Education at a Glance 2016

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Foreword

Governments are increasingly looking to international comparisons of education opportunities and outcomes 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 the quantitative, internationally comparable indicators that it publishes annually in *Education at a Glance*. Together with OECD country policy reviews, these indicators can be used to assist governments in building more effective and equitable education systems.

Education at a Glance addresses the needs of a range of users, from governments seeking to learn policy lessons to academics requiring data for further analysis to the general public wanting to monitor how its country's schools are progressing in producing world-class students. The publication examines the quality of learning outcomes, the policy levers and contextual factors that shape these outcomes, and the broader private and social returns that accrue to investments in education.

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. The publication was prepared by the staff of the Innovation and Measuring Progress Division of the OECD Directorate for Education and Skills, under the responsibility of Dirk Van Damme and Corinne Heckmann, and in co-operation with Étienne Albiser, Diogo Amaro de Paula, Rodrigo Castañeda Valle, Éric Charbonnier, João Collet, Rie Fujisawa, William Herrera Penagos, Soumaya Maghnouj, Gabriele Marconi, Camila de Moraes, Simon Normandeau, Joris Ranchin, Cuauhtémoc Rebolledo Gómez, Gara Rojas González and Markus Schwabe. Administrative support was provided by Laetitia Dehelle, and additional advice as well as analytical support were provided by Anithasree Athiyaman, Marie-Hélène Doumet, Michael Jacobs, Karinne Logez, Martha Rozsi, Giovanni Maria Semeraro, Cailyn Torpie and Benedikt Weiß. Marilyn Achiron, Marika Boiron, Cassandra Davis and Sophie Limoges provided valuable support in the editorial and production process. The development of the publication was steered by 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 OECD INES more generally are listed at the end of the book.

While much progress has been accomplished in recent years, member countries and the OECD continue to strive to strengthen the link between policy needs and the best available internationally comparable data. This presents various challenges and trade-offs. First, the indicators need to respond to education issues that are high on national policy agendas, and where the international comparative perspective can offer added value to what can be accomplished through national analysis and evaluation. Second, while the indicators should be as comparable as possible, they also need to be as country-specific as is necessary to allow for historical, systemic and cultural differences between countries. Third, the indicators need to be presented in as straightforward a manner as possible, while remaining sufficiently complex to reflect multi-faceted realities. Fourth, there is a general desire to keep the indicator set as small as possible, but it needs to be large enough to be useful to policy makers across countries that face different challenges in education.

The OECD will continue not only to address these challenges vigorously and develop indicators in areas where it is feasible and promising to develop data, but also to advance in areas where a considerable investment still needs to be made in conceptual work. The OECD Programme for International Student Assessment (PISA) and its extension through the Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC), as well as the OECD Teaching and Learning International Survey (TALIS), are major efforts to this end.

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Editorial

Measuring what counts in education: Monitoring the Sustainable Development Goal for education

In September 2015, the world's leaders gathered in New York 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". More specific targets and indicators spell out what countries need to deliver by 2030. The OECD regards the SDGs as an exceptional opportunity to promote the agenda of world-wide inclusive social progress and it will work together with other international organisations in implementing the goals and their targets, including by applying the OECD's unique tools to monitor and assess measures of social progress and providing country-specific policy advice.

Two aspects of Goal 4 distinguish it from the preceding Millennium Development Goals (MDGs) on education which were in place between 2000 and 2015. Firstly, Goal 4 is truly global. The SDGs establish a universal agenda; they do not differentiate between rich and poor countries. Every single country is challenged to achieve the SDGs. Secondly, Goal 4 puts the quality of education and learning outcomes front and centre. Access, participation and enrolment, which were the main focus of the MDG agenda, are still important. The world is still far from providing equitable access to high-quality education for all. An estimated 57 million children still don't have access to primary education and too many children continue to be excluded from the benefits of education because of poverty, gender, ethnicity, where they live, and armed conflicts.

But participation in education is not an end in itself. What matters for people and for our economies are the skills acquired through education. It is the competence and character qualities that are developed through schooling, rather than the qualifications and credentials gained, that make people successful and resilient in their professional and private lives. They are also key in determining individual well-being and the prosperity of societies.

The OECD's international assessments of learning outcomes and skills reflect the magnitude and importance of challenges faced in education. Across the 65 high- and middle-income countries that participated in the OECD Programme for International Student Assessment (PISA) in 2012, an average of 33% of 15-year-olds did not attain the baseline level of proficiency in mathematics and 26% did not attain that level in reading. This means that roughly 800 000 15-year-olds in Mexico, 168 000 in France, and around 1.9 million 15-year-olds in Brazil do not yet have the basic knowledge and skills needed to thrive in modern societies.

The shift from access and enrolment in the MDGs towards the quality of education in Goal 4 requires a system that can measure the actual learning outcomes of children and young people at various ages and levels of education. The OECD already offers measurement tools to this end and is committed to improving, expanding and enriching its assessment tools.

PISA, for example, assesses the learning outcomes of 15-year-old students in reading, mathematics, science and collaborative problem-solving. In December 2016, results from the most recent PISA cycle, involving more than 70 high- and middle-income countries, will become available. PISA offers a comparable and robust measure of progress so that all countries, regardless of their starting point, can clearly see where they are on the path towards the internationally agreed targets of quality and equity in education. Through PISA, countries can also build their capacity to develop relevant data; and while most countries that have participated in PISA already have adequate systems in place, that isn't true for many low-income countries. In this respect, the OECD PISA for Development initiative not only aims to expand the coverage of the international assessment to include more middle- and low-income countries, but it also offers these countries assistance in building their national assessment and data-collection systems.

PISA is also expanding its assessment domains to include other skills relevant to Goal 4. For 2018, for example, PISA is exploring an assessment of the "global competence" of 15-year-olds. This includes measuring their understanding of the "culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development".

Other OECD data, such as those derived from the Survey of Adult Skills (a product of the OECD Programme for the International Assessment of Adult Competencies [PIAAC]) and the OECD Teaching and Learning International Survey (TALIS), provide a strong evidence base for monitoring education systems. OECD analysis promotes peer learning across countries as new policy options are explored and experiences compared. Together, OECD indicators, statistics and analyses can be seen as a model of how progress towards the SDG education goal can be measured and reported.

Table 1 presents a synopsis of what the OECD can offer to the international community as it develops a set of global indicators to track progress towards achieving Goal 4. While the measurement and assessment tools for education may be better established than those for other areas included in the SDGs, they do not yet cover all of the concepts included in the related targets. In this respect, the OECD stands ready to work with UNESCO, which oversees the education SDG agenda, in building a comprehensive data system.

Each year, *Education at a Glance* presents the broadest set of education indicators available in the world. The indicators in this edition of *Education at a Glance* provide the elements to assess where OECD countries stand on their way to meeting the education SDG targets (Table 2). For each indicator, the OECD identifies a quantitative benchmark. In future editions of the report, more sophisticated approaches will be developed by integrating multiple indicators in a composite index to reflect the various facets of the targets and the global indicators that will be adopted by the United Nations General Assembly in September 2016.

Comparing data, benchmarking, learning from good practices and exchanging experiences are among the core missions of the OECD. Data collected and processed with the highest possible accuracy and reliability are indispensable for these activities. *Education at a Glance* has always focused on data collection and reporting; but now, in the service of Goal 4, our indicators can contribute to improving well-being and economic outcomes across many more countries, for many more people.

Making Goal 4 a reality will transform lives around the globe. Imagine a world where all children have the opportunity to develop basic literacy and numeracy skills after nine years of study. The rewards would accrue not only to the individual students, but to the economies and societies to which they will contribute as adults.

The economic output that is lost due to poor education policies and practices is immense. For lower middle-income countries, potential economic gains from ensuring that all 15-year-olds attain at least the PISA baseline level of proficiency in reading, mathematics and science are estimated at 13 times their current GDP; on average, 28% higher GDP over the next 80 years. For upper middle-income countries, which generally show better learning outcomes, the gains would average 16% higher GDP over the same period. In other words, the gains from tackling low performance not only dwarf any conceivable cost of improvement – but also improve people's well-being and stimulate economic growth.

The challenge is huge, but so is our commitment to succeed!

Angel Gurría
OECD Secretary-General

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Table 1. OECD data to measure progress towards the education SDG targets

Education SDG targets*		Data the OECD can offer and help to develop
4.1	By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education, leading to relevant and effective learning outcomes	▪ Enrolment and completion rate data from administrative sources and INES data collections ▪ Reading and maths performance data for 15-year-olds in PISA ▪ Learning outcome assessments need to be developed for the end of primary school ▪ PISA for Development will improve methodologies for estimating the out-of-school populations
4.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	▪ Administrative data collected through the INES surveys on enrolment in early childhood development and pre-primary education ▪ An Early Learning Outcomes assessment project is under development and will generate data on the development of young children's cognitive, social and emotional skills
4.3	By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	▪ Enrolment rates from the INES data collections for tertiary education and upper secondary vocational education programmes, by gender ▪ Participation in formal and non-formal adult education from the Survey of Adult Skills (PIAAC)
4.4	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	▪ Data on proficiency in digital problem-solving skills among 16-65 year-olds from the Survey of Adult Skills (PIAAC) ▪ Data on proficiency in literacy and numeracy among 16-65 year-olds from the Survey of Adult Skills (PIAAC)
4.5	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	▪ Enrolment, graduation and attainment data for all ISCED levels from the INES data collections, by gender ▪ Educational attainment data for ISCED levels 3 and higher, by gender, immigrant background, parents' educational attainment, language spoken at home, from the Survey of Adult Skills (PIAAC) ▪ Data on public and private financial investments in education from the INES data collections ▪ Data on equity policies related to access and funding for disadvantaged populations from the country studies in the OECD project on Efficient Resource Allocation in Education ▪ Data on aid to education compiled by the Development Assistance Committee (DAC) of the OECD
4.6	By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve proficiency in literacy and numeracy	▪ Literacy and numeracy proficiency data from the Survey of Adult Skills (PIAAC), by age and gender ▪ Participation in basic skills training activities from the Survey of Adult Skills (PIAAC)
4.7	By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	▪ Global competence proficiency data from the 2018 PISA cycle ▪ Science proficiency and environmental awareness data from the 2015 PISA cycle ▪ Data on interpersonal trust and various other social outcomes from the Survey of Adult Skills (PIAAC) ▪ INES/NESLI surveys on curricula, subject fields and learning time in schools
4.a	Build and upgrade education facilities that are child-, disability- and gender-sensitive, and provide safe, nonviolent, inclusive and effective learning environments for all	▪ Data on learning environments, resources and equipment (including ICT and connectivity) from PISA surveys ▪ School-climate indicators, including violence and disruptive behaviour by students, from the Teaching and Learning International Survey (TALIS)
4.b	By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least-developed countries, small-island developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries	▪ Data compiled by the Development Assistance Committee (DAC) of the OECD on scholarships included in development aid programmes
4.c	By 2030, substantially increase the supply of qualified teachers, including through international co-operation for teacher training in developing countries, especially least-developed countries and small-island developing states	▪ Data on teachers from the INES/NESLI surveys ▪ Data on teachers, teacher training and teachers' professional development from the TALIS surveys and PISA teacher questionnaire ▪ Data from the forthcoming Initial Teacher Preparation (ITP) study

*For detail on the Education SDG targets, please see the legend under Table 2 on the next page.

Table 2. OECD countries' progress towards the education SDG targets

Education SDG targets*	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.a	4.b	4.c
Benchmark	**80**	**95**	**60**	**60**	**75**	**50**	**70**	**0.7**	**0**	**95**
Australia	80	101		66	77	58	71	1.5	38	98
Austria	81	96	70	61	71	45	64	1.5	-19	
Belgium[1]	81	98	67	65	72	53	67	0.7	0	98
Canada[1]	86	93		65	83	51	75	0.8	13	98
Chile	48	94	87	34	47	13	44	0.5		86
Czech Republic	79	89	69	59	76	49	66	0.9	1	77
Denmark	83	98	89	70	82	50	63	0.8	0	94
Estonia	89			51	82	51	75	0.7		94
Finland	88	79	53	67	91	62	80	0.5		92
France	78	101				40	62	0.6	-10	90
Germany	82	99	64	64	74	47	68	0.7	-50	
Greece	64	91		39	73	31	58	0.2	-52	
Hungary	72	96	42		63		67	0.6		
Iceland	79		86		86		60	0.6		92
Ireland	83	100		51	80	45	66	0.6	1	
Israel	66	98	70	50	75	38	50	0.4		94
Italy	75	97	44		76	29	53	0.5	-2	79
Japan	89	96	80	53	78	72	75	0.6	-1	88
Korea	91	94		55	78	46	72	0.4	8	96
Latvia	80	96			75		63	1.0		91
Luxembourg	76	99	32		74		59	0.9	1	
Mexico	45	113	38		57		34	0.3		62
Netherlands	85	99	70	73	82	60	70	0.7	-30	92
New Zealand	77	98	96	75	78	58	68	1.1	7	
Norway	78	98	81	72	91	58	59	0.8	1	93
Poland	86	95	74	32	76	42	66	0.4		99
Portugal	75	96	65		69		54	0.5	-1	82
Slovak Republic	73	81	59	50	64	51	61	0.8		89
Slovenia	80	90	72	49	75	35	71	0.6	2	
Spain	76	97	72		75	32	62	0.7	-7	97
Sweden	73	95	62	72	87	58	62	0.6	9	90
Switzerland	88	98	80		83		66	0.7	-1	
Turkey	58	71	94	22	72	12	38	0.1	134	
United Kingdom[1]	78	99	61		79		64	1.0	-7	92
United States	74	90	52	64	74	48	58	1.0		
Average	**77**	**95**	**68**	**57**	**76**	**46**	**63**	**0.7**	**1**	**90**

Notes: Figures above the benchmark are coloured light blue. Mismatches between the coverage of the population data and the enrolment data may result in enrolment rates of over 100%.
1. For targets 4.4, 4.6 and 4.c, Belgium is Flanders only. For target 4.c, Canada is Alberta only, and the United Kingdom is England only.

* Legend to the Education SDG targets

4.1	Percentage of 15 year-old students performing at Level 2 or higher on the math scale (PISA, 2012)
4.2	Enrolment rate in pre-primary and primary education at age 5 (INES, 2014)
4.3	First-time tertiary entry rates (INES, 2014)
4.4	Percentage of 24-64 year-olds in Group 3 or 4 of skills and readiness to use information and communication technologies for problem solving scale (PIAAC, 2012/2015)
4.5	PISA Inclusion Index (PISA, 2012)
4.6	Percentage of adults performing at Level 3 or higher on the literacy scale (PIAAC, 2012/2015)
4.7	Percentage of students at level A, B and C in the environmental science performance index (PISA, 2006)
4.a	Computers for educational purposes per student. Mean index (PISA, 2012)
4.b	Scholarships and student costs in donor countries (US$, millions, difference between 2012 and 2014)
4.c	Percentage of ISCED 2 teachers having completed teacher education or training programme (TALIS, 2013)

Introduction: The Indicators and their Framework

The organising framework

Education at a Glance 2016: OECD Indicators offers a rich, comparable and up-to-date array of indicators that reflects a consensus among professionals on how to measure the current state of education internationally. The indicators provide information on the human and financial resources invested in education, how education and learning systems operate and evolve, and the returns to investments in education. The indicators are organised thematically, and each is accompanied by information on the policy context and an interpretation of the data. The education indicators are presented within an organising framework that:

- distinguishes between the actors in education systems: individual learners and teachers, instructional settings and learning environments, education service providers, and the education system as a whole
- groups the indicators according to whether they address learning outcomes for individuals or countries, policy levers or circumstances that shape these outcomes, or to antecedents or constraints that put policy choices into context
- identifies the policy issues to which the indicators relate, with three major categories distinguishing between the quality of education outcomes and education opportunities, issues of equity in education outcomes and opportunities, and the adequacy and effectiveness of resource management.

The following matrix describes the first two dimensions:

	1. Education and learning outputs and outcomes	2. Policy levers and contexts shaping education outcomes	3. Antecedents or constraints that contextualise policy
I. Individual participants in education and learning	**1.I.** The quality and distribution of individual education outcomes	**2.I.** Individual attitudes towards, engagement in, and behaviour in teaching and learning	**3.I.** Background characteristics of the individual learners and teachers
II. Instructional settings	**1.II.** The quality of instructional delivery	**2.II.** Pedagogy, learning practices and classroom climate	**3.II.** Student learning conditions and teacher working conditions
III. Providers of educational services	**1.III.** The output of educational institutions and institutional performance	**2.III.** School environment and organisation	**3.III.** Characteristics of the service providers and their communities
IV. The education system as a whole	**1.IV.** The overall performance of the education system	**2.IV.** System-wide institutional settings, resource allocations, and policies	**3.IV.** The national educational, social, economic, and demographic contexts

Actors in education systems

The OECD Indicators of Education Systems (INES) programme seeks to gauge the performance of national education systems as a whole, rather than to compare individual institutional or other subnational entities. However, there is increasing recognition that many important features of the development, functioning and impact of education systems can only be assessed through an understanding of learning outcomes and their relationships to inputs and processes at the level of individuals and institutions. To account for this, the indicator framework distinguishes between a macro level, two meso-levels and a micro-level of education systems. These relate to:

- the education system as a whole
- the educational institutions and providers of educational services
- the instructional setting and the learning environment within the institutions
- the individual participants in education and learning.

To some extent, these levels correspond to the entities from which data are being collected, but their importance mainly centres on the fact that many features of the education system play out quite differently at different levels of the system, which needs to be taken into account when interpreting the indicators. For example, at the level of students within a classroom, the relationship between student achievement and class size may be negative, if students in small classes benefit from improved contact with teachers. At the class or school level, however, students are often intentionally grouped such that weaker or disadvantaged students are placed in smaller classes so that they receive more individual attention. At the school level, therefore, the observed relationship between class size and student achievement is often positive, suggesting that students in larger classes perform better than students in smaller classes. At higher aggregated levels of education systems, the relationship between student achievement and class size is further confounded, e.g. by the socio-economic intake of schools or by factors relating to the learning culture in different countries. Therefore, past analyses that have relied on macro-level data alone have sometimes led to misleading conclusions.

Outcomes, policy levers and antecedents

The second dimension in the organising framework further groups the indicators at each of the above levels:

- Indicators on observed outputs of education systems, as well as indicators related to the impact of knowledge and skills for individuals, societies and economies, are grouped under the sub-heading *output and outcomes of education and learning.*
- The sub-heading *policy levers and contexts* groups activities seeking information on the policy levers or circumstances that shape the outputs and outcomes at each level.
- These policy levers and contexts typically have *antecedents* – factors that define or constrain policy. These are represented by the sub-heading *antecedents and constraints*. The antecedents or constraints are usually specific for a given level of the education system; antecedents at a lower level of the system may well be policy levers at a higher level. For teachers and students in a school, for example, teacher qualifications are a given constraint while, at the level of the education system, professional development of teachers is a key policy lever.

Policy issues

Each of the resulting cells in the framework can then be used to address a variety of issues from different policy perspectives. For the purpose of this framework, policy perspectives are grouped into three classes that constitute the third dimension in the organising framework for INES:

- quality of education outcomes and education opportunities
- equality of education outcomes and equity in education opportunities
- adequacy, effectiveness and efficiency of resource management.

In addition to the dimensions mentioned above, the time perspective in the framework allows for dynamic aspects of the development of education systems to be modelled as well.

The indicators that are published in *Education at a Glance 2016* fit within this framework, though often they speak to more than one cell.

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Most of the indicators in **Chapter A,** *The output of educational institutions and the impact of learning,* relate to the first column of the matrix describing outputs and outcomes of education. Even so, indicators in Chapter A measuring educational attainment for different generations, for instance, not only provide a measure of the output of the education system, but also provide context for current education policies, helping to shape policies on, for example, lifelong learning.

Chapter B, *Financial and human resources invested in education,* provides indicators that are either policy levers or antecedents to policy, or sometimes both. For example, expenditure per student is a key policy measure that most directly affects the individual learner, as it acts as a constraint on the learning environment in schools and learning conditions in the classroom.

Chapter C, *Access to education, participation and progression,* provides indicators that are a mixture of outcome indicators, policy levers and context indicators. Internationalisation of education and progression rates are, for instance, outcome measures to the extent that they indicate the results of policies and practices at the classroom, school and system levels. But they can also provide contexts for establishing policy by identifying areas where policy intervention is necessary to address issues of inequity, for example.

Chapter D, *The learning environment and organisation of schools,* provides indicators on instruction time, teachers' working time and teachers' salaries that not only represent policy levers that can be manipulated but also provide contexts for the quality of instruction in instructional settings and for the outcomes of individual learners. It also presents data on the profile of teachers, the levels of government at which decisions about education are taken, and pathways and gateways to gain access to secondary and tertiary education.

The reader should note that this edition of *Education at a Glance* covers a significant amount of data from partner countries as well (please refer to the *Reader's Guide* for details).

Reader's Guide

Coverage of the statistics

Although a lack of data still limits the scope of the indicators in many countries, the coverage extends, in principle, to the entire national education system (within the national territory), regardless of 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 open-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, with the exception of combined school- and work-based programmes that are explicitly deemed to be part of the education system, is not included in the basic education expenditure and enrolment data.

Educational activities classified as "adult" or "non-regular" are covered, provided that the activities involve 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.

Country coverage

This publication features data on education from the 35 OECD countries, two partner countries that participate in the OECD Indicators of Education Systems programme (INES), Brazil and the Russian Federation, and other partner countries that do not participate in INES (Argentina, China, Colombia, Costa Rica, India, Indonesia, Lithuania, Saudi Arabia and South Africa). Data sources for these latter nine countries are specified below the tables.

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

Calculation of international means

The main purpose of Education at a Glance is to provide an authoritative compilation of key international comparisons of education statistics. While countries attain specific values in these comparisons, readers should not assume that countries themselves are homogeneous. The country averages include significant variations among subnational jurisdictions, much as the OECD average encompasses a variety of national experiences (see Box A1.1 in *Education at a Glance 2014*).

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.

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

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Both the OECD average and the OECD total can be significantly affected by missing data. Given the relatively small number of countries surveyed, no statistical methods are used to compensate for this. 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 average" refers to the OECD countries included in the respective comparisons. Averages are sometimes not calculated if too many countries have missing information or have information included in other columns.

For financial tables using trend series over 1995-2013, the OECD average is also calculated for countries providing data for all reference years used. This allows for a comparison of the OECD average over time with no distortion due to the exclusion of certain countries in the different years.

For many indicators, an **EU22 average** is also presented. It is calculated as the unweighted mean of the data values of the 22 countries that are members of both the European Union and the OECD for which data are available or can be estimated. These 22 countries are Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, the Slovak Republic, Spain, Sweden and the United Kingdom.

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, Turkey, 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 China or India are not available.

For some indicators, an **average** is presented. This average is included in tables with data from the 2012 Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). The average corresponds to the arithmetic mean of the estimates included in the table or figure from both the national and the subnational entities (which include Flanders [Belgium] and England/Northern Ireland [UK]). Partner countries are not included in the average presented in any of the tables or figures.

Standard error (S.E.)

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 provides 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, there is one column with the heading "%", which indicates the average percentage, and a column with the heading "S.E.", which 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 an uncertainty zone of twice (1.96) the standard error of 2.6, assuming an error risk of 5%. 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, 5% = 10% – 1.96 * 2.6 and 15% = 10% + 1.96 * 2.6.

Classification of levels of education

The classification of levels of education is based on the International Standard Classification of Education (ISCED). ISCED is an instrument for compiling statistics on education internationally. ISCED-97 was recently revised, and the new International Standard Classification of Education (ISCED 2011) was formally adopted in November 2011. This new classification is used for the second time in this edition of *Education at a Glance*. The major changes between ISCED 2011 and ISCED-97 are described in the section "About the ISCED 2011 classification".

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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 when data for the latest year refer to ISCED 2011 and data for previous years refer to ISCED-97.
- c There are too few observations to provide reliable estimates (e.g. in the Survey of Adult Skills, there are fewer than 3 individuals for the numerator or fewer than 30 individuals for the denominator).
- d Includes data from another category.
- m Data are not available.
- 0 Magnitude is either negligible or zero.
- r Values are below a certain reliability threshold and should be interpreted with caution.
- q Data have been withdrawn at the request of the country concerned.
- x Data included in another category or column of the table (e.g. x(2) means that data are included in Column 2 of the table).
- ~ Average is not comparable with other levels of education.

Further resources

The website www.oecd.org/education/education-at-a-glance-19991487.htm 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. The website also provides access to the data underlying the indicators and to a comprehensive glossary for technical terms used in this publication.

All post-production changes to this publication are listed at www.oecd.org/publishing/corrigenda (corrections) and http://dx.doi.org/10.1787/eag-data-en (updates).

Education at a Glance uses the OECD's StatLinks service. Below each table and figure in *Education at Glance 2016* is a URL that leads to a corresponding Excel file containing the underlying data for the indicator. These URLs are stable and will remain unchanged over time. In addition, readers of the *Education at a Glance* e-book will be able to click directly on these links and the workbook will open in a separate window.

Layout of tables

In all tables, the numbers in parentheses at the top of the columns are simply used for reference. When a consecutive number does not appear, that column is available on line only.

Codes used for territorial entities

These codes are used in certain figures. Country or territorial entity names are used in the text and the tables. Note that throughout the publication, the Flemish Community of Belgium and the French Community of Belgium may be referred to as "Belgium (Fl.)" and "Belgium (Fr.)", respectively. However, for indicators using data from the Survey of Adult Skills and from the Teaching and Learning International Survey (TALIS), the Flemish Community is referred to as "Flanders (Belgium)".

ARG	Argentina	CZE	Czech Republic	ISL	Iceland	PRT	Portugal
AUS	Australia	DEU	Germany	ISR	Israel	RUS	Russian Federation
AUT	Austria	DNK	Denmark	ITA	Italy	SAU	Saudi Arabia
BEL	Belgium	ENG	England (UK)	JPN	Japan	SCO	Scotland (UK)
BFL	Belgium (Flemish Community)	ESP	Spain	KOR	Korea	SVK	Slovak Republic
BFR	Belgium (French Community)	EST	Estonia	LUX	Luxembourg	SVN	Slovenia
BRA	Brazil	FIN	Finland	LVA	Latvia	SWE	Sweden
CAN	Canada	FRA	France	LTU	Lithuania	TUR	Turkey
CHE	Switzerland	GRC	Greece	NZL	New Zealand	UKM	United Kingdom
CHL	Chile	HUN	Hungary	MEX	Mexico	USA	United States
CHN	China	IDN	Indonesia	NLD	Netherlands	ZAF	South Africa
COL	Colombia	IND	India	NOR	Norway		
CRI	Costa Rica	IRL	Ireland	POL	Poland		

About the new ISCED 2011 classification

More details can be found in the publication *ISCED 2011 Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications* (OECD/Eurostat/UNESCO Institute for Statistics, 2015), http://dx.doi.org/10.1787/9789264228368-en.

The need to revise ISCED

The structure of education systems varies widely between countries. In order to produce internationally comparable education statistics and indicators, it is necessary to have a framework to collect and report data on education programmes with a similar level of educational content. UNESCO's *International Standard Classification of Education* (ISCED) is the reference classification for organising education programmes and related qualifications by education levels and fields. The basic concepts and definitions of ISCED are intended to be internationally valid and comprehensive of the full range of education systems.

The ISCED classification was initially developed by UNESCO in the mid-1970s, and was first revised in 1997. Due to subsequent changes in education and learning systems throughout the start of the 21st century, a further review of ISCED was undertaken between 2009 and 2011 involving extensive global consultation with countries, regional experts and international organisations. The revision took into account important shifts in the structure of higher education, such as the Bologna process in Europe, expansion of education programmes for very young children, and increasing interest in statistics on the outcomes of education, such as educational attainment. The revised ISCED 2011 classification was adopted by the UNESCO General Conference at its 36th session in November 2011.

Major changes between ISCED 2011 and ISCED-97

The ISCED 2011 classification is an important step forward in a long-term consultative process designed to improve the comparability of international statistics on education. The classification is used for the second time in this edition of Education at a Glance. The major changes between ISCED 2011 and ISCED-97 are the following:

- ISCED 2011 classification presents a revision of the ISCED-97 levels of education programmes (ISCED-P) and introduces for the first time a related classification of educational attainment levels (ISCED-A) based on recognised education qualifications (see Indicator A1).
- ISCED 2011 classification includes improved definitions of formal and non-formal education, educational activities and programmes.
- Compared to ISCED-97 which had seven levels of education, ISCED 2011 now has nine levels of education. In fact, higher education has been restructured taking into account changes in tertiary education, such as the Bologna structure, and now comprises four levels of education compared with two levels in ISCED-97. Programmes previously classified in level 5 of ISCED-97 will now be allocated to level 5, 6 or 7 in ISCED 2011. Moreover, while the position in the national degree structure of tertiary programmes was mentioned in ISCED-97, specific coding for this dimension has been introduced in ISCED 2011 for levels 6 and 7 (bachelor's or equivalent and master's or equivalent levels, respectively).
- ISCED level 0 has been expanded to include a new category covering early childhood educational development programmes designed for children under the age of 3 (see Indicator C2).
- Each education level within ISCED has also been more clearly delineated, which may result in some changes of classification for programmes that previously sat on the border between ISCED levels (for example, between ISCED levels 3 and 4).

- The complementary dimensions within ISCED levels have also been revised. There are now only two categories of orientation: general and vocational. Programmes previously classified as pre-vocational (in ISCED-97) do not provide labour-market relevant qualifications and are now mainly classified as general education.
- ISCED-97 differentiated access to education at higher ISCED levels in two categories depending on the type of subsequent education, while ISCED 2011 identifies only one group of programmes that provide access to higher education levels. The ISCED 2011 sub-category "level completion with access to higher ISCED levels" corresponds to the combined destination categories A and B in ISCED-97. ISCED 2011 further sub-classifies programmes that do not provide access to higher ISCED levels into the sub-categories "no level completion", "partial level completion" and "level completion". These three sub-categories in ISCED 2011 correspond to destination category C in ISCED-97.

Fields of education and training

Within ISCED, programmes and related qualifications can be classified by fields of education and training as well as by levels. The ISCED 2011 revision focused on the ISCED levels and complementary dimensions related to ISCED levels. 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) in November 2013 at its 37th session. The *ISCED 2013 Fields of Education and Training* classification (UNESCO-UIS, 2014) is available at www.uis.unesco.org/Education/Documents/isced-fields-of-education-training-2013.pdf and will be used for the first time in *Education at a Glance 2017*.

Correspondence tables between ISCED versions

The correspondence between the levels in ISCED 2011 and ISCED-97 is shown in Table 1. For more details on the correspondence between ISCED 2011 and ISCED-97 levels, see Part I of the ***ISCED 2011 Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications***.

Table 1. Comparison of levels of education between ISCED 2011 and ISCED-97

ISCED 2011		ISCED-97	
01	Early childhood educational development		-
02	Pre-primary education	0	Pre-primary education
1	Primary education	1	Primary education or first stage of basic education
2	Lower secondary education	2	Lower secondary education or second stage of basic education
3	Upper secondary education	3	(Upper) secondary education
4	Post-secondary non-tertiary education	4	Post-secondary non-tertiary education
5	Short-cycle tertiary education	5	First stage of tertiary education (not leading directly to an advanced research qualification) (5A, 5B)
6	Bachelor's or equivalent level		
7	Master's or equivalent level		
8	Doctoral or equivalent level	6	Second stage of tertiary education (leading to an advanced research qualification)

Definition of ISCED levels

Early childhood education (ISCED level 0)

ISCED level 0 refers to early childhood programmes that have an intentional education component. ISCED level 0 programmes target children below the age of entry into primary education (ISCED level 1). These programmes aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society.

Programmes offered at ISCED level 0 are often differentiated by age. There are two categories of ISCED level 0 programmes: ISCED 010 – early childhood educational development, and ISCED 020 – pre-primary education. ISCED 010 has intentional educational content designed for younger children (typically in the age range of 0 to 2 years), while ISCED 020 is typically designed for children from the age of 3 years to the start of primary education (ISCED level 1). For international comparability purposes, the term "early childhood education" is used to label ISCED level 0 (for more details, see Indicator C2 in *Education at a Glance 2015*).

Programmes classified at ISCED level 0 may be referred to in many ways, for example: early childhood education and development, play school, reception, pre-primary, pre-school or *educación inicial*. For programmes provided in *crèches*, day-care centres, nurseries or *guarderías*, it is important to ensure that they meet the ISCED level 0 classification criteria specified.

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Primary education (ISCED level 1)

Primary education usually begins at age 5, 6 or 7, and has a typical duration of six years. Programmes at ISCED level 1 are normally designed to give pupils a sound basic education in reading, writing and mathematics, along with an elementary understanding of other subjects, such as history, geography, natural science, social sciences, art and music. The beginning of reading activities alone is not a sufficient criterion to classify an education programme at ISCED level 1.

Programmes classified at ISCED level 1 may be referred to in many ways, for example: primary education, elementary education or basic education (stage 1 or lower grades if an education system has one programme that spans ISCED levels 1 and 2). For international comparability purposes, the term "primary education" is used to label ISCED level 1.

Lower secondary education (ISCED level 2)

Programmes at the lower secondary education level are designed to lay the foundation across a wide range of subjects and to prepare children and young people for more specialised study at upper secondary and higher levels of education. The beginning – or the end – of lower secondary education often involves a change of school for young students and also a change in the style of instruction.

In some education systems, programmes may be differentiated by orientation, although this is more common at upper secondary level. Vocational programmes, where they exist at this level, generally offer options for young people wishing to prepare for direct entry into the labour market in low- or semi-skilled jobs. They may also be the first step in vocational education, giving access to more advanced vocational programmes at the upper secondary level.

Programmes classified at ISCED level 2 may be referred to in many ways, for example: secondary school (stage one/lower grades), junior secondary school, middle school or junior high school. If a programme spans ISCED levels 1 and 2, the terms elementary education or basic school (second stage/upper grades) are often used. For international comparability purposes, the term "lower secondary education" is used to label ISCED level 2.

Upper secondary education (ISCED level 3)

Programmes at the upper secondary education level are more specialised than those at the lower secondary level and offer students more choices and diverse pathways for completing their secondary education. The range of subjects studied by a single student tends to be narrower than at lower levels of education, but the content is more complex and the study more in-depth.

Programmes offered are differentiated by orientation and often by broad subject groups. General programmes are usually designed for students planning to continue to academic or professional studies at the tertiary level. Students will often begin to specialise in specific fields, such as the sciences, humanities or social sciences, even if they are expected to continue to take some courses in basic subjects like the national language, mathematics and, perhaps, a foreign language. There can also be general programmes at ISCED level 3 that do not provide access to tertiary education, but these are comparatively rare. Vocational programmes exist both to offer options to young people who might otherwise leave school without any qualifications from an upper secondary programme and for those wishing to prepare for skilled worker and/or technician jobs.

Second chance or re-integration programmes that either review material already covered in upper secondary programmes or provide opportunities for young people to change streams or enter an occupation requiring an upper secondary qualification that they did not earn during their previous studies, are also classified at this level.

Programmes classified at ISCED level 3 may be referred to in many ways, for example: secondary school (stage two/upper grades), senior secondary school or (senior) high school. For international comparability purposes, the term "upper secondary education" is used to label ISCED level 3.

Post-secondary non-tertiary education (ISCED level 4)

Programmes at the post-secondary non-tertiary education level are not significantly more complex than those at the upper secondary level. They generally serve to broaden rather than deepen the knowledge, skills and competencies already gained through successful (full) level completion of upper secondary education. They may be designed to increase options for participants in the labour market, for further studies at the tertiary level, or both.

Usually, programmes at ISCED level 4 are vocationally oriented. They may be referred to in many ways, for example: technician diploma, primary professional education or *préparation aux carrières administratives*. For international comparability purposes, the term "post-secondary non-tertiary education" is used to label ISCED level 4.

ISCED 2011 tertiary education levels (ISCED levels 5-8)

Tertiary education builds on secondary education, providing learning activities at a high level of complexity in specialised fields of study. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education.

There is usually a clear hierarchy between qualifications granted by tertiary education programmes. It comprises ISCED levels 5 (short-cycle tertiary education), 6 (bachelor's or equivalent level), 7 (master's or equivalent level) and 8 (doctoral or equivalent level). The content of programmes at the tertiary level is more complex and advanced than in lower ISCED levels.

- **Short-cycle tertiary education (ISCED level 5)**
  The content of ISCED level 5 programmes is noticeably more complex than in upper secondary programmes giving access to this level. ISCED level 5 programmes serve to deepen knowledge by imparting new techniques, concepts and ideas not generally covered in upper secondary education. By comparison, ISCED level 4 programmes serve to broaden knowledge and are typically not significantly more advanced than programmes at ISCED level 3.

  Programmes classified at ISCED level 5 may be referred to in many ways, for example: higher technical education, community college education, technician or advanced/higher vocational training, associate degree, *bac+2*. For international comparability purposes, the term "short-cycle tertiary education" is used to label ISCED level 5.

- **Bachelor's or equivalent level (ISCED level 6)**
  Programmes at ISCED level 6, or bachelor's or equivalent level, are longer and usually more theoretically oriented than ISCED level 5 programmes. They are often designed to provide participants with intermediate academic and/or professional knowledge, skills and competencies, leading to a first degree or equivalent qualification.

  They typically have a duration of three to four years of full-time study at the tertiary level. They may include practical components and/or involve periods of work experience as well as theoretically based studies. They are traditionally offered by universities and equivalent tertiary educational institutions.

  Programmes classified at ISCED level 6 may be referred to in many ways, for example: bachelor's programme, licence or first university cycle. For international comparability purposes, the term "bachelor's or equivalent level" is used to label ISCED level 6.

- **Master's or equivalent level (ISCED level 7)**
  Programmes at ISCED level 7, or master's or equivalent level, have a significantly more complex content than programmes at ISCED level 6 and are usually more specialised. The content of ISCED level 7 programmes is often designed to provide participants with advanced academic and/or professional knowledge, skills and competencies, leading to a second degree or equivalent qualification. Programmes at this level may have a substantial research component but do not yet lead to the award of a doctoral qualification. The cumulative duration of studies at the tertiary level is usually five to eight years or even longer.

  Programmes classified at ISCED level 7 may be referred to in many ways, for example: master's programmes or magister studies. For international comparability purposes, the term "master's or equivalent level" is used to label ISCED level 7.

- **Doctoral or equivalent level (ISCED level 8)**
  Programmes at ISCED level 8, or doctoral or equivalent level, are designed primarily to lead to an advanced research qualification. Programmes at this ISCED level are devoted to advanced study and original research and are typically offered only by research-oriented tertiary educational institutions, such as universities. Doctoral programmes exist in both academic and professional fields.

  The theoretical duration of these programmes is three years full time in most countries, although the actual time that students take to complete the programmes is typically longer.

  Programmes classified at ISCED level 8 may be referred to in many ways, for example: PhD, DPhil, D.Lit, D.Sc, LL.D, doctorate or similar terms. For international comparability purposes the term, "doctoral or equivalent level" is used to label ISCED level 8.

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Executive Summary

Countries are finding other ways, besides public spending, to fund higher education.

OECD countries spend an average of 5.2% of their GDP on educational institutions from primary to tertiary education, public and private expenditure combined. Around one-third of the total expenditure is devoted to tertiary education, where spending per student is highest. The higher cost of tertiary-level teaching staff and the prevalence of research and development in tertiary education contribute to the high cost.

To ease the strain on already tight public budgets, more countries are shifting the cost of tertiary education from the government to individual households. On average, 30% of the expenditure for tertiary institutions comes from private sources – a much larger share than seen at lower levels of education; and two-thirds of that funding comes from households, often in the form of tuition fees.

Understanding that high fees may prevent eligible students from enrolling in tertiary education, many governments allow for some differentiation in tuition fees. For example, tuition fees may be higher for students attending private institutions or for foreign students, or lower for students in short-cycle tertiary programmes. To support students, many countries also offer scholarships, grants and public or state-guaranteed loans, often with advantageous conditions, to help students cope with the direct and indirect costs of education. Over the past decade, most countries saw an increase in the number of tertiary students taking public or state-guaranteed loans – and graduating with both a diploma and a debt.

Gender imbalances persist in education and beyond.

The reversal of the gender gap in tertiary education – more women than men are now tertiary graduates – has been well-documented in recent years. But women are still less likely to enter and graduate from more advanced levels of tertiary education, such as doctoral or equivalent programmes.

The gender divide in education is also reflected in students' field of study. Women remain under-represented in certain fields, such as science and engineering, and over-represented in others, such as education and health. In 2014 there were, on average, three times more men than women who graduated with a degree in engineering and four times more women than men who graduated with a degree in the field of education.

Gender imbalances in fields of study are mirrored in the labour market – and ultimately in earnings. Graduates in the field of engineering, for example, earn about 10% more than other tertiary-educated adults, on average, while graduates from teacher training and education science earn about 15% less.

There is also a gender divide within the teaching profession itself. The percentage of female teachers shrinks – but teachers' salaries tend to increase – with each successive level of education. Women are also less likely to become school principals, even though principals are often recruited from the ranks of teachers.

Immigrants are less likely to participate at all levels of education.

Education systems play a critical role in integrating immigrants into their new communities – and into the host country's labour market. For example, immigrant students who reported that they had attended pre-primary education programmes score 49 points higher on the OECD Programme for International Student Assessment (PISA) reading test than immigrant students who reported that they had not participated in such programmes. This difference corresponds to roughly one year of education. In most countries, however, participation in pre-primary programmes among immigrant students is considerably lower than it is among students without an immigrant background.

In many countries immigrants lag behind their native-born peers in educational attainment. For example, the share of adults who have not completed upper secondary education is larger among those with an immigrant background.

On average, 37% of 25-44 year-olds with an immigrant background – but only 27% of 25-44 year-olds without an immigrant background – whose parents have not attained upper secondary education have not completed upper secondary education themselves. Evidence also shows that native-born students are more likely to complete bachelor's or equivalent tertiary programmes than students with an immigrant background.

Other findings

Enrollment in early childhood education has been rising: between 2005 and 2014, enrolment of 3-year-olds in pre-primary education rose from 54% to 69% and enrolment of 4-year-olds rose from 73% to 85%, on average across countries with data for both years.

Across OECD countries, the unemployment rate is lower (9.2%) among those with vocational upper secondary education as their highest level of attainment than among those with general upper secondary as their highest level of attainment (10.0%).

Between 2005 and 2014, the enrolment rate of 20-24 year-olds in tertiary education increased from 29% to 33%, on average across OECD countries. Given that an average of 36% of today's young adults across OECD countries is expected to graduate from tertiary education at least once before the age of 30, tertiary attainment is likely to continue rising.

Students often take longer to complete a tertiary programme than theoretically envisaged. Some 41% of full-time students who enter a bachelor's or equivalent programme graduate within the programme's theoretical duration, while 69% graduate within the theoretical duration plus three years, on average across countries with individual student data.

The teaching force is ageing as the profession fails to attract younger adults. The share of secondary teachers aged 50 or older grew between 2005 and 2014 in 16 of the 24 OECD countries with available data. In Italy and Portugal, fewer than 3% of primary teachers are younger than 30.

Principals have a crucial influence on the school environment and teachers' working conditions. On average across countries with available data, over 60% of principals report frequently taking action to support co-operation among teachers to develop new teaching practices, to ensure that teachers take responsibility for improving their teaching skills, and to help them feel responsible for their students' learning outcomes.

Despite the economic downturn in 2008, expenditure per student at all levels of education has been increasing, on average across OECD countries. Between 2008 and 2013, real expenditure per student increased by 7% in primary to post-secondary non-tertiary education and by 6% in tertiary education. However, the financial crisis did have a direct impact on teachers' salaries: on average across OECD countries, salaries were either frozen or cut between 2009 and 2013. They have since begun to rise.

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Chapter

A

The Output of Educational Institutions and the Impact of Learning

Indicator A1 To what level have adults studied?
StatLink http://dx.doi.org/10.1787/888933396517

Indicator A2 How many students are expected to complete upper secondary education?
StatLink http://dx.doi.org/10.1787/888933396628

Indicator A3 How many young people are expected to complete tertiary education and what is their profile?
StatLink http://dx.doi.org/10.1787/888933396730

Indicator A4 To what extent does parents' background influence educational attainment?
StatLink http://dx.doi.org/10.1787/888933396841

Indicator A5 How does educational attainment affect participation in the labour market?
StatLink http://dx.doi.org/10.1787/888933396955

Indicator A6 What are the earnings advantages from education?
StatLink http://dx.doi.org/10.1787/888933397112

Indicator A7 What are the financial incentives to invest in education?
StatLink http://dx.doi.org/10.1787/888933397224

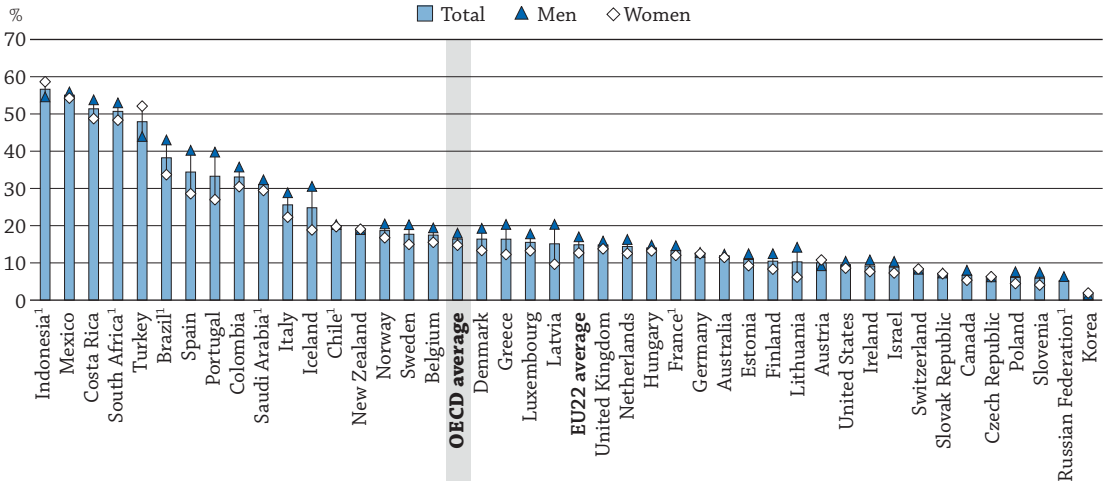
Indicator A8 How are social outcomes related to education?
StatLink http://dx.doi.org/10.1787/888933397355

Indicator A9 How many students complete tertiary education?
StatLink http://dx.doi.org/10.1787/888933397448

TO WHAT LEVEL HAVE ADULTS STUDIED?

- Over recent decades, the share of adults who have not completed upper secondary education has decreased in the majority of OECD and partner countries. On average, about one in five 25-34 year-olds are still without upper secondary qualifications. A number of countries, including Costa Rica, Indonesia, Mexico and South Africa are still lagging behind. In these countries, more than 50% of young adults are without upper secondary qualifications.
- Upper secondary or post-secondary non-tertiary education continues to be the highest educational attainment for the largest share of 25-64 year-olds across countries, but it no longer represents the largest share among 25-34 year-olds in about half of OECD countries. The largest share has shifted from upper secondary or post-secondary non-tertiary education to tertiary education.
- Among adults with upper secondary education or post-secondary non-tertiary education as the highest educational attainment, a larger share completed vocational programmes than general programmes.

Figure A1.1. Percentage of 25-34 year-old adults with below upper secondary education, by gender (2015)



1. Reference year differs from 2015. Refer to the source table for more details.

Countries are ranked in descending order of the percentage of 25-34 year-olds with attainment below upper secondary education.

Source: OECD. Table A1.3, and "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396573

Context

Giving all people a fair chance to obtain a quality education is a fundamental part of the social contract. It is critically important to address inequalities in education opportunities in order to improve social mobility and socio-economic outcomes, and to promote inclusive growth through a broadened pool of candidates for high-skilled jobs.

Educational attainment, measured as the percentage of a population that has reached a certain level of education and holds a qualification at that level, is frequently used as a proxy measure of human capital and the level of an individual's skills – in other words, a measure of the skills associated with a given level of education and available in the population and to the labour force. In this sense, qualifications certify and offer information on the type of knowledge and skills that graduates have acquired in formal schooling.

Higher levels of educational attainment are associated with several positive individual, economic and social outcomes (see Indicators A5, A6, A7 and A8). Individuals with high educational attainment generally have better health, are more socially engaged, and have higher employment rates and higher relative earnings. Higher proficiency in literacy and numeracy is also strongly associated with higher levels of formal education (OECD, 2016a).

Individuals thus have incentives to pursue more education, and governments have incentives to provide appropriate infrastructure and organisation to support the expansion of higher educational attainment across the population. Over past decades, almost all OECD countries have seen significant increases in educational attainment, especially among young and particularly among women.

Other findings

- In the majority of OECD and partner countries, the share of people with below upper secondary education is higher among young men than young women. On average across OECD countries, 47% of young men aged 25-34 years old have upper secondary or post-secondary non-tertiary education as their highest attainment, while the share is lower among young women (38%).
- Over recent decades, the expansion in tertiary education has been considerable, and people with tertiary education represent the largest share of 25-34 year-olds in many OECD countries. On average across OECD countries, the tertiary-educated account for 35% among 25-64 year-olds and 42% among 25-34 year-olds.
- In most countries, those with bachelor's or equivalent degree account for the largest share of tertiary-educated adults. Among 25-64 year-olds, women are represented more than men at all levels of tertiary education except for doctoral or equivalent degrees.
- Across OECD countries and subnational entities that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), a larger share of tertiary-educated women studied in the field of teacher training and education science, and the field of health and welfare, while a larger share of tertiary-educated men studied in the field of engineering, manufacturing and construction, and the field of science, mathematics and computing.

Note

Several indicators in this publication show the level of education among individuals. Indicator A1 shows the level of attainment (i.e. the percentage of a population that has successfully completed a given level of education). Graduation rates (see Indicators A2 and A3) measure the estimated percentage of younger adults who are expected to graduate from a particular level of education during their lifetimes. Completion rates at tertiary level (see Indicator A9) estimate the proportion of students who enter a programme and complete it successfully within a certain period of time (see *Note* in Indicator A9).

A1

Analysis

Attainment levels

Below upper secondary

Over recent decades, the share of adults with below upper secondary education decreased in the majority of OECD and partner countries, as access to higher education expanded. Based on the data available for 2015, the proportion of people with below upper secondary education is lower among 25-34 year-olds than among 55-64 year-olds, suggesting the expansion of education. These differences across generations are pronounced in Chile, Colombia, Korea, Portugal and Saudi Arabia. In these countries, the difference between younger and older age groups in the share of adults without upper secondary education is over 35 percentage points, and in Korea and Portugal, it exceeds 40 percentage points. Although this trend is less pronounced elsewhere, it is observed in almost all countries, except Estonia, Latvia and Lithuania, where upper secondary education was compulsory in the 1970s and 1980s (Table A1.3).

Despite this progress, several countries are still lagging behind and have a high proportion of young adults without upper secondary education. While the share of young adults without upper secondary education is lower than 7% among 25-34 year-olds in Canada, the Czech Republic, Korea, Poland, Slovenia and the Russian Federation, it is over 50% in Costa Rica, Indonesia, Mexico and South Africa (Figure A1.1, Table A1.3 and OECD, 2016b). In Spain, the share of young adults without upper secondary qualifications has decreased in recent years after the implementation of several reforms and programmes with a policy target of reducing dropout to 15% by 2020 (OECD, 2015). In many countries, an important share of low-educated young adults have a disadvantaged background, including low-educated parents (see Indicator A4), suggesting the importance of assuring equity in access to higher education through targeted support for the disadvantaged population (OECD, 2013).

In the majority of OECD and partner countries, the share of people with below upper secondary education is higher among young men than young women. Although the difference is generally small (3 percentage points on average across OECD countries), in Iceland, Latvia, Portugal and Spain, it is over 10 percentage points. In these countries, a larger share of young women than young men attained tertiary education, while the share of upper secondary or post-secondary non-tertiary is generally about the same for young men and young women (except in Latvia). However, the situation is the opposite in countries such as Indonesia and Turkey, where the share of people with below upper secondary education is higher among young women (Figure A1.1, Table A1.3 and OECD, 2016b).

This general trend across OECD countries of a lower share of young women than young men with below upper secondary education is encouraged by women's empowerment over the past few decades. Among 55-64 year-olds, higher shares of women are without upper secondary qualifications in the majority of OECD and partner countries, compared to women aged between 25 and 34 (OECD, 2016b). Hence, in recent decades, a decrease in the share of those with below upper secondary education has generally been achieved more quickly among women than among men across countries.

Across OECD countries and subnational entities that participated in the Survey of Adult Skills, literacy and numeracy proficiency levels of adults with below upper secondary education are found to be lower than among those with higher levels of education. It also holds true for skills and readiness to use information and communication technologies for problem solving (Tables A.1.6 [L], A1.6 [N] and A1.6 [P], available on line). For example, the share of those with high literacy proficiency levels is low on average (2%) among those with below upper secondary education. But it is 7% among those with upper secondary education and as high as 21% among the tertiary-educated (Figure A1.2 and Table A1.6 [L], available on line). Participation in adult learning opportunities is known to be associated with higher levels of proficiency (see Indicator C6), and better access to these opportunities could support low-educated adults in further developing skills such as literacy and numeracy.

Upper secondary or post-secondary non-tertiary

Although upper secondary or post-secondary non-tertiary education continues to be the highest educational attainment for the largest share of 25-64 year-olds across countries, it no longer represents the largest share among 25-34 year-olds in about half of OECD countries. On average across OECD countries, the share of people with upper secondary or post-secondary non-tertiary education among 25-34 year-olds is 42%. While it is as low as 18% in China and 20% in Costa Rica, it is as high as over 60% in the Czech Republic and the Slovak Republic (Figure A1.3 and Table A1.4). In many OECD countries, the largest share of 25-34 year-olds has shifted from this level to tertiary.

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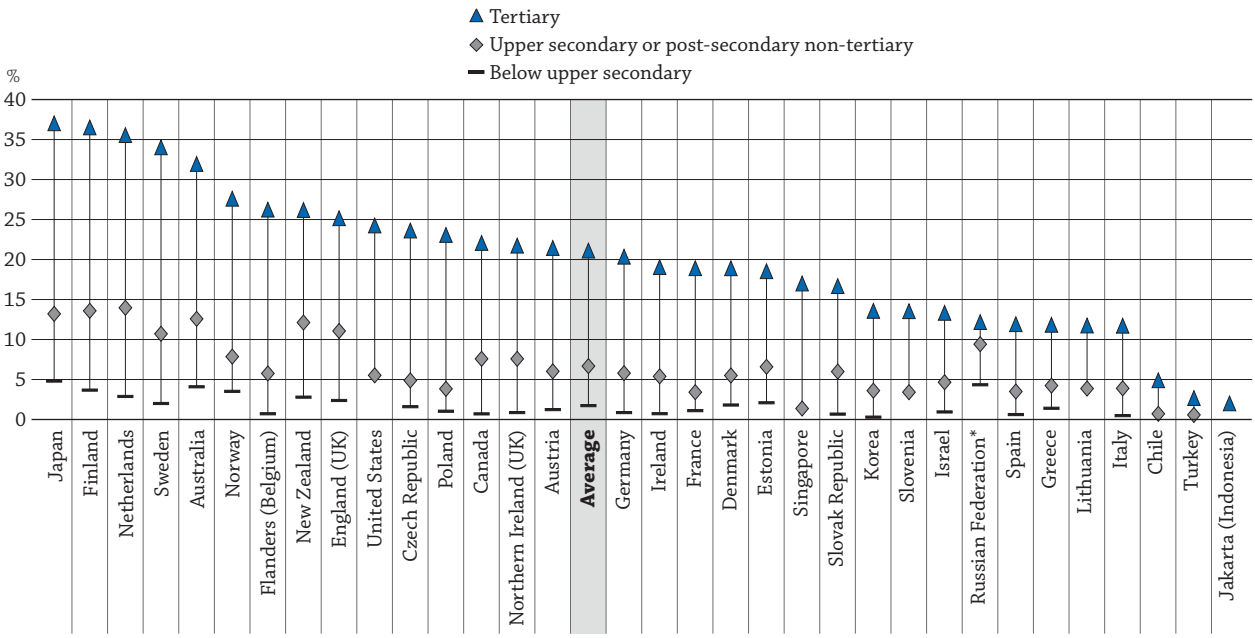
Figure A1.2. Percentage of adults scoring at literacy proficiency Level 4 or 5, by educational attainment (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

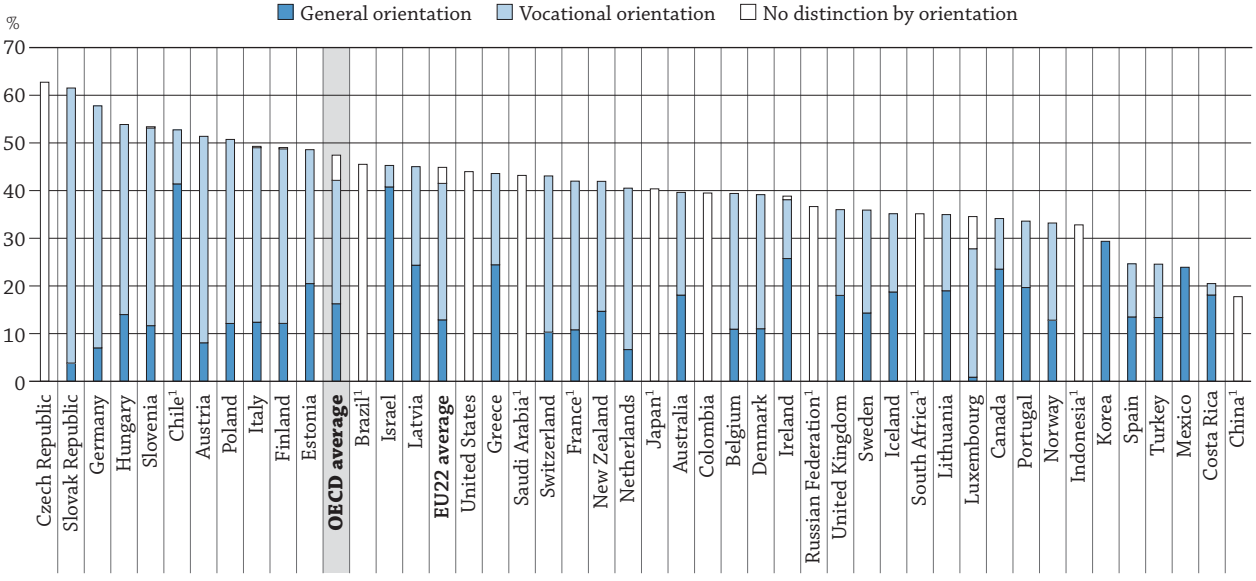
* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-64 year-olds with tertiary education and literacy proficiency Level 4 or 5.

Source: OECD. Table A1.6 (L) available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396586

Figure A1.3. Percentage of 25-34 year-olds whose highest level of education is upper secondary or post-secondary non-tertiary, by programme orientation (2015)



1. Reference year differs from 2015. Refer to the source table for more details.

Countries are ranked in descending order of the percentage of 25-34 year-olds with upper secondary or post-secondary non-tertiary education as highest level of attainment, regardless of the orientation of the programmes.

Source: OECD. Table A1.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396593

Within upper secondary education or post-secondary non-tertiary education, more adults completed vocational programmes than general programmes as their highest educational attainment across countries. On average across OECD countries, 26% of 25-34 year-olds completed a vocational programme designed to prepare people for work (see Indicator A2) as the highest educational attainment. But a lower share of young adults (17% on average across OECD countries) completed a general programme as the highest education level, because these programmes are usually designed to prepare students for further education, and those who acquire this qualification often continue to pursue tertiary education (Figure A1.3 and Table A1.4). Labour market outcomes, such as employment and unemployment rates, are generally better among young adults with vocational education than those with general education (see Indicator A5).

But the importance of vocational programmes differs across countries. While the share of 25-34 year-olds with vocational programmes is as low as 2% in Costa Rica, followed by 5% in Israel, elsewhere it is much more significant: 58% in the Slovak Republic, followed by 51% in Germany and 43% in Austria (Figure A1.3 and Table A1.4).

A gender difference is also observed among 25-34 year-olds with upper secondary or post-secondary non-tertiary education. Across OECD countries, on average, 47% of young men have this level of education as the highest attainment, while the share is lower among young women (38%). This is related to the fact that although a larger share of young men than young women are without upper secondary qualifications, generally, more young women have tertiary education than young men. The share of young men with vocationally oriented upper secondary or post-secondary non-tertiary education is higher (30%) than that of young women (23%), but the share of young men and women who completed general programmes is about the same (17% versus 16%) (OECD, 2016b).

Tertiary

Over recent decades, the expansion in tertiary education has been significant, and people with tertiary education account for the largest share of 25-34 year-olds in many OECD countries. On average across OECD countries, 35% of 25-64 year-olds are tertiary educated. As a result of the expansion in tertiary education, the share of 25-34 year-olds with tertiary education is 42% across OECD countries, much higher than the share of 55-64 year-olds (26%) (Table A1.2). Among 25-64 year-olds, the tertiary-educated account for the largest share in some countries, including Australia, Canada, Ireland, Israel, Luxembourg and the United Kingdom, but among 25-34 year-olds, the tertiary-educated represent the largest share in about half of OECD countries (Figure A1.4, and Tables A1.1 and A1.3).

However, there are still notable variations across countries. Although the proportion of 25-64 year-olds with tertiary education is about 50% in Canada, Israel, Japan and the Russian Federation, it is below 10% in China and Indonesia, where the dominant share of adults have below upper secondary education. Cross-country variations are even larger among 25-34 year-olds, ranging from 69% in Korea and 60% in Japan to less than 15% in Indonesia and South Africa (Figure A1.4, and Tables A1.1 and A1.3). The share of adults with tertiary education varies not only among countries, but also regionally within countries (OECD/NCES, 2015).

Reflecting different developments in tertiary education systems, the share of adults with specific tertiary degree varies substantially across countries. Although short-cycle tertiary education represents less than 10% of the attainment of adults across OECD countries, the share is as high as 26% in Canada. The proportion of adults with bachelor's or equivalent degree varies from 3% in Austria, China and the Slovak Republic to about 25% in Australia, Greece and New Zealand. Cross-country variations in the share of people with master's or equivalent degree range from a low of 1% in Chile and Mexico, and 2% in Greece and Turkey to a high of 20% or more in Estonia and Poland (Figure A1.4 and Table A1.1). Among 25-64 year-olds, women are represented more than men at all levels of tertiary education except for doctoral or equivalent degree (OECD, 2016b), and this trend is also observed among first-time graduates (see Indicator A3).

In most OECD and partner countries those with bachelor's or equivalent degree account for the largest share of tertiary-educated adults. But in some countries, such as Austria, Canada, China and France, people with short-cycle tertiary degree represent the largest share of tertiary-educated 25-64 year-olds, while those with master's or equivalent degree account for the largest share in the Czech Republic, Estonia, Italy, Luxembourg, Poland, Portugal, the Slovak Republic, Slovenia and Spain (Figure A1.4 and Table A1.1).

Across OECD countries and subnational entities that participated in the Survey of Adults Skills, the most studied fields of education are social sciences, business and law (27%); engineering, manufacturing and construction (18%); teacher training and education science (13%); health and welfare (12%); and science, mathematics and computing (11%).

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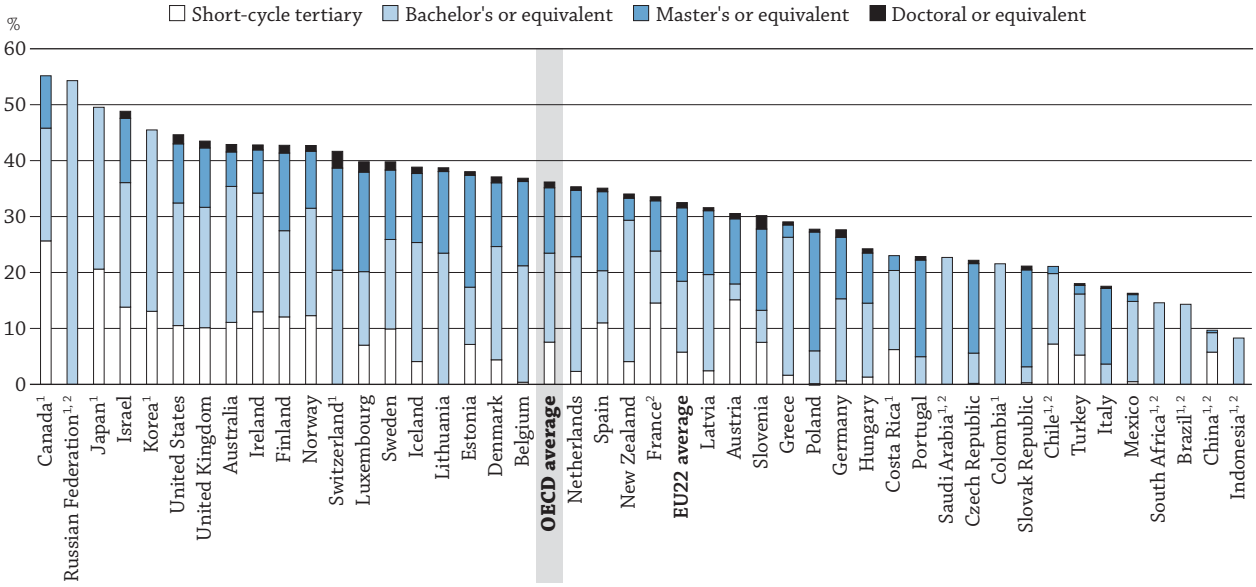
Figure A1.4. Percentage of 25-64 year-olds with tertiary education, by level of tertiary education (2015)



1. Some levels of education are included in others. Refer to the source table for more details.
2. Reference year differs from 2015. Refer to the source table for more details.

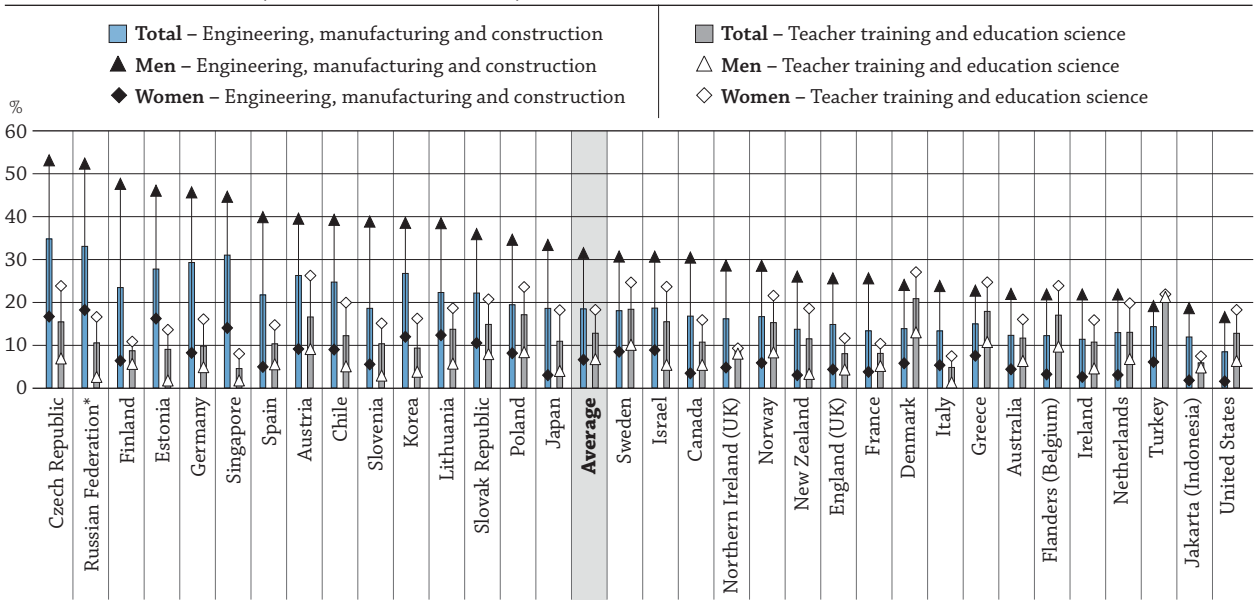
Countries are ranked in descending order of the percentage of 25-64 year-olds with tertiary education, regardless of the level of tertiary attainment.

Source: OECD. Table A1.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396600

Figure A1.5. Field of education studied among tertiary-educated adults, by gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students, selected fields of education



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of tertiary-educated men who studied engineering, manufacturing and construction.

Source: OECD. Table A1.5. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396618

But there is a clear gender difference in some of the fields of education studied. A larger share of women with tertiary education studied teacher training and education science, and health and welfare across countries, while a larger share of men with tertiary education studied engineering manufacturing and construction, and science, mathematics and computing. For example, across OECD countries and subnational entities, the share of tertiary-educated men who studied engineering, manufacturing and construction is 31%, while the share of women is 7%. For teacher training and education science, the share among tertiary-educated women is 18%, while it is only 7% among tertiary-educated men (Figure A1.5 and Table A1.5). This gender difference in tertiary education continues among current students (see Indicator A3) and seems to be associated with gender differences in labour market outcomes (see Indicators A5 and A6).

Definitions

Age groups: adults refers to 25-64 year-olds; **younger adults** refers to 25-34 year-olds; **older adults** refers to 55-64 year-olds.

Completion of intermediate programmes for educational attainment (ISCED 2011) corresponds to recognised qualification from an ISCED 2011 level programme which is not considered as sufficient for ISCED 2011 level completion and is classified at a lower ISCED 2011 level. In addition, this recognised qualification does not give direct access to an upper ISCED 2011 level programme.

Levels of education: In this indicator, two ISCED (International Standard Classification of Education) classifications are used: ISCED 2011 and ISCED-97.

ISCED 2011 is used for all the analyses that are not based on the Survey of Adult Skills. For ISCED 2011, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2, and includes recognised qualifications from ISCED 2011 level 3 programmes, which are not considered as sufficient for ISCED 2011 level 3 completion, and without direct access to post-secondary non-tertiary education or tertiary education; **upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4; and **tertiary** corresponds to ISCED 2011 levels 5, 6, 7 and 8 (UNESCO Institute for Statistics, 2012)

ISCED-97 is used for all analyses based on the Survey of Adult Skills. For ISCED-97, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes, and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

See the section *About the new ISCED 2011 classification*, at the beginning of this publication, for a presentation of all ISCED 2011 levels and Annex 3 for a presentation of all ISCED-97 levels.

Literacy is the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential. Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts. It does not, however, involve the production of text (writing). Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.

Numeracy is the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life. To this end, numeracy involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways.

Problem solving in technology-rich environments is the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks. The assessment focuses on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals and plans, and accessing and making use of information through computers and computer networks.

Proficiency levels for literacy and numeracy are based on a 500-point scale. Each level has been defined by particular score-point ranges. Six levels are defined for literacy and numeracy (Below Level 1 and Levels 1 through 5), which are grouped in four proficiency levels in *Education at a Glance*: Level 1 or below – all scores below 226 points; Level 2 – scores from 226 points to less than 276 points; Level 3 – scores from 276 points to less than 326 points; Level 4 or 5 – scores from 326 points and higher.

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Skills and readiness to use information and communication technologies (ICT) for problem solving in technology-rich environments are categorised into skill groups. Each group is described in terms of the characteristics of the types of tasks that can be successfully completed by adults, and the related scores in the assessment of problem solving in technology-rich environments in the Survey of Adult Skills.

- group 0 (no computer experience)
- group 1 (refused the computer-based assessment)
- group 2 (failed ICT core stage 1 or minimal problem-solving skills – scored below Level 1 in the problem solving in technology-rich environments assessment)
- group 3 (moderate ICT and problem-solving skills – scored at Level 1 in the problem solving in technology-rich environments assessment)
- group 4 (good ICT and problem-solving skills – scored at Level 2 or Level 3 in the problem solving in technology-rich environments assessment)

Vocational programmes: The International Standard Classification of Education (ISCED 2011) defines vocational programmes as "education programmes that are designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades. Such programmes may have work-based components (e.g. apprenticeships and dual-system education programmes). Successful completion of such programmes leads to labour market-relevant, vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market" (UNESCO Institute for Statistics, 2012).

Methodology

Data on population and educational attainment for most countries are taken from OECD and Eurostat databases, which are compiled from National Labour Force Surveys by the OECD LSO (Labour Market and Social Outcomes of Learning) Network. Data on educational attainment for Indonesia, Saudi Arabia and South Africa are taken from the ILO database and data for China from the UNESCO Institute of Statistics (UIS) database. Data on proficiency levels and fields of education are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). See Annex 3 for additional information (www.oecd.org/education/education-at-a-glance-19991487.htm).

Attainment profiles are based on the percentage of the population in a specific age group that has 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. Where countries have been able to demonstrate equivalencies in the labour market value of attainment formally classified as "completion of intermediate upper secondary programmes" (e.g. achieving five good GCSEs or equivalent in the United Kingdom) and "full upper secondary attainment", attainment of these programmes are reported as ISCED 2011 level 3 completion in the tables showing three aggregate levels of educational attainment (UNESCO Institute for Statistics, 2012).

Most OECD countries include people without education (i.e. illiterate adults or people whose educational attainment does not fit national classifications) under the international classification ISCED 2011 level 0; therefore averages for the category "less than primary educational attainment" are likely to be influenced.

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator A1 Tables

StatLink http://dx.doi.org/10.1787/888933396517

	Table A1.1	Educational attainment of 25-64 year-olds (2015)
	Table A1.2	Percentage of adults who have attained tertiary education, by type of programme and age group (2015)
	Table A1.3	Trends in educational attainment, by age group (2005 and 2015)
	Table A1.4	Educational attainment of 25-34 year-olds, by programme orientation and age group (2015)
	Table A1.5	Field of education studied among tertiary-educated adults, by gender (2012 or 2015)
WEB	Table A1.6 (L)	Distribution of literacy proficiency levels, by educational attainment and gender (2012 or 2015)
WEB	Table A1.6 (N)	Distribution of numeracy proficiency levels, by educational attainment and gender (2012 or 2015)
WEB	Table A1.6 (P)	Distribution of skills and readiness to use information and communication technologies for problem solving, by educational attainment and gender (2012 or 2015)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table A1.1. Educational attainment of 25-64 year-olds (2015)

Percentage of adults 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	Upper secondary	Post-secondary non-tertiary	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	All levels of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	0	5	a	16	a	31	5	11	24	6	1	100
	Austria	x(2)	1[d]	a	14	a	52	3	15	3	12	1	100
	Belgium	3	6	a	16	a	36	1	0	21	15	1	100
	Canada	x(2)	2[d]	a	7	a	24	11	26	20	9[d]	x(10)	100
	Chile[1]	9	6	a	23	a	40	a	7	13	1[d]	x(10)	100
	Czech Republic	0	0	a	7	a	71[d]	x(6)	0	5	16	1	100
	Denmark	x(2)	4[d]	a	16	a	43	0	4	20	11	1	100
	Estonia	0	1	a	8	a	44	9	7	10	20	1	100
	Finland	x(2)	4[d]	a	9	a	43	1	12	15	14	1	100
	France[2]	2	7	a	14	a	44	0	15	9	9	1	100
	Germany	x(2)	3[d]	a	10	a	48	11	1	15	11	1	100
	Greece	1	15	0	13	0	32	9	2	25	2	1	100
	Hungary	0	1	a	15	a	51	8	1	13	9	1	100
	Iceland	x(2)	1[d]	a	25	a	33	3	4	21	12	1	100
	Ireland	0	7	a	12	a	24	13	13	21	8	1	100
	Israel	2	4	a	8	a	37	a	14	22	11	1	100
	Italy	1	6	a	33	a	42	1	0	4	14	0	100
	Japan	x(6)	x(6)	a	x(6)	a	50[d]	x(8)	21[d]	29[d]	x(9)	x(9)	100
	Korea	x(2)	6[d]	a	8	a	40	a	13	32[d]	x(9)	x(9)	100
	Latvia	0	0	a	9	2	49	7	2	17	11	1	100
	Luxembourg	0	10	a	15	a	32	2	7	13	18	2	100
	Mexico	15	18	3	26	3	19	a	0	14	1	0	100
	Netherlands	1	6	a	16	a	41	0	2	21	12	1	100
	New Zealand	x(4)	x(4)	a	25[d]	a	27	14	4	25	4	1	100
	Norway	0	0	a	17	a	38	2	12	19	10	1	100
	Poland	0	8	a	1	a	60	3	0	6	21	1	100
	Portugal	3	32	a	21	a	22	1	a	5	17	1	100
	Slovak Republic	0	0	m	8	0	69	1	0	3	17	1	100
	Slovenia	0	1	a	12	a	57	a	8	6	15	2	100
	Spain	3	9	a	31	a	22	0	11	9	14	1	100
	Sweden	x(2)	3[d]	a	13	2	35	7	10	16	12	1	100
	Switzerland	0	2	a	10	a	46[d]	x(6)	x(9, 10, 11)	20[d]	18[d]	3[d]	100
	Turkey	5	45	a	13	a	19	a	5	11	2	0	100
	United Kingdom	0	0	a	21	17	18	a	10	22	11	1	100
	United States	1	3	a	7	a	45[d]	x(6)	11	22	11	2	100
	OECD average	2	7	m	15	m	40	5	8	16	11	1	100
	EU22 average	1	6	m	14	m	42	4	6	13	13	1	100
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	17	20	a	15[d]	a	33[d]	x(6)	x(9)	14[d]	x(9)	x(9)	100
	China[3]	3	25	a	47	a	15[d]	x(6)	6	3	0[d]	x(10)	100
	Colombia	x(4)	x(4)	a	44[d]	5	29[d]	x(6)	x(9)	22[d]	x(9)	x(9)	100
	Costa Rica	13	29	8	7	2	16	1	6	14	3[d]	x(10)	100
	India	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	5	45	a	18	a	24	1	x(9)	8[d]	x(9)	x(9)	100
	Lithuania	0	0	a	6	2	33	20	a	23	15	1	100
	Russian Federation[1]	x(4)	x(4)	a	5[d]	a	40[d]	x(6)	x(9)	54[d]	x(9)	x(9)	100
	Saudi Arabia[2]	3	24	a	19	a	26	6	x(9)	23[d]	x(9)	x(9)	100
	South Africa[2]	15	5	a	38	a	m	28	x(9)	15[d]	x(9)	x(9)	100
	G20 average	6	14	m	19	m	32	m	10	19	m	m	100

Note: In most countries data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.
2. Year of reference 2014.
3. Year of reference 2010.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. China: UNESCO Institute for Statistics. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933396529

A1

Table A1.2. Percentage of adults who have attained tertiary education, by type of programme and age group (2015)

		Short-cycle tertiary			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent			Total tertiary			
		25-64 year-olds	25-34 year-olds	55-64 year-olds	25-64 year-olds	25-34 year-olds	55-64 year-olds	25-64 year-olds	25-34 year-olds	55-64 year-olds	25-64 year-olds	25-34 year-olds	55-64 year-olds	25-64 year-olds	25-34 year-olds	55-64 year-olds	25-64 year-olds (in thousands)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia	11	10	11	24	30	17	6	8	4	1	1	1	43	48	34	5 233
	Austria	15	16	13	3	7	1	12	14	8	1	1	1	31	39	22	1 450
	Belgium	0	0	0	21	23	16	15	19	10	1	1	0	37	43	27	2 198
	Canada	26	25	23	20	25	15	9[d]	9[d]	8[d]	x(7)	x(8)	x(9)	55	59	46	10 675
	Chile[1]	7	9	4	13	18	9	1[d]	1[d]	1[d]	x(7)	x(8)	x(9)	21	27	14	1 815
	Czech Republic	0	0	0	5	11	2	16	19	12	1	1	1	22	31	14	1 322
	Denmark	4	4	4	20	24	18	11	16	7	1	1	0	37	44	29	1 063
	Estonia	7	1	12	10	23	1	20	15	22	1	1	0	38	41	35	273
	Finland	12	0	18	15	26	8	14	14	9	1	0	1	43	41	36	1 215
	France[2]	15	17	10	9	12	6	9	15	5	1	1	1	34	45	22	10 880
	Germany	1	0	1	15	15	14	11	13	10	1	1	1	28	30	26	12 293
	Greece	2	1	2	25	35	17	2	3	1	1	0	0	29	40	20	1 718
	Hungary	1	3	0	13	16	10	9	12	6	1	1	1	24	32	17	1 317
	Iceland	4	3	5	21	25	14	12	11	8	1	c	2	39	40	29	64
	Ireland	13	12	10	21	29	12	8	10	4	1	1	1	43	52	27	1 028
	Israel	14	11	16	22	27	16	11	7	13	1	0	2	49	46	47	1 866
	Italy	0	0	m	4	10	1	14	15	11	0	0	0	18	25	12	5 807
	Japan[3]	21[d]	20[d]	15[d]	29[d]	39[d]	23[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	50[d]	60[d]	38[d]	31.340[d]
	Korea	13	22	4	32[d]	47[d]	15[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	45	69	18	13 718
	Latvia	2	5	1	17	23	12	11	11	12	1	1	1	32	40	25	339
	Luxembourg	7	6	6	13	17	9	18	26	9	2	1	2	40	50	26	120
	Mexico	0	1	0	14	19	10	1	1	2	0	0	0	16	21	12	9 354
	Netherlands	2	1	2	21	27	16	12	16	8	1	1	1	35	45	27	3 103
	New Zealand	4	3	5	25	32	18	4	4	4	1	0	1	34	39	27	788
	Norway	12	14	10	19	21	16	10	13	6	1	0	1	43	48	33	1 168
	Poland	0	0	0	6	12	2	21	31	10	1	0	0	28	43	14	5810
	Portugal	a	a	a	5	12	3	17	21	10	1	0	1	23	33	13	1 289
	Slovak Republic	0	0	0	3	6	1	17	24	12	1	1	1	21	31	13	672
	Slovenia	8	7	8	6	10	2	15	22	8	2	2	1	30	41	19	356
	Spain	11	13	6	9	11	7	14	17	9	1	0	1	35	41	23	9 180
	Sweden	10	11	10	16	22	10	12	13	8	1	1	1	40	46	30	1 972
	Switzerland	x(4, 7, 10)	x(5, 8, 11)	x(6, 9, 12)	20[d]	26[d]	15[d]	18[d]	21[d]	14[d]	3[d]	2[d]	3[d]	42	49	32	1 908
	Turkey	5	8	4	11	17	5	2	2	1	0	0	0	18	28	10	6 586
	United Kingdom	10	8	11	22	28	15	11	13	8	1	1	1	43	49	35	14 595
	United States	11	10	11	22	25	19	11	10	11	2	1	2	45	47	41	74 147
	OECD average	8	8	7	16	21	11	11	14	8	1	1	1	35	42	26	6 762
	EU22 average	6	5	6	13	18	8	13	16	9	1	1	1	32	40	23	3 545
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	x(4)	x(5)	x(6)	14[d]	16[d]	11[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	14	16	11	15 284
	China[4]	6	10	3	3	7	1	0[d]	1[d]	0[d]	x(7)	x(8)	x(9)	10	18	4	74 086
	Colombia	x(4)	x(5)	x(6)	22[d]	27[d]	15[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	22	27	15	4 819
	Costa Rica	6	10	5	14	17	11	3[d]	1[d]	4[d]	x(7)	x(8)	x(9)	23	28	20	558
	India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	x(4)	x(5)	x(6)	8[d]	11[d]	4[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	8	11	4	10 260
	Lithuania	a	a	a	23	37	14	15	17	15	1	1	0	39	55	30	606
	Russian Federation[1]	x(4)	x(5)	x(6)	54[d]	58[d]	50[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	54	58	50	45 262
	Saudi Arabia[2]	x(4)	x(5)	x(6)	23[d]	26[d]	15[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	23	26	15	3.576
	South Africa[2]	x(4)	x(5)	x(6)	15[d]	14[d]	12[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)	15	14	12	3.632
	G20 average	10	11	m	19	23	14	m	m	m	m	m	m	30	37	23	20 396

Notes: In most countries, the data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.
2. Year of reference 2014.
3. Data for short-cycle tertiary education and total tertiary education include post-secondary non-tertiary programmes (less than 5% of the adults are under this group).
4. Year of reference 2010.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. China: UNESCO Institute for Statistics. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A1.3. Trends in educational attainment, by age group (2005 and 2015)

		Below upper secondary						Upper secondary or post-secondary non-tertiary						Tertiary					
		25-64 year-olds		25-34 year-olds		55-64 year-olds		25-64 year-olds		25-34 year-olds		55-64 year-olds		25-64 year-olds		25-34 year-olds		55-64 year-olds	
		2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	35[b]	21	21[b]	12	50[b]	33	33[b]	36	41[b]	40	26[b]	33	32[b]	43	38[b]	48	24[b]	34
	Austria	23	15	14	10	36	23	52	54	55	51	47	55	25	31	31	39	18	22
	Belgium	34[b]	25	19[b]	17	52[b]	39	35[b]	38	40[b]	39	26[b]	34	31[b]	37	41[b]	43	22[b]	27
	Canada	15	10	9	7	25	15	39	35	37	34	39	39	46	55	54	59	36	46
	Chile[1]	m	39	m	20	m	58	m	40	m	53	m	27	m	21	m	27	m	14
	Czech Republic	10[b]	7	6[b]	6	17[b]	12	77[b]	71	80[b]	63	73[b]	73	13[b]	22	14[b]	31	11[b]	14
	Denmark	19[b]	20	13[b]	16	25[b]	28	47[b]	43	48[b]	39	48[b]	44	34[b]	37	40[b]	44	27[b]	29
	Estonia	11	9	13	11	20	8	56	53	55	49	51	56	33	38	33	41	29	35
	Finland	21[b]	13	11[b]	10	39[b]	20	44[b]	44	52[b]	49	34[b]	43	35[b]	43	38[b]	41	27[b]	36
	France[2]	33	23	19	13	49	36	41	44	42	42	35	43	25	34	40	45	16	22
	Germany	17[b]	13	16[b]	13	21[b]	14	59[b]	59	62[b]	58	56[b]	60	25[b]	28	22[b]	30	23[b]	26
	Greece	43[b]	30	26[b]	16	68[b]	48	36[b]	41	49[b]	44	20[b]	32	21[b]	29	26[b]	40	12[b]	20
	Hungary	24[b]	17	15[b]	14	39[b]	22	59[b]	59	65[b]	54	46[b]	60	17[b]	24	20[b]	32	15[b]	17
	Iceland	32	25	29	25	42	32	39	36	36	35	38	39	29	39	35	40	20	29
	Ireland	35[b]	20	19[b]	9	60[b]	38	35[b]	37	40[b]	39	23[b]	35	29[b]	43	41[b]	52	17[b]	27
	Israel	21[b]	14	15[b]	9	32[b]	22	36[b]	37	43[b]	45	26[b]	31	43[b]	49	43[b]	46	42[b]	47
	Italy	50[b]	40	34[b]	26	70[b]	53	38[b]	42	50[b]	49	22[b]	35	12[b]	18	16[b]	25	8[b]	12
	Japan[3]	m	m	m	m	m	m	m	m	m	m	m	m	40[b]	50	53[b]	60	22[b]	38
	Korea	24	14	3	2	65	43	44	40	46	29	25	39	32	45	51	69	10	18
	Latvia	15	12	19	15	26	11	64	56	59	45	54	64	21	32	22	40	19	25
	Luxembourg	34[b]	25	23[b]	16	45[b]	33	39[b]	35	40[b]	35	37[b]	40	27[b]	40	37[b]	50	19[b]	26
	Mexico	68[b]	64	62[b]	55	84[b]	75	17[b]	19	20[b]	24	8[b]	13	15[b]	16	18[b]	21	8[b]	12
	Netherlands	28[b]	24	19[b]	14	41[b]	35	42[b]	41	46[b]	40	35[b]	38	30[b]	35	35[b]	45	24[b]	27
	New Zealand	32[b]	25	24[b]	19	44[b]	34	m	41	m	42	m	38	m	34	m	39	m	27
	Norway	23	18	17	19	27	19	45	40	43	33	49	48	33	43	41	48	24	33
	Poland	15[b]	9	8[b]	6	30[b]	15	68[b]	63	66[b]	51	58[b]	72	17[b]	28	26[b]	43	13[b]	14
	Portugal	74[b]	55	57[b]	33	87[b]	76	14[b]	22	24[b]	34	5[b]	11	13[b]	23	19[b]	33	7[b]	13
	Slovak Republic	12[b]	9	7[b]	7	23[b]	14	74[b]	70	77[b]	61	65[b]	72	14[b]	21	16[b]	31	12[b]	13
	Slovenia	20[b]	13	9[b]	6	31[b]	23	60[b]	57	67[b]	53	53[b]	58	20[b]	30	25[b]	41	16[b]	19
	Spain	51[b]	43	35[b]	34	74[b]	59	21[b]	22	24[b]	25	11[b]	18	29[b]	35	41[b]	41	14[b]	23
	Sweden	16[b]	18	9[b]	18	28[b]	25	54[b]	42	53[b]	36	47[b]	45	30[b]	40	37[b]	46	25[b]	30
	Switzerland	15[b]	12	10[b]	8	21[b]	16	56[b]	46	59[b]	43	57[b]	52	29[b]	42	31[b]	49	22[b]	32
	Turkey	72	63	63	48	84	78	18	19	24	25	8	12	10	18	13	28	8	10
	United Kingdom[4]	33[b]	21	27[b]	15	40[b]	29	37[b]	36	38[b]	36	36[b]	36	30[b]	43	35[b]	49	24[b]	35
	United States	12	10	13	10	14	10	49	45	47	44	49	48	39	45	39	47	37	41
	OECD average	29	23	21	16	43	32	45	43	48	42	38	42	27	35	32	42	20	26
	EU22 average	28	21	19	15	42	30	48	47	51	45	40	47	24	32	30	40	18	23
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	m	53	m	38	m	70	m	33	m	45	m	18	m	14	m	16	m	11
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	50	m	33	m	70	m	29	m	39	m	16	m	22	m	27	m	15
	Costa Rica	m	61	m	51	m	67	m	16	m	20	m	13	m	23	m	28	m	20
	India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	m	67	m	57	m	85	m	24	m	33	m	11	m	8	m	11	m	4
	Lithuania	12[b]	9	13[b]	10	29[b]	8	61[b]	53	50[b]	35	52[b]	63	27[b]	39	37[b]	55	19[b]	30
	Russian Federation[1]	m	5	m	5	m	8	m	40	m	37	m	43	m	54	m	58	m	50
	Saudi Arabia[2]	m	45	m	31	m	69	m	32	m	43	m	16	m	23	m	26	m	15
	South Africa[2]	m	58	m	51	m	73	m	28	m	35	m	15	m	15	m	14	m	12
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: In most countries there is a break in the series, represented by the code "b", as data for the latest year refer to ISCED 2011 while data for previous years refer to ISCED-97. For China and Korea data refer to ISCED-97 for all years. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013 instead of 2015.

2. Year of reference 2014 instead of 2015.

3. Data for short-cycle tertiary education and total tertiary education include post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

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 (18% of the adults are under this group).

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. China, South Africa (2005), Saudi Arabia (2004): UNESCO Institute for Statistics. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A1.4. Educational attainment of 25-34 year-olds, by programme orientation (2015)

		Below upper secondary	Upper secondary or post-secondary non-tertiary			Tertiary	Upper secondary or post-secondary non-tertiary: Relative percentages of the programme orientation	
			Vocational	General	No distinction		Vocational	General
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
OECD	Australia	12	22	18	a	48	54	46
	Austria	10	43	8	a	39	84	16
	Belgium	17	28	11	a	43	72	28
	Canada	7	11	24	a	59	31	69
	Chile[1]	20	11	41	a	27	21	79
	Czech Republic	6	x(4)	x(4)	63	31	m	m
	Denmark	16	28	11	a	44	72	28
	Estonia	11	28	20	a	41	58	42
	Finland	10	37	12	a	41	m	m
	France[2]	13	31	11	a	45	74	26
	Germany	13	51	7	a	30	88	12
	Greece	16	19	24	a	40	44	56
	Hungary	14	40	14	a	32	74	26
	Iceland	25	16	19	a	40	47	53
	Ireland	9	12	26	1	52	m	m
	Israel	9	5	41	a	46	10	90
	Italy	26	37	12	a	25	m	m
	Japan[3]	x(4)	x(4)	x(4)	40	60[d]	m	m
	Korea	2	x(3)	29[d]	a	69	m	m
	Latvia	15	21	24	a	40	46	54
	Luxembourg	16	27	1	7	50	m	m
	Mexico	55	x(3)	24[d]	a	21	m	m
	Netherlands	14	34	7	a	45	84	16
	New Zealand	19	27	15	a	39	65	35
	Norway	19	20	13	a	48	61	39
	Poland	6	39	12	a	43	76	24
	Portugal	33	14	20	a	33	41	59
	Slovak Republic	7	58	4	a	31	94	6
	Slovenia	6	42	12	a	41	m	m
	Spain	34	11	13	a	41	45	55
	Sweden	18	22	14	a	46	60	40
	Switzerland	8	33	10	a	49	76	24
	Turkey	48	11	13	a	28	46	54
	United Kingdom	15	18	18	a	49	50	50
	United States	10	x(4)	x(4)	44	47	m	m
	OECD average	16	26	17	4	42	59	41
	EU22 average	15	30	13	3	40	68	32
Partners	Argentina	m	m	m	m	m	m	m
	Brazil[2]	38	x(4)	x(4)	45	16	m	m
	China[4]	64	x(4)	x(4)	18	18	m	m
	Colombia	33	x(4)	x(4)	39	27	m	m
	Costa Rica	51	2	18	a	28	12	88
	India	m	m	m	m	m	m	m
	Indonesia[1]	57	x(4)	x(4)	33	11	m	m
	Lithuania	10	16	19	a	55	46	54
	Russian Federation[1]	5	x(4)	x(4)	37	58	m	m
	Saudi Arabia[2]	31	x(4)	x(4)	43	26	m	m
	South Africa[2]	51	x(4)	x(4)	35	14	m	m
	G20 average	28	m	m	17	37	m	m

Notes: In most countries, the data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.
2. Year of reference 2014.
3. Data for tertiary education include post-secondary non-tertiary programmes (less than 5% of the adults are under this group).
4. Year of reference 2010.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. China: UNESCO Institute for Statistics. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A1.5. Field of education studied among tertiary-educated adults, by gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students

	Men and women																		
	General programmes		Teacher training and education science		Humanities, languages and arts		Social sciences, business and law		Science, mathematics and computing		Engineering, manufacturing and construction		Agriculture and veterinary		Health and welfare		Services		Total
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
OECD																			
National entities																			
Australia	c	c	12	(0.8)	10	(0.8)	35	(1.2)	10	(0.9)	12	(1.0)	1	(0.2)	16	(0.9)	4	(0.5)	100
Austria	1	(0.3)	17	(1.4)	9	(1.1)	25	(1.6)	6	(0.9)	26	(1.3)	3	(0.6)	9	(0.9)	4	(0.7)	100
Canada	4	(0.3)	11	(0.5)	11	(0.5)	25	(0.8)	14	(0.5)	17	(0.7)	2	(0.2)	12	(0.5)	5	(0.4)	100
Chile	5	(1.4)	12	(1.8)	9	(1.6)	16	(2.4)	12	(1.3)	25	(1.8)	2	(0.7)	14	(1.6)	6	(1.4)	100
Czech Republic	c	c	15	(1.1)	8	(1.0)	28	(1.8)	6	(0.8)	35	(2.3)	3	(0.7)	4	(0.7)	1	(0.5)	100
Denmark	2	(0.3)	21	(0.8)	9	(0.6)	20	(1.0)	12	(0.8)	14	(0.7)	2	(0.3)	16	(0.8)	5	(0.5)	100
Estonia	0	(0.2)	9	(0.6)	7	(0.5)	30	(0.8)	6	(0.4)	28	(0.9)	5	(0.4)	7	(0.5)	8	(0.5)	100
Finland	0	(0.1)	9	(0.6)	7	(0.6)	30	(1.1)	5	(0.5)	23	(0.9)	3	(0.4)	19	(0.9)	4	(0.5)	100
France	6	(0.6)	8	(0.6)	9	(0.6)	25	(0.9)	15	(0.7)	13	(0.7)	3	(0.3)	14	(0.7)	7	(0.5)	100
Germany	1	(0.2)	10	(0.7)	7	(0.7)	23	(1.2)	8	(0.9)	29	(1.2)	2	(0.4)	15	(0.9)	4	(0.5)	100
Greece	1	(0.3)	18	(1.4)	6	(0.9)	25	(1.4)	13	(1.4)	15	(1.3)	5	(0.8)	11	(1.0)	5	(0.8)	100
Ireland	4	(0.5)	11	(0.8)	10	(0.9)	27	(1.0)	16	(1.0)	11	(0.8)	2	(0.4)	13	(0.9)	5	(0.6)	100
Israel	4	(0.4)	15	(0.7)	8	(0.7)	29	(1.0)	12	(0.8)	19	(1.0)	1	(0.3)	10	(0.8)	2	(0.4)	100
Italy	0	(0.3)	5	(1.2)	23	(1.6)	29	(2.3)	11	(1.5)	13	(1.5)	3	(1.0)	14	(1.7)	1	(0.4)	100
Japan	14	(0.9)	11	(0.7)	13	(0.8)	19	(1.0)	4	(0.5)	19	(0.9)	3	(0.5)	11	(0.6)	6	(0.4)	100
Korea	0	(0.1)	9	(0.7)	17	(0.8)	17	(0.9)	13	(0.8)	27	(1.0)	2	(0.3)	9	(0.6)	5	(0.4)	100
Netherlands	1	(0.3)	13	(1.0)	8	(0.8)	34	(1.3)	9	(0.8)	13	(0.8)	2	(0.5)	17	(1.0)	3	(0.5)	100
New Zealand	0	(0.1)	11	(0.8)	10	(0.7)	28	(1.1)	13	(0.9)	14	(0.9)	3	(0.5)	14	(0.8)	5	(0.6)	100
Norway	1	(0.2)	15	(0.9)	9	(0.7)	28	(1.2)	9	(0.8)	17	(0.8)	1	(0.3)	19	(0.9)	2	(0.3)	100
Poland	c	c	17	(1.5)	14	(1.1)	28	(1.5)	11	(1.0)	19	(1.2)	3	(0.5)	4	(0.7)	3	(0.6)	100
Slovak Republic	1	(0.4)	15	(1.4)	12	(1.2)	20	(1.7)	15	(1.4)	22	(1.6)	6	(1.1)	7	(1.0)	1	(0.3)	100
Slovenia	2	(0.5)	10	(0.9)	7	(0.9)	41	(1.4)	11	(1.2)	19	(1.1)	3	(0.5)	6	(0.7)	1	(0.3)	100
Spain	3	(0.5)	10	(0.9)	12	(0.9)	25	(1.2)	9	(0.7)	22	(1.2)	2	(0.4)	13	(0.8)	4	(0.6)	100
Sweden	0	(0.2)	18	(1.1)	7	(0.8)	25	(1.4)	7	(0.6)	18	(1.1)	2	(0.5)	18	(1.1)	3	(0.5)	100
Turkey	9	(1.0)	21	(1.7)	3	(0.6)	31	(1.6)	10	(1.3)	14	(1.9)	2	(0.5)	7	(1.1)	3	(0.8)	100
United States	5	(0.7)	13	(0.9)	12	(0.8)	29	(1.5)	14	(0.8)	8	(0.8)	1	(0.3)	14	(0.8)	4	(0.5)	100
Subnational entities																			
Flanders (Belgium)	2	(0.3)	17	(1.0)	12	(0.9)	22	(1.1)	16	(1.0)	12	(1.0)	2	(0.4)	15	(0.9)	2	(0.4)	100
England (UK)	5	(0.6)	8	(0.7)	16	(1.0)	30	(1.4)	13	(1.1)	15	(0.9)	1	(0.2)	13	(1.0)	0	(0.2)	100
Northern Ireland (UK)	5	(1.0)	9	(1.0)	14	(1.3)	28	(1.5)	12	(1.2)	16	(1.6)	2	(0.6)	14	(0.9)	c	c	100
Average	3	(0.1)	13	(0.2)	10	(0.2)	27	(0.3)	11	(0.2)	18	(0.2)	3	(0.1)	12	(0.2)	4	(0.1)	100
Partners																			
Jakarta (Indonesia)	13	(1.7)	6	(0.8)	4	(0.8)	40	(2.1)	15	(1.7)	12	(1.4)	2	(0.6)	6	(0.9)	2	(0.6)	100
Lithuania	0	(0.1)	14	(1.0)	10	(1.1)	32	(1.6)	9	(0.9)	22	(1.1)	5	(0.6)	6	(0.9)	2	(0.5)	100
Russian Federation*	2	(0.4)	11	(1.1)	10	(1.0)	10	(0.6)	12	(0.8)	33	(2.1)	6	(1.0)	9	(0.7)	8	(0.9)	100
Singapore	0	(0.1)	5	(0.5)	5	(0.6)	36	(1.3)	15	(0.9)	31	(1.1)	0	(0.1)	4	(0.4)	2	(0.3)	100

Note: Columns showing data broken down by gender are available for consultation on line (see *StatLink* below). Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

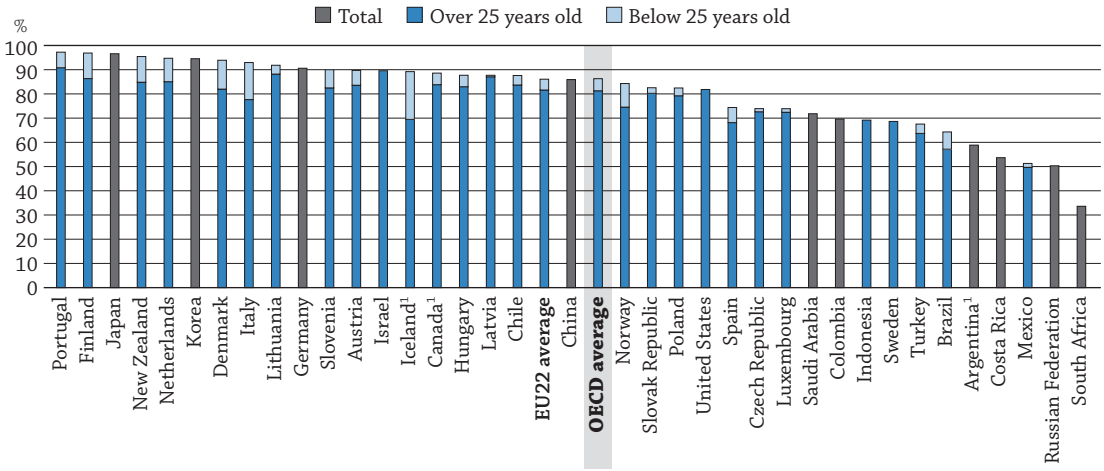
StatLink http://dx.doi.org/10.1787/888933396568

INDICATOR A2

HOW MANY STUDENTS ARE EXPECTED TO COMPLETE UPPER SECONDARY EDUCATION?

- Based on current patterns, it is estimated that an average of 85% of today's young people in OECD countries will complete upper secondary education over their lifetime.
- The fields of study with the lowest gender diversity in upper secondary vocational programmes are engineering, manufacturing and construction, where women represent 12% of graduates, and health and welfare, where men represent 17% of graduates.
- The average age of graduates from upper secondary education is 19 in general programmes and 23 in vocational programmes. In post-secondary non-tertiary education, the average graduation age is 30.

Figure A2.1. Upper secondary graduation rates (2014)



Note: Solid grey bar indicates the graduation rates when no data by age are available.
1. Year of reference 2013.

Countries are ranked in descending order of first-time upper secondary graduation rates.

Source: OECD. Table A2.1 and *Education at a Glance* (database). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396676

Context

Upper secondary education, which consolidates students' basic skills and knowledge through either academic or vocational pathways, aims to prepare students to enter further levels of education or the labour market and to become engaged citizens. In many countries, this level of education is not compulsory and can last from two to five years. What is crucial, however, is providing education of good quality that meets the needs of society and the economy.

Graduating from upper secondary education has become increasingly important in all countries, as the skills needed in the labour market are becoming more knowledge-based, and workers are progressively required to adapt to the uncertainties of a rapidly changing global economy. However, while graduation rates give an indication of the extent to which education systems are succeeding in preparing students to meet the minimum requirements of the labour market, they do not capture the quality of education outcomes.

One of the challenges facing education systems in many OECD countries is students' disengagement and consequent dropout from the education system, meaning that they leave school without an upper secondary qualification. These young people tend to face severe difficulties entering – and remaining in – the labour market. Leaving school early is a problem, for both individuals and society. Students' lack of motivation can be the result of poor performance at school, which can, in turn, lead to further disengagement, creating a vicious circle. Recent evidence shows that the risk of lower performance at school can be higher depending on students' socio-economic, demographic and

educational backgrounds (Box A2.1). Policy makers are examining ways to reduce the number of early school-leavers (defined as those students who do not complete their upper secondary education). Internationally comparable measures of how many students successfully complete upper secondary programmes – which also imply how many students do not complete those programmes – can assist efforts to this end.

Other findings

- In 23 of 37 countries with available data, more than 75% of young people have graduated from upper secondary education. In 11 countries, the first-time graduation rate exceeds 90%.
- On average across OECD countries, 80% of those graduating from an upper secondary vocational programme are younger than 25, and 46% are women.
- Some 10% of young people are expected to graduate from a post-secondary non-tertiary vocational programme; 54% of them are women.
- Most young men in upper secondary vocational programmes study engineering, manufacturing and construction, while young women form the majority in all other fields of study in vocational programmes.

Trends

In countries for which comparable trends data are available for 2005, 2010 and 2014, the first-time graduation rate at the upper secondary level increased by 4 percentage points between 2005 and 2014. This increase was striking in two countries: Portugal (from 54% to 97%) and Turkey (from 48% to 68%). By contrast, in some countries, graduation rates declined during the period, including in the Czech Republic, where graduation rates dropped from 116% in 2005 to 74% in 2014.

Graduation rates from general upper secondary programmes increased, on average, by 3 percentage points from 2005 to 2014, and graduation rates from vocational programmes increased by 4 percentage points. A few countries developed vocational education systems that grew quickly during the period. Graduation rates from vocational programmes in Australia and in Portugal, for example, increased by more than 40 percentage points.

The prevalence of post-secondary non-tertiary vocational education remained constant over the same period; the average graduation rate among OECD countries was about 10% between 2005 and 2014. In Australia, graduation rates from post-secondary non-tertiary vocational education increased by 26 percentage points, so that 44% of students in Australia are now expected to graduate from one of these programmes.

Note

Graduation rates represent the estimated percentage of people from a given age cohort that is expected to graduate at some point during their lifetime. This estimate is based on the number of graduates in 2014 and the age distribution of this group. Graduation rates are based on both the population and the current pattern of graduation, and are thus sensitive to any changes in the education system, such as the introduction of new programmes, and changes in the duration of programmes. Graduation rates can be very high – even above 100% – during a period when an unexpected number of people go back to school.

When the age breakdown is not available, the gross graduation rate is calculated instead. This refers to the total number of graduates divided by the average cohort of the population at the typical age provided by the country.

In this indicator, age refers generally to the age of students at the beginning of the calendar year. Students could be one year older than the age indicated when they graduate at the end of the school year. Twenty-five is regarded as the upper age limit for completing secondary education. Across OECD countries, more than 95% of graduates from upper secondary general programmes in 2014 were under age 25. People who graduate from this level at age 25 or older are usually enrolled in second-chance programmes.

A2

Analysis

Graduation from upper secondary programmes

A snapshot of upper secondary graduation rates

Current estimates indicate that, on average, 85% of people across OECD countries will complete upper secondary education over their lifetime (Table A2.1). An upper secondary education is often considered to be the minimum credential for successful entry into the labour market and necessary for continuing to further education. The costs of not completing this level of education on time can be considerable to both individuals and society (see Indicators A6 and A7).

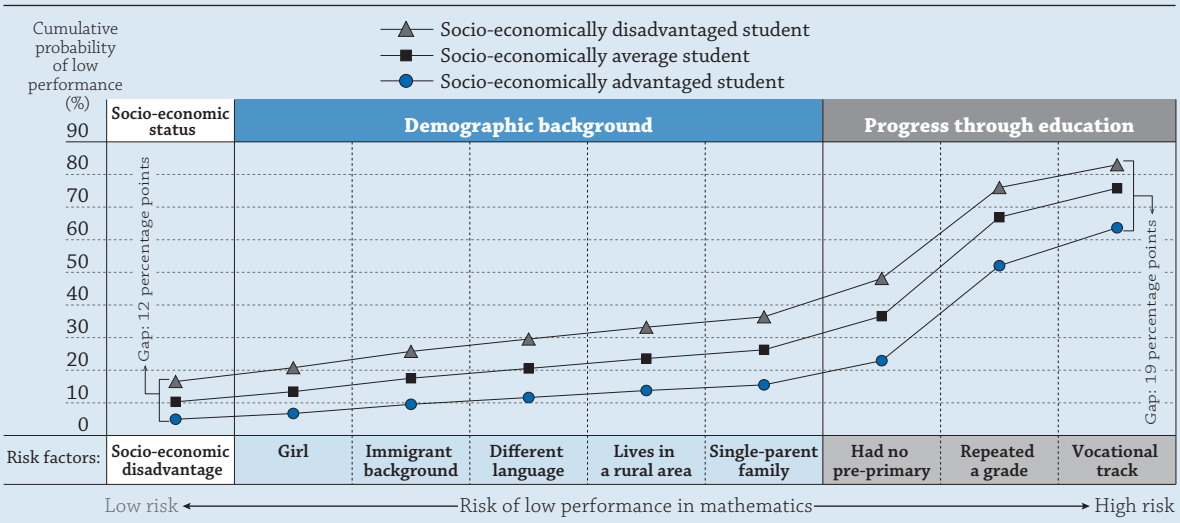
Box A2.1. The cumulative risk of low performance at age 15

Far too many students around the world are trapped in a vicious circle of poor performance and demotivation that leads only to more bad marks and further disengagement from school. Worse, poor performance at school has long-term consequences, both for the individual and for society as a whole. Students who perform poorly at age 15 face a high risk of dropping out of school without obtaining an upper secondary qualification. When a large share of the population lacks basic skills, a country's long-term economic growth is also severely compromised (OECD, 2016).

The OECD Programme for International Student Assessment (PISA) defines "low performers" as those who score below Level 2 on the PISA mathematics, reading and/or science scales. These students will find it difficult to leave education systems with an upper secondary qualification. Reducing the number of low-performing students is not only a goal in its own right, but also an effective way to improve an education system's overall performance – and to boost equity, since low performers are disproportionately from socio-economically disadvantaged families.

Figure A2.a. Cumulative probability of low performance in mathematics across risk profiles

Variations between levels of socio-economic advantage across risk profiles (OECD average)



Notes: Risk profiles are based on students' socio-economic, demographic and education characteristics.

The profile of a low-risk student is a student who is a boy, has no immigrant background, speaks the same language at home as the language of assessment, lives in a two-parent family, attends a school located in a city, attended pre-primary education for more than one year, has not repeated a grade, and is enrolled in a general track.

A socio-economically advantaged student is a student at the top quarter of the *PISA index of economic, social and cultural status* (ESCS). A socio-economically disadvantaged student is a student at the bottom quarter of ESCS, and a socio-economically average student is a student at the average of the second and third quarters of ESCS.

Coefficient estimates come from a multivariate logistic regression with low performance in mathematics as the outcome and each of the variables in the figure as a covariate.

Source: OECD (2016), *Low-performing Students: Why They Fall Behind and How to Help Them Succeed*, PISA, OECD Publishing, Paris, Figure 2.19.

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...

Analyses show that poor performance at age 15 is not the result of any single risk factor, but rather of a combination and accumulation of various barriers and disadvantages that affect students throughout their lives. On average across OECD countries, a socio-economically disadvantaged girl who lives in a single-parent family in a rural area, has an immigrant background, speaks a different language at home from the language of instruction, had not attended pre-primary school, had repeated a grade and is enrolled in a vocational track has an 83% probability of being a low performer (Figure A2.a). While these background factors can affect all students, among low performers, the combination of risk factors is more detrimental to disadvantaged students than to advantaged students. Indeed, all of the demographic characteristics considered in the report, as well as the lack of pre-primary education, increase the probability of low performance by a larger margin among disadvantaged students than among advantaged students, on average across OECD countries. Only repeating a grade and enrolment in a vocational track have greater penalties for advantaged students than for disadvantaged students.

As shown in Figure A2.a, the probability of low performance in mathematics varies by socio-economic status, as indicated by the three symbols (circle, square and triangle). On average across OECD countries, a student with a low-risk profile who comes from a disadvantaged family has a 17% probability of low performance in mathematics, whereas a student who comes from a socio-economically average family has a 10% probability, and an advantaged student has a 5% probability. On average across OECD countries, a student with a high-risk profile who comes from a disadvantaged family has an 83% probability of low performance in mathematics, compared to a 76% probability for a student who comes from a socio-economically average family and a 64% probability for an advantaged student. These findings show that while differences in socio-economic status matter, other factors also have to be considered when designing policies to tackle low performance among students and increase upper secondary graduation rates. Overall, the widening of the gap across the risk spectrum indicates that the concentration of different kinds of risk factors is more detrimental to disadvantaged students. In other words, disadvantaged students tend not only to be encumbered with more risk factors than advantaged students, but those risk factors have a stronger impact on their performance.

Graduation rates offer an indication of whether government initiatives have been successful in increasing the number of people who graduate from upper secondary education. The large differences in graduation rates among countries reflect the variety of systems and programmes available, as well as other country-specific factors, such as current social norms and economic performance.

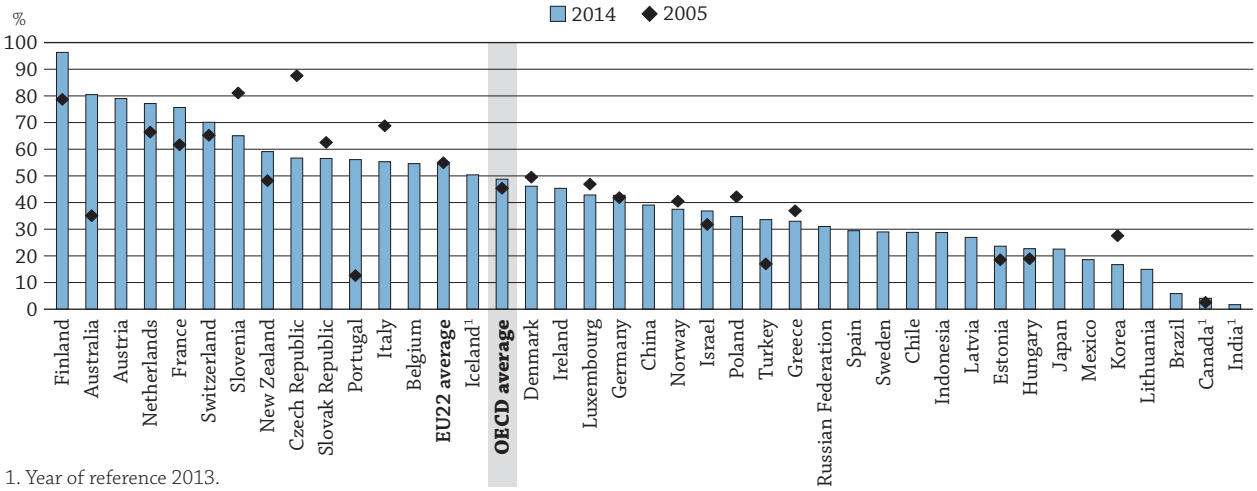
In 11 countries among those with data available, 90% or more of people are expected to graduate from upper secondary school during their lifetime, but just 34% of young people in South Africa are expected to do so. In almost all countries, women are more likely than men to complete upper secondary education. The largest gender gap is observed in Iceland, where 100% of young women are expected to graduate at least once from upper secondary education, while only 79% of young men will do so (Table A2.1).

Women are more likely than men to graduate from general programmes in all countries, while men are more likely to graduate from vocational programmes in 32 of the 39 countries with available data. Vocational education and training (VET) is an important part of upper secondary education in many OECD countries, and it can play a central role in preparing young people for work, developing adults' skills and responding to labour market needs (see Indicator A1). But in some countries, VET has been neglected and marginalised in policy discussions, often overshadowed by the increasing emphasis on general academic education. Nevertheless, an increasing number of countries are recognising that good initial VET has a major contribution to make to economic competitiveness (OECD, 2015). This is one of the explanations for the increase in graduation rates from upper secondary vocational programmes between 2005 and 2014.

On average across OECD countries, 46% of young people will graduate from an upper secondary vocational programme. Although many countries have developed extensive vocational programmes at the secondary level, in other countries, most students prefer general programmes. As shown in Figure A2.2, large proportions of students in Australia, Austria, Finland and the Netherlands are expected to graduate from an upper secondary vocational programme. But in Canada, the proportion of young people expected to graduate from a vocational programme is considerably smaller. Vocational programmes in Canada are often offered within the post-secondary system, and vocational training at the secondary level is largely a second-chance programme for older students. In fact, 66% of graduates from upper secondary vocational programmes in Canada are older than 25 (Table A2.2).

A2

Figure A2.2. Change in vocational upper secondary graduation rates (2005 and 2014)



1. Year of reference 2013.

Countries are ranked in descending order of vocational upper secondary graduation rates in 2014.

Source: OECD. Table A2.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

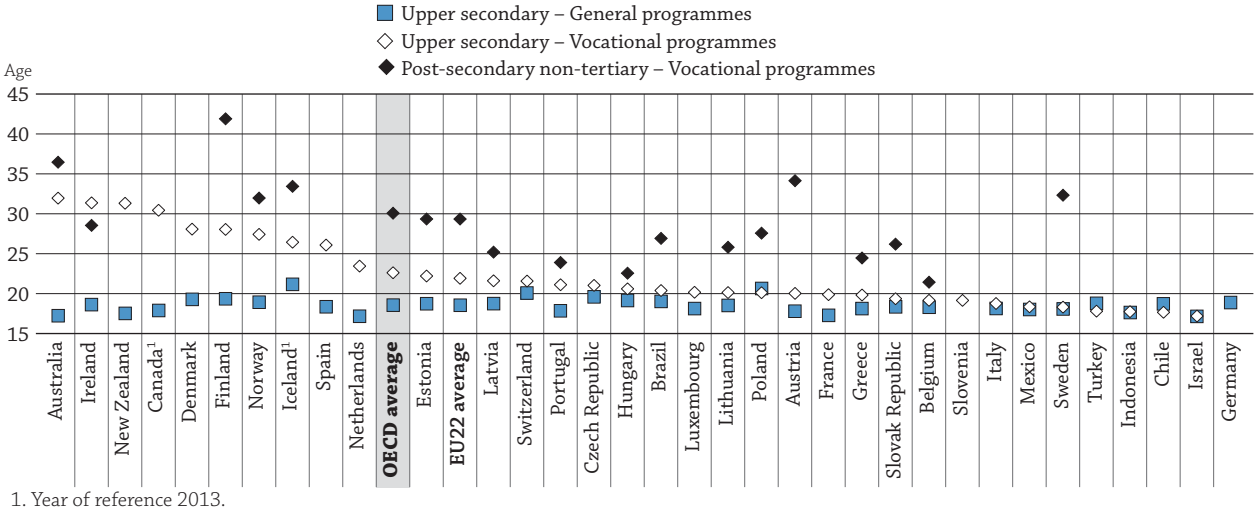
StatLink http://dx.doi.org/10.1787/888933396680

Graduation rates, however, do not imply that all graduates will pursue a tertiary degree or enter the labour force immediately. Indeed, the number of graduates who wind up neither employed nor in education or training (NEET) has been growing throughout OECD countries (see Indicator C5). For this reason, it is important to have high-quality upper secondary programmes that provide individuals with the right mix of guidance and education opportunities to ensure there are no dead ends once students have graduated.

Profile of an upper secondary graduate

Graduation rates also vary according to the age of the students. Students' age at graduation can be related to changes in the education system, such as when opportunities become available to complete upper secondary education later on in life or when the duration of general and vocational programmes is altered. The average age of graduates from upper secondary general programmes is 19, and varies from 17 in Australia, France, Israel and the Netherlands to 21 in Iceland and Poland (Figure A2.3).

Figure A2.3. Average age of graduates for upper secondary and post-secondary non-tertiary education, by programme orientation (2014)



1. Year of reference 2013.

Countries are ranked in descending order of the average age of upper secondary graduates in vocational programmes.

Source: OECD. Tables A2.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396698

The variation in average age of graduation is much more pronounced among students in vocational programmes, ranging from 17 in Israel to 32 in Australia, where only 40% of graduates are younger than 25. Across OECD countries, the average age of graduation from upper secondary vocational programmes is 23.

Most graduates in vocational programmes earned a degree in sciences and engineering (37%), or education, humanities and social sciences (27%). In three countries, the largest proportions of graduates studied health and welfare: Denmark (28%), Ireland (55%) and the Netherlands (26%).

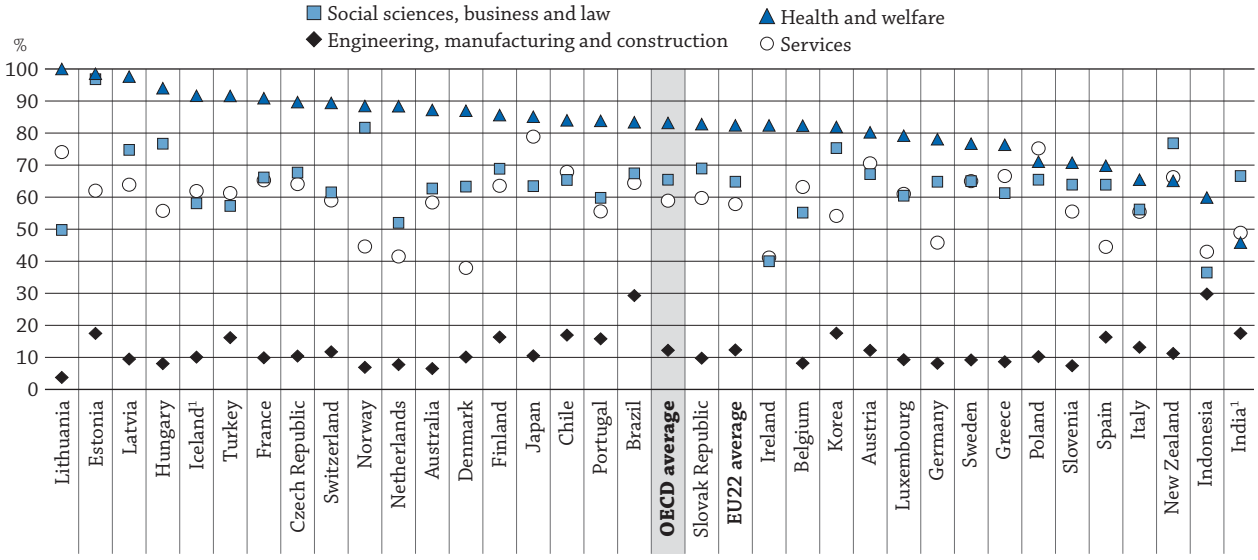
Gender differences are also apparent in young people's choice of field of study when pursuing vocational education. These differences can be attributed to traditional perceptions of gender roles and identities, as well as to the cultural values sometimes associated with particular fields of education.

As Figure A2.4 shows, the percentage of women pursuing an engineering, manufacturing and construction programme is low at upper secondary vocational level: only 12% of all graduates in this field of education are women. In contrast, women are over-represented in health and welfare, where 83% of graduates are women. The share of men graduating in health and welfare does not surpass 35% in any OECD country. Between these two extremes, there are some fields of study with greater gender diversity: on average, 59% of graduates in the field of services are women, as are 65% of graduates in social sciences, business and law.

At the tertiary level, the discrepancies remain, but they are less pronounced than in upper secondary education. For more details on the profile of students in tertiary education, please refer to Indicator A3 of this publication.

The relevance of gender balance across fields of study is twofold. From the economic point of view, there is evidence of gains in GDP from more balanced market participation between male and female workers (IMF, 2013). There is also a moral imperative to ensure that men and women have the same opportunities in their personal and professional lives. In this, formal education plays an important role (OECD, 2015a).

Figure A2.4. Share of female graduates from upper secondary vocational programmes, by field of education (2014)



1. Year of reference 2013.

Countries are ranked in descending order of the share of female graduates from upper secondary vocational programmes in health and welfare.

Source: OECD. Table A2.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396706

Vocational and educational training

Vocational education and training is mainly designed to help participants acquire the practical skills, know-how and understanding necessary for employment in a particular occupation or trade. Across OECD countries, 46% of students are expected to graduate from a vocational programme at the upper secondary level. However, the importance of VET systems varies widely across countries. In some countries, VET plays a central role in the initial education of young people, while in other countries, most students go into general education.

Vocational programmes can be offered in combined school-based and work-based programmes, where only up to 75% of the curriculum is presented in the school environment or through distance education. These include apprenticeship programmes that involve concurrent school-based and work-based training, and programmes that involve alternating periods of attendance at educational institutions and participation in work-based training. This type of dual system can be found in Austria, the Czech Republic, Denmark, Germany, Hungary, the Netherlands, the Slovak Republic and Switzerland (OECD, 2015b). Through work-based learning, students acquire the skills that are valued in the workplace. Work-based learning is also a way to develop public-private partnerships and to involve social partners and employers in developing VET programmes, often by defining curricular frameworks.

Moreover, high-quality VET programmes tend to be effective in developing skills among those who would otherwise lack the qualifications to ensure a smooth and successful transition into the labour market. Employment rates are higher, and inactivity rates are lower, among people who graduated from vocational training than among those who pursued an upper secondary general programme as their highest level of educational attainment (see Indicator A5). However, it is important to ensure that graduates of upper secondary VET programmes have good employment opportunities, since VET can be more expensive than other education programmes (see Indicator B1).

A snapshot of post-secondary non-tertiary graduation rates

Various kinds of post-secondary non-tertiary programmes are offered in OECD countries. These programmes straddle upper secondary and post-secondary education and may be considered as either upper secondary or post-secondary programmes, depending on the country. Although the content of these programmes may not be significantly more advanced than upper secondary programmes, they broaden the knowledge of individuals who have already attained an upper secondary qualification.

First-time graduation rates from post-secondary non-tertiary education are low compared to those from upper secondary programmes. On average, it is estimated that 10% of today's young people in OECD countries will complete post-secondary non-tertiary programmes over their lifetime. The first-time graduation rate among women (12%) is higher than among men (9%). In all countries, except China, Hungary, Iceland, Luxembourg, Portugal, the Slovak Republic and Switzerland, women's first-time graduation rates at the post-secondary non-tertiary level are higher than those of men. The highest first-time graduation rates for these programmes are observed in Australia (20%), the Czech Republic (30%), Germany (26%), New Zealand (27%) and the United States (22%) (Table A2.1). Six countries do not offer this level of education (Chile, Indonesia, Mexico, Slovenia, Turkey and the United Kingdom).

Profile of post-secondary non-tertiary graduates from vocational programmes

Post-secondary non-tertiary education vocational programmes are offered by 28 of the 35 OECD countries and by 10 of the 11 partner countries. Some countries that do not offer programmes at this level (ISCED 4) have high graduation rates from vocational programmes at a lower level of education (ISCED 3), such as 65% in Slovenia and 70% in Switzerland (Table A2.1).

In comparison to upper secondary education, post-secondary non-tertiary education is fairly common among older students, as shown in Figure A2.3. The average age of graduates from this level is 30. In many countries, these graduates had taken time off after they graduated from the previous education level. In other countries, these are second-chance programmes designed to encourage adults to re-enter education. However, in some countries, graduates from post-secondary non-tertiary education are relatively young, as in Belgium (21 years old) and Hungary (23 years old).

The share of female graduates from post-secondary non-tertiary vocational programmes varies widely, from 75% in Poland to 25% in the Netherlands. This is partially explained by the fields of study offered at this level of education. In Austria, for instance, 53% of graduates pursued a degree in health and welfare, whereas in Netherlands, 69% of graduates studied engineering, manufacturing and construction.

On average, most students graduate from post-secondary non-tertiary vocational programmes with degrees in engineering, manufacturing and construction (22%), or social sciences, business and law (20%). The least popular fields are education (7%), humanities and arts (7%), agriculture (4%) and sciences (4%). For some countries, a single field dominates post-secondary non-tertiary education. For instance, in Denmark, 97% of students graduate with a degree in social sciences, business and law, while in the Netherlands, 69% of graduates earn a degree in engineering, manufacturing and construction.

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Box A2.2. Male teachers and the motivation of male students

There is sometimes a tendency to attribute lower performance of boys at school to the fact that a low share of their teachers are male. Recent studies have shown that there is unlikely to be a connection between these two facts (Cho, 2012; Neugebauer and Gerth, 2013; Winters et al., 2013). This does not mean, however, that policies aiming for a better balance between men and women among teachers are misguided.

The importance of having more male teachers at initial levels of education is primarily to provide role models for students, particularly for those who lack positive male influences in their lives. Furthermore, teachers often serve as examples and sources of inspiration to their students. In that sense, disinterest in school among male students and lack of motivation to conclude their basic education could eventually be addressed through a larger presence of male teachers with whom they can identify.

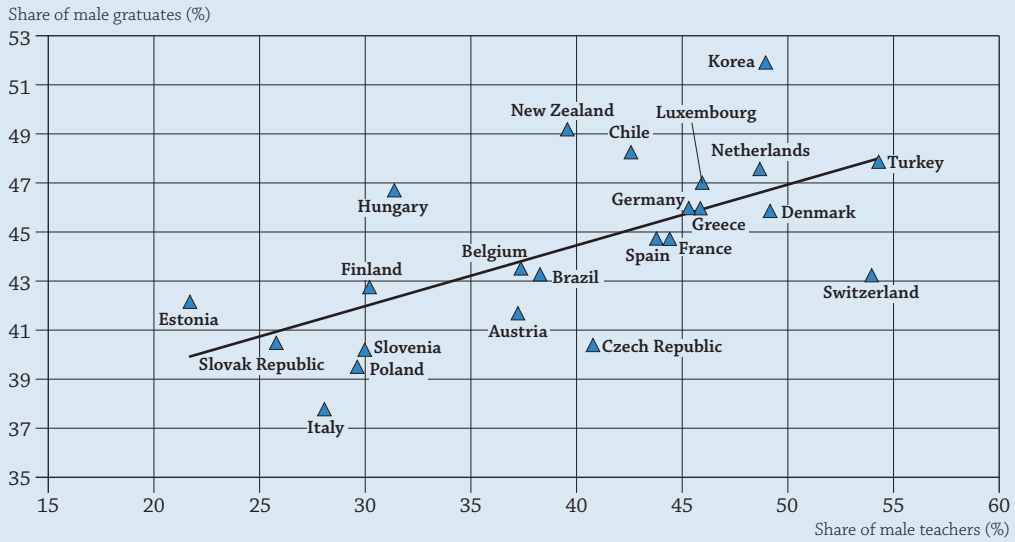
The disengagement of male students is a problem in many education systems. In all OECD countries with available data, young men are less likely than young women to complete their upper secondary education (OECD, 2014).

In 2014, the share of male students graduating from upper secondary general programmes was lower than the share of female students (Table A2.2). In all countries with available data, except China, Korea and Ireland, women make up the majority of upper secondary graduates from general programmes, averaging 55% of graduates among OECD countries. At this level, on average, around 38% of teachers are men (see Indicator D5).

Figure A2.b shows that a larger share of male graduates in general programmes at upper secondary level is correlated with a larger share of male teachers. In Turkey, for example, where 54% of upper secondary teachers in general programmes are men, the share of male graduates at this level is 48%. However, in the Slovak Republic, only 26% of upper secondary teachers are men, and the share of male graduates is 40%.

The observed trend, far from conclusive, might contribute to the existing debate on student-teacher gender matching in schools. For more information on drivers of gender imbalance in the teaching profession, please see Box D5.

Figure A2.b. Share of male teachers and male graduates at upper secondary level, general programmes (2014)



Source: OECD (2016), "Profiles of graduates and new entrants", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_GRAD_ENTR_SHARE and "Distibution of teachers by age and gender", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_PERS_SHARE_AGE. See Annex 3 for notes (www.oecd.org/edu/education-at-a-glance-19991487.htm).

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Definitions

Graduates in the reference period can be either first-time graduates or repeat graduates. A **first-time graduate** is a student who has graduated for the first time at a given level of education in the reference period. Thus, if a student has graduated multiple times over the years, he or she is counted as a graduate each year, but as a first-time graduate only once.

Gross graduation rates refer to the total number of graduates (the graduates themselves may be of any age) at the specified level of education divided by the population at the typical graduation age from the specified level.

Net graduation rates represent the estimated percentage of an age group that will complete upper secondary education, based on current patterns of graduation.

Typical age is the age at the beginning of the last school/academic year of the corresponding educational level and programme when the degree is obtained.

Methodology

Data refer to the academic year 2013/14 and are based on the UNESCO-UIS / OECD / EUROSTAT data collection on education statistics administered by the OECD in 2015 (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Unless otherwise indicated, graduation rates are calculated as net graduation rates (i.e. as the sum of age-specific graduation rates). Gross graduation rates are presented for countries that are unable to provide such detailed data. In order to calculate gross graduation rates, countries identify the age at which graduation typically occurs (see Annex 1). The number of graduates, regardless of their age, is divided by the population at the typical graduation age. In many countries, defining a typical age of graduation is difficult, however, because graduates are dispersed over a wide range of ages.

Graduates by programme orientation at ISCED 3 and ISCED 4 are not counted as first-time graduates, given that many students graduate from more than one upper secondary or post-secondary non-tertiary programme. Therefore, graduation rates cannot be added, as some individuals would be counted twice. In addition, the typical graduation ages are not necessarily the same for the different types of programmes (see Annex 1). Vocational programmes include both school-based programmes and combined school-based and work-based programmes that are recognised as part of the education system. Entirely work-based education and training programmes that are not overseen by a formal education authority are not included.

Note regarding data from Israel

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

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Indicator A2 Tables

StatLink http://dx.doi.org/10.1787/888933396628

Table A2.1	**Upper secondary and post-secondary non-tertiary graduation rates (2014)**
Table A2.2	**Profile of upper secondary graduates from general and vocational programmes (2014)**
Table A2.3	**Profile of post-secondary non-tertiary graduates from vocational programmes (2014)**
Table A2.4	**Trends in upper secondary and post-secondary non-tertiary graduation rates (2005, 2010 and 2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table A2.1. Upper secondary and post-secondary non-tertiary graduation rates (2014)

Sum of age-specific graduation rates, by gender and programme orientation

		Upper secondary									Post-secondary non-tertiary					
		First-time graduation rates			Graduation rates						First-time graduation rates			Graduation rates		
		All programmes			General programmes			Vocational programmes			All programmes			Vocational programmes		
		M + W	Men	Women	M + W	Men	Women	M + W	Men	Women	M + W	Men	Women	M + W	Men	Women
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	m	m	m	74	71	78	80	83	78	20	18	22	44	40	49
	Austria	90	89	90	20	16	24	79	83	75	9	5	14	11	6	16
	Belgium	m	m	m	38	32	44	55	55	54	m	m	m	7	7	7
	Canada[1]	89	85	93	85	80	90	4	5	3	m	m	m	m	m	m
	Chile	88	84	91	59	55	62	29	29	29	a	a	a	a	a	a
	Czech Republic	74	74	74	22	17	27	57	62	51	30	21	39	8	7	8
	Denmark	94	89	99	68	61	75	46	45	48	1	0	1	1	0	1
	Estonia	m	m	m	60	49	71	24	29	18	m	m	m	23	17	30
	Finland	97	94	100	46	38	53	96	89	104	7	6	8	8	7	9
	France	m	m	m	54	47	61	76	75	76	m	m	m	m	m	m
	Germany	91	92	90	48	43	53	43	49	36	26	21	31	22	17	28
	Greece	m	m	m	70	64	77	33	39	27	m	m	m	4	3	5
	Hungary	88	85	91	66	60	72	23	26	19	16	17	16	18	18	17
	Iceland[1]	89	79	100	74	61	86	50	53	48	12	14	9	12	15	9
	Ireland	m	m	m	111	108	114	45	31	60	m	m	m	13	17	9
	Israel	90	87	93	53	50	56	37	37	37	m	m	m	a	a	a
	Italy	93	92	94	38	28	49	55	64	46	1	1	2	1	1	2
	Japan	97	96	98	74	71	78	23	25	20	m	m	m	m	m	m
	Korea	95	95	94	78	77	79	17	18	15	m	m	m	m	m	m
	Latvia	88	84	92	67	60	75	27	31	22	7	4	10	7	4	10
	Luxembourg	74	73	75	33	30	36	43	45	40	2	2	1	2	2	1
	Mexico	51	49	54	33	30	35	19	19	19	a	a	a	a	a	a
	Netherlands	95	90	99	42	39	45	77	77	77	0	0	0	0	0	0
	New Zealand	95	92	100	76	73	80	59	47	71	27	21	33	m	m	m
	Norway	84	79	90	62	51	73	37	44	30	4	3	5	4	3	5
	Poland	83	80	85	49	38	61	35	44	25	15	7	23	15	7	23
	Portugal	97	95	100	41	34	49	56	61	51	6	7	4	6	7	4
	Slovak Republic	83	81	85	27	21	33	57	60	53	9	9	8	9	9	8
	Slovenia	90	89	91	36	28	44	65	71	58	a	a	a	a	a	a
	Spain	74	68	81	53	47	61	29	28	31	0	0	0	0	0	0
	Sweden	69	65	73	48	43	55	29	33	26	4	3	4	4	4	4
	Switzerland	m	m	m	42	35	49	70	75	65	1	1	1	a	a	a
	Turkey	68	66	70	34	32	36	34	34	33	a	a	a	a	a	a
	United Kingdom	m	m	m	m	m	m	m	m	m	a	a	a	a	a	a
	United States	82	79	85	m	m	m	m	m	m	22	17	27	22	17	27
	OECD average	85	83	88	54	48	60	46	47	44	10	9	12	10	9	12
	EU22 average	86	84	89	49	43	56	50	52	47	9	7	11	8	7	10
Partners	Argentina[1]	59	49	69	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	64	55	74	62	53	70	6	5	7	7	7	8	8	7	9
	China	86	84	88	47	44	50	39	40	38	5	6	4	2	3	1
	Colombia	70	62	78	m	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	54	47	61	m	m	m	m	m	m	m	m	m	m	m	m
	India[1]	m	m	m	m	m	m	2	3	1	1	1	2	1	1	2
	Indonesia	69	74	64	40	38	43	29	36	21	a	a	a	a	a	a
	Lithuania	92	89	95	77	71	85	15	19	11	15	15	15	18	18	18
	Russian Federation	50	44	57	52	46	59	31	47	14	5	5	5	5	5	5
	Saudi Arabia	72	78	66	m	m	m	m	m	m	m	m	m	m	m	m
	South Africa	34	32	35	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	74	71	76	55	50	60	32	35	29	10	8	11	12	10	13

1. Year of reference 2013.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A2.2. Profile of upper secondary graduates from general and vocational programmes (2014)

		General programmes			Vocational programmes														
								Percentage of graduates by field of education								Percentage of female graduates in upper secondary programmes by field of education			
		Percentage of graduates younger than 25 years	Average age	Percentage of female graduates	Percentage of graduates younger than 25 years	Average age	Percentage of female graduates	Education	Humanities and arts	Social sciences, business and law	Sciences	Engineering, manufacturing and construction	Agriculture	Health and welfare	Services	Social sciences, business and law	Engineering, manufacturing and construction	Health and welfare	Services
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	100	17	51	40	32	48	2	1	20	2	35	3	23	14	63	7	87	58
	Austria	99	18	58	88	20	46	2	2	29	2	35	8	3	19	67	12	80	71
	Belgium	100	18	56	100	19	49	0	6	20	2	29	3	27	13	55	8	82	63
	Canada[1]	97	18	52	34	30	42	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	94	19	52	99	18	49	6	1	34	0	38	5	6	11	65	17	84	68
	Czech Republic	100	20	60	92	21	44	2	4	22	4	38	4	7	20	68	10	90	64
	Denmark	96	19	54	53	28	51	0	2	25	1	24	6	28	14	63	10	87	38
	Estonia	97	19	58	84	22	37	0	4	3	8	50	7	2	25	97	17	99	62
	Finland	99	19	57	55	28	53	0	6	16	2	30	5	20	22	69	16	86	64
	France	100	17	55	89	20	50	0	2	21	0	34	4	19	21	66	10	91	65
	Germany	100	19	54	m	m	41	0	4	34	3	33	2	9	15	65	8	78	46
	Greece	100	18	54	90	20	40	6	3	8	8	43	2	17	12	61	9	76	67
	Hungary	94	19	53	91	21	42	0	7	12	0	43	4	9	25	77	8	94	56
	Iceland[1]	87	21	57	58	26	46	2	14	14	1	33	2	11	21	58	10	92	62
	Ireland	98	19	50	44	31	66	0	11	4	1	2	16	55	11	40	41	82	41
	Israel	100	17	52	100	17	49	m	m	m	m	m	m	m	m	m	m	m	m
	Italy	100	18	62	100	19	40	0	2	36	9	29	4	2	17	56	13	65	55
	Japan	m	m	51	m	m	43	0	0	31	0	42	13	6	8	63	10	85	79
	Korea	m	m	48	m	m	43	0	17	19	12	44	2	2	5	75	18	82	54
	Latvia	100	19	53	90	22	40	0	9	12	5	42	3	2	27	75	9	98	64
	Luxembourg	100	18	53	95	20	46	9	4	36	2	28	4	9	7	60	9	79	61
	Mexico	98	18	53	97	18	50	m	m	m	m	m	m	m	m	m	m	m	m
	Netherlands	100	17	52	79	23	50	2	4	21	4	18	4	26	21	52	8	88	41
	New Zealand	100	18	51	44	31	60	1	19	33	1	14	11	8	14	77	11	65	66
	Norway	97	19	57	59	27	39	0	2	5	2	46	3	23	19	82	7	88	45
	Poland	92	21	60	99	20	35	0	2	14	11	46	4	0	24	65	10	71	75
	Portugal	98	18	57	88	21	45	0	8	20	10	24	2	12	25	60	16	84	56
	Slovak Republic	99	18	60	95	19	46	2	6	21	1	35	3	8	25	69	10	83	60
	Slovenia	100	19	60	100	19	44	8	4	17	6	32	5	14	14	64	7	71	56
	Spain	96	18	55	61	26	53	0	33	12	6	16	1	21	12	64	16	70	44
	Sweden	100	18	54	100	18	42	0	2	8	0	45	8	17	20	65	9	76	65
	Switzerland	97	20	57	89	22	45	0	3	33	3	34	5	14	9	61	12	89	59
	Turkey	92	19	52	97	18	48	0	4	15	15	37	0	20	8	57	16	92	61
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average	98	19	55	80	23	46	1	6	20	4	33	5	14	17	65	12	83	59
	EU22 average	98	19	56	85	22	46	2	6	19	4	32	5	15	18	65	12	82	58
Partners	Argentina[1]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	91	19	57	84	20	60	18	2	20	19	17	9	8	8	67	29	83	64
	China	m	m	49	m	m	46	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	m	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	India[1]	m	m	m	m	m	19	2	1	1	2	92	0	2	0	67	17	46	49
	Indonesia	100	18	51	100	18	36	0	2	50	0	35	1	3	9	36	30	60	43
	Lithuania	96	19	53	94	20	36	0	4	18	1	46	3	0	28	50	4	100	74
	Russian Federation	m	m	55	m	m	22	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	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	m	m	53	m	m	43	2	6	24	6	38	4	10	11	62	16	76	56

1. Year of reference 2013.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A2.3. Profile of post-secondary non-tertiary graduates from vocational programmes (2014)

		Percentage of females graduates	Percentage of graduates younger than 30 years	Average age	Percentage of graduates by field of education							
					Education	Humanities and arts	Social sciences, business and law	Sciences	Engineering, manufacturing and construction	Agriculture	Health and welfare	Services
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	55	36	36	22	4	32	4	12	2	18	8
	Austria	74	40	34	32	2	10	1	1	1	53	1
	Belgium	52	97	21	0	6	11	1	22	2	34	23
	Canada	m	m	m	m	m	m	m	m	m	m	m
	Chile	a	a	a	a	a	a	a	a	a	a	a
	Czech Republic	52	m	m	m	m	m	m	m	m	m	m
	Denmark	73	26	37	0	0	97	0	0	0	3	0
	Estonia	63	63	29	0	6	18	5	25	9	6	32
	Finland	56	11	42	3	1	45	0	28	1	8	13
	France	m	m	m	0	59	16	7	2	0	1	15
	Germany	61	m	m	0	3	26	3	18	1	40	9
	Greece	61	84	24	17	4	11	9	15	1	26	16
	Hungary	48	89	23	1	3	17	10	27	3	23	16
	Iceland[1]	36	42	33	4	3	1	6	46	1	0	38
	Ireland	33	69	29	23	0	0	0	24	47	0	6
	Israel	a	a	a	a	a	a	a	a	a	a	a
	Italy	52	m	m	m	m	m	m	m	m	m	m
	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	68	82	25	0	5	13	1	16	5	24	35
	Luxembourg	28	63	29	1	9	0	0	66	2	0	23
	Mexico	a	a	a	a	a	a	a	a	a	a	a
	Netherlands	25	34	37	31	0	0	1	69	0	0	0
	New Zealand[2]	60[d]	62[d]	29[d]	1[d]	25[d]	24[d]	7[d]	11[d]	4[d]	14[d]	13[d]
	Norway	65	52	32	0	9	34	0	1	2	28	27
	Poland	75	72	28	0	7	20	5	2	2	34	30
	Portugal	37	85	24	0	6	14	10	31	6	6	29
	Slovak Republic	47	71	26	8	1	17	0	19	1	14	40
	Slovenia	a	a	a	a	a	a	a	a	a	a	a
	Spain	a	a	a	a	a	a	a	a	a	a	a
	Sweden	52	49	32	9	3	19	9	26	4	22	9
	Switzerland	a	a	a	a	a	a	a	a	a	a	a
	Turkey	a	a	a	a	a	a	a	a	a	a	a
	United Kingdom	a	a	a	a	a	a	a	a	a	a	a
	United States	60	m	m	1	6	10	4	18	1	37	23
	OECD average	54	59	30	7	7	20	4	22	4	18	18
	EU22 average	53	62	29	7	7	20	4	23	5	17	17
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m
	Brazil	56	68	27	0	2	21	10	22	3	26	16
	China	25	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m	m
	India[1]	71	m	m	71	0	0	0	0	0	28	0
	Indonesia	a	a	a	a	a	a	a	a	a	a	a
	Lithuania	50	79	26	0	6	28	2	26	3	8	27
	Russian Federation[3]	47	m	m	1[d]	5[d]	3[d]	48[d]	8[d]	1[d]	32[d]	2[d]
	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
	G20 average	53	m	m	14	11	15	11	11	1	26	10

1. Year of reference 2013.
2. Data on vocational programmes include general programmes.
3. Data for post-secondary non-tertiary include some upper secondary graduates.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A2.4. Trends in upper secondary and post-secondary non-tertiary graduation rates (2005, 2010 and 2014)

Sum of age-specific graduation rates, by gender and programme orientation

	Upper secondary									Post-secondary non-tertiary					
	First-time graduation rates			Graduation rates						First-time graduation rates			Graduation rates		
	All programmes			General programmes			Vocational programmes			All programmes			Vocational programmes		
	2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	m	72	74	35	52	80	m	16	20	18	29	44
Austria	m	87	90	m	19	20	m	77	79	m	7	9	m	8	11
Belgium	m	m	m	m	m	38	m	m	55	m	m	m	m	m	7
Canada[1]	80	85	89	78	82	85	3	3	4	m	m	m	m	m	m
Chile	m	m	88	m	m	59	m	m	29	a	a	a	a	a	a
Czech Republic	116	110	74	28	34	22	88	76	57	m	m	30	m	m	8
Denmark	83	85	94	59	58	68	50	49	46	1	1	1	1	1	1
Estonia	m	m	m	60	61	60	19	21	24	m	m	m	19	18	23
Finland	94	95	97	52	46	46	79	90	96	6	7	7	6	7	8
France	m	m	m	50	51	54	62	65	76	m	m	m	0	0	m
Germany	78	m	91	37	m	48	42	m	43	23	m	26	20	m	22
Greece	95	88	m	59	62	70	37	26	33	9	6	m	9	8	4
Hungary	84	86	88	68	69	66	19	17	23	20	18	16	26	20	18
Iceland[1]	m	m	89	m	m	74	m	m	50	m	m	12	m	m	12
Ireland	92	86	m	m	130	111	a	a	45	14	10	m	14	10	13
Israel	89	91	90	57	58	53	32	33	37	m	m	m	a	a	a
Italy	85	85	93	31	36	38	69	61	55	6	4	1	6	4	1
Japan	m	95	97	m	72	74	m	23	23	m	m	m	m	m	m
Korea	92	91	95	65	69	78	28	22	17	m	m	m	m	m	m
Latvia	m	m	88	m	64	67	m	25	27	m	3	7	m	3	7
Luxembourg	74	70	74	27	30	33	47	41	43	m	2	2	2	2	2
Mexico	40	45	51	m	m	33	m	m	19	a	a	a	a	a	a
Netherlands	m	m	95	34	39	42	66	84	77	m	m	0	1	1	0
New Zealand	94	91	95	m	70	76	48	60	59	26	30	27	m	m	m
Norway	90	87	84	62	60	62	40	36	37	5	10	4	2	5	4
Poland	m	83	83	55	52	49	42	38	35	14	12	15	14	12	15
Portugal	54	105	97	41	69	41	13	36	56	m	3	6	m	3	6
Slovak Republic	86	86	83	23	26	27	63	60	57	12	10	9	12	10	9
Slovenia	85	94	90	34	38	36	81	71	65	a	a	a	a	a	a
Spain	m	m	74	m	m	53	m	m	29	a	a	0	a	a	0
Sweden	m	m	69	m	m	48	m	m	29	m	m	4	m	m	4
Switzerland	m	m	m	35	38	42	65	72	70	m	m	1	1	0	a
Turkey	48	54	68	31	33	34	17	22	34	a	a	a	a	a	a
United Kingdom	m	m	m	m	m	m	m	m	m	a	a	a	a	a	a
United States	74	77	82	m	m	m	m	m	m	17	22	22	17	22	22
OECD average[2]	80	85	85	47	51	50	45	47	49	12	13	10	9	9	11
EU22 average[2]	84	91	88	44	48	47	55	55	55	10	9	7	10	9	8
Partners															
Argentina[1]	m	m	59	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	64	m	65	62	m	4	6	m	m	7	m	6	8
China	m	m	86	m	m	47	m	m	39	m	m	5	m	m	2
Colombia	m	m	70	m	m	m	m	m	m	m	m	m	a	a	m
Costa Rica	m	m	54	m	m	m	m	m	m	m	m	m	m	m	m
India[1]	m	m	m	m	m	m	m	m	2	m	m	1	m	m	1
Indonesia	m	m	69	m	m	40	m	m	29	a	a	a	a	a	a
Lithuania	m	m	92	m	m	77	m	m	15	m	m	15	m	m	18
Russian Federation	m	m	50	m	m	52	m	m	31	m	m	5	m	m	5
Saudi Arabia	m	m	72	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	34	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

1. Year of reference 2013 instead of 2014.

2. The averages are calculated only from countries with data available for all reference years and so may be different from Table A2.1.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

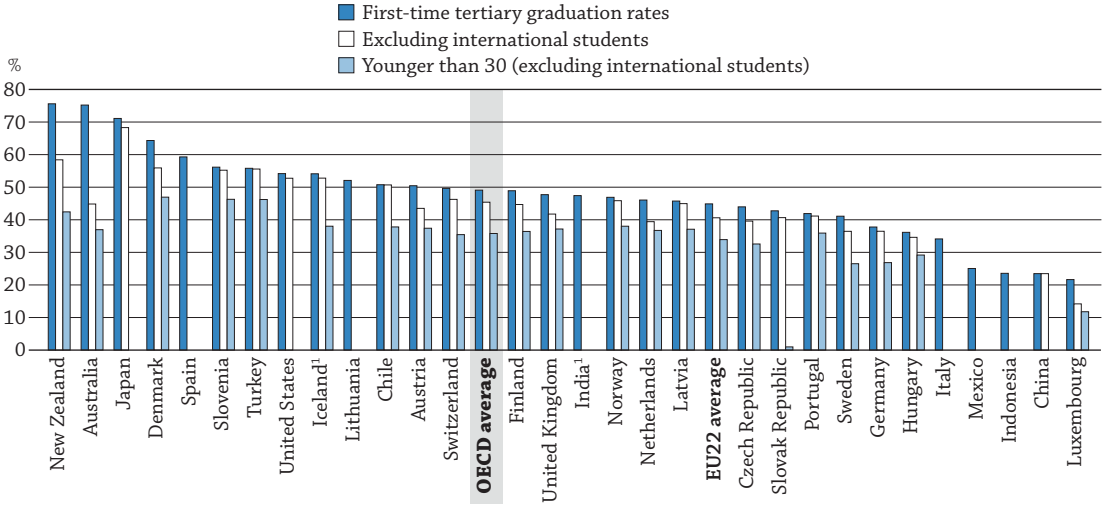
StatLink http://dx.doi.org/10.1787/888933396669

INDICATOR A3

HOW MANY YOUNG PEOPLE ARE EXPECTED TO COMPLETE TERTIARY EDUCATION AND WHAT IS THEIR PROFILE?

- Based on current patterns of graduation, an average of 36% of today's young people across OECD countries are expected to graduate from tertiary education at least once before the age of 30.
- Even though women are over-represented among tertiary graduates (57% of first-time graduates across OECD countries), they remain under-represented in certain fields of study, such as science and engineering while, in the field of education, four women graduated for every man in 2014.
- In 2014, a majority of first-time tertiary graduates (72%) earned a bachelor's degree, 12% earned a master's degree and 16% earned a short-cycle tertiary diploma, on average across OECD countries.

Figure A3.1. First-time tertiary graduation rates (2014)



Note: Mismatches between the coverage of the population data and first-time graduates data mean that the graduation rates for those countries that are net exporters of students may be underestimated and those that are net importers may be overestimated. The first-time tertiary graduation rate excluding international students accounts for this.
1. Year of reference 2013.

Countries are ranked in descending order of the first-time tertiary graduation rates.

Source: OECD. Table A3.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396803

Context

Tertiary graduation rates illustrate a country's capacity to provide future workers with advanced and specialised knowledge and skills. Incentives to earn a tertiary degree, including higher salaries and better employment prospects, remain strong across OECD countries (see Indicators A5, A6 and A7 for further reading on these themes). Tertiary education varies in structure and scope among countries, and graduation rates seem to be influenced by the ease of access to and flexibility in programmes and labour market demand for higher skills.

In recent decades, access to tertiary education has expanded remarkably, involving new types of institutions that offer more choice and new modes of delivery (OECD, 2014a). In parallel, the student population is becoming increasingly diverse in gender and in study pathways chosen. Students are also becoming more likely to seek a tertiary degree outside their country of origin.

Policy makers are exploring ways to help ease the transition from tertiary education into the labour market (OECD, 2015a). Understanding current graduation patterns would help to address the needs of recent graduates and anticipate the flow of new tertiary-educated workers into the labour force.

Other findings

- Advanced tertiary degrees attract more international students than bachelor's or equivalent degrees. Some 26% of students in OECD countries who graduated for the first time from a doctoral programme in 2014 were international students, as were 16% of students who were awarded a master's degree or the equivalent, and 7% of graduates who earned a bachelor's degree for the first time.
- Graduates in the fields of science and engineering combined represent around 22% of graduates at all tertiary levels except for the doctoral level where they represent 44% of graduates.
- The share of international students graduating from a master's or equivalent level programme following a bachelor's degree is, on average, higher than that of those graduating from long first degrees.

Trends

Over the past nine years, first-time graduation rates from bachelor's or equivalent level have risen by 12 percentage points, on average across OECD countries with available data and have not decreased in any of them. The highest surge over these nine years was in Portugal, although this evolution occurred mainly between 2005 and 2010. Only 9% of young people in Portugal were expected to graduate from a bachelor's programme in 2005, increasing to 33% in 2010 and to 35% in 2014.

Graduation rates from doctoral programmes have also increased over the past decade. Between 2005 and 2014, the graduation rate from doctoral programmes increased in every country for which comparable data are available, except for Austria and Slovenia, where the rate decreased. Denmark, Slovenia and Switzerland have the highest graduation rates at this level among all OECD countries, with 3% or more of young people in these countries expected to graduate from doctoral programmes, if 2014 patterns are maintained.

Note

Graduation rates represent the estimated percentage of an age cohort that is expected to graduate over their lifetime. This estimate is based on the total number of graduates in 2014 and the age-specific distribution of graduates. Therefore, graduation rates are based on the current pattern of graduation and are sensitive to any changes in education systems, such as the introduction of new programmes or any variations in a programme's duration, like those seen in many EU countries with the implementation of the Bologna Process.

In this edition of *Education at a Glance*, we are able to use for the first time the distinction within master's programmes provided by the 2011 ISCED classification. Hence, master's or equivalent level incorporates different types of programmes, mainly those preparing for long first degrees and those preparing for a second or further degree following a first degree from a bachelor's level.

A3

Analysis

Graduation rates from tertiary education

Thanks to the new ISCED 2011 classification, statistical information on first-time graduates from tertiary education is used for the second time in this edition of *Education at a Glance*. First-time graduates from tertiary education are defined as students who receive a tertiary degree for the first time in their life in a given country. Based on current patterns of graduation, 49% of today's young people (including international students) can be expected to graduate from tertiary education at least once during their lifetime, on average across the 26 OECD countries with comparable data for 2014. The proportion ranges from 22% in Luxembourg, where many citizens choose to study abroad, to 70% or more in Australia, Japan and New Zealand (Figure A3.1).

Graduation rates, by levels of education

More young people are expected to graduate from a bachelor's degree programme over their lifetime than from any other level of tertiary education. Based on patterns of graduation prevailing in 2014, on average across OECD countries, over their lifetime, 38% of young people in a given country are expected to graduate with a bachelor's degree, 18% are expected to earn a master's degree, 11% are expected to graduate from a short-cycle tertiary programme, and roughly 2% are expected to graduate from a doctoral programme (Table A3.1).

Although bachelor's degrees remain the most common tertiary diploma to be held by graduates in OECD countries, countries are also promoting other levels of tertiary education. In an effort to improve employability and the transition into the labour market, some countries are promoting short-cycle tertiary programmes. The probability of a person in Austria, China, New Zealand and the Russian Federation graduating from a short-cycle tertiary programme over his or her lifetime is 25% or more. Other ways of boosting employability and easing the transition into the labour market include promoting professional programmes at the bachelor's and master's levels of education.

Graduation rates, excluding international students

In some countries, a large proportion of graduates from tertiary education are international students. The term "international students" refers to students who have crossed borders expressly with the intent to study. For various reasons, international students have a marked impact on estimated graduation rates. Due to lack of information, they are often considered first-time graduates, regardless of their previous education in other countries (i.e. an international student who graduates from a second-degree programme will be considered a first-time graduate in the country of destination). In some countries with a high proportion of international students, such as Australia and New Zealand, graduation rates are thus inflated. When international students are excluded, first-time tertiary graduation rates drop by 30 percentage points for Australia and 17 percentage points for New Zealand (Table A3.1).

Graduation rates among people under the age of 30

The first-time graduation rate from tertiary education among people under the age of 30 is an indicator of how many young people are expected to enter the labour force for the first time with a tertiary qualification. On average across the 20 countries with available data, 36% of young people (excluding international students) are expected to obtain a tertiary diploma for the first time before the age of 30. This rate ranges from 47% in Denmark to 12% in Luxembourg.

In addition, some education systems accommodate a wider range of ages among their students than others. In Chile, Iceland, New Zealand and Switzerland, first-time graduation rates at the tertiary level drop by more than 10 percentage points when restricted to young people under 30 (excluding international students). This may suggest that these education systems are more flexible in terms of access to and duration of programmes, and are more suitable for students outside the typical age of study. Finland, Israel and Switzerland also have mandatory military or civilian service that increases the length of tertiary studies (Table A3.1).

Profile of graduates from tertiary education

Over the past two decades, tertiary education in OECD countries has changed significantly. The student body is more international, more women are graduating from this level of education, and in some countries more students are pursuing studies in science and engineering. These changes might reflect concerns about competitiveness in the global economy and the labour market.

A majority of graduates hold a bachelor's degree or the equivalent

The new data on first-time graduates at the tertiary level allow for a more precise description of the young graduates who are entering the labour market with a tertiary diploma and also make it easier to compare countries by disregarding system-specific tertiary pathways.

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In 2014, most of the first-time tertiary graduates were awarded a bachelor's degree. In fact, on average across OECD countries, 72% of first-time tertiary graduates earned a bachelor's degree, 12% earned a master's degree and 16% earned a short-cycle tertiary diploma (Table A3.2).

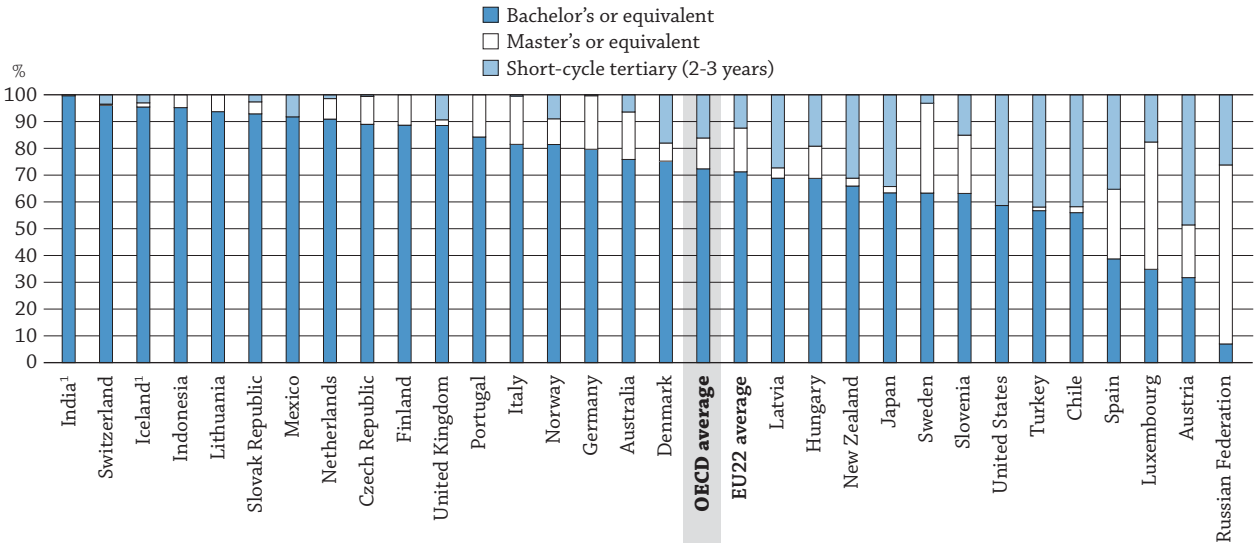
However, there are considerable differences across countries. In Austria, the largest share of first-time graduates (49%) graduated from short-cycle tertiary programmes, while in Spain, the shares of first-time graduates are similar across three levels of tertiary education: short-cycle, bachelor's or equivalent, and master's or equivalent. These differences may result from the structure of the tertiary system or because certain programmes, such as short-cycle programmes, are more vigorously promoted in some countries (Figure A3.2).

Average age of graduation

Across OECD countries in 2014, the average age of first-time graduates was 26. The variation among countries can be large, ranging from 23 years old in Lithuania and the United Kingdom to 28 years old in Iceland, Sweden and Switzerland. (Table A3.2).

As expected, the average age of graduation tends to increase in higher degrees. It is the same in short-cycle programmes and bachelor's or equivalent level: the average age of graduation is 26. At master's or equivalent levels, the average age is 30. Graduates from master's programmes following a bachelor's degree are slightly older on average, than those graduating from long first degrees (30 versus 27 years old). At doctoral or equivalent level, students graduate, on average, at the age of 35. In none of OECD countries is the average age of graduation below 31 at this level (Table A3.4).

Figure A3.2. Distribution of first-time tertiary graduates, by level of education (2014)



1. Year of reference 2013.

Countries are ranked in descending order of the percentage of first-time graduates at bachelor's level or equivalent.

Source: OECD. Tables A3.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

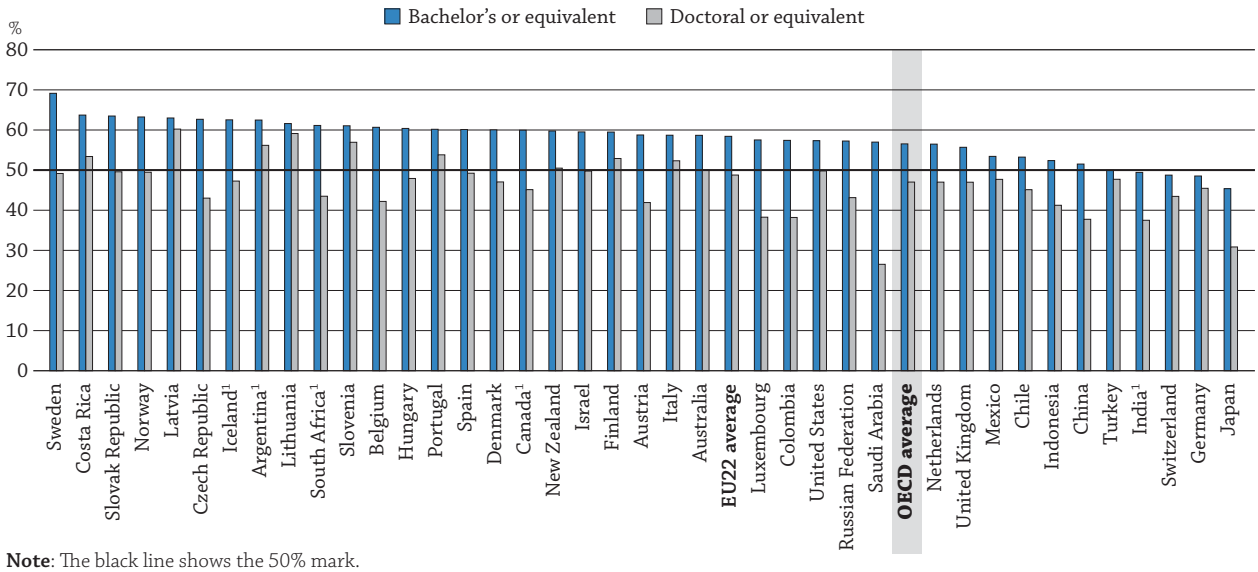
StatLink http://dx.doi.org/10.1787/888933396817

More than half of all first-time graduates are women

Recognising the impact that education has on participation in the labour market, occupational mobility and quality of life, policy makers and educators are emphasising the importance of reducing differences in education opportunities and outcomes between men and women. In 2014, an average of 57% of first-time graduates from tertiary education in OECD countries were women, ranging from 49% in Switzerland to 64% in Latvia and the Slovak Republic (Table A3.2). In addition, more than one in two first-time graduates from all levels of tertiary education – except the doctoral level – were women. On average, 58% of first-time graduates from bachelor's programmes or the equivalent were women, as were 47% of doctoral-level graduates. The largest differences between the share of women who graduated with a bachelor's degree or the equivalent and those who graduated with a doctorate (20 percentage points or more) were observed in the Czech Republic, Saudi Arabia and Sweden (Figure A3.3).

Although most tertiary graduates in 2014 were women, men still have better labour market outcomes. Earnings for tertiary-educated men are higher, on average, than those for tertiary-educated women, and tertiary-educated men tend to have higher employment rates than women with the same level of education (see Indicators A5 and A6).

Figure A3.3. Percentage of female graduates in tertiary levels of education (2014)



Note: The black line shows the 50% mark.
1. Year of reference 2013.
Countries are ranked in descending order of percentage of women graduating with bachelor's or equivalent.
Source: OECD. Table A3.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933396824

Students choose to graduate abroad, mainly for advanced degrees

The internationalisation of tertiary education has been more pronounced in advanced degrees, such as master's and doctoral programmes. In 2014, 26% of doctoral graduates in OECD countries were international students, as were 16% of graduates from master's programmes or equivalent, and 7% of graduates at the bachelor's level or equivalent. In the Netherlands, New Zealand, Switzerland and the United Kingdom, 40% or more of graduates from doctoral programmes were international students. In Luxembourg, 81% of doctoral graduates were international students. In Australia, master's programmes attract a considerably higher number of international students (57%) than doctoral programmes (39%).

The average share of international students among those graduating from a master's programme following a bachelor's or equivalent level (16%) is higher than the share of international students graduating from long first degrees (6%). The differences can be very substantial, as in Sweden where it equals to 36 percentage points.

For more details on the internationalisation of tertiary education, please refer to Chapter C (see Indicator C4) of this publication.

Science and engineering are more popular fields of study in advanced tertiary degrees

The distribution of graduates by field of study is related to the relative popularity of these fields among students, the relative number of positions offered in universities and equivalent institutions, and the degree structure of the various disciplines in each country.

Many countries are pushing for a better balance in the distribution of graduates across fields of education. For instance, the United States recently took measures to increase the number of graduates with tertiary science and engineering qualifications by 1 million by 2022 (US Department of Education, 2011). Similarly, the European Union recently launched the Science with and for Society programme to build co-operation between science and society, recruit new talent for science, and pair scientific excellence with social awareness and responsibility. The programme aims to make science more attractive, particularly to young people, and to open further research and innovation activities across Europe (European Union, 2012).

The small share of graduates in science and engineering at the tertiary level hides large differences by level of tertiary education. In science, doctoral degrees have a markedly higher share of graduates compared to lower levels. While 5% of graduates from short-cycle tertiary programmes, 9% of graduates from bachelor's or equivalent programmes, and 8% of graduates from master's or equivalent programmes earned a degree in science in 2014, 27% of graduates from doctoral programmes were in sciences, on average across OECD countries. In Canada, France, Israel and Saudi Arabia, 55% or more of doctoral students graduated from the fields of science or engineering in 2014 (Table A3.5).

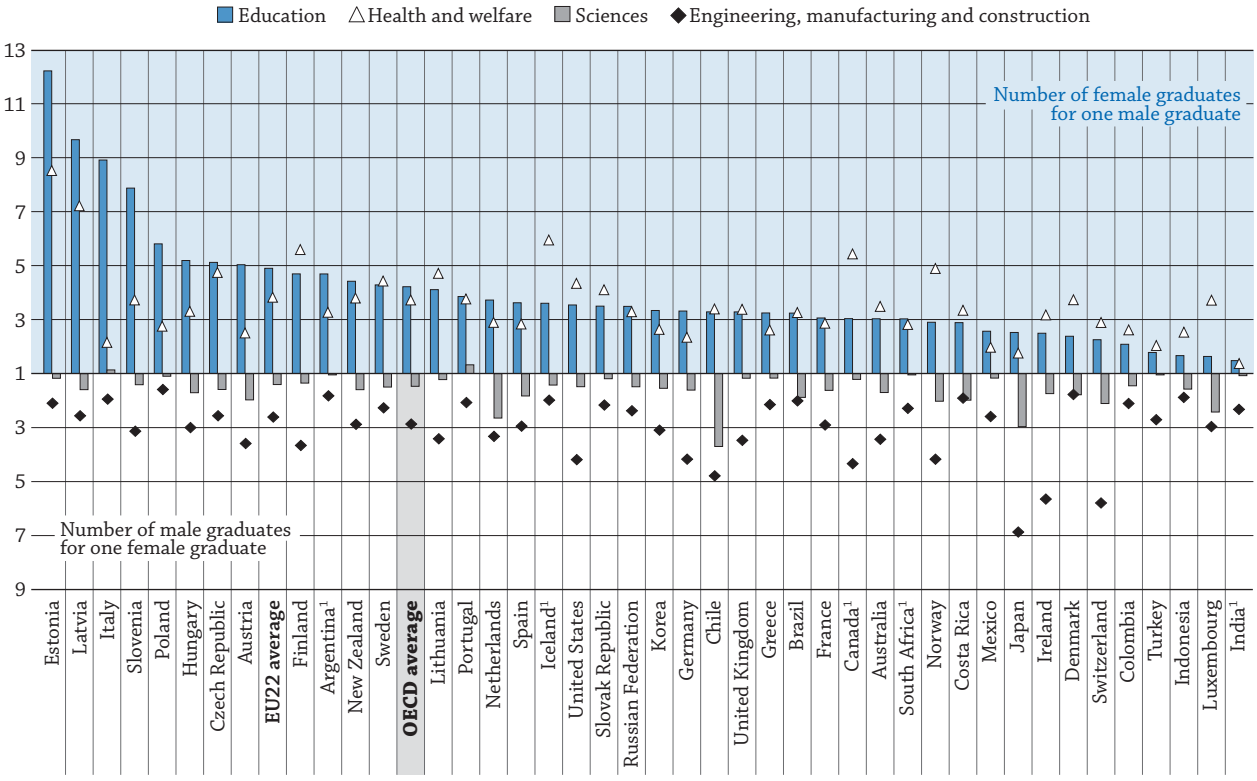
This pattern is even clearer among international students. More than one in two international students who graduated with a doctorate earned a degree in either science or engineering (33% earned a doctorate in sciences and 20% earned a doctorate in engineering), compared with 20% international students who graduated at the bachelor's level or from a short-cycle tertiary programme in these fields of education.

The popularity of science and engineering in doctoral programmes may be the result of policies that encourage academic research in these fields. Recent OECD work highlighted that while innovation draws on a wide set of skills, excellence in scientific research is the basis of science-based innovation, and research competence is essential for building co-operation among the scientific community, business and society. Thus, developing scientific research skills through doctoral training has become an important aim of education policy in many countries (OECD, 2014b).

Some fields of study have an unbalanced gender distribution

Even though women are over-represented among tertiary graduates (57% of first-time graduates), they remain under-represented in certain fields of study, such as science and engineering. As Figure A3.4 shows, there are, on average, three times more male graduates in engineering than female graduates. Among all OECD and partner countries, Poland has the lowest gender imbalance in engineering (1.6 men per woman) and Japan the highest (6.9 men per women). In science, only Italy and Portugal have a larger share of female graduates (Table A3.3).

Figure A3.4. Gender ratio for all tertiary graduates, by field of education (2014)



1. Year of reference 2013.

Countries are ranked in descending order of the number of female graduates for one male graduate in the field of "Education".

Source: OECD. Table A3.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396834

These results are partially explained by gender differences in young people's attitudes and aspirations. The OECD Programme for International Student Assessment (PISA) has consistently found that 15-year-old girls have higher expectations for their careers than boys, but that, on average across OECD countries, fewer than 5% of girls of that age contemplate a career in engineering or computing (OECD, 2015b).

The fields of education, and health and welfare reveal the other extreme. On average in 2014, four women graduated in the field of education for every man. The ratio is highest in Estonia, where more than 12 women graduated for every man. Similarly, women graduating in health and welfare represented, on average across OECD countries, 3.7 times the number of men. Canada, Estonia, Finland, Iceland and Latvia have more than five female graduates per male in the field of health and welfare (Figure A3.4). Regarding the field of humanities and arts, none of the countries with available data have more male graduates than female. The same pattern is observed in the fields of social sciences, business and law, with the exception of Indonesia, Japan, Switzerland and Turkey. The fields of agriculture and services have a more even gender balance (Table A3.3).

Definitions

First-time graduate is a student who has graduated for the first time at a given level of education during the reference period. Therefore, if a student has graduated multiple times over the years, he or she is counted as a graduate each year, but as a first-time graduate only once.

First-time tertiary graduate is a student who graduates for the first time with a tertiary diploma, regardless of the education programme in which he or she is enrolled. This definition is applied in Tables A3.1 (Columns 13 to 15), A3.2 and A3.6 (Columns 13 to 15).

First-time graduate from a given programme or level of tertiary education is a first-time graduate from the given programme, but may have a diploma from another programme. For example, a first-time graduate at the master's level has earned a master's degree for the first time, but may have previously graduated with a bachelor's degree. This definition is applied in Tables A3.1 (Columns 1 to 12), A3.4 (all columns except 4 and 5, 10 and 11, 16 and 17), A3.5 and A3.6 (Columns 1 to 12).

International students are those students who left their country of origin and moved to another country for the purpose of study. In the majority of countries, international students are considered first-time graduates, regardless of their previous education in other countries. In the calculations described here, when countries could not report the number of international students, foreign students have been used as an approximation. **Foreign students** are students who do not have the citizenship of the country in which they studied (for more details, please refer to Annex 3, www.oecd.org/education/education-at-a-glance-19991487.htm).

Net graduation rates represent the estimated percentage of people from a specific age cohort who will complete tertiary education over their lifetime, based on current patterns of graduation.

Methodology

Data refer to the academic year 2013/14 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Unless otherwise indicated, graduation rates are calculated as net graduation rates (i.e. as the sum of age-specific graduation rates). Net tertiary graduation rates represent the expected probability of graduating from tertiary education over a lifetime if current patterns are maintained. The current cohort of graduates by ages (cross-section data) is used in the calculation.

Gross graduation rates are used when data by age are missing. In order to calculate gross graduation rates, countries identify the age at which graduation typically occurs (see Annex 1, Table X1.1a). The typical age of graduation for a given education level is defined in *Education at a Glance* as the age range comprising at least half of the graduate population. The number of graduates of which the age is unknown is divided by the population at the typical graduation age. In many countries, defining a typical age at graduation is difficult, however, because graduates are dispersed over a wide range of ages.

Note regarding data from Israel

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

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Indicator A3 Tables

StatLink http://dx.doi.org/10.1787/888933396730

Table A3.1	**First-time graduation rates, by tertiary level (2014)**
Table A3.2	**Profile of a first-time tertiary graduate (2014)**
Table A3.3	**Gender ratio for all tertiary graduates, by field of education (2014)**
Table A3.4	**Percentage of female, international first-time graduates and average age, by tertiary level (2014)**
Table A3.5	**Percentage of all students and international students who graduate from sciences and engineering programmes, by tertiary level (2014)**
Table A3.6	**Trends in first-time graduation rates, by tertiary levels (2005, 2010, 2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

A3

Table A3.1. First-time graduation rates, by tertiary level (2014)

Sum of age-specific graduation rates, by demographic group

	Short-cycle tertiary (2-3 years)			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent			First-time tertiary		
		Excluding international students			Excluding international students			Excluding international students			Excluding international students			Excluding international students	
	Total	Total	Younger than 30	Total	Total	Younger than 30	Total	Total	Younger than 35	Total	Total	Younger than 35	Total	Total	Younger than 30
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	20	17	9	61	44	35	19	8	6	2.5	1.5	0.8	75	45	37
Austria	26	26	25	25	21	18	20	16	14	1.9	1.3	1.0	50	44	37
Belgium	m	m	m	42	39	38	12	8	9	0.6	0.4	0.5	m	m	m
Canada[1]	21	18	14	38	35	31	12	10	8	1.5	1.2	0.7	m	m	m
Chile	22	22	15	34	33	25	9	9	5	0.2	0.2	0.1	51	51	38
Czech Republic	0	0	0	39	36	30	26	23	21	1.6	1.4	1.0	44	40	33
Denmark	12	10	8	54	50	42	26	22	19	3.2	2.1	1.4	64	56	47
Estonia	a	a	a	m	m	m	m	m	m	m	m	m	m	m	m
Finland	a	a	a	46	44	34	23	21	16	2.6	2.0	0.9	49	45	36
France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	0	0	0	30	29	21	17	15	14	2.8	2.3	1.9	38	36	27
Greece	a	a	a	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	7	7	6	25	24	20	15	14	12	0.9	0.8	0.6	36	35	29
Iceland[1]	2	2	1	52	51	36	24	23	14	1.2	0.9	0.3	54	53	38
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	m	m	m	43	42	31	19	19	11	1.5	1.4	0.6	m	m	m
Italy	0	m	m	28	m	m	20	m	m	1.4	m	m	34	m	m
Japan	24	23	m	45	44	m	8	7	m	1.2	1.0	m	71	68	m
Korea	m	m	m	m	m	m	m	m	m	1.6	m	m	m	m	m
Latvia	13	13	9	31	31	27	15	15	13	1.0	0.9	0.5	46	45	37
Luxembourg	4	4	4	8	6	6	11	5	5	1.0	0.2	0.2	22	14	12
Mexico	2	m	m	23	m	m	4	m	m	0.3	m	m	25	m	m
Netherlands	1	1	0	42	38	36	18	14	13	2.2	1.3	1.2	46	39	37
New Zealand	26	20	12	56	45	34	8	5	3	2.4	1.2	0.6	76	58	42
Norway	4	4	3	39	38	31	18	16	13	2.1	1.5	0.6	47	46	38
Poland	0	m	m	m	m	m	m	m	m	0.4	m	m	m	m	m
Portugal	a	a	a	35	35	30	20	19	16	1.7	1.5	0.7	42	41	36
Slovak Republic	1	1	1	40	38	m	38	36	m	2.6	2.6	m	43	41	m
Slovenia	8	8	5	38	38	33	20	19	17	3.1	2.9	1.8	56	55	46
Spain	22	m	m	26	26	23	20	19	17	1.6	m	m	59	m	m
Sweden	6	6	4	27	26	19	20	16	12	2.4	1.6	0.8	41	36	27
Switzerland	2	2	1	48	44	34	17	13	12	3.4	1.5	1.2	50	46	35
Turkey	23	23	19	32	31	27	4	4	3	0.4	0.4	0.2	56	56	46
United Kingdom	4	4	3	50	42	38	26	14	10	2.9	1.6	1.1	48	42	37
United States	22	22	m	38	37	m	20	18	m	1.6	1.1	m	54	53	m
OECD average	11	11	7	38	36	29	18	15	12	1.7	1.3	0.8	49	45	36
EU22 average	7	7	5	35	33	28	20	17	14	1.9	1.5	1.0	45	41	34
Partners															
Argentina[1]	18	m	m	13	m	m	2	m	m	0.3	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	25	25	m	22	22	m	2	2	m	0.2	0.2	m	23	23	m
Colombia	10	m	m	16	m	m	8	m	m	0.0	m	m	m	m	m
Costa Rica	3	m	m	44	m	m	6	m	m	0.1	m	m	m	m	m
India[1]	a	a	a	32	m	m	3	m	m	0.1	m	m	32	m	m
Indonesia	x(4)	m	m	22[d]	m	m	1	m	m	0.1	m	m	24	m	m
Lithuania	a	a	a	51	m	m	21	m	m	1.1	m	m	52	m	m
Russian Federation	27	m	m	6	m	m	55	m	m	1.4	m	m	m	m	m
Saudi Arabia	6	m	m	24	m	m	1	m	m	0.1	m	m	m	m	m
South Africa[1]	6	m	m	12	m	m	1	m	m	0.2	m	m	m	m	m
G20 average	15	m	m	30	m	m	13	m	m	1.1	m	m	45	m	m

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A3.2. Profile of a first-time tertiary graduate (2014)

		Share of female graduates	Share of graduates below the typical age of 30	Average age	Share of international graduates	Share of first-time graduates by level of education		
						Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Master's or equivalent
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
OECD	Australia	56	84	25	41	6	76	18
	Austria	57	84	24	14	49	32	20
	Belgium	m	m	m	m	m	m	m
	Canada	m	m	m	m	m	m	m
	Chile	57	77	27	0	42	56	2
	Czech Republic	63	82	26	10	1	89	10
	Denmark	58	84	26	13	18	75	7
	Estonia	m	m	m	m	m	m	m
	Finland	58	80	27	9	a	89	11
	France	m	m	m	m	m	m	m
	Germany	51	88	21	3	0	80	20
	Greece	m	m	m	m	m	m	m
	Hungary	62	82	26	4	19	69	12
	Iceland[1]	62	73	28	2	3	95	2
	Ireland	m	m	m	m	m	m	m
	Israel	m	m	m	m	m	m	m
	Italy	60	87	25	m	1	81	18
	Japan	51	m	m	4	34	63	2
	Korea	m	m	m	m	m	m	m
	Latvia	64	82	26	2	27	69	4
	Luxembourg	56	74	27	36	18	35	48
	Mexico	52	93	24	m	8	92	a
	Netherlands	56	93	24	14	1	91	8
	New Zealand	56	76	27	22	31	66	3
	Norway	59	82	26	2	9	81	10
	Poland	m	m	m	m	m	m	m
	Portugal	59	84	26	2	a	84	16
	Slovak Republic	64	85	m	5	3	93	4
	Slovenia	59	81	26	2	15	63	22
	Spain	55	84	25	m	35	39	26
	Sweden	62	74	28	11	3	63	34
	Switzerland	49	76	28	7	3	96	0
	Turkey	50	84	25	0	42	57	1
	United Kingdom	56	90	23	13	9	89	2
	United States	58	m	m	3	41	59	a
	OECD average	57	82	26	10	16	72	12
	EU22 average	59	83	26	10	12	71	16
Partners	Argentina	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m
	China	51	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m
	India[1]	49	m	m	m	a	100	0
	Indonesia	52	100	24	m	x(6)	95[d]	5
	Lithuania	62	94	23	m	a	94	6
	Russian Federation	57	m	m	m	26	7	67
	Saudi Arabia	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m
	G20 average	54	m	m	m	17	70	13

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A3.3. Gender ratio for all tertiary graduates, by field of education (2014)

		Education	Humanities and arts	Social sciences, business and law	Sciences	Engineering, manufacturing and construction	Agriculture	Health and welfare	Services
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	Australia	3.0	1.7	1.3	0.6	0.3	1.1	3.5	1.4
	Austria	5.0	2.3	1.5	0.5	0.3	1.1	2.5	3.8
	Belgium	m	m	m	m	m	m	m	m
	Canada[1]	3.0	1.7	1.4	0.8	0.2	1.4	5.4	1.0
	Chile	3.3	1.2	1.4	0.3	0.2	0.9	3.4	0.9
	Czech Republic	5.1	2.4	2.0	0.6	0.4	1.5	4.7	1.1
	Denmark	2.4	2.1	1.2	0.6	0.6	2.2	3.7	0.4
	Estonia	12.2	2.9	2.9	0.9	0.5	1.4	8.5	0.9
	Finland	4.7	2.8	1.8	0.7	0.3	1.5	5.6	1.9
	France	3.1	2.3	1.5	0.6	0.3	0.7	2.9	1.1
	Germany	3.3	2.3	1.3	0.6	0.2	0.7	2.3	1.0
	Greece	3.2	2.7	1.6	0.9	0.5	1.1	2.6	1.0
	Hungary	5.2	2.1	2.2	0.6	0.3	0.9	3.3	1.6
	Iceland[1]	3.6	1.9	1.7	0.7	0.5	2.7	5.9	1.7
	Ireland	2.5	1.5	1.2	0.6	0.2	0.3	3.2	0.6
	Israel	m	m	m	m	m	m	m	m
	Italy	8.9	2.6	1.4	1.1	0.5	1.0	2.1	0.9
	Japan	2.5	2.2	0.6	0.3	0.1	0.7	1.7	3.2
	Korea	3.3	2.1	1.0	0.6	0.3	0.7	2.6	1.0
	Latvia	9.7	3.8	2.4	0.6	0.4	0.6	7.2	1.2
	Luxembourg	1.6	2.0	1.2	0.4	0.3	a	3.7	a
	Mexico	2.6	1.4	1.4	0.9	0.4	0.6	2.0	0.4
	Netherlands	3.7	1.4	1.2	0.4	0.3	1.2	2.9	1.2
	New Zealand	4.4	1.8	1.3	0.6	0.3	1.9	3.8	1.1
	Norway	2.9	1.6	1.4	0.5	0.2	1.6	4.9	0.6
	Poland	5.8	3.1	2.3	0.9	0.6	1.2	2.7	1.2
	Portugal	3.9	1.5	1.6	1.3	0.5	1.5	3.8	0.9
	Slovak Republic	3.5	2.1	2.1	0.8	0.5	1.1	4.1	0.7
	Slovenia	7.9	2.3	2.2	0.7	0.3	1.3	3.7	0.9
	Spain	3.6	1.5	1.5	0.5	0.3	0.8	2.8	0.8
	Sweden	4.3	1.7	1.7	0.7	0.4	2.0	4.4	1.9
	Switzerland	2.3	1.6	0.9	0.5	0.2	0.5	2.9	0.7
	Turkey	1.8	1.7	0.9	1.0	0.4	0.8	2.0	0.6
	United Kingdom	3.3	1.7	1.1	0.9	0.3	1.8	3.4	1.6
	United States	3.5	1.5	1.3	0.7	0.2	1.0	4.3	1.1
	OECD average	4.2	2.0	1.5	0.7	0.3	1.2	3.7	1.2
	EU22 average	4.9	2.2	1.7	0.7	0.4	1.2	3.8	1.2
Partners	Argentina[1]	4.7	2.7	1.6	1.0	0.5	0.8	3.3	1.2
	Brazil	3.2	1.3	1.4	0.5	0.5	0.8	3.3	1.6
	China	m	m	m	m	m	m	m	m
	Colombia	2.1	1.0	1.6	0.7	0.5	0.7	2.6	0.8
	Costa Rica	2.9	1.3	1.7	0.5	0.5	0.8	3.3	1.5
	India[1]	1.5	1.1	1.0	0.9	0.4	0.3	1.4	3.5
	Indonesia	1.7	1.3	0.9	0.6	0.5	0.6	2.5	0.6
	Lithuania	4.1	2.7	2.5	0.8	0.3	1.0	4.7	0.9
	Russian Federation	3.5	3.2	2.1	0.7	0.4	1.2	3.3	0.8
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa[1]	3.0	1.7	1.5	1.0	0.4	1.1	2.8	3.5
	G20 average	3.3	1.9	1.3	0.7	0.4	0.9	2.9	1.4

Note: Tertiary graduates include short-cycle tertiary, bachelor's or equivalent, master's or equivalent, and doctoral.

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A3.4. Percentage of female, international first-time graduates and average age, by tertiary level (2014)

		Percentage of female graduates						Percentage of international graduates						Average age					
				Master's or equivalent						Master's or equivalent						Master's or equivalent			
		Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Total	Master's or equivalent level following bachelor's[1]	Master's or equivalent level long first degrees[1]	Doctoral or equivalent	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Total	Master's or equivalent level following bachelor's[1]	Master's or equivalent level long first degrees[1]	Doctoral or equivalent	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Total	Master's or equivalent level following bachelor's[1]	Master's or equivalent level long first degrees[1]	Doctoral or equivalent
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	58	59	53	54	a	50	15	28	57	51	a	39	30	26	29	32	28	36
	Austria	54	59	54	49	62	42	0	16	20	19	18	31	20	26	29	30	28	32
	Belgium	m	61	56	55	a	42	m	8	31	14	a	38	m	24	25	25	a	32
	Canada[2, 3]	56	60	56	56	60	45	15	8	16	21	1	18	26	25	30	31	27	35
	Chile	60	53	55	56	52	45	0	0	1	1	0	34	27	28	34	36	26	37
	Czech Republic	65	63	61	59	67	43	3	8	11	9	16	13	25	27	36	28	27	35
	Denmark	50	60	57	57	81	47	17	7	18	18	a	32	26	26	29	29	28	33
	Estonia	a	m	m	69	60	m	a	m	m	5	6	m	a	m	m	28	26	m
	Finland	a	59	60	60	59	53	a	6	10	10	1	24	a	28	31	32	28	38
	France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Germany	67	49	53	46	61	45	0	3	11	16	4	16	m	25	27	27	27	32
	Greece	a	m	m	m	a	m	a	m	m	m	a	m	a	m	m	m	a	m
	Hungary	69	60	60	60	59	48	0	3	9	6	15	8	24	26	29	29	28	34
	Iceland[2]	43	63	68	68	61	47	4	2	7	7	0	27	34	28	34	35	28	38
	Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Israel	m	60	61	m	m	50	m	3	4	m	m	4	m	29	35	m	m	38
	Italy	23	59	60	57	66	52	m	m	m	m	m	m	24	30	34	28	28	33
	Japan	62	45	32	m	m	31	4	2	10	m	m	19	m	m	m	m	m	m
	Korea	m	m	m	50	a	35	m	m	m	8	a	m	m	m	m	34	a	39
	Latvia	66	63	68	68	71	60	0	2	4	3	8	2	28	26	28	28	29	36
	Luxembourg	64	58	52	54	a	38	14	24	50	68	a	81	23	25	30	29	a	32
	Mexico	40	53	55	55	a	48	m	m	m	m	m	m	23	24	m	m	a	m
	Netherlands	53	56	57	57	a	47	a	9	21	20	a	40	28	24	26	26	a	31
	New Zealand	52	60	57	57	a	50	24	18	33	33	a	48	29	27	33	33	a	36
	Norway	22	63	58	57	58	49	1	2	10	14	2	28	28	26	30	32	26	37
	Poland	85	m	m	68	66	54	m	m	m	1	5	m	24	m	m	27	27	34
	Portugal	a	60	60	63	54	54	a	2	6	8	2	13	a	26	29	30	26	39
	Slovak Republic	70	63	63	63	68	50	1	4	5	4	21	0	24	m	27	27	m	32
	Slovenia	45	61	64	63	65	57	0	2	2	4	1	5	31	26	28	29	27	35
	Spain	52	60	55	56	55	49	m	1	7	10	1	m	24	25	28	29	27	36
	Sweden	56	69	56	61	53	49	0	2	21	38	2	32	29	28	30	31	29	36
	Switzerland	63	49	48	48	70	43	0	7	24	24	10	54	28	28	29	29	32	32
	Turkey	49	50	43	42	48	48	0	1	3	3	3	3	25	26	31	32	25	34
	United Kingdom	61	56	58	m	m	47	6	15	46	m	a	43	30	24	29	m	m	33
	United States	61	57	59	m	a	50	2	3	12	m	a	27	m	m	m	m	a	m
	OECD average	56	58	57	57	62	47	5	7	16	16	6	26	26	26	30	30	27	35
	EU22 average	58	60	58	59	63	49	4	7	17	15	8	25	26	26	29	29	27	34
Partners	Argentina[2]	68	62	58	m	m	56	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	56	a	m	m	m	m	1	a	m	m	m	m	32	a	m
	China	51	52	49	49	a	38	0	0	1	1	a	2	m	m	m	m	a	m
	Colombia	52	57	56	m	m	38	m	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	65	64	58	m	m	53	m	m	m	m	m	m	m	m	m	m	m	m
	India[2]	a	49	54	28	49	38	a	m	m	m	m	m	a	m	m	m	m	m
	Indonesia	x(2)	52[d]	48	a	66	41	m	m	m	m	a	m	x(14)	24[d]	25	a	25	27
	Lithuania	a	62	67	67	68	59	a	m	m	3	3	m	a	23	27	27	25	33
	Russian Federation	52	57	60	57	60	43	m	m	m	2	m	m	m	m	m	m	m	m
	Saudi Arabia	24	57	40	m	m	27	m	m	m	m	m	m	m	m	m	m	m	m
	South Africa[2]	62	61	49	m	m	43	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	53	55	52	51	58	44	5	7	18	14	m	21	m	m	m	m	m	m

1. The percentages for "master's or equivalent level degrees following bachelor's", and "master's or equivalent level long first degrees" are calculated using the number of graduates instead of the number of first-time graduates.
2. Year of reference 2013.
3. Includes "master's or equivalent level degrees following master's".

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A3.5. Percentage of all students and international students who graduate from sciences and engineering programmes, by tertiary level (2014)

	Percentage of students who graduate from sciences and engineering programmes								Percentage of international students who graduate from sciences and engineering programmes							
	Sciences				Engineering, manufacturing and construction				Sciences				Engineering, manufacturing and construction			
	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	Short-cycle tertiary (2-3 years)	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	5	10	8	24	10	7	9	17	8	10	11	25	12	9	10	23
Austria	4	13	10	25	32	14	16	24	0	12	7	28	43	11	15	22
Belgium	m	4	7	22	m	11	15	23	m	2	11	23	m	7	11	28
Canada[1]	5	13	10	37	13	8	9	19	6	14	10	38	16	9	11	21
Chile	4	6	3	35	16	18	4	16	4	6	2	34	17	20	11	38
Czech Republic	0	10	9	28	0	12	15	21	0	16	9	36	0	11	12	15
Denmark	5	7	11	18	23	10	12	22	4	7	11	22	22	17	18	33
Estonia	a	10	12	38	a	11	17	16	a	0	12	20	a	0	17	0
Finland	a	6	9	19	a	21	18	22	a	5	13	22	a	25	33	30
France	3	12	10	47	22	8	17	14	m	m	m	m	m	m	m	m
Germany	0	12	16	32	25	24	16	11	0	12	12	44	0	28	26	16
Greece	a	11	15	18	a	18	15	22	a	m	m	m	a	m	m	m
Hungary	9	6	6	26	4	14	14	11	12	6	3	28	24	12	6	9
Iceland[1]	3	8	5	38	0	10	6	5	0	6	32	60	0	0	7	7
Ireland	9	13	11	35	10	14	5	10	42	15	18	57	5	9	8	4
Israel	m	8	7	49	m	12	5	9	m	7	6	48	m	12	3	11
Italy	14	8	6	26	69	15	17	20	m	m	m	m	m	m	m	m
Japan	0	3	10	16	15	17	32	23	m	m	m	m	m	m	m	m
Korea	2	10	5	13	28	23	17	25	1	3	4	21	33	13	16	31
Latvia	6	7	7	17	10	15	12	24	8	5	4	40	0	5	12	0
Luxembourg	4	8	7	40	5	9	3	10	0	3	11	45	0	8	4	12
Mexico	1	6	4	14	53	23	7	14	m	m	m	m	m	m	m	m
Netherlands	2	6	7	14	6	8	8	18	a	3	9	m	a	6	13	m
New Zealand	11	12	12	32	7	7	14	16	16	18	11	38	8	8	18	18
Norway	5	6	10	29	55	7	12	10	15	6	20	48	46	6	16	21
Poland	0	7	7	22	0	12	13	17	a	5[d]	x(10)	m	a	7[d]	x(14)	m
Portugal	a	7	8	22	a	18	20	20	a	6	7	23	a	16	16	21
Slovak Republic	1	8	7	18	2	12	13	21	0	3	2	6	0	4	3	14
Slovenia	6	11	8	24	22	15	15	17	0	14	8	39	0	12	14	31
Spain	7	7	9	36	19	16	12	11	m	5	7	m	m	11	10	m
Sweden	9	6	7	25	28	11	23	26	16	15	18	33	32	12	34	36
Switzerland	1	6	10	30	2	16	12	16	0	10	13	39	0	21	14	20
Turkey	6	7	6	19	17	11	9	16	6	9	9	22	11	23	29	20
United Kingdom	9	21	11	32	9	8	9	14	5	14	11	28	11	15	13	19
United States	5	11	6	27	6	6	6	15	6	14	18	36	4	13	21	32
OECD average	5	9	8	27	18	13	13	17	7	8	11	33	13	12	15	20
EU22 average	5	9	9	26	17	13	14	18	7	8	10	31	11	11	15	18
Partners																
Argentina[1]	9	6	4	45	4	10	5	7	m	m	m	m	m	m	m	m
Brazil	2	5	13	18	0	9	15	14	0	10	24	29	0	15	29	16
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	8	2	2	21	19	24	6	25	m	m	m	m	m	m	m	m
Costa Rica	12	7	4	10	6	7	1	0	m	m	m	m	m	m	m	m
India[1]	a	18	26	26	a	11	5	9	a	m	m	m	a	m	m	m
Indonesia	x(2)	12[d]	5	6	x(6)	9[d]	4	7	m	m	m	m	m	m	m	m
Lithuania	a	5	6	23	a	18	13	24	a	1	0	0	a	9	3	0
Russian Federation	6	11	6	19	27	15	17	4	m	m	m	m	m	m	m	m
Saudi Arabia	69	39	5	44	0	6	1	15	m	m	m	m	m	m	m	m
South Africa[1]	8	11	14	31	11	7	12	7	m	m	m	m	m	m	m	m
G20 average	m	12	9	27	m	12	12	14	m	m	m	m	m	m	m	m

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A3.6. Trends in first-time graduation rates, by tertiary levels (2005, 2010, 2014)

Sum of age-specific graduation rates, by demographic groups

		Short-cycle tertiary (2-3 years)			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent			First-time tertiary		
		2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	m	18	20	45	49	61	17	19	19	1.7	2.1	2.5	52	62	75
	Austria	m	25	26	2	15	25	19	20	20	2.0	2.2	1.9	m	46	50
	Belgium	m	m	m	m	m	42	m	m	12	m	m	0.6	m	m	m
	Canada[1]	16	20	21	30	32	38	8	10	12	m	m	1.5	m	m	m
	Chile	m	m	22	m	m	34	m	m	9	m	m	0.2	m	m	51
	Czech Republic	m	m	0	m	m	39	m	m	26	1.2	1.3	1.6	m	m	44
	Denmark	7	9	12	43	47	54	19	22	26	1.3	2.0	3.2	53	58	64
	Estonia	a	a	a	m	m	m	m	m	m	0.7	0.9	m	m	m	m
	Finland	0	0	a	35	43	46	19	22	23	2.2	2.2	2.6	43	50	49
	France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Germany	0	m	0	14	m	30	14	m	17	2.3	m	2.8	26	m	38
	Greece	m	m	a	m	m	m	m	m	m	0.7	1.1	m	m	m	m
	Hungary	4	6	7	23	21	25	9	10	15	m	m	0.9	m	m	36
	Iceland[1]	m	m	2	m	m	52	m	m	24	m	m	1.2	m	m	54
	Ireland	m	m	m	m	m	m	m	m	m	1.2	1.7	m	m	m	m
	Israel	m	m	m	34	36	43	11	14	19	1.3	1.5	1.5	m	m	m
	Italy	m	m	0	m	m	28	m	m	20	1.1	m	1.4	m	m	34
	Japan	m	m	24	m	m	45	m	m	8	m	1.1	1.2	m	m	71
	Korea	m	m	m	m	m	m	m	m	m	1.0	1.3	1.6	m	m	m
	Latvia	m	16	13	m	62	31	m	7	15	m	0.5	1.0	m	m	46
	Luxembourg	m	m	4	m	m	8	m	m	11	m	m	1.0	m	m	22
	Mexico	1	1	2	17	19	23	2	3	4	0.1	0.2	0.3	18	21	25
	Netherlands	m	0	1	m	41	42	m	15	18	1.4	m	2.2	m	45	46
	New Zealand	m	m	26	m	m	56	m	m	8	1.1	1.7	2.4	m	m	76
	Norway	4	m	4	37	m	39	13	m	18	1.3	1.8	2.1	48	m	47
	Poland	0	1	0	m	m	m	m	m	m	m	m	0.4	m	m	m
	Portugal	a	a	a	9	33	35	29	15	20	0.6	0.9	1.7	32	40	42
	Slovak Republic	m	m	1	m	m	40	m	m	38	1.2	3.4	2.6	m	m	43
	Slovenia	m	m	8	m	m	38	m	m	20	4.3	4.0	3.1	m	m	56
	Spain	m	m	22	m	m	26	m	m	20	1.0	1.1	1.6	m	m	59
	Sweden	m	6	6	m	20	27	m	20	20	m	m	2.4	m	m	41
	Switzerland	m	m	2	m	m	48	m	m	17	m	m	3.4	m	m	50
	Turkey	9	19	23	15	23	32	2	3	4	0.2	1.5	0.4	m	m	56
	United Kingdom	m	m	4	m	m	50	m	m	26	m	m	2.9	m	m	48
	United States	17	20	22	33	37	38	17	19	20	1.4	1.4	1.6	45	50	54
	OECD average[2]	m	m	m	26	32	38	14	14	17	1.4	1.8	1.9	m	m	m
	EU22 average[2]	m	m	m	m	m	m	m	m	m	1.7	2.0	2.3	m	m	m
Partners	Argentina[1]	m	m	18	m	m	13	m	m	2	m	m	0.3	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	China	m	m	25	m	m	22	m	m	2	m	m	0.2	m	m	23
	Colombia	m	m	10	m	m	16	m	m	8	m	m	0.0	m	m	m
	Costa Rica	m	m	3	m	m	44	m	m	6	m	m	0.1	m	m	m
	India[1]	a	a	a	m	m	32	m	m	3	m	m	0.1	m	m	32
	Indonesia	m	m	x(6)	m	m	22[d]	m	m	1	m	m	0.1	m	m	24
	Lithuania	a	a	a	m	m	51	m	m	21	m	m	1.1	m	m	52
	Russian Federation	m	m	27	m	m	6	m	m	55	m	m	1.4	m	m	m
	Saudi Arabia	m	m	6	m	m	24	m	m	1	m	m	0.1	m	m	m
	South Africa[1]	m	m	6	m	m	12	m	m	1	m	m	0.2	m	m	m
	G20 average[2]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2013 instead of 2014.

2. The averages are calculated only from countries with data available for all reference years and so may be different from Table A3.1.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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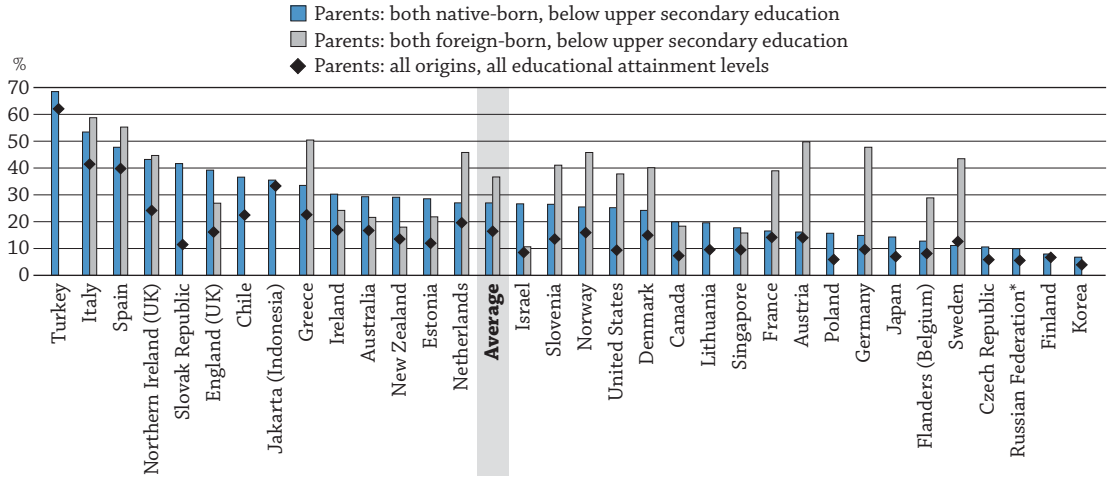
TO WHAT EXTENT DOES PARENTS' BACKGROUND INFLUENCE EDUCATIONAL ATTAINMENT?

- Although educational attainment has been improving across countries, low educational attainment still persists particularly among those with low-educated parents.
- In several countries, the share of those with below upper secondary education as highest level of education is higher among those with foreign-born parents without upper secondary education than among those with native-born parents without upper secondary education.
- Parents' educational attainment plays some role in perpetuating similar educational attainment among their children, but in many countries strong upward mobility to tertiary education has also occurred.

Figure A4.1. Percentage of 25-44 year-olds with below upper secondary education, by parents' immigrant status and educational attainment (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey : Year of reference 2015. All other countries: Year of reference 2012. Information on both foreign-born parents is not displayed for some countries because there are too few observations to provide reliable estimates. For national entities as well as for subnational entities, "foreign-born parents" refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), "foreign-born parents" refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-44 year-olds with below upper secondary education (parents: both native-born, below upper secondary education).

Source: OECD. Table A4.3, and Table A4.5, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396895

Context

Education opportunities can promote inclusive growth and reduce inequalities in societies through improved employment opportunities, higher earnings and overall wealth, but inequalities in educational attainment sometimes persist over generations, leading to widening inequalities in societies. To facilitate social inclusion and mobility and improve socio-economic outcomes now and for future generations, countries need to assure access to quality education. This is particularly important among those with disadvantaged background (often identified as being of low socio-economic status), including those with low-educated parents and immigrant background.

Many OECD countries have an important share of immigrant population, and these population groups generally do not benefit from learning and education as much as others, often due to language barriers and/or difficult socio-economic situations. Early childhood education and care (ECEC) (see Indicator C2) is particularly important for children with immigrant background, because pre-primary education tailored to language development can place them on a level playing field with non-immigrant children before the start of formal education. However, participation rates are often lower among immigrant children than among non-immigrant children (OECD, 2015a).

During compulsory education, performance of students with immigrant background is often lower (OECD, 2015a), and access to further education also tends to be lower among students with immigrant background. Adults with immigrant background are therefore often challenged in attaining labour market outcomes equivalent to those of their native-born peers (OECD, 2016a), and they may benefit from formal and non-formal adult learning opportunities.

Countries need to develop and implement effective integration and education policies to accommodate the needs of people with immigrant background and maximise their potential. Education performance and access among those with immigrant background may be linked to cultural and educational factors not related to the host country, but performance and access are also likely to be influenced by its education system (OECD, 2015a). This suggests an important role for host countries in assuring access to and completion of higher education among people with immigrant background, to promote social integration, mobility and cohesion.

But the challenges related to people with immigrant background vary across countries. A number of European countries tend to receive more immigrants with lower education and a fluctuating inflow of migrants, while Australia, Canada, New Zealand and the United States have more well-educated immigrants and a stable inflow (OECD/EU, 2016). The magnitude of the challenges depends on the number of people with immigrant background, their characteristics such as educational attainment, the country in which migrant parents and children received education before arriving in the host country, and age at which they arrived in the host country (e.g. before or after completing formal education in the country of their origin), the language spoken at home and the inflow of migration, which vary widely across countries.

Family background (both socio-economic status and parents' educational attainment) is known to have some influence on children's performance at school and their decisions to pursue higher education. Research shows that mothers and fathers may have different impacts on their children's access to and completion of higher education (Behrman, 1997; Chevalier et al., 2013).

Other findings

- In some countries, including France, Greece, Italy, Slovenia and Spain, upward mobility from upper secondary or post-secondary non-tertiary to tertiary is less prevalent among those with foreign-born parents than among those with native-born parents.
- Across countries, upward mobility to tertiary education is generally larger among women and this general tendency can be explained by higher attainment of tertiary education among women than men in recent decades.

Note

Drawing from the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), this indicator analyses intergenerational mobility in education (see the *Definitions* section at the end of this indicator). To capture challenges facing education systems in relation to young adults, the analysis examines non-student adults aged between 25 and 44 and their parents. The 25-44 year-olds pursuing higher education are not included because the analysis focuses on the highest level of education already completed and excluding them could lead to underestimation of higher-educated adults in some countries if many adults over age 25 continue to pursue higher education. The data do not generally reflect the impact of policies that countries have implemented recently, particularly for policies focusing on children. Due to the small number of observations, data need to be interpreted with care and data for specific countries are presented only if the differences are statistically significant.

Intergenerational mobility in education may not be the same for those with one foreign-born parent as for those whose parents are both foreign-born. But due to the small number of observations of such cases, this analysis focuses on comparing people whose parents are both native-born with those whose parents are both foreign-born. The analysis examines aggregated levels of education attainment, so it does not reflect mobility within disaggregated levels, which does occur to a large extent in several countries. Other factors, not evaluated in this analysis, may also have an impact on the educational performance of children and their access to higher education.

A4

Analysis

Below upper secondary education

Although educational attainment has been improving across countries (see Indicator A1), low educational attainment still persists particularly among adults with low-educated parents. In Italy, Spain and Turkey, among 25-44 year-old non-student, the share of those without upper secondary education is highest across OECD countries and subnational entities that participated in the Survey of Adult Skills. The share of those without upper secondary education is even higher among 25-44 year-old non-students whose parents do not have upper secondary qualification. This pattern is also observed in many other countries (Figure A4.1, Table A4.3 and Table A4.5, available on line).

In several countries with a relatively large share of people with immigrant background, the share of adults with below upper secondary education is higher among those whose parents are both foreign-born and do not have upper secondary education than among those whose parents are both native-born and do not have upper secondary education. The difference is relatively large in countries such as Austria, France, Germany, the Netherlands, Norway and Sweden (Figure A4.1 and Table A4.3). This may be related to immigration policies in these countries (Box A4.1).

In some of these countries, implementation of education policies to enhance integration of people with immigrant background and promote social inclusion and upward social mobility has been underway for many years. For example, following its 2007 National Integration Plan, in 2011 Germany developed the National Action Plan on Integration, which aims to improve participation and success of students with immigrant background, based on goals in education, training and continuing education (OECD, 2015b). Progress has been made in recent years: the share of young people with immigrant background without secondary education has decreased, and the share of graduates with a university-entrance qualification among those with immigrant background has increased (*Die Beauftragte der Bundesregierung für Migration, Flüchtlinge und Integration*, 2014). Several other countries, including the Netherlands, Norway and Sweden, also have provided support for immigrants, including language training and formal education and adult learning, to help them integrate into society (OECD, 2005). In Norway, both national and municipal governments have made efforts to promote access to high quality pre-primary education by supporting low-income and minority-language families. Initiatives include reducing or waiving fees and pilot programmes providing up to four hours per day of kindergarten free for 3-5 year-olds (OECD, 2015c). In recent years, the share of children participating in ECEC has increased, narrowing the gap in access to ECEC and suggesting that intergenerational mobility in education may improve in the near future.

Contrary to the general trend, in Israel, the share of adults with below upper secondary education is statistically higher among those with native-born parents than those with foreign-born parents (Figure A4.1 and Table A4.3). In Israel, the share of parents without upper secondary qualification is higher among the native-born than among the foreign-born (Box A4.1). This may suggest a need for education policies to effectively promote access to higher education among those with low-educated native-born parents. In Australia, some native-born ethnic minority groups tend to have lower education attainment than others, and the country is implementing a targeted strategy to guide this disadvantaged population to achieve full learning potential throughout their lives (Education Council, 2015).

Box A4.1. Share of the population with immigrant background and parents with below upper secondary education

Educational attainment of people with immigrant background needs to be assessed, along with cross-country differences in the size of this population group, as the magnitude of policy implications differs significantly across countries. Across OECD countries and subnational entities that participated in the Survey of Adult Skills, approximately 16% of non-student adults aged 25-44 have both parents foreign-born. Cross-country variation is large, ranging from over 35% in countries including Australia and Israel to less than 2% in Korea, Poland, the Slovak Republic and Turkey, while in many countries the share is between 10% and 20% (Figure A4.a and Table A4.1).

Differences in immigration policies also need to be taken into account when analysing intergenerational mobility in education among people with immigrant background. In general, countries in Europe historically have a larger share of family migrants and humanitarian migrants than countries such as Australia, Canada,

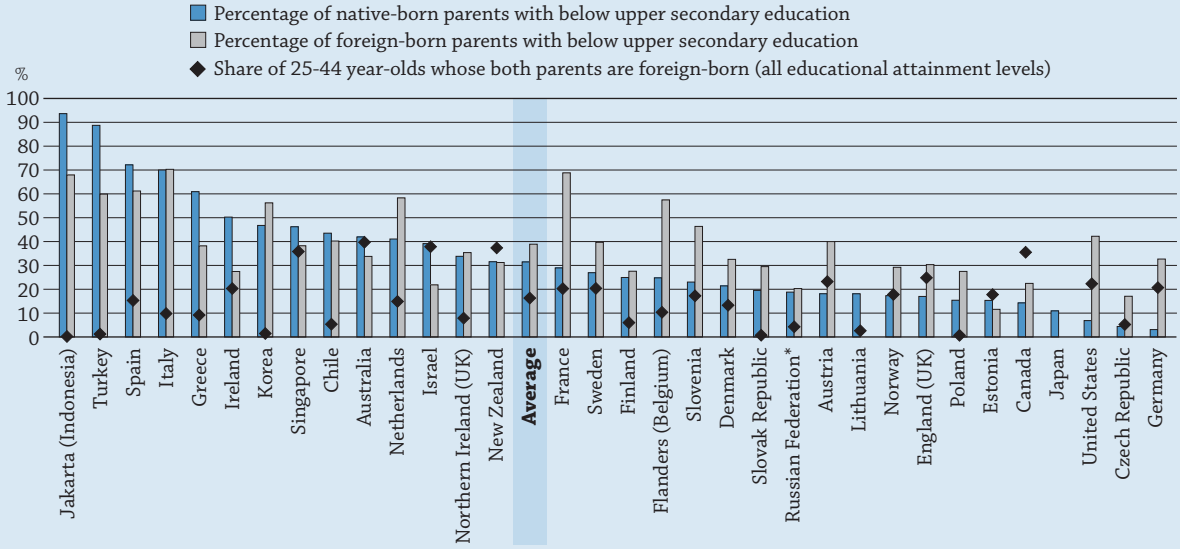
...

New Zealand and the United States. In countries in southern Europe, labour migration policies do not usually apply education or skill thresholds, while in Australia, Canada and New Zealand, most permanent economic migration comes through channels which require meeting restrictive criteria. In recent years, low-educated migrants in OECD countries are increasingly concentrated in Europe (OECD/EU, 2016).

Educational attainment of immigrants varies across countries, but in many countries, it appears to be lower than among the native-born. Large disparities in the share of those without upper secondary education are observed between foreign-born and native-born parents (20 percentage-point difference or more) in Flanders (Belgium), France, Germany and the United States (Figure A4.a and Table A4.2). A disparity also exists in Sweden, where a large share of refugees arriving on humanitarian grounds have low levels of education (OECD, 2016a).

Figure A4.a. Share of foreign-born parents and percentage of parents with below upper secondary education, by immigrant status (2012 or 2015)

Survey of Adult Skills, parents of 25-44 year-old non-students



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. For national entities as well as for subnational entities, "foreign-born parents" refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), "foreign-born parents" refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-44 year-old non-students whose both parents are native-born and whose highest education is below upper secondary.

Source: OECD. Tables A4.1 and A4.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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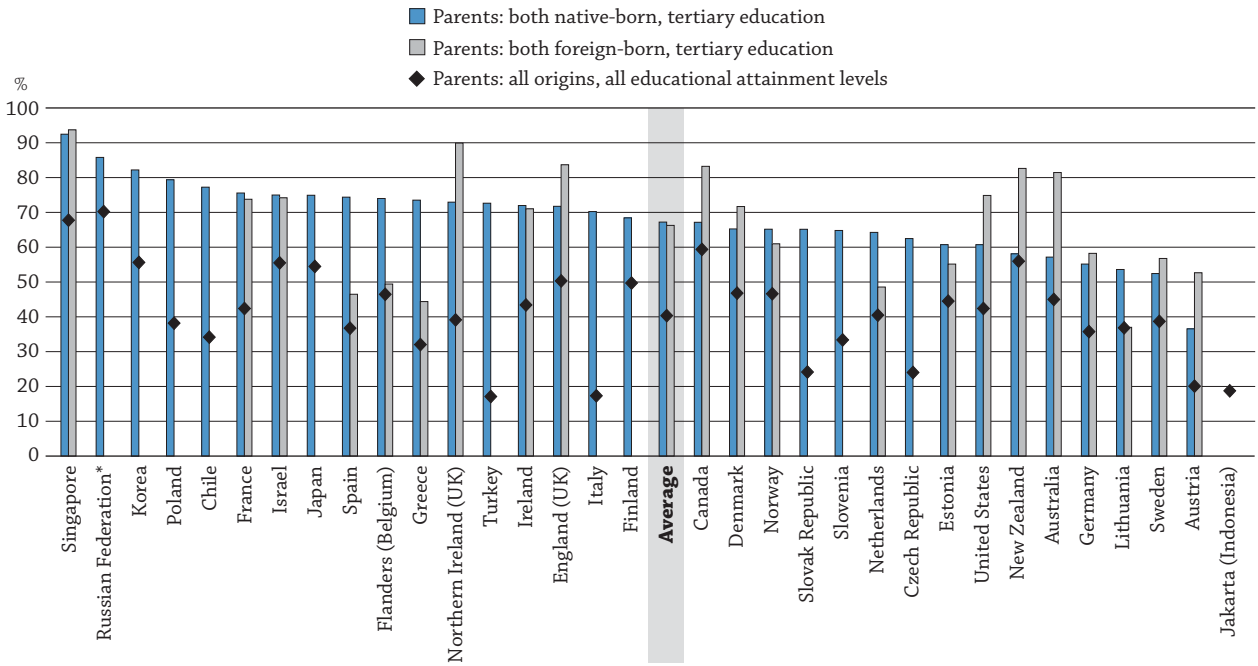
However, in countries such as Greece, Ireland, Israel, Singapore, Spain and Turkey, the share of people without upper secondary qualification is larger among native-born parents than among foreign-born parents (so a larger share of foreign-born parents are higher educated than the native-born parents) (Figure A4.a and Table A4.2).

Tertiary education

Across countries, the share of tertiary-educated adults is also high among those with tertiary-educated parents, compared to those whose parents are low educated. Across OECD countries and subnational entities, on average, 40% of non-student adults aged 25-44 are tertiary educated, and the share is 68% among those who have at least one parent with tertiary education. This suggests that tertiary-educated parents may have a positive impact on their children in attaining higher education. The share of adults with tertiary education is particularly prevalent among those with tertiary-educated parents in Jakarta (Indonesia), the Russian Federation and Singapore (Figure A4.2 and Table A4.3).

Figure A4.2. Percentage of 25-44 year-olds with tertiary education, by parents' immigrant status and educational attainment (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. For national entities as well as for subnational entities, "foreign-born parents" refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), "foreign-born parents" refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-44 year-olds with tertiary education (parents: both native-born, tertiary education).

Source: OECD. Table A4.3, and Table A4.5, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396900

On average, the share of adults with tertiary education is about the same among those with native-born tertiary-educated parents and those with foreign-born tertiary-educated parents. However, the situation varies significantly across countries. Some countries and subnational entities, including Flanders (Belgium), Greece, and Spain, have a higher share of tertiary-educated adults among those with native-born tertiary-educated parents, while in countries such as Australia, Canada and New Zealand, the share of tertiary-educated is higher among those with foreign-born tertiary-educated parents (Figure A4.2, Table A4.3 and Table A4.5, available on line). This may be related to differences in immigration policies across countries.

Upward mobility to tertiary education

Although parents' educational attainment plays some role in perpetuating similar educational attainment among their children, strong upward mobility has also occurred in many countries. Mobility between two generations from upper secondary or post-secondary non-tertiary to tertiary education is particularly large in countries and subnational entities such as Jakarta (Indonesia), Korea, the Russian Federation and Singapore, where more than one in two 25-44 year-olds achieved this upward mobility (Figure A4.3 and Table A4.3). In some of these countries, this can be explained by a rapid expansion of tertiary education in recent decades (see Indicator A1).

In several countries, upward mobility is limited, but for different reasons. Compared to many other countries, upward mobility to tertiary education in Chile and Italy is relatively limited both from below upper secondary education and from upper secondary or post-secondary non-tertiary education. These governments may need to consider ways to increase social inclusion and mobility by supporting particularly low performers who have a higher risk of disengaging from school (OECD, 2016b). In Austria, the Czech Republic, Germany, Poland, the Slovak Republic and Slovenia, limited upward mobility can be explained by the fact that upper secondary and post-secondary non-tertiary education continues to play a relatively important role, providing well-recognised labour market qualifications.

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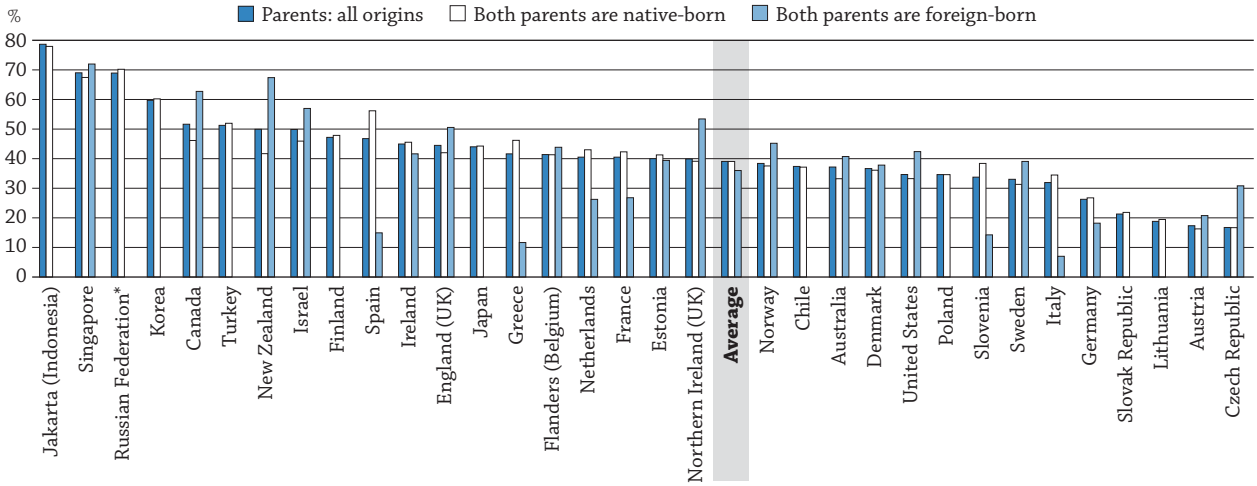
Across all age groups in these countries, the share of tertiary-educated and people with below upper secondary education is small, but the majority of adults have upper secondary or post-secondary non-tertiary education as the highest level of educational attainment. In Denmark, Norway, Sweden and the United States, upward mobility appears contained, but this is partly because attainment of tertiary education was high for previous generations (see Indicator A1 and Table A4.3).

Figure A4.3. Upward mobility from upper secondary or post-secondary non-tertiary to tertiary education, by parents' immigrant status (2012 or 2015)

Survey of Adult Skills, tertiary-educated 25-44 year-old non-students whose parents' highest level of education is upper secondary or post-secondary non-tertiary



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. For national entities as well as for subnational entities, "foreign-born parents" refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), "foreign-born parents" refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of upward mobility from upper secondary or post-secondary non-tertiary to tertiary education among 25-44 year-old non-students regardless of parents' origin.

Source: OECD. Table A4.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396912

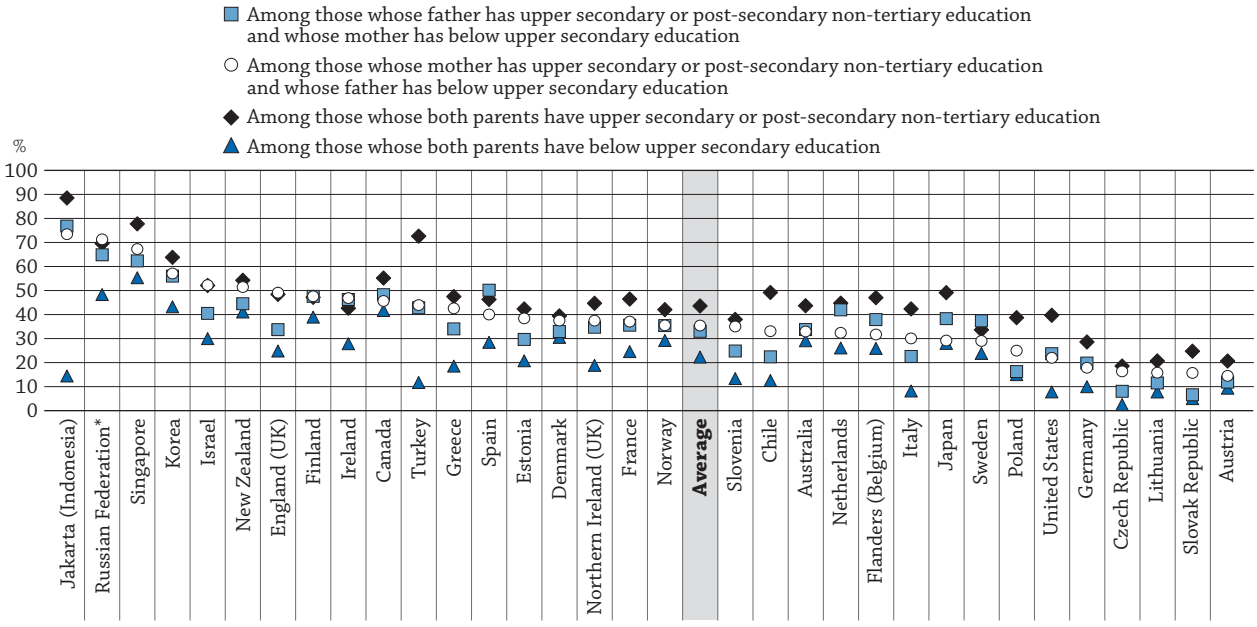
In some OECD countries, the magnitude of upward mobility to tertiary education is different between those with foreign-born parents and those with native-born parents. In countries, including Canada and New Zealand, the extent of upward mobility from upper secondary or post-secondary non-tertiary education to tertiary education is larger among those with foreign-born parents than among those with native-born parents. On the other hand, in countries, including France, Greece, Italy, Slovenia and Spain, upward mobility is less prevalent among those with foreign-born parents than among those with native-born parents (Figure A4.3 and Table A4.3). In these countries, there may be a need to assure equity in access to higher education and upward mobility can be promoted by policies to support the disadvantaged, such as reduction or waiver of tuition fees and means-tested financial support (see Indicator B5).

In general, upward mobility to tertiary education is larger if both parents have upper secondary or post-secondary non-tertiary education as the highest educational attainment. On average, 43% of adults with such parents achieved upward mobility across OECD countries and subnational entities. Upward mobility to tertiary education is also observed among people whose parents both have below upper secondary education, but the extent of upward mobility is smaller: on average across OECD countries and subnational entities, only 22% of adults with such parents attained tertiary education (Figure A4.4 and Table A4.4).

Overall, upward mobility is about the same when only one of the two parents holds the higher qualification, irrespective of who holds it: either the mother or the father. On average, 35% of adults with upper-secondary-educated mother and below upper-secondary-educated father have tertiary education, while upward mobility is slightly lower (33%) among adults with upper-secondary-educated father and below-upper-secondary-educated mother across OECD countries and subnational entities (Figure A4.4 and Table A4.4), but the differences are not statistically significant.

Figure A4.4. Upward mobility to tertiary education, by educational attainment and gender of parents (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

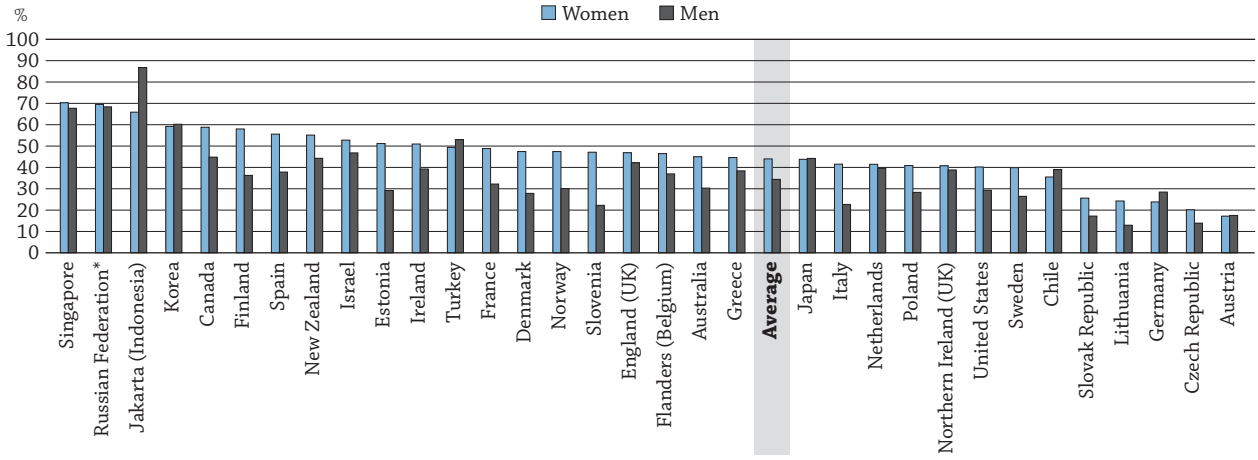
Countries and subnational entities are ranked in descending order of the percentage of upward mobility to tertiary education among 25-44 year-old non-students when only the mother attained upper secondary or post-secondary non-tertiary education.

Source: OECD. Table A4.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396928

Figure A4.5. Upward mobility from upper secondary or post-secondary non-tertiary to tertiary education, by gender (2012 or 2015)

Survey of Adult Skills, tertiary-educated 25-44 year-old non-students whose parents' highest level of education is upper secondary or post-secondary non-tertiary



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of upward mobility to tertiary education among women whose parents' highest educational attainment is upper secondary or post-secondary non-tertiary.

Source: OECD. Table A4.5, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933396933

Upward mobility to tertiary education by gender

Across countries, upward mobility to tertiary education is generally larger among women, but there are some exceptions. On average across OECD countries and subnational entities, 34% of men aged 25-44 attain tertiary education among those who have one or both parents whose highest educational attainment is upper secondary or post-secondary non-tertiary, while the share is 44% among women. The gender difference is relatively large in Estonia, Finland and Slovenia. On the other hand, upward mobility is more prevalent among men than women in Jakarta (Indonesia) (Figure A4.5 and Table A4.5, available on line).

Upward mobility from below upper secondary to tertiary education is also generally higher among women than men (Table A4.5, available on line), and this general tendency of larger upward mobility among women explains higher attainment of tertiary education among women than men in recent decades (see Indicator A1 and OECD, 2013).

Definitions

Adults with immigrant background: adults whose parents are both foreign-born.

Age groups: adults refers to 25-44 year-olds.

Levels of education:

- **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes
- **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4
- **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

Non-student refers to an individual who was not enrolled as a student at the time of the survey. For example, "non-students who completed tertiary education" refers to individuals who had completed tertiary education and were not students when the survey was conducted.

Parents' educational attainment:

- **below upper secondary** means that both parents have attained ISCED-97 levels 0, 1, 2 or 3C short programmes
- **upper secondary or post-secondary non-tertiary** means that at least one parent (either mother or father) has attained ISCED-97 levels 3A, 3B, 3C long programmes or level 4
- **tertiary** means that at least one parent (either mother or father) has attained ISCED-97 levels 5A, 5B or 6.

Upward mobility in education: from below upper secondary to tertiary refers to the situation in which both parents have below upper secondary education and children have tertiary education; **from upper secondary or post-secondary non-tertiary to tertiary** refers to the situation in which the highest educational attainment of parents is upper secondary or post-secondary non-tertiary (i.e. either one parent or both parents have this level of education) and children have tertiary education.

Methodology

All data are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). See Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for additional information.

For some data analysis, the sample is small, explaining why standard errors are slightly higher than usual. Data should, therefore, be interpreted with caution.

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator A4 Tables

StatLink http://dx.doi.org/10.1787/888933396841

	Table A4.1	**Percentage of 25-44 year-olds with native-born and foreign-born parents, by educational attainment (2012 or 2015)**
	Table A4.2	**Parents' educational attainment, by parents' immigrant status (2012 or 2015)**
	Table A4.3	**Intergenerational mobility in education, by parents' educational attainment and immigrant status (2012 or 2015)**
	Table A4.4	**Intergenerational mobility in education, by father's and mother's educational attainment (2012 or 2015)**
WEB	Table A4.5	**Educational attainment of adults, by age group, parents' educational attainment and gender (2012 or 2015)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table A4.1. Percentage of 25-44 year-olds with native-born and foreign-born parents, by educational attainment (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students with below upper secondary education, 56% have native-born parents, 13% have one foreign-born parent and 31% have foreign-born parents. For those with upper secondary or post-secondary non-tertiary, 53% have native-born parents, 16% have one foreign-born parent and 31% have foreign-born parents. Finally, for tertiary-educated 25-44 year-old non-students, 38% have native-born parents, 11% have one foreign-born parent and 50% have foreign-born parents.

	Own education: below upper secondary						Own education: upper secondary or post-secondary non-tertiary						Own education: tertiary					
	Both parents are native-born		One parent is foreign-born		Both parents are foreign-born		Both parents are native-born		One parent is foreign-born		Both parents are foreign-born		Both parents are native-born		One parent is foreign-born		Both parents are foreign-born	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
National entities																		
Australia	56	(3.6)	13	(2.4)	31	(3.2)	53	(2.2)	16	(1.7)	31	(1.7)	38	(1.6)	11	(1.2)	50	(1.6)
Austria	49	(3.3)	5	(1.6)	46	(3.2)	77	(1.4)	5	(0.7)	18	(1.1)	69	(1.9)	6	(1.2)	25	(1.9)
Canada	61	(3.8)	9	(2.1)	30	(3.6)	65	(1.7)	9	(1.3)	26	(1.6)	50	(1.1)	8	(0.7)	42	(1.1)
Chile	94	(3.3)	c	c	6	(3.3)	94	(3.3)	1	(0.6)	5	(3.2)	93	(2.5)	2	(0.7)	5	(1.9)
Czech Republic	82	(5.8)	3	(1.5)	14	(5.9)	88	(1.5)	9	(1.4)	3	(0.6)	86	(2.8)	5	(1.2)	9	(2.7)
Denmark	77	(2.0)	4	(1.4)	20	(1.6)	85	(1.2)	4	(0.8)	11	(0.9)	81	(1.1)	6	(0.9)	13	(0.7)
Estonia	68	(2.8)	17	(2.3)	15	(2.1)	63	(1.4)	18	(1.0)	19	(1.2)	69	(1.2)	14	(1.0)	17	(1.1)
Finland	82	(4.6)	c	c	15	(4.3)	93	(1.0)	1	(0.4)	6	(1.0)	93	(0.9)	2	(0.6)	5	(0.9)
France	43	(2.5)	9	(1.6)	48	(3.1)	75	(1.3)	8	(1.0)	17	(1.1)	76	(1.2)	10	(0.8)	14	(1.0)
Germany	37	(4.8)	8	(2.4)	54	(5.1)	72	(1.6)	9	(0.9)	19	(1.4)	71	(1.9)	14	(1.7)	15	(1.5)
Greece	86	(2.7)	1	(1.0)	12	(2.5)	87	(1.3)	3	(0.7)	10	(1.3)	91	(1.3)	4	(0.8)	5	(1.1)
Ireland	84	(2.3)	4	(1.2)	12	(1.9)	74	(1.6)	6	(0.9)	20	(1.6)	70	(1.8)	6	(0.8)	24	(1.7)
Israel	65	(3.8)	15	(3.0)	19	(3.4)	48	(2.1)	17	(1.6)	35	(2.2)	36	(1.6)	21	(1.5)	42	(1.5)
Italy	85	(2.2)	3	(0.9)	12	(1.9)	86	(1.2)	3	(0.7)	10	(1.1)	94	(1.4)	3	(1.0)	3	(1.0)
Japan	98	(1.4)	c	c	c	c	99	(0.4)	1	(0.5)	c	c	99	(0.4)	1	(0.4)	c	c
Korea	93	(3.1)	c	c	7	(3.1)	97	(0.5)	1	(0.3)	2	(0.4)	98	(0.3)	1	(0.2)	1	(0.2)
Netherlands	68	(2.8)	6	(1.6)	27	(2.8)	78	(1.9)	7	(1.2)	15	(1.6)	84	(1.6)	7	(1.1)	10	(1.4)
New Zealand	65	(3.1)	13	(2.5)	22	(2.9)	63	(2.5)	11	(1.7)	25	(2.1)	41	(1.8)	11	(1.1)	47	(1.8)
Norway	72	(3.0)	4	(1.4)	24	(3.0)	78	(1.7)	6	(0.9)	16	(1.6)	78	(1.3)	4	(0.8)	17	(1.2)
Poland	96	(2.2)	4	(2.2)	c	c	96	(0.6)	3	(0.5)	1	(0.4)	97	(0.6)	3	(0.6)	0	(0.2)
Slovak Republic	91	(1.9)	8	(1.7)	1	(0.7)	93	(0.7)	7	(0.7)	1	(0.2)	93	(1.6)	7	(1.5)	1	(0.5)
Slovenia	60	(3.8)	7	(1.8)	33	(3.7)	71	(1.6)	9	(1.0)	20	(1.3)	86	(1.5)	7	(1.2)	7	(1.0)
Spain	78	(1.2)	4	(0.7)	17	(1.1)	74	(1.9)	3	(0.8)	23	(1.8)	89	(1.1)	3	(0.6)	8	(0.9)
Sweden	54	(4.4)	8	(3.0)	38	(4.3)	75	(1.8)	8	(1.3)	17	(1.6)	73	(1.6)	8	(1.0)	19	(1.4)
Turkey	99	(0.4)	0	(0.2)	1	(0.4)	97	(0.8)	2	(0.6)	1	(0.6)	97	(0.8)	1	(0.5)	2	(0.6)
United States	44	(4.5)	6	(2.1)	50	(4.6)	76	(1.5)	5	(0.9)	19	(1.4)	75	(1.9)	4	(0.8)	20	(1.8)
Subnational entities																		
Flanders (Belgium)	66	(4.2)	7	(1.9)	27	(3.9)	84	(1.3)	5	(0.8)	12	(1.2)	90	(1.1)	4	(0.6)	6	(0.9)
England (UK)	71	(3.8)	6	(1.7)	22	(3.4)	74	(2.2)	5	(1.2)	20	(2.0)	62	(2.1)	9	(1.3)	29	(2.2)
Northern Ireland (UK)	85	(3.0)	8	(2.4)	7	(2.4)	87	(1.8)	8	(1.5)	5	(1.0)	81	(1.8)	8	(1.2)	11	(1.6)
Average	73	(0.6)	7	(0.4)	23	(0.6)	79	(0.3)	7	(0.2)	14	(0.3)	78	(0.3)	7	(0.2)	16	(0.3)
Partners																		
Jakarta (Indonesia)	99	(0.2)	1	(0.2)	c	c	99	(0.3)	1	(0.3)	c	c	98	(0.9)	1	(0.6)	1	(0.3)
Lithuania	95	(2.0)	5	(2.0)	c	c	88	(1.5)	9	(1.3)	3	(1.0)	88	(1.5)	10	(1.3)	2	(0.6)
Russian Federation*	88	(4.3)	c	c	c	c	83	(3.7)	7	(2.1)	9	(2.7)	89	(1.4)	8	(1.1)	3	(1.0)
Singapore	50	(3.7)	17	(2.8)	34	(4.0)	53	(2.5)	17	(1.8)	31	(2.3)	44	(1.1)	18	(1.1)	38	(1.1)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for all levels of educational attainment are available for consultation on line (see *StatLink* below). For national entities as well as for subnational entities, foreign-born parents refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), foreign-born parents refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933396852

A4

Table A4.2. Parents' educational attainment, by parents' immigrant status (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents are native-born, 42% have parents whose highest education is below upper secondary, 29% have parents whose highest education is upper secondary or post-secondary non-tertiary and 29% have parents whose highest education is tertiary. Parents' highest level of education attained should be understood as the highest level of education of either parent. Data on 25-44 year-olds with one native-born parent and one foreign-born parent are not included in this table due to low number of observations.

	Both parents are native-born						Both parents are foreign-born					
	Parents' educational attainment: below upper secondary		Parents' educational attainment: upper secondary or post-secondary non-tertiary		Parents' educational attainment: tertiary		Parents' educational attainment: below upper secondary		Parents' educational attainment: upper secondary or post-secondary non-tertiary		Parents' educational attainment: tertiary	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
National entities												
Australia	42	(2.1)	29	(1.5)	29	(1.7)	34	(2.2)	25	(1.8)	42	(1.7)
Austria	18	(1.0)	63	(1.3)	19	(1.0)	40	(2.7)	39	(2.8)	21	(2.1)
Canada	14	(0.6)	42	(1.1)	43	(1.1)	22	(1.3)	33	(1.5)	45	(1.5)
Chile	44	(3.2)	38	(2.4)	19	(2.1)	40	(5.1)	26	(2.6)	34	(6.0)
Czech Republic	4	(0.6)	79	(1.4)	17	(1.2)	17	(6.3)	58	(9.3)	25	(8.6)
Denmark	21	(1.1)	41	(1.3)	38	(1.3)	33	(2.2)	29	(2.3)	39	(2.3)
Estonia	15	(0.8)	45	(1.3)	40	(1.2)	12	(1.6)	44	(2.9)	45	(2.8)
Finland	25	(1.1)	54	(1.2)	21	(1.0)	28	(5.1)	37	(5.3)	35	(6.1)
France	29	(1.0)	47	(1.1)	24	(1.1)	69	(1.9)	18	(1.5)	13	(1.6)
Germany	3	(0.6)	60	(1.7)	37	(1.7)	33	(3.3)	39	(3.2)	29	(2.6)
Greece	61	(1.4)	27	(1.4)	12	(1.0)	38	(4.3)	36	(4.5)	25	(3.8)
Ireland	50	(1.3)	32	(1.2)	18	(0.9)	27	(2.9)	32	(3.0)	41	(3.0)
Israel	39	(1.4)	29	(1.6)	32	(1.5)	22	(1.7)	27	(1.6)	52	(2.1)
Italy	70	(1.3)	24	(1.2)	6	(0.6)	70	(4.6)	23	(4.3)	7	(2.2)
Japan	11	(0.8)	50	(1.3)	39	(1.2)	c	c	c	c	c	c
Korea	47	(1.1)	36	(1.1)	17	(0.8)	56	(9.6)	29	(9.1)	15	(6.5)
Netherlands	41	(1.3)	31	(1.3)	28	(1.2)	58	(3.8)	20	(3.7)	21	(3.0)
New Zealand	32	(1.6)	31	(1.4)	38	(1.6)	31	(2.3)	19	(1.8)	50	(2.3)
Norway	17	(1.1)	43	(1.4)	39	(1.3)	29	(3.0)	34	(2.9)	37	(2.9)
Poland	15	(1.0)	70	(1.1)	15	(1.0)	27	(14.0)	73	(14.0)	c	c
Slovak Republic	20	(1.0)	67	(1.2)	13	(0.8)	30	(13.1)	65	(13.7)	c	c
Slovenia	23	(1.2)	57	(1.5)	20	(1.2)	46	(3.5)	45	(3.4)	8	(1.5)
Spain	72	(1.1)	16	(1.0)	12	(0.9)	61	(2.9)	22	(2.7)	16	(2.2)
Sweden	27	(1.3)	30	(1.5)	43	(1.7)	40	(3.4)	24	(2.9)	36	(3.4)
Turkey	89	(0.8)	8	(0.6)	4	(0.4)	60	(11.9)	31	(10.9)	9	(4.7)
United States	7	(0.8)	47	(1.5)	46	(1.8)	42	(3.2)	26	(2.6)	32	(2.9)
Subnational entities												
Flanders (Belgium)	25	(1.2)	42	(1.4)	33	(1.2)	57	(3.6)	22	(3.4)	21	(3.1)
England (UK)	17	(1.5)	55	(1.7)	28	(1.6)	30	(3.4)	34	(3.0)	36	(2.5)
Northern Ireland (UK)	34	(1.4)	50	(1.6)	17	(1.3)	35	(6.4)	29	(5.1)	35	(5.9)
Average	31	(0.2)	43	(0.3)	26	(0.2)	39	(1.1)	33	(1.1)	30	(0.7)
Partners												
Jakarta (Indonesia)	94	(0.6)	5	(0.5)	1	(0.3)	68	(42.7)	c	c	c	c
Lithuania	18	(1.1)	25	(1.6)	57	(1.6)	c	c	11	(4.8)	76	(9.9)
Russian Federation*	19	(2.4)	49	(1.7)	32	(2.6)	20	(9.8)	50	(7.4)	29	(8.8)
Singapore	46	(1.5)	41	(1.5)	13	(1.1)	38	(1.7)	31	(1.6)	31	(1.7)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Data for parents' with tertiary education and for the total are available on line. For national entities as well as for subnational entities, foreign-born parents refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), foreign-born parents refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A4.3. [1/3] Intergenerational mobility in education, by parents' educational attainment and immigrant status (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents have below upper secondary education and whose parents are both native-born, 29% attained below upper secondary, 45% attained upper secondary or post-secondary non-tertiary and 25% attained tertiary education. Parents' educational attainment should be understood as the highest level of education of either parent. Data on 25-44 year-olds with one native-born parent and one foreign-born parent are not included in this table due to low number of observations.

		Parents' educational attainment: below upper secondary											
		Both parents are native-born						Both parents are foreign-born					
		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	**National entities**												
	Australia	29	(2.6)	45	(3.0)	25	(2.4)	22	(2.9)	39	(3.5)	39	(3.0)
	Austria	16	(2.3)	72	(2.5)	12	(1.7)	50	(4.1)	44	(4.1)	6	(1.8)
	Canada	20	(1.9)	47	(2.5)	33	(2.9)	18	(2.9)	30	(3.3)	51	(3.1)
	Chile	37	(1.7)	51	(2.3)	12	(2.0)	c	c	c	c	c	c
	Czech Republic	11	(3.5)	89	(3.5)	c	c	c	c	c	c	c	c
	Denmark	24	(2.7)	44	(2.7)	32	(2.5)	40	(4.1)	35	(4.2)	25	(3.5)
	Estonia	29	(2.8)	49	(3.0)	23	(2.4)	22	(5.9)	66	(7.3)	12	(4.9)
	Finland	8	(1.3)	53	(2.1)	39	(2.1)	c	c	c	c	c	c
	France	17	(1.8)	57	(2.1)	26	(1.8)	39	(2.6)	39	(2.4)	22	(2.3)
	Germany	15	(6.4)	64	(7.6)	21	(6.2)	48	(5.2)	46	(5.3)	7	(2.4)
	Greece	34	(1.8)	47	(1.8)	19	(1.4)	50	(7.8)	42	(7.1)	7	(3.9)
	Ireland	30	(1.4)	43	(1.6)	27	(1.4)	24	(4.8)	41	(5.1)	34	(4.8)
	Israel	27	(2.3)	49	(2.6)	25	(2.1)	11	(2.6)	50	(4.4)	40	(4.3)
	Italy	53	(1.7)	37	(1.6)	9	(0.8)	59	(5.0)	39	(4.8)	2	(1.0)
	Japan	14	(2.6)	57	(3.8)	29	(3.3)	c	c	c	c	c	c
	Korea	7	(0.8)	50	(1.2)	43	(1.0)	c	c	c	c	c	c
	Netherlands	27	(2.1)	44	(2.2)	29	(1.8)	46	(5.6)	37	(5.0)	18	(4.1)
	New Zealand	29	(3.1)	38	(3.0)	33	(3.0)	18	(3.1)	27	(3.7)	55	(4.2)
	Norway	26	(2.9)	44	(3.6)	31	(2.8)	46	(5.9)	28	(5.1)	26	(5.2)
	Poland	16	(2.4)	69	(3.2)	15	(2.5)	c	c	c	c	c	c
	Slovak Republic	42	(2.7)	54	(2.7)	4	(1.2)	c	c	c	c	c	c
	Slovenia	26	(2.2)	58	(2.7)	16	(2.1)	41	(5.0)	50	(4.9)	9	(2.1)
	Spain	48	(1.2)	21	(1.0)	31	(1.1)	55	(3.3)	30	(3.2)	15	(2.6)
	Sweden	11	(2.4)	61	(2.6)	28	(2.3)	43	(4.6)	40	(4.4)	17	(3.0)
	Turkey	69	(0.8)	20	(0.8)	12	(0.5)	c	c	c	c	c	c
	United States	25	(4.4)	69	(4.4)	5	(2.2)	38	(4.6)	53	(3.8)	9	(2.3)
	Subnational entities												
	Flanders (Belgium)	13	(1.9)	58	(3.1)	29	(2.6)	29	(5.2)	56	(5.2)	15	(3.4)
	England (UK)	39	(3.7)	43	(3.7)	17	(2.8)	27	(4.8)	37	(5.7)	36	(5.6)
	Northern Ireland (UK)	43	(3.2)	39	(3.1)	18	(2.0)	45	(13.6)	39	(11.2)	16	(6.8)
	Average	27	(0.5)	51	(0.6)	23	(0.5)	37	(1.2)	41	(1.1)	22	(0.8)
Partners	Jakarta (Indonesia)	36	(1.3)	50	(1.2)	14	(0.8)	c	c	c	c	c	c
	Lithuania	20	(2.6)	73	(2.8)	8	(1.8)	c	c	c	c	c	c
	Russian Federation*	10	(3.2)	40	(3.5)	50	(3.5)	c	c	c	c	c	c
	Singapore	18	(1.8)	29	(1.8)	54	(2.1)	16	(2.1)	31	(2.4)	54	(2.8)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for total native-born and foreign-born parents and for all levels of educational attainment for parents are available for consultation on line (see *StatLink* below). For national entities as well as for subnational entities, foreign-born parents refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), foreign-born parents refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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A4

Table A4.3. [2/3] Intergenerational mobility in education, by parents' educational attainment and immigrant status (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents have below upper secondary education and whose parents are both native-born, 29% attained below upper secondary, 45% attained upper secondary or post-secondary non-tertiary and 25% attained tertiary education. Parents' educational attainment should be understood as the highest level of education of either parent. Data on 25-44 year-olds with one native-born parent and one foreign-born parent are not included separately in this table due to low number of observations.

	Parents' educational attainment: upper secondary or post-secondary non-tertiary											
	Both parents are native-born						Both parents are foreign-born					
	Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
OECD												
National entities												
Australia	18	(2.9)	48	(3.6)	33	(2.9)	17	(3.6)	42	(3.9)	41	(3.9)
Austria	9	(1.0)	74	(1.4)	16	(1.0)	16	(3.2)	64	(4.3)	21	(3.0)
Canada	8	(1.0)	45	(1.9)	46	(1.9)	4	(1.1)	33	(3.2)	63	(3.1)
Chile	16	(2.8)	47	(4.4)	37	(3.7)	c	c	c	c	c	c
Czech Republic	6	(0.8)	77	(1.5)	17	(1.1)	19	(10.9)	51	(12.2)	31	(9.2)
Denmark	14	(1.8)	50	(2.1)	36	(1.7)	16	(2.9)	46	(4.6)	38	(4.2)
Estonia	12	(1.2)	47	(2.2)	41	(1.9)	11	(2.7)	49	(3.7)	39	(3.6)
Finland	6	(1.0)	46	(1.6)	48	(1.6)	c	c	c	c	c	c
France	7	(0.8)	51	(1.6)	42	(1.5)	27	(4.9)	46	(5.3)	27	(4.3)
Germany	5	(0.8)	69	(1.5)	27	(1.3)	21	(3.7)	61	(4.4)	18	(3.9)
Greece	6	(1.7)	48	(2.6)	46	(2.3)	29	(10.7)	59	(10.6)	12	(4.6)
Ireland	11	(1.3)	44	(2.2)	46	(2.3)	6	(1.9)	52	(4.3)	42	(4.1)
Israel	6	(1.6)	48	(3.6)	46	(3.5)	4	(1.7)	39	(4.0)	57	(4.3)
Italy	11	(1.9)	55	(2.5)	34	(2.1)	35	(10.8)	58	(10.1)	7	(3.8)
Japan	8	(0.8)	48	(1.4)	44	(1.4)	c	c	c	c	c	c
Korea	1	(0.4)	38	(1.5)	60	(1.4)	c	c	c	c	c	c
Netherlands	12	(1.6)	45	(2.2)	43	(2.7)	24	(7.4)	49	(9.5)	26	(8.1)
New Zealand	13	(2.0)	45	(3.3)	42	(3.1)	5	(2.4)	27	(5.8)	67	(5.6)
Norway	16	(1.5)	46	(2.0)	38	(2.0)	15	(3.7)	40	(4.9)	45	(4.8)
Poland	5	(0.6)	61	(1.5)	35	(1.4)	c	c	c	c	c	c
Slovak Republic	5	(0.5)	74	(1.5)	22	(1.4)	c	c	c	c	c	c
Slovenia	8	(1.1)	54	(1.6)	38	(1.5)	14	(4.0)	72	(4.2)	14	(3.3)
Spain	19	(2.6)	25	(3.0)	56	(3.3)	36	(6.5)	49	(6.4)	15	(4.2)
Sweden	15	(2.3)	54	(2.9)	31	(2.4)	13	(6.4)	48	(5.9)	39	(5.9)
Turkey	16	(2.3)	32	(3.3)	52	(3.6)	c	c	c	c	c	c
United States	6	(1.1)	61	(1.9)	33	(1.6)	15	(5.4)	43	(5.5)	42	(6.5)
Subnational entities												
Flanders (Belgium)	6	(1.0)	53	(2.3)	41	(2.1)	15	(5.6)	41	(7.8)	44	(7.9)
England (UK)	16	(1.6)	42	(2.5)	42	(2.1)	16	(3.9)	34	(4.0)	51	(4.4)
Northern Ireland (UK)	19	(2.0)	42	(2.2)	39	(2.1)	20	(9.4)	26	(7.1)	53	(8.6)
Average	10	(0.3)	51	(0.4)	39	(0.4)	17	(1.3)	47	(1.4)	36	(1.1)
Partners												
Jakarta (Indonesia)	3	(1.5)	19	(3.5)	78	(3.7)	c	c	c	c	c	c
Lithuania	15	(2.0)	65	(2.8)	19	(2.6)	c	c	c	c	c	c
Russian Federation*	6	(1.7)	23	(2.0)	70	(2.6)	c	c	c	c	c	c
Singapore	4	(1.2)	28	(2.2)	67	(2.2)	8	(1.6)	20	(2.5)	72	(2.5)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for total native-born and foreign-born parents and for all levels of educational attainment for parents are available for consultation on line (see *StatLink* below). For national entities as well as for subnational entities, foreign-born parents refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), foreign-born parents refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A4.3. [3/3] Intergenerational mobility in education, by parents' educational attainment and immigrant status (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents have below upper secondary education and whose parents are both native-born, 29% attained below upper secondary, 45% attained upper secondary or post-secondary non-tertiary and 25% attained tertiary education. Parents' educational attainment should be understood as the highest level of education of either parent. Data on 25-44 year-olds with one native-born parent and one foreign-born parent are not included in this table due to low number of observations.

		Parents' educational attainment: tertiary											
		Both parents are native-born						Both parents are foreign-born					
		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
OECD	**National entities**												
	Australia	7	(1.8)	36	(3.6)	57	(4.0)	3	(1.5)	15	(2.0)	81	(2.5)
	Austria	5	(1.4)	59	(3.0)	37	(2.9)	9	(3.8)	39	(6.4)	53	(6.0)
	Canada	4	(0.6)	29	(1.8)	67	(1.9)	2	(0.6)	15	(1.6)	83	(1.8)
	Chile	3	(1.2)	19	(3.6)	77	(3.9)	c	c	c	c	c	c
	Czech Republic	3	(1.2)	35	(3.3)	62	(3.3)	c	c	c	c	c	c
	Denmark	8	(1.6)	26	(2.1)	65	(2.2)	11	(2.3)	17	(2.6)	72	(3.4)
	Estonia	6	(0.9)	33	(1.9)	61	(2.1)	7	(2.2)	38	(3.8)	55	(4.2)
	Finland	3	(1.3)	28	(2.7)	68	(3.0)	c	c	c	c	c	c
	France	2	(0.6)	22	(2.1)	76	(2.1)	14	(4.7)	12	(3.7)	74	(5.4)
	Germany	6	(1.6)	39	(2.2)	55	(2.2)	5	(2.6)	36	(5.4)	58	(5.3)
	Greece	c	c	26	(3.7)	74	(3.7)	c	c	53	(8.9)	44	(9.2)
	Ireland	4	(1.0)	24	(2.7)	72	(2.9)	2	(1.2)	27	(3.4)	71	(3.4)
	Israel	3	(0.8)	22	(3.1)	75	(3.3)	2	(0.8)	24	(2.5)	74	(2.7)
	Italy	c	c	25	(4.9)	70	(5.3)	c	c	c	c	c	c
	Japan	4	(0.8)	21	(1.6)	75	(1.7)	c	c	c	c	c	c
	Korea	c	c	18	(1.9)	82	(1.8)	c	c	c	c	c	c
	Netherlands	8	(1.5)	28	(2.4)	64	(2.7)	15	(5.8)	36	(8.1)	49	(8.2)
	New Zealand	10	(1.6)	31	(2.9)	58	(2.8)	3	(1.3)	14	(2.3)	83	(2.4)
	Norway	9	(1.4)	26	(2.3)	65	(2.1)	9	(2.6)	30	(5.0)	61	(4.9)
	Poland	1	(0.7)	19	(2.7)	79	(2.8)	c	c	c	c	c	c
	Slovak Republic	c	c	34	(3.3)	65	(3.3)	c	c	c	c	c	c
	Slovenia	2	(1.1)	33	(3.0)	65	(3.3)	c	c	c	c	c	c
	Spain	9	(1.8)	17	(2.6)	74	(3.1)	19	(5.0)	34	(7.3)	46	(7.0)
	Sweden	5	(1.2)	43	(2.2)	52	(2.4)	9	(3.2)	34	(4.7)	57	(4.9)
	Turkey	10	(4.0)	17	(4.5)	73	(5.2)	c	c	c	c	c	c
	United States	3	(0.8)	36	(2.3)	61	(2.5)	c	c	21	(4.0)	75	(5.0)
	Subnational entities												
	Flanders (Belgium)	2	(0.7)	24	(2.2)	74	(2.3)	c	c	46	(7.4)	49	(7.5)
	England (UK)	7	(1.7)	22	(2.4)	72	(3.0)	3	(1.5)	13	(3.7)	84	(3.8)
	Northern Ireland (UK)	3	(1.5)	24	(3.9)	73	(4.0)	c	c	10	(6.1)	90	(6.1)
	Average	5	(0.3)	28	(0.5)	67	(0.6)	m	m	27	(1.2)	66	(1.2)
Partners	Jakarta (Indonesia)	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	5	(0.8)	41	(2.0)	54	(1.8)	c	c	63	(11.3)	37	(11.3)
	Russian Federation*	2	(1.1)	12	(2.0)	86	(2.3)	c	c	c	c	c	c
	Singapore	c	c	6	(2.2)	92	(2.4)	c	c	5	(1.5)	94	(1.7)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for total native-born and foreign-born parents and for all levels of educational attainment for parents are available for consultation on line (see *StatLink* below). For national entities as well as for subnational entities, foreign-born parents refers to parents born outside of the country. In the case of England (UK) and Northern Ireland (UK), foreign-born parents refers to those born outside of the United Kingdom.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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A4

Table A4.4. [1/2] Intergenerational mobility in education, by father's and mother's educational attainment (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents both have below upper secondary education, 29% attained tertiary. Among 25-44 year-old non-students whose mother only attained upper secondary or post-secondary non-tertiary, 33% attained tertiary. Among those whose father only attained upper secondary or post-secondary non-tertiary, 34% attained tertiary. Among those whose parents both have upper secondary or post-secondary non-tertiary education, 44% attained tertiary.

	Both parents' educational attainment: below upper secondary						Mother's educational attainment: upper secondary or post-secondary non-tertiary Father's educational attainment: below upper secondary					
	Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
National entities												
Australia	25	(1.7)	46	(2.0)	29	(1.7)	21	(4.7)	46	(4.5)	33	(3.7)
Austria	30	(1.9)	61	(1.9)	9	(1.2)	13	(3.6)	73	(5.0)	14	(4.3)
Canada	20	(1.6)	39	(2.0)	42	(2.1)	7	(1.5)	47	(3.6)	46	(3.1)
Chile	37	(1.8)	50	(2.2)	13	(1.9)	20	(5.6)	47	(8.0)	33	(6.8)
Czech Republic	13	(4.0)	85	(4.7)	3	(1.4)	c	c	81	(8.4)	16	(8.0)
Denmark	27	(2.2)	42	(2.3)	30	(2.0)	11	(4.1)	52	(5.2)	37	(4.5)
Estonia	27	(2.2)	53	(2.7)	21	(2.0)	16	(2.2)	46	(3.7)	38	(3.5)
Finland	10	(1.6)	51	(2.0)	39	(2.1)	7	(1.8)	46	(3.1)	47	(2.9)
France	26	(1.3)	49	(1.5)	25	(1.3)	6	(2.1)	57	(3.4)	37	(3.3)
Germany	39	(4.4)	51	(4.3)	10	(2.3)	7	(3.8)	75	(6.4)	18	(5.6)
Greece	35	(1.7)	47	(1.6)	18	(1.3)	11	(4.6)	47	(6.4)	42	(6.0)
Ireland	29	(1.2)	43	(1.3)	28	(1.2)	11	(1.8)	43	(3.1)	47	(3.3)
Israel	21	(1.6)	49	(2.4)	30	(2.0)	7	(2.4)	41	(5.0)	52	(5.3)
Italy	54	(1.5)	38	(1.4)	8	(0.7)	9	(3.6)	61	(5.1)	30	(4.9)
Japan	15	(2.7)	57	(3.7)	28	(3.1)	12	(2.4)	59	(3.8)	29	(3.7)
Korea	7	(0.8)	50	(1.2)	43	(1.0)	c	c	40	(6.8)	57	(7.1)
Netherlands	31	(2.1)	43	(2.0)	26	(1.7)	19	(4.2)	49	(4.8)	32	(4.6)
New Zealand	25	(2.2)	34	(2.4)	41	(2.5)	10	(2.9)	38	(5.7)	51	(5.9)
Norway	31	(2.9)	40	(3.2)	29	(2.6)	16	(3.5)	48	(4.4)	35	(4.2)
Poland	16	(2.4)	69	(3.2)	15	(2.5)	9	(3.7)	66	(4.9)	25	(5.4)
Slovak Republic	42	(2.7)	53	(2.7)	5	(1.3)	9	(3.5)	76	(5.0)	16	(4.2)
Slovenia	32	(2.5)	55	(2.4)	13	(1.5)	12	(3.9)	53	(5.7)	35	(5.1)
Spain	49	(1.0)	22	(0.9)	28	(1.0)	28	(5.4)	32	(5.5)	40	(5.1)
Sweden	21	(2.1)	56	(2.4)	24	(1.7)	18	(4.4)	53	(5.1)	29	(4.7)
Turkey	68	(0.8)	20	(0.8)	12	(0.5)	30	(12.9)	26	(10.8)	44	(13.0)
United States	34	(3.2)	58	(2.7)	8	(1.6)	10	(3.1)	68	(4.4)	22	(4.0)
Subnational entities												
Flanders (Belgium)	17	(2.0)	58	(2.8)	26	(2.1)	4	(1.9)	64	(4.2)	32	(4.3)
England (UK)	35	(2.8)	40	(2.9)	25	(2.6)	15	(2.9)	36	(5.1)	49	(5.6)
Northern Ireland (UK)	44	(2.9)	37	(2.7)	19	(1.9)	21	(3.8)	42	(4.2)	37	(4.5)
Average	30	(0.4)	48	(0.5)	22	(0.3)	13	(0.8)	52	(1.0)	35	(1.0)
Partners												
Jakarta (Indonesia)	35	(1.2)	50	(1.2)	14	(0.8)	c	c	20	(8.3)	73	(8.5)
Lithuania	19	(2.5)	73	(2.7)	8	(1.7)	19	(4.8)	65	(6.1)	16	(4.5)
Russian Federation*	10	(3.2)	42	(3.4)	48	(3.4)	7	(3.3)	22	(3.9)	71	(3.6)
Singapore	16	(1.1)	28	(1.2)	55	(1.3)	4	(2.5)	29	(3.8)	67	(3.7)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933396880

Table A4.4. [2/2] Intergenerational mobility in education, by father's and mother's educational attainment (2012 or 2015)

Survey of Adult Skills, 25-44 year-old non-students

How to read this table: In Australia, among 25-44 year-old non-students whose parents both have below upper secondary education, 29% attained tertiary. Among 25-44 year-old non-students whose mother only attained upper secondary or post-secondary non-tertiary, 33% attained tertiary. Among those whose father only attained upper secondary or post-secondary non-tertiary, 34% attained tertiary. Among those whose parents both have upper secondary or post-secondary non-tertiary education, 44% attained tertiary.

		Father's educational attainment: upper secondary or post-secondary non-tertiary Mother's educational attainment: below upper secondary						Both parents' educational attainment: upper secondary or post-secondary non-tertiary					
		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary		Own education: below upper secondary		Own education: upper secondary or post-secondary non-tertiary		Own education: tertiary	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
OECD	**National entities**												
	Australia	19	(3.3)	48	(3.7)	34	(3.6)	15	(2.8)	41	(3.9)	44	(3.5)
	Austria	15	(2.1)	73	(2.4)	12	(1.6)	8	(1.0)	72	(1.7)	21	(1.3)
	Canada	8	(1.5)	44	(3.3)	48	(3.4)	6	(1.0)	39	(2.0)	55	(2.0)
	Chile	23	(4.2)	55	(6.2)	22	(4.6)	9	(4.0)	42	(4.2)	49	(5.6)
	Czech Republic	15	(3.6)	77	(3.8)	8	(1.8)	5	(0.8)	77	(1.6)	19	(1.3)
	Denmark	18	(3.1)	49	(2.9)	33	(2.6)	11	(2.1)	49	(2.7)	39	(2.4)
	Estonia	14	(3.5)	56	(5.0)	30	(4.3)	11	(1.2)	47	(2.0)	42	(1.9)
	Finland	6	(2.3)	46	(3.9)	47	(4.1)	6	(1.3)	47	(2.1)	47	(2.1)
	France	10	(1.5)	54	(2.2)	35	(1.9)	8	(1.5)	46	(2.2)	46	(2.0)
	Germany	18	(3.7)	62	(4.2)	20	(2.8)	5	(0.9)	67	(1.7)	29	(1.7)
	Greece	17	(4.6)	50	(5.5)	34	(4.5)	1	(0.7)	51	(3.9)	47	(4.0)
	Ireland	10	(2.1)	44	(3.6)	46	(3.9)	9	(2.0)	49	(3.3)	43	(3.4)
	Israel	12	(3.4)	48	(5.7)	40	(5.7)	4	(1.3)	44	(3.2)	52	(3.3)
	Italy	22	(3.7)	55	(3.9)	22	(3.6)	7	(2.3)	51	(3.6)	42	(3.4)
	Japan	17	(4.2)	44	(5.1)	38	(3.5)	5	(0.8)	46	(1.8)	49	(1.9)
	Korea	2	(0.8)	42	(2.5)	56	(2.5)	c	c	36	(2.1)	64	(2.1)
	Netherlands	13	(1.9)	45	(3.0)	42	(3.2)	8	(2.5)	47	(4.3)	45	(4.4)
	New Zealand	11	(2.8)	45	(4.5)	44	(4.7)	10	(3.0)	36	(4.2)	54	(4.3)
	Norway	21	(2.7)	44	(2.8)	35	(2.6)	13	(2.0)	45	(2.8)	42	(2.7)
	Poland	9	(2.3)	75	(3.8)	16	(2.8)	4	(0.5)	58	(1.6)	39	(1.6)
	Slovak Republic	10	(1.9)	84	(2.3)	7	(1.4)	4	(0.5)	71	(1.8)	25	(1.7)
	Slovenia	10	(2.0)	66	(2.7)	25	(2.5)	8	(1.3)	55	(1.8)	38	(1.6)
	Spain	25	(3.3)	25	(3.6)	50	(3.9)	18	(4.2)	36	(5.6)	46	(5.2)
	Sweden	10	(3.7)	53	(5.1)	37	(4.7)	13	(3.3)	53	(3.9)	34	(3.3)
	Turkey	20	(2.9)	37	(3.2)	43	(3.3)	c	c	28	(6.5)	72	(6.5)
	United States	12	(3.8)	64	(5.4)	24	(5.7)	5	(1.0)	55	(2.3)	40	(2.5)
	Subnational entities												
	Flanders (Belgium)	11	(2.4)	51	(3.9)	38	(3.6)	5	(1.1)	48	(2.8)	47	(2.6)
	England (UK)	22	(3.0)	44	(4.3)	34	(3.6)	12	(1.9)	40	(2.9)	48	(3.0)
	Northern Ireland (UK)	30	(4.2)	35	(4.1)	35	(4.0)	10	(1.6)	46	(2.9)	45	(3.0)
	Average	15	(0.6)	52	(0.7)	33	(0.7)	8	(0.4)	49	(0.6)	43	(0.6)
Partners	Jakarta (Indonesia)	3	(2.2)	20	(4.2)	77	(4.8)	c	c	12	(4.9)	88	(4.9)
	Lithuania	26	(9.7)	63	(8.9)	11	(4.4)	11	(2.0)	68	(3.2)	21	(3.0)
	Russian Federation*	12	(5.5)	24	(6.8)	65	(4.2)	5	(1.4)	26	(2.9)	69	(3.8)
	Singapore	9	(1.6)	29	(2.4)	62	(2.4)	4	(1.2)	19	(2.3)	77	(2.5)

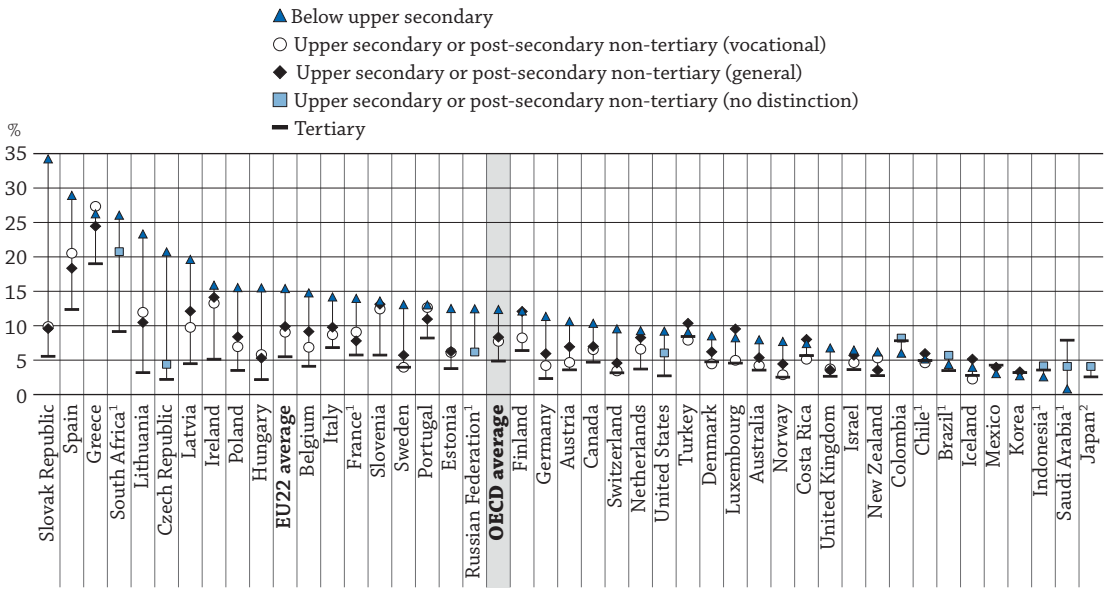
Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933396880

HOW DOES EDUCATIONAL ATTAINMENT AFFECT PARTICIPATION IN THE LABOUR MARKET?

- Labour market outcomes are better among the higher-educated: on average across OECD countries, the unemployment rate is 12.4% for adults with below upper secondary education, while it is 4.9% for the tertiary-educated.
- Across countries, the employment rates of men are higher than those of women for all levels of educational attainment, but the gender gap shrinks as educational attainment increases. On average across OECD countries, the gender difference in employment rates among 25-64 year-olds is 20 percentage points for those with below upper secondary education, 14 percentage points for those with upper secondary or post-secondary non-tertiary education and 9 percentage points for tertiary-educated adults.
- The employment rate varies by field of education studied. For 25-64 year-olds, the employment rate is high for engineering, manufacturing and construction, and for science, mathematics and computing, and low for teacher training and education science, and for humanities, languages and arts. The difference in employment rates is influenced partly by gender differences in the share of those who studied specific fields of education.

Figure A5.1. Unemployment rates, by educational attainment (2015)

25-64 year-olds



1. Year of reference differs from 2015. Refer to the source table for more details.

2. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

Countries are ranked in descending order of the unemployment rate of adults with below upper secondary education.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

The economies of OECD countries depend upon a supply of high-skilled workers, and expanded education opportunities have increased the pool of skilled people across countries. People with high qualifications are more likely to be employed, as they are considered to be better equipped with the skills required in the labour market. On the other hand, while there is still work for those with lower education, their labour market prospects are relatively challenging. People with the lowest educational qualifications are at greater risk of being unemployed, and their earnings are lower (see Indicator A6). Disparities in labour market outcomes contribute to widening inequalities in society.

Education systems face challenges in responding to changing demands in the labour market and the need to build skill sets through education. Given the technological advances that have been transforming the needs of the global labour market, for example, employers expect their employees to have good knowledge of information and communication technologies (ICT), and those with such knowledge and skills tend to have better job opportunities. Employment prospects are better among those with higher skills, particularly in ICT, and higher skills and readiness in using ICT for problem solving, which may be acquired outside of formal education, can also even compensate for lower educational attainment in the labour market (Lane and Conlon, 2016).

In most OECD countries, it may be critical to increase female labour-force participation to drive economic growth. This is because the active working-age population is shrinking due to population ageing, despite efforts to prolong working lives and there is a large pool of untapped human capital among women, who are often highly educated. The full potential of women is often not exploited after schooling. Women do not always pursue careers in the same way as their male counterparts (or are not able to), partly because many women continue to take on traditional gender roles, including family and childcare. Also, their labour market outcomes, including earnings, are not as good as those for men (see Indicator A6). The gender gap in labour market outcomes is related to the structures and practices of the labour market, but different policies can help reduce this gender gap. For instance, education policies may be able to do more to guide women and equip them with the skills needed in the labour market, while employment, family and childcare policies can help achieve a better work-life balance.

Other findings

- Vocational programmes in upper secondary or post-secondary non-tertiary education are often designed to prepare people for work. On average across OECD countries, adults who have completed vocational programmes as their highest educational attainment have lower unemployment rates (7.7%) than those with general programmes (8.3%) but this pattern is not consistent across countries.
- The employment rate for adults with a short-cycle tertiary qualification is 80%, on average across OECD countries, and it rises to 82% for those with a bachelor's or equivalent degree, 87% with a master's or equivalent degree, and 91% with a doctoral or equivalent degree.
- Skill formation can be attributed to what one learns through education, but skills may continue to be developed beyond the education pathway. For the same level of educational attainment, proficiency levels are different across occupations and higher among those with skilled occupations.
- Compared to other industries, a higher percentage of workers in the education sector report that moderate or complex ICT skills are required at work.

A5

Analysis

Unemployment rates

Across all countries for which data are available, higher levels of education reduce the risk of being unemployed. On average across OECD countries, the unemployment rate is 4.9% for 25-64 year-olds with tertiary education, compared to 7.3% for adults with upper secondary or post-secondary non-tertiary education and 12.4% for adults with below upper secondary education (Figure A5.1 and Table A5.4).

In countries with relatively low unemployment rates, the variation in unemployment rates by educational attainment is small. Unemployment rates are consistently low across educational attainment in Iceland, Indonesia, Japan, Korea and Mexico, where the overall unemployment rate is 3.5% or below (Figure A5.1 and OECD, 2016a).

In Greece and Spain, where unemployment rates are over 20.0%, the variation in unemployment rates is large, and the highly educated also have a relatively high chance of becoming unemployed, pointing to possible concerns over returns of higher education. Although the tertiary-educated have much lower unemployment rates than the lower-educated, unemployment rates among tertiary-educated adults are as high as 19.0% in Greece and 12.4% in Spain, the highest unemployment rates across OECD countries for adults with tertiary education (Figure A5.1 and OECD, 2016a). However, these high unemployment rates among tertiary-educated adults do not necessarily translate into low financial returns for tertiary education, because there are still large earning advantages (see Indicators A6 and A7).

Several other countries also have large variations in unemployment rates by educational attainment, because the low-educated (relatively few within these countries) do not succeed in competing for jobs against the large number of those with upper secondary or post-secondary non-tertiary education, while the tertiary-educated (also relatively few) have a comparative advantage in finding employment. The difference in the unemployment rates between high-qualified adults and low-qualified adults is largest in the Slovak Republic: the unemployment rate is 5.6% for 25-64 year-olds with tertiary education, compared to 34.2% for adults with below upper secondary education. This may be related to low share of low-educated and high-educated adults in the Slovak Republic: those without upper secondary education account for only 9% of adults, much lower than the OECD average (23%), while the share of the tertiary-educated is 21%, also lower than the OECD average (35%). The Czech Republic and Lithuania have the next largest difference in unemployment rates, about 20 percentage points between those without upper secondary education and those with tertiary education, and the shares of low-educated and high-educated are also relatively small (Table A5.2 and see Indicator A1).

Vocational programmes in upper secondary or post-secondary non-tertiary education are often designed to prepare people for work (see Indicator A2), and on average across OECD countries, adults who have completed vocational programmes as their highest educational attainment have lower unemployment rates (7.7%) than those with general programmes (8.3%). The largest differences in unemployment rates between vocational and general programmes are found in Finland (3.8 percentage points) and in Luxembourg (4.6 percentage points). In Chile, Costa Rica, Denmark, Iceland, Sweden and Turkey, the unemployment rate for those with vocational education is equal to or even lower than that of the tertiary-educated. In Greece and Spain, the situation is reversed: the unemployment rates of adults with vocational programmes are more than 2 percentage points higher than the unemployment rates of adults with general programmes, signalling the need to ensure that vocational programmes respond to the skill sets required in the changing labour market (Figure A5.1 and OECD, 2016a).

Across educational attainment levels, the unemployment rate is generally higher among younger adults than among older adults. On average across OECD countries, for those with below upper secondary education, the unemployment rate is 17.4% for 25-34 year-olds and 9.1% for 55-64 year-olds (Table A5.4 and OECD, 2016a). Similar trends are found for other educational attainment levels, pointing to the difficulties that young adults face in the transition from school to work (see Indicator C5).

Employment rates

Higher educational attainment increases the likelihood of being employed. On average, across OECD countries, the employment rate of tertiary-educated adults is 84%, compared to 74% for adults with upper secondary or post-secondary non-tertiary education as their highest level of attainment. Among adults without upper secondary education, the employment rate is only 56% (Table A5.3). Within countries, the regional variations in employment rates tend to be larger among adults without upper secondary education than among those with upper secondary education or higher (OECD/NCES, 2015).

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In all countries, employment rates among the tertiary-educated exceed the rates for adults with lower education, because the shares of the unemployed, and particularly of inactive adults, are lower than those for the lower-educated. On average across OECD countries, the unemployment rate for the tertiary-educated is 4.9% and the inactivity rate is 12%. For upper secondary or post-secondary non-tertiary education, the unemployment rate is slightly higher (7.3%), and the inactivity rate is higher (20%). For below upper secondary, the unemployment rate is high (12.4%), and the inactivity rate is very high (36%) (OECD, 2016a and see the *Definitions* section at the end of this indicator).

In some countries, the difference in employment rates is large between adults who hold a tertiary qualification and those without upper secondary education. It is largest in Poland and the Slovak Republic, at 46 percentage points. In these countries, for adults with below upper secondary education, unemployment rates are high, but inactivity rates are also very high, at well over 40% (Figure A5.2 and OECD, 2016a).

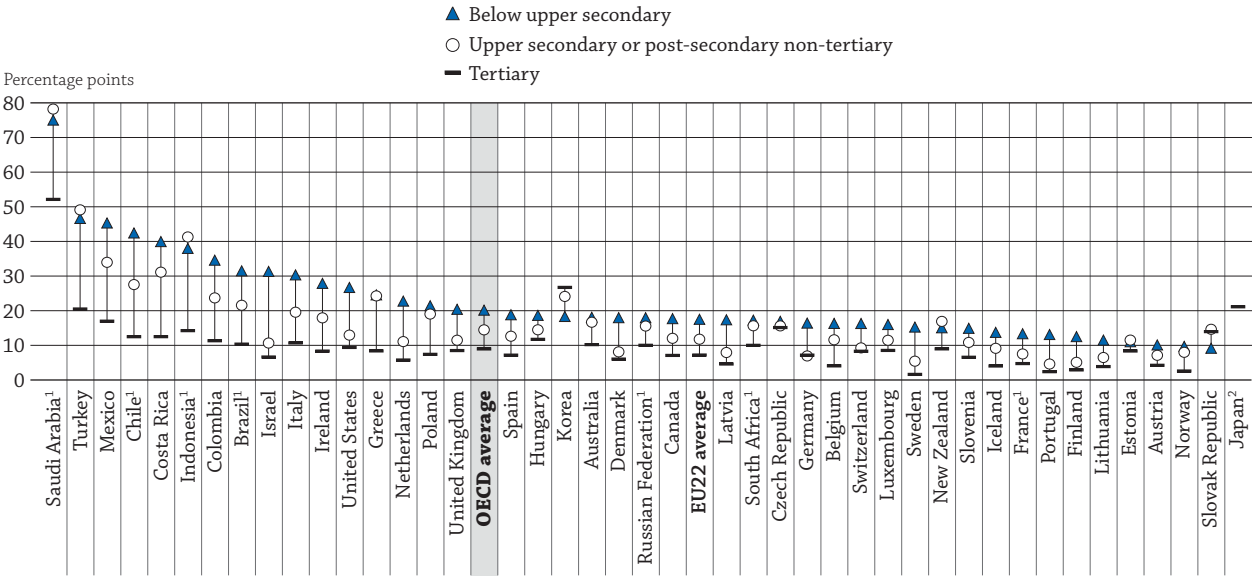
Employment rates by gender

In all OECD countries, the employment rates of women are lower than the employment rates of men, mostly due to large gender differences in inactivity rates. This is consistent across all levels of educational attainment, despite women's higher educational attainment (OECD, 2016a).

However, the gender gap in employment rates narrows as educational attainment increases. On average across OECD countries, the gender difference in employment rates among 25-64 year-olds without upper secondary qualification is 20 percentage points (66% for men and 46% for women). This difference shrinks to 14 percentage points among adults with upper secondary or post-secondary non-tertiary education (81% for men and 67% for women) and to just 9 percentage points among tertiary-educated men and women (88% for men and 79% for women). Exceptions to this are Korea and the Slovak Republic, where the gender gap in employment is higher among adults with tertiary education than among those with below upper secondary education. In Korea, this is due to persistently high inactivity rates among women for all levels of educational attainment, while the rates for men decrease consistently with higher education. In the Slovak Republic, the unemployment rate for adults with below upper secondary education is particularly high for men compared to women, contributing to the small gender gap in employment rates for below upper secondary education (Figure A5.2 and OECD, 2016a).

Figure A5.2. Gender difference in employment rates, by educational attainment (2015)

25-64 year-olds, percentage-point difference (employment rate for men - employment rate for women)



1. Year of reference differs from 2015. Refer to the source table for more details.

2. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

Countries are ranked in descending order of the differences in employment rates between male and female adults with below upper secondary education.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397067

Gender gaps in employment rates are pronounced in some countries. Saudi Arabia has the largest gap across all OECD and partner countries. The employment rate of tertiary-educated women is less than half the rate of tertiary-educated men. The difference is even greater for adults with below upper secondary education (75 percentage points), where 16% of women are employed compared to 91% of men. Japan also has a large gender difference among the tertiary-educated, due to the relatively high inactivity rate among women with this level of educational attainment compared to men (Figure A5.2 and OECD, 2016a).

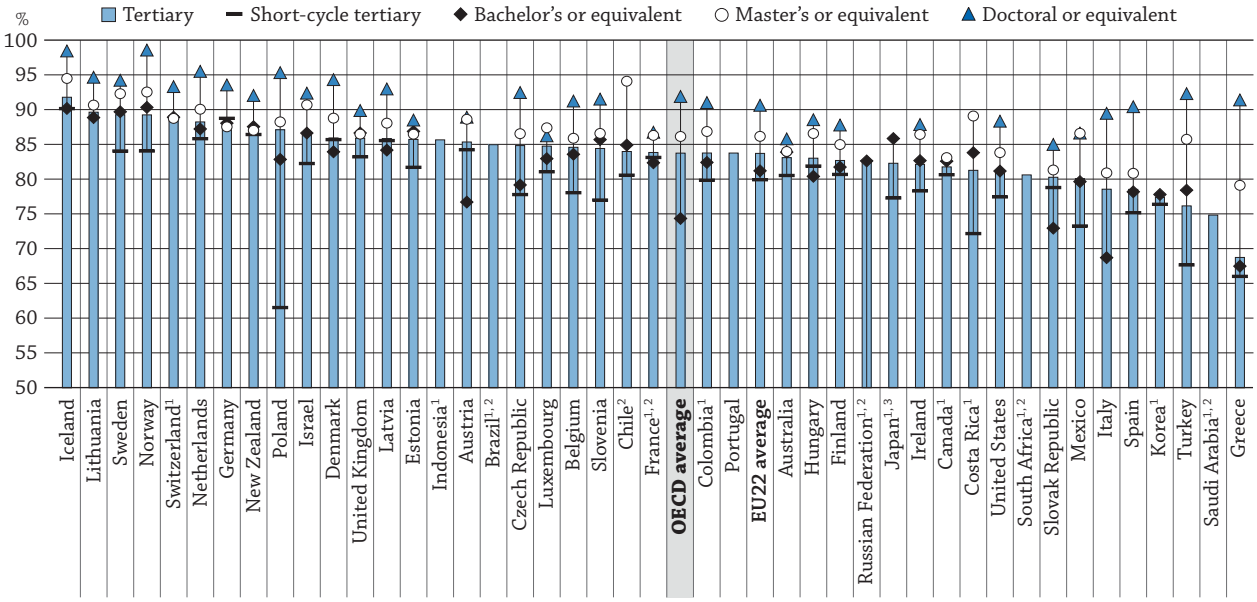
In Chile, Costa Rica, Mexico and Turkey, the gender gap in employment rates for below upper secondary education is 25 percentage points higher than for tertiary education. This is because gender differences in inactivity rates in these countries are particularly large for below upper secondary education, and over 50% of women with this level of educational attainment are inactive. The rate is particularly high in Turkey, where 69% of women without upper secondary education are inactive. In contrast, differences in employment rates between genders are small in countries such as Austria, Estonia and Norway across the three aggregated levels of educational attainment (Figure A5.2 and OECD 2016a).

Employment rates by level of tertiary education

Employment rates increase with educational attainment and continue to increase with further levels of tertiary education. On average across OECD countries, the employment rate is 80% for adults with a short-cycle tertiary qualification, rising to 82% for those with a bachelor's or equivalent degree, 87% with a master's or equivalent degree, and 91% with a doctoral or equivalent degree (Table A5.1 and Figure A5.3).

Figure A5.3. Employment rates of tertiary-educated adults, by levels of tertiary education (2015)

25-64 year-olds



1. Some levels of education are included in others. Refer to the source table for more details.

2. Year of reference differs from 2015. Refer to the source table for more details.

3. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

Countries are ranked in descending order of the employment rate of adults with tertiary education.

Source: OECD. Tables A5.1 and A5.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397077

In most countries, employment rates among those with short-cycle tertiary education are lower than those with bachelor's or equivalent degree, but in some countries, where short-cycle tertiary education is prevalent or promoted to improve employability and facilitate entry into the labour market (see Indicator A3), employment rates are relatively high among short-cycle tertiary degree holders. In Austria, where the share of adults with short-cycle tertiary education accounts for 15% of 25-64 year-olds, the employment rate among those with short-cycle tertiary education is 84%, compared to 77% for bachelor's or equivalent degree. Similarly, in France, where 15% of adults

have short-cycle tertiary education, the employment rate for those with short-cycle tertiary education is 83%, compared to 82% for bachelor's or equivalent degree. On the other hand, in Poland, the share of those with short-cycle tertiary education is negligible, and they face difficulties in finding a job compared to adults with higher tertiary education and even adults with upper secondary or post-secondary non-tertiary education (Figure A5.3, Table A5.1 and see Indicator A1).

In countries where a small share of adults have advanced tertiary qualifications, their employment prospects are considerably better than those with lower educational attainment. Less than 4% of adults completed master's, doctoral or equivalent degrees in Chile, Costa Rica, Greece, Mexico and Turkey, and those who have completed these levels of education have significantly higher employment rates compared to those with lower levels of tertiary attainment (Figure A5.3, Tables A1.1 and A5.1).

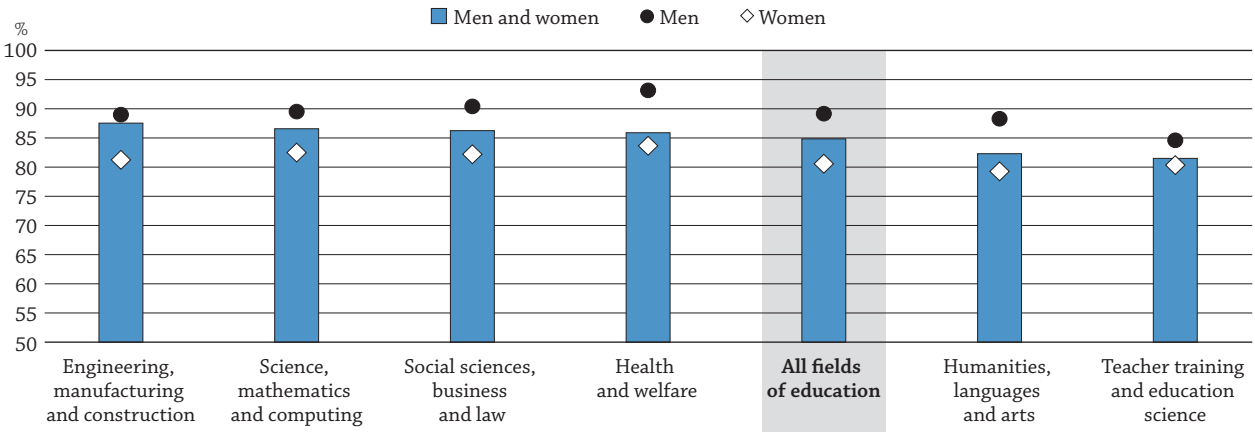
The gender gap in employment rates also continues to decrease with higher levels of tertiary degree. On average across OECD countries, it is 12 percentage points for short-cycle tertiary education (75% for women and 87% for men), 8 percentage points for bachelor's or equivalent degree (78% for women and 87% for men), 7 percentage points for master's or equivalent degree (84% for women and 90% for men) and as low as 6 percentage points for doctoral or equivalent degree (88% for women and 93% for men). This is because the higher the tertiary degree attained, the lower the inactivity rates become among women, while unemployment rates stay similar across different levels of tertiary degrees. On average across OECD countries, the inactivity rate for women is 21% for short-cycle tertiary education, 17% for bachelor's or equivalent degree, 12% for master's or equivalent degree, and 10% for doctoral or equivalent degree. This may be explained by different factors. For example, women who invest in completing higher tertiary education may consider that the opportunity cost of not working is high; they may be more eager to work and seek competitive career paths and hence more likely to enter the labour force (OECD, 2016a).

Employment rates by field of education and gender

On average, across OECD countries and subnational entities that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), the employment rate for the tertiary-educated is 85% across all fields of education for both women and men together, but 81% for women and 89% for men. This trend of higher employment rates among men is consistent across all fields of education studied, mainly because women tend to have higher inactivity rates. The gender difference in employment rates is largest among those who studied health and welfare, and lowest among those who studied teacher training and education science (Figure A5.4 and Table A5.6).

Figure A5.4. Employment rates of tertiary-educated adults, by field of education studied and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students, average



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

Fields of education are ranked in descending order of the percentage of employed tertiary-educated adults who studied in that field.

Source: OECD. Table A5.6. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397082

For both genders combined, the employment rate is high for engineering, manufacturing and construction and for science, mathematics and computing, and it is low for teacher training and education science and for humanities, languages and arts. This is influenced partly by gender differences in the share of those who studied specific fields of education as the share of inactive adults is higher among women across fields of education. For example, the share of tertiary-educated men who studied engineering, manufacturing and construction is 31%, much higher than the share of 7% among tertiary-educated women, and the share of tertiary-educated women who studied teacher training and education science is 18%, higher than the share of 7% among tertiary-educated men (see Indicator A1). Consequently, the employment rate among those who studied engineering, manufacturing and construction is higher than the rate for those who studied teacher training and education science. Overall, fields of education associated with higher employment rates tend to also have higher earnings than the average earnings for tertiary-educated adults. The opposite is also true: teacher training and education science, and humanities, language and arts, which are associated with lower employment rates, also tend to have lower earnings (see Indicators A6 and D3).

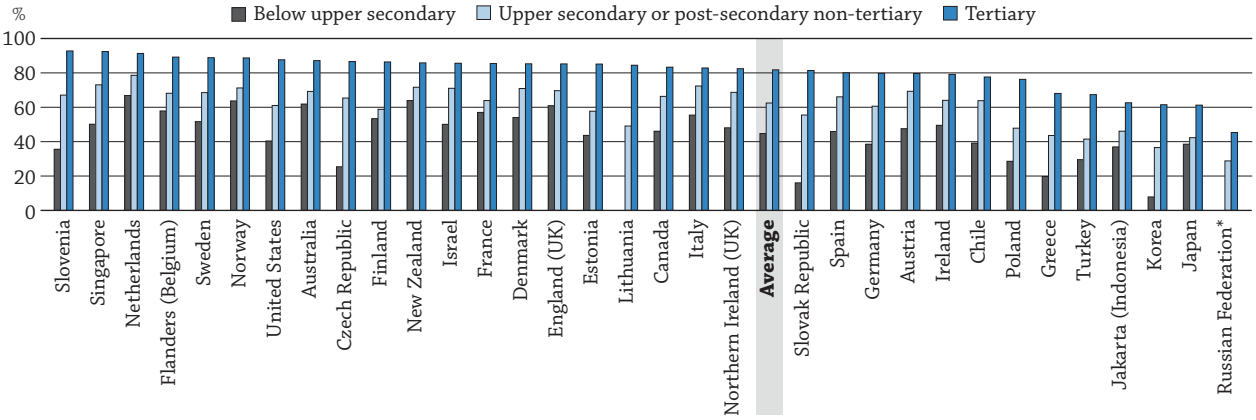
Differences in gender composition of professions may partly explain the extent of gender difference in employment rates for each field of education. For example, within health and welfare, men and women tend to choose different specialisations and different professions. Female doctors account for almost half of doctors on average across OECD countries (OECD, 2015a), but in Europe and the United States, women are about ten times more likely than men to work in nursing, a profession with relatively low retention rates (OECD, 2005; OECD, 2016b). This difference in the gender composition of certain professions in the health sector may contribute to a relatively large gender difference in employment rates among those who studied health and welfare (Table A5.6 and Figure A5.4).

Educational attainment and the use of information and communication technologies at work and in selected industries

Across all countries and subnational entities that participated in the Survey of Adult Skills, the level of educational attainment is positively associated with the use of ICT at work (OECD, 2016c). The use of e-mail in the workplace has become prevalent, but its use varies significantly by level of educational attainment. On average, across OECD countries and subnational entities, 45% of adults with below upper secondary education report using e-mail daily at work. For tertiary-educated adults, this percentage is 82%. The gap across levels of educational attainment is the largest in countries such as the Czech Republic, Korea and the Slovak Republic, and the smallest in countries such as Japan and New Zealand. Overall, educational attainment is also positively associated with the use of other ICT related activities, such as the use of word processors or the use of the Internet at work, and this positive relationship between ICT use at work and educational attainment holds not just for younger adults, but also for adults in other age groups. This may be because higher educational attainment leads to highly qualified jobs, which in turn require being part of the connected world (Table A5.7 and Figure A5.5).

Figure A5.5. Daily use of e-mail at work, by educational attainment (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of tertiary-educated adults reporting to use e-mail at work on a daily basis.

Source: OECD. Table A5.7. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397096

According to the Survey of Adult Skills, more advanced ICT skills are required in the education sector than in other industries. On average across OECD countries and subnational entities, 63% of adults report that moderate and complex levels of computer use are needed at work in the education sector (see the *Definitions* section at the end of this indicator). Other main industries, each representing at least 10% of the 25-64 year-old workers, are: "human health and social work activities", "manufacturing" and "wholesale and retail trade; repair of motor vehicles and motorcycles". In all these industries, 41% of adults reported that moderate or complex ICT skills are required at work. Across countries, in the education sector, the share of workers with good ICT and problem-solving skills is also generally higher, compared to those working in other main industries (Table A5.8).

In nearly all OECD countries and subnational entities, and across all main industries, the share of adults who use a computer at work is higher than the share of those who are required moderate or complex ICT skills at work while the share of workers with good ICT and problem-solving skills is lower. But in countries where a high share of workers uses a computer at work, the share of workers who are required moderate or complex ICT skills at work and the share of workers with good ICT and problem-solving skills tend to be high. For example, in the Netherlands, in the education sector, the share of employed adults using a computer at work (98%) and of those required moderate or complex ICT skills at work (84%) is among the highest, and the share of workers with good ICT and problem-solving skills (56%) is also one of the highest in the OECD (Table A5.8)

Skills by occupation and educational attainment

Across countries that participated in the Survey of Adult Skills, the percentage of adults with tertiary education is higher among occupations requiring advanced skills. On average, across OECD countries and subnational entities, 66% of workers in skilled occupations are tertiary educated. The share falls to 24% for semi-skilled white-collar occupations, 12% for semi-skilled blue-collar occupations and 10% for elementary occupations (Table A5.9, available on line, and see the *Definitions* section at the end of this indicator).

Skill formation can be attributed to what one learns through education, but skills may continue to be developed beyond the education pathway. For the same level of educational attainment, literacy proficiency levels are different across occupations and higher among those with skilled occupations. For example, on average across OECD countries and subnational entities, the mean literacy score of adults in elementary occupations with below upper secondary is 34 points below the score of adults with the same level of education working in skilled occupations. This pattern also holds for adults with upper secondary or post-secondary non-tertiary education and for adults with tertiary education (Table A5.9 [L], available on line).

This positive relationship between skilled occupations and higher proficiency levels can be attributed also to other factors. The competition for skilled occupations in the labour market can act as a filter, letting in only the most skilled adults across all educational attainment levels. Also, among skilled occupations, employers may make more investment in developing the skills of their employees (see Indicator C6). Across OECD countries and subnational entities that participated in the Survey of Adult Skills in 2012, 62% of employed 25-64 year-olds reported that they participated in employer-sponsored education and this share falls to 26% for those working in elementary occupations (OECD, 2015b). The positive relationship between skilled occupations and higher proficiency levels may also be attributed to the higher use of skills among those with skilled occupations than those with lower-skilled occupations (Box A5.1).

Box A5.1. **Proficiency levels and skill use, the example of literacy**

The information contained in the Survey of Adult Skills on educational attainment, proficiency and skill use is extremely useful for stakeholders with an interest in education and labour market policies. It offers an overview of proficiency levels and skill use for skilled occupations, semi-skilled white-collar occupations, semi-skilled blue-collar occupations and elementary occupations.

Figure A5.a. displays the mean literacy score and the index of use of reading skills at work for each of the four occupation categories. Results show that there is much less cross-country variation among adults working in skilled occupations than among adults working in lower-skilled occupations. Across countries, adults working in skilled occupations have a high level of literacy proficiency and a high frequency of use of reading skills at work. The level of proficiency and skill use diminishes on average among adults working in semi-skilled white-collar occupations and in semi-skilled blue-collar occupations. It is lowest among adults working in elementary occupations, and the cross-country variation widens.

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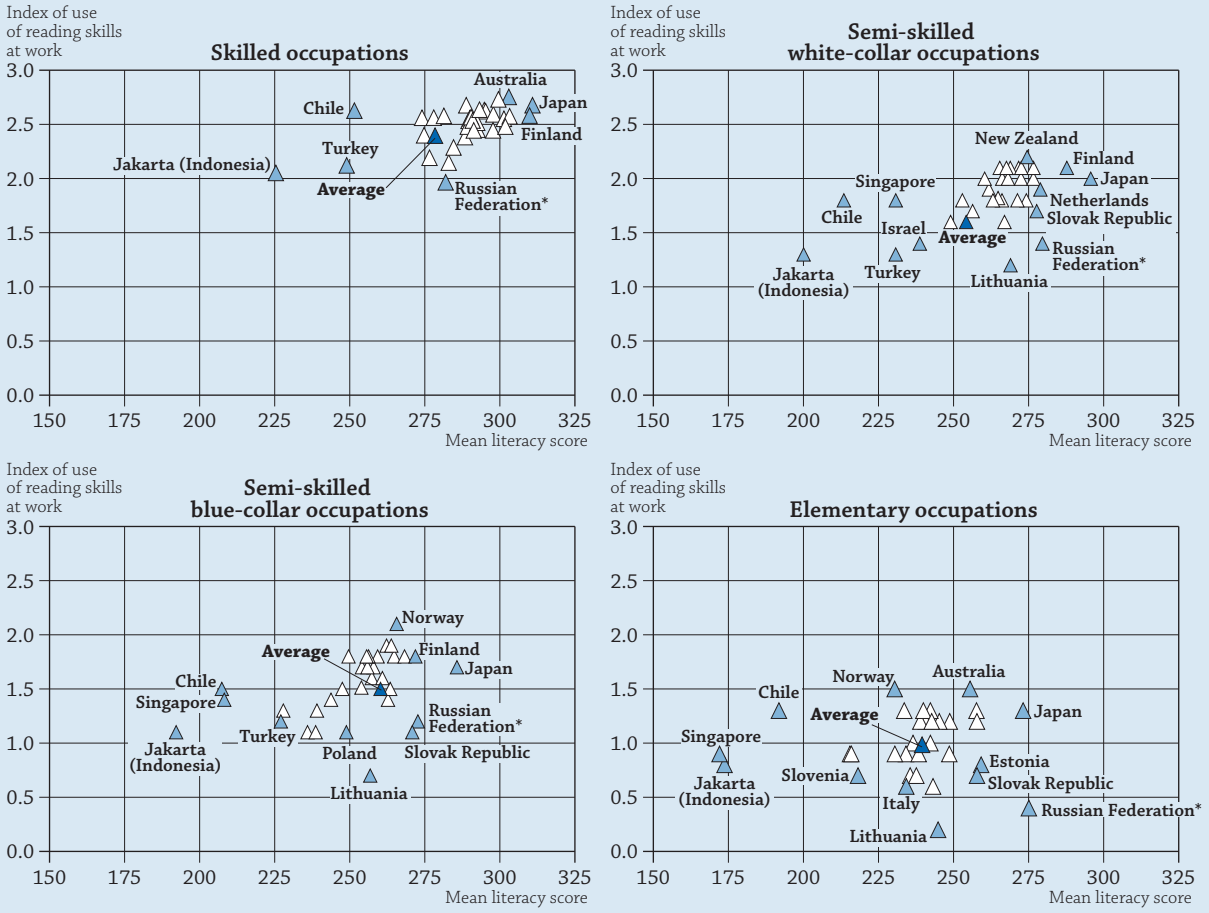
Figure A5.a. Index of use of reading skills at work and mean literacy score, by occupation (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Tables A5.9 (L). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397102

In general, results show that over the four broad occupational groups, countries have a similar mix of proficiency level and skill use. Countries such as Australia, Finland, Japan, New Zealand and Norway show high literacy proficiency levels and high skill use at work across the different occupations. On the other hand, in Jakarta (Indonesia) and Turkey, adults show lower-than-average literacy proficiency levels and skill use. In Chile, the skill use is relatively high despite a lower-than-average literacy score. The opposite is observed in Lithuania where the skill use is relatively low while having about an average literacy score.

Similar mean literacy scores do not necessarily translate into similar frequencies in the use of reading skills at work. For example, among adults working in semi-skilled blue-collar occupations, the mean literacy score of Norway (266) is similar to the mean score of the Slovak Republic (271), but the index of use of reading at work for Norway (2.1) is almost twice as high as for the Slovak Republic (1.1). This suggests that with the same level of literacy proficiency, the use of skills at work among workers in the same broad occupational groups is different across countries.

In a comparable way, similar frequency of use of reading skills at work is sometimes associated with very different literacy proficiency. For example, among adults working in elementary occupations, the index of use of reading skills at work is 1.3 for both for Chile and Japan. However, their mean literacy score is very different: Chile (192) and Japan (273).

Definitions

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

Age groups: Adults refers to 25-64 year-olds; **younger adults** refers to 25-34 year-olds; and **older adults** refers to 55-64 year-olds. The **working-age population** is the total population aged 25 to 64.

Completion of intermediate programmes for educational attainment (ISCED 2011) corresponds to recognised qualification from an ISCED 2011 level programme which is not considered as sufficient for ISCED 2011 level completion and is classified at a lower ISCED 2011 level. In addition, this recognised qualification does not give direct access to an upper ISCED 2011 level programme.

Employed individuals are those who, during the survey reference week: *i)* work for pay (employees) or profit (self-employed and unpaid family workers) for at least one hour; or *ii)* have a job but are temporarily not at work (through injury, illness, holiday, strike or lock-out, educational or training leave, maternity or parental leave, etc.).

The **employment rate** refers to the number of persons in employment as a percentage of the working-age population (the number of employed people is divided by the number of all working-age people). Employment rates by gender, educational attainment, programme orientation and age group are calculated within each of these categories. For example, the employment rate among women is calculated by dividing the number of employed women by the total number of working-age women.

ICT skills required at work refers to the use of computers needed at work. Four levels of use are identified: "ICT skills not required at work" corresponds to individuals who reported they do not use a computer in their job; "Straightforward" indicates using a computer for routine tasks, such as data entry or sending and receiving e-mails; "Moderate" indicates using a computer for word-processing, spreadsheets or database management; and "Complex" indicates developing software or modifying computer games, programming using languages like java, sql, php or perl, or maintaining a computer network.

Inactive individuals are those who are, during the survey reference week, neither employed nor unemployed (i.e. individuals who are not looking for a job). The number of inactive individuals is calculated by subtracting the number of active people (labour force) from the number of all working-age people.

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 all working-age people). Inactivity rates by gender, educational attainment, programme orientation and age group are calculated within each of these categories. For example, the inactivity rate among individuals with a tertiary education degree is calculated by dividing the number of inactive individuals with tertiary education by the total number of working-age people with tertiary education.

The **index of use of reading skills at work** refers to the frequency of reading various types of texts at work such as directions, instructions, letters, memos, e-mails, articles, books, manuals, bills, invoices, diagrams and maps. A value of 0 indicates that a person undertakes no reading activities; a value of 1 indicates that reading tasks are carried out less than once a month; a value of 2 indicates that they are carried out less than once a week but at least once a month; a value of 3 indicates that they are carried out at least once a week but not every day; and a value of 4 indicates that they are carried out every day.

Levels of education: In this indicator, two ISCED (International Standard Classification of Education) classifications are used: ISCED 2011 and ISCED-97.

- ISCED 2011 is used for all the analyses that are not based on the Survey of Adult Skills. For ISCED 2011, the levels of education are defined as follow: **below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2, and includes recognised qualifications from ISCED 2011 level 3 programmes, which are not considered as sufficient for ISCED 2011 level 3 completion, and without direct access to post-secondary non-tertiary education or tertiary education; **upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4; and **tertiary** corresponds to ISCED 2011 levels 5, 6, 7 and 8 (UNESCO Institute for Statistics, 2012)
- ISCED-97 is used for all analyses based on the Survey of Adult Skills. For ISCED-97, the levels of education are defined as follow: **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

See the section *About the new ISCED 2011 classification*, at the beginning of this publication, for a presentation of all ISCED 2011 levels and Annex 3 for a presentation of all ISCED-97 levels.

Literacy is the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential. Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts. It does not, however, involve the production of text (writing). Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.

Numeracy is the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life. To this end, numeracy involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways.

Occupation: Skilled occupations include legislators, senior officials and managers (ISCO 1 [International Standard Classification of Occupations]), professionals (ISCO 2), technicians and associate professionals (ISCO 3); **semi-skilled white-collar occupations** include clerks (ISCO 4), service workers, and shop and market sales workers (ISCO 5); **semi-skilled blue-collar occupations** include skilled agricultural and fishery workers (ISCO 6), craft and related trades workers (ISCO 7), and plant and machine operators and assemblers (ISCO 8); and **elementary occupations** include low-skilled occupations (ISCO 9).

Problem solving in technology-rich environments is the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks. The assessment focuses on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals and plans, and accessing and making use of information through computers and computer networks.

Proficiency levels for literacy and numeracy are based on a 500-point scale. Each level has been defined by particular score-point ranges. Six levels are defined for literacy and numeracy (Below Level 1 and Levels 1 through 5), which are grouped in four proficiency levels in *Education at a Glance*: Level 1 or below – all scores below 226 points; Level 2 – scores from 226 points to less than 276 points; Level 3 – scores from 276 points to less than 326 points; Level 4 or 5 – scores from 326 points and higher.

Skills and readiness to use information and communication technologies (ICT) for problem solving in technology-rich environments are categorised into skill groups. Each group is described in terms of the characteristics of the types of tasks that can be successfully completed by adults and the related scores in the assessment of problem solving in technology-rich environments in the Survey of Adult Skills.

- group 0 (no computer experience)
- group 1 (refused the computer-based assessment)
- group 2 (failed ICT core stage 1 or minimal problem-solving skills – scored below Level 1 in the problem solving in technology-rich environments assessment)
- group 3 (moderate ICT and problem-solving skills – scored at Level 1 in the problem solving in technology-rich environments assessment)
- group 4 (good ICT and problem-solving skills – scored at Level 2 or Level 3 in the problem solving in technology-rich environments assessment)

Unemployed individuals are those who are, during the survey reference week, without work (i.e. neither had a job nor were at work for one hour or more in paid employment or self-employment), actively seeking employment (i.e. had taken specific steps during the four weeks prior to the reference week to seek paid employment or self-employment), and currently available to start work (i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week).

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). Unemployment rates by gender, educational attainment, programme orientation and age group are calculated within each of these categories.

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For example, the unemployment rate among women is calculated by dividing the number of unemployed women by the total number of women who are active in the labour force.

Use of computer at work refers to whether the respondent uses a computer in his work or not. A computer can be a mainframe, desktop or laptop, or any other device that can be used to do such things as sending or receiving e-mail messages, processing data or text, or finding things on the internet.

Use of e-mails, Internet and word processor at work refers to the frequency of use of these tasks at work. The possible answers are "never", "less than once a month", "less than once a week but at least once a month", "at least once a week but not every day" or "every day".

Methodology

Data on population and educational attainment for most countries are taken from OECD and Eurostat databases, which are compiled from National Labour Force Surveys by the OECD LSO (Labour Market and Social Outcomes of Learning) Network. Data on educational attainment for Indonesia, Saudi Arabia and South Africa are taken from the ILO database and data for China from the UNESCO Institute of Statistics (UIS) database. Data on fields of education, use of information and communication technologies at work and in selected industries, literacy proficiency levels and mean scores are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). See Annex 3 for additional information (www.oecd.org/education/education-at-a-glance-19991487.htm).

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator A5 Tables

StatLink http://dx.doi.org/10.1787/888933396955

	Table A5.1	Employment rates, by educational attainment (2015)
	Table A5.2	Unemployment rates, by educational attainment (2015)
	Table A5.3	Trends in employment rates, by educational attainment and age group (2005 and 2015)
	Table A5.4	Trends in unemployment rates, by educational attainment and age group (2005 and 2015)
	Table A5.5	Employment, unemployment and inactivity rates of 25-34 year-olds, by programme orientation and educational attainment (2015)
	Table A5.6	Employment rates of tertiary-educated adults, by field of education studied and gender (2012 or 2015)
	Table A5.7	Frequency of use of information and communication technologies at work, by educational attainment (2012 or 2015)
	Table A5.8	Proficiency, use and need of information and communication technologies at work, by main industry (2012 or 2015)
WEB	Table A5.9	Educational attainment, by occupation (2012 or 2015)
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WEB	Table A5.10 (L)	Labour market status, by educational attainment and literacy proficiency level (2012 or 2015)
WEB	Table A5.10 (N)	Labour market status, by educational attainment and numeracy proficiency level (2012 or 2015)
WEB	Table A5.10 (P)	Labour market status, by educational attainment and skills and readiness to use information and communication technologies for problem solving (2012 or 2015)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table A5.1. Employment rates, by educational attainment (2015)

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

		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	Upper secondary	Post-secondary non-tertiary	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	All levels of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	25	44	a	64	a	77	83	81	84	84	86	76
	Austria	x(2)	28[d]	a	54	a	76	80	84	77	89	89	75
	Belgium	30	37	a	54	a	72	84	78	84	86	91	70
	Canada	x(2)	45[d]	a	59	a	71	80	81	83	83[d]	x(10)	76
	Chile[1]	53	55	a	66	a	72	a	81	85	94[d]	x(10)	70
	Czech Republic	4	6[r]	a	43	a	79[d]	x(6)	78	79	87	92	78
	Denmark	x(2)	45[d]	a	64	a	80	91	86	84	89	94	78
	Estonia	m	34	a	61	a	77	78	82	87	86	89	78
	Finland	x(2)	39[d]	a	59	a	72	94	81	82	85	88	75
	France[2]	46	41	a	61	a	73	59	83	82	86	87	72
	Germany	x(2)	48[d]	a	62	a	79	85	89	88	88	94	79
	Greece	26	44	49	55	57	55	61	66	67	79	91	58
	Hungary	19	26	a	50	a	73	81	82	80	87	89	72
	Iceland	x(2)	61[d]	a	79	a	87	96	90	90	94	98	87
	Ireland	20	38	a	56	a	67	72	78	83	86	88	71
	Israel	37	40	a	57	a	73	a	82	87	91	92	76
	Italy	31	28	a	55	a	70	74	m	69	81	89	64
	Japan	x(6)	x(6)	a	x(6)	a	77[d]	x(8)	77[d]	86[d]	x(9)	x(9)	79
	Korea	x(2)	63[d]	a	68	a	72	a	76	78[d]	x(9)	x(9)	74
	Latvia	7[r]	29	a	55	70	72	72	86	84	88	93	74
	Luxembourg	38[r]	58	a	66	a	71	79	81	83	87	86	75
	Mexico	57	63	70	68	75	71	a	73	80	87	87	68
	Netherlands	37	52	a	65	a	78	88	86	87	90	96	77
	New Zealand	x(4)	x(4)	a	69[d]	a	79	86	86	88	87	92	80
	Norway	48	43	a	62	a	80	82	84	90	93	99	81
	Poland	6	42	a	46	a	67	70	62	83	88	95	70
	Portugal	29	61	a	74	a	79	83	a	74	86	92	72
	Slovak Republic	c	18	m	36	38	73	74	79	73	81	85	71
	Slovenia	13[r]	33	a	50	a	70	a	77	86	87	92	71
	Spain	27	40	a	57	a	68	62	75	78	81	90	65
	Sweden	x(2)	42[d]	a	68	83	85	84	84	90	92	94	83
	Switzerland	52	65	a	70	a	83[d]	x(6)	x(9)	89[d]	89[d]	93[d]	84
	Turkey	34	50	a	59	a	62	a	68	78	86	92	58
	United Kingdom	m	41	a	59	77	84	a	83	87	86	90	78
	United States	52	58	a	54	a	69[d]	x(6)	77	81	84	88	73
	OECD average	33	43	m	60	m	74	79	80	82	87	91	74
	EU22 average	25	38	m	57	m	74	77	80	81	86	91	73
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	62	69	a	73[d]	a	77[d]	x(6)	x(9)	85[d]	x(9)	x(9)	73
	China	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	x(4)	x(4)	a	72[d]	74	77[d]	x(6)	x(9)	84[d]	x(9)	x(9)	76
	Costa Rica	55	65	71	71	69	72	69	72	84	89[d]	x(10)	70
	India	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	72	73	a	72	a	74	77	x(9)	86[d]	x(9)	x(9)	74
	Lithuania	7[r]	31[r]	a	48	65	69	74	a	89	91	95	76
	Russian Federation[1]	x(4)	x(4)	a	49[d]	a	72[d]	x(6)	x(9)	83[d]	x(9)	x(9)	77
	Saudi Arabia[2]	23	60	a	65	a	62	82	x(9)	75	x(9)	x(9)	65
	South Africa[2]	38	45	a	49	a	m	61	x(9)	81	x(9)	x(9)	55
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Notes: In most countries data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.

2. Year of reference 2014.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A5.2. Unemployment rates, by educational attainment (2015)

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				
		Less than primary	Primary	Completion of intermediate lower secondary programmes	Lower secondary	Completion of intermediate upper secondary programmes	Upper secondary	Post-secondary non-tertiary	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	All levels of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	m	9.7	a	7.6	a	5.0	2.9	4.7	3.1	3.9	1.9	4.7
	Austria	x(2)	22.0[d]	a	10.2	a	5.1	1.9	3.3	5.5	3.3	5.7	5.1
	Belgium	22.8	17.7	a	12.9	a	7.6	4.6	c	3.9	4.4	3.6	7.4
	Canada	x(2)	10.3[d]	a	10.4	a	7.0	6.5	4.9	4.4	5.0[d]	x(10)	5.9
	Chile[1]	4.6	5.1	a	5.4	a	5.6	a	5.7	4.9	1.3[d]	x(10)	5.3
	Czech Republic	m	m	a	20.8	a	4.4[d]	x(6)	1.4	3.1	2.0	1.2	4.6
	Denmark	x(2)	11.3[d]	a	8.1	a	4.7	2.3	4.7	4.2	5.7	3.9	5.3
	Estonia	m	c	a	12.1	a	6.0	6.9	4.8	4.3	3.3	m	5.6
	Finland	x(2)	14.2[d]	a	11.6	a	8.3	1.1	6.0	6.7	6.4	6.9	7.7
	France[2]	11.9	15.3	a	13.7	a	8.8	c	5.3	6.3	5.9	5.3	8.6
	Germany	x(2)	14.6[d]	a	10.5	a	4.6	2.8	c	2.2	2.7	1.4	4.4
	Greece	46.9	24.6	22.8	26.9	37.5	25.1	26.7	2.6	20.7	14.8	4.5	23.6
	Hungary	26.3	26.7	a	15.0	a	6.0	4.2	4.2	2.3	1.9	c	6.0
	Iceland	x(2)	m	a	4.0	a	3.2	2.1	1.7	3.1	2.8	m	3.2
	Ireland	19.4[r]	18.6	a	14.7	a	9.6	10.5	6.2	5.1	4.0	1.9	8.5
	Israel	4.3	8.3	a	6.2	a	5.4	a	4.6	3.8	2.4	2.3	4.5
	Italy	19.5	19.7	a	13.5	a	8.9	12.2	m	10.7	6.0	4.1	10.2
	Japan	x(6)	x(6)	a	x(6)	a	4.1[d]	x(8)	2.9[d]	2.4[d]	x(9)	x(9)	3.3
	Korea	x(2)	3.1[d]	a	2.5	a	3.3	a	3.4	3.1[d]	x(9)	x(9)	3.2
	Latvia	c	c	a	22.3	9.4	10.8	10.3	4.2	5.6	3.1	m	9.5
	Luxembourg	28.2[r]	8.4	a	7.9	a	5.6	2.9	5.0	4.6	4.4	4.3	5.7
	Mexico	2.1	2.8	3.5	3.6	3.6	4.0	a	3.4	4.5	2.0	c	3.5
	Netherlands	17.5	10.3	a	8.5	a	6.8	c	4.3	3.9	3.5	c	6.1
	New Zealand	x(4)	x(4)	a	6.2[d]	a	5.1	4.3	3.1	2.4	4.1	c	4.4
	Norway	20.0	12.9	a	7.5	a	3.3	4.4	4.2	1.6	2.6	m	3.6
	Poland	m	14.6	a	26.7	a	7.2	6.8	10.6	5.5	3.0	1.9	6.4
	Portugal	22.5	13.3	a	12.2	a	11.5	10.9	a	12.4	7.3	3.9	11.4
	Slovak Republic	m	37.4	m	34.4	c	10.0	5.5	c	7.0	5.5	c	10.3
	Slovenia	m	8.7[r]	a	13.8	a	9.4	a	6.3	6.0	5.8	3.4	8.5
	Spain	43.4	35.0	a	26.6	a	19.2	28.5	15.1	11.6	11.2	4.9	20.3
	Sweden	x(2)	30.6[d]	a	11.1	7.5	4.5	5.2	5.8	3.7	3.1	2.8	5.7
	Switzerland	11.7	10.4	a	9.3	a	3.6[d]	x(6)	x(9)	2.9[d]	3.6[d]	2.1[d]	4.0
	Turkey	11.6	8.4	a	10.5	a	9.2	a	10.3	8.3	5.5	0.9	8.9
	United Kingdom	m	9.0	a	6.8	4.2	3.2	a	2.9	2.6	2.7	1.9	3.7
	United States	9.4	6.5	a	10.4	a	6.0[d]	x(6)	3.7	2.7	2.0	1.9	4.7
	OECD average	m	14.8	m	12.5	m	7.2	7.4	4.8	5.3	4.4	3.3	7.0
	EU22 average	m	18.5	m	15.5	m	8.5	8.4	5.1	6.3	5.0	3.7	8.4
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	3.3	4.5	a	5.3[d]	a	5.7[d]	x(6)	x(9)	3.5[d]	x(9)	x(9)	4.7
	China	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	x(4)	x(4)	a	5.9[d]	7.2	8.2[d]	x(6)	x(9)	7.8[d]	x(9)	x(9)	7.1
	Costa Rica	9.0	7.1	6.8	6.7	9.2	7.7	4.2	8.8	5.3	1.3[d]	x(10)	7.0
	India	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	1.7	2.4	a	3.4	a	4.2	3.5	x(9)	3.6[d]	x(9)	x(9)	3.1
	Lithuania	c	c	a	25.1	16.6	12.9	8.8	a	4.0	2.0	m	8.6
	Russian Federation[1]	x(4)	x(4)	a	12.5[d]	a	6.2[d]	x(6)	x(9)	c	x(9)	x(9)	4.6
	Saudi Arabia[2]	0.2	0.6	a	1.1	a	4.2	3.8	x(9)	7.9	x(9)	x(9)	3.8
	South Africa[2]	19.8	22.9	a	28.1	a	m	20.8	x(9)	9.2	x(9)	x(9)	21.3
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Notes: In most countries data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.

2. Year of reference 2014.

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A5.3. Trends in employment rates, by educational attainment and age group (2005 and 2015)

Percentage of employed adults, by age group among all adults in the same age group

	Below upper secondary						Upper secondary or post-secondary non-tertiary						Tertiary					
	Employment rates of 25-64 year-olds		Employment rates of 25-34 year-olds		Employment rates of 55-64 year-olds		Employment rates of 25-64 year-olds		Employment rates of 25-34 year-olds		Employment rates of 55-64 year-olds		Employment rates of 25-64 year-olds		Employment rates of 25-34 year-olds		Employment rates of 55-64 year-olds	
	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	63[b]	58	64[b]	59	46[b]	50	80[b]	78	81[b]	79	62[b]	67	84[b]	83	85[b]	85	69[b]	71
Austria	53	53	61	58	23	31	73	76	83	83	28	45	83	85	86	86	48	66
Belgium	49[b]	47	57[b]	51	21[b]	29	74[b]	72	81[b]	77	38[b]	46	84[b]	85	90[b]	87	49[b]	63
Canada	56	55	62	57	40	49	76	74	80	77	57	59	82	82	85	84	62	66
Chile[1]	m	61	m	61	m	54	m	72	m	70	m	62	m	84	m	84	m	74
Czech Republic	41[b]	42	43[b]	42	20[b]	29	75[b]	79	78[b]	79	47[b]	55	86[b]	85	81[b]	77	69[b]	79
Denmark	62[b]	61	64[b]	58	42[b]	53	80[b]	80	83[b]	81	61[b]	65	86[b]	86	87[b]	82	73[b]	76
Estonia	50	57	60	62	36	39	74	77	77	82	53	59	84	86	84	85	74	79
Finland	58[b]	53	63[b]	53	43[b]	44	75[b]	73	77[b]	75	53[b]	57	84[b]	83	86[b]	81	66[b]	71
France[2]	59	54	63	54	32	38	76	73	80	75	40	47	83	84	86	85	56	61
Germany	52[b]	59	52[b]	56	32[b]	48	71[b]	80	74[b]	82	43[b]	65	83[b]	88	85[b]	88	63[b]	79
Greece	59[b]	49	72[b]	52	39[b]	34	69[b]	56	73[b]	58	38[b]	28	82[b]	69	79[b]	65	59[b]	44
Hungary	38[b]	48	49[b]	51	16[b]	26	70[b]	74	75[b]	78	39[b]	47	83[b]	83	83[b]	82	60[b]	63
Iceland	82	78	81	79	81	75	89	88	82	83	87	87	94	92	94	88	90	91
Ireland	58[b]	49	64[b]	44	45[b]	44	77[b]	69	83[b]	68	56[b]	60	87[b]	82	89[b]	84	70[b]	66
Israel	41[b]	49	43[b]	58	32[b]	43	67[b]	73	65[b]	72	53[b]	67	81[b]	86	82[b]	86	68[b]	77
Italy	52[b]	50	65[b]	51	24[b]	34	74[b]	70	72[b]	63	44[b]	60	80[b]	79	69[b]	62	67[b]	79
Japan[3]	m	m	m	m	m	m	m	m	m	m	m	m	79[b]	82[d]	78[b]	83[d]	72[b]	74[d]
Korea	66	66	62	52	58	64	70	72	64	65	59	66	77	77	74	76	61	70
Latvia	52	56	60	64	35	39	73	72	77	80	49	57	85	86	86	85	70	75
Luxembourg	62[b]	62	79[b]	76	22[b]	28	72[b]	72	82[b]	82	30[b]	38	84[b]	85	87[b]	87	60[b]	64
Mexico	62[b]	64	63[b]	66	52[b]	53	71[b]	71	71[b]	70	46[b]	53	82[b]	80	79[b]	80	68[b]	63
Netherlands	60[b]	60	70[b]	65	35[b]	48	78[b]	78	86[b]	81	49[b]	64	86[b]	88	92[b]	91	62[b]	77
New Zealand	70	69	68	63	61	66	84	81	82	78	75	78	84	87	81	86	78	85
Norway	64	61	66	61	48	52	82	81	84	82	70	72	89	89	86	86	85	85
Poland	38[b]	41	45[b]	46	21[b]	26	62[b]	67	68[b]	75	28[b]	44	83[b]	87	83[b]	87	55[b]	67
Portugal	71[b]	64	81[b]	75	50[b]	46	79[b]	79	78[b]	78	48[b]	59	87[b]	84	87[b]	80	61[b]	68
Slovak Republic	26[b]	34	16[b]	39	9[b]	24	71[b]	73	73[b]	76	34[b]	48	84[b]	80	84[b]	75	54[b]	68
Slovenia	56[b]	49	70[b]	63	27[b]	26	75[b]	70	84[b]	78	27[b]	34	87[b]	84	91[b]	82	51[b]	56
Spain	59[b]	52	72[b]	56	38[b]	37	75[b]	68	78[b]	66	51[b]	55	83[b]	79	82[b]	75	65[b]	66
Sweden	66[b]	66	65[b]	66	59[b]	63	81[b]	85	81[b]	84	69[b]	75	87[b]	89	84[b]	87	83[b]	84
Switzerland	65[b]	69	68[b]	65	51[b]	57	80[b]	83	83[b]	86	65[b]	72	90[b]	89	91[b]	89	79[b]	82
Turkey	47	51	49	53	30	34	62	62	64	66	24	29	75	76	79	76	34	42
United Kingdom[4]	65[b]	59	64[b]	58	56[b]	48	82[b]	81	81[b]	83	69[b]	68	88[b]	86	90[b]	88	72[b]	70
United States	57	55	62	56	39	42	73	69	74	71	58	59	82	81	83	83	72	70
OECD average	56	56	61	58	38	43	75	74	77	76	50	57	84	84	84	83	65	71
EU22 average	54	53	61	56	33	38	74	74	78	77	45	54	85	84	85	82	63	69
Partners																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[2]	m	68	m	72	m	52	m	77	m	78	m	58	m	85	m	88	m	65
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	72	m	73	m	61	m	77	m	77	m	62	m	84	m	84	m	68
Costa Rica	m	64	m	68	m	51	m	72	m	74	m	54	m	81	m	81	m	66
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia[1]	m	73	m	69	m	68	m	74	m	71	m	56	m	86	m	84	m	64
Lithuania	46[b]	50	62[b]	60	32[b]	34	75[b]	71	80[b]	76	52[b]	55	88[b]	90	89[b]	91	69[b]	78
Russian Federation[1]	m	49	m	58	m	c	m	72	m	79	m	43	m	83	m	88	m	54
Saudi Arabia[2]	m	60	m	65	m	36	m	65	m	59	m	60	m	75	m	62	m	77
South Africa[2]	m	46	m	42	m	33	m	61	m	55	m	55	m	81	m	74	m	70
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Notes: In most countries there is a break in the series, represented by the code "b", as data for the latest year refer to ISCED 2011 while data for previous years refer to ISCED-97. For China and Korea data refer to ISCED-97 for all years. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013 instead of 2015.
2. Year of reference 2014 instead of 2015.
3. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).
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 (18% of the adults are under this group).

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A5.4. Trends in unemployment rates, by educational attainment and age group (2005 and 2015)

Percentage of unemployed adults, by age group among all adults in the same age group

	Below upper secondary						Upper secondary or post-secondary non-tertiary						Tertiary					
	Unemployment rates of 25-64 year-olds		Unemployment rates of 25-34 year-olds		Unemployment rates of 55-64 year-olds		Unemployment rates of 25-64 year-olds		Unemployment rates of 25-34 year-olds		Unemployment rates of 55-64 year-olds		Unemployment rates of 25-64 year-olds		Unemployment rates of 25-34 year-olds		Unemployment rates of 55-64 year-olds	
	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	6.3[b]	8.0	12.3[b]	15.5	3.7[b]	4.5	3.4[b]	4.7	4.0[b]	4.9	3.4[b]	4.5	2.5[b]	3.6	2.8[b]	3.4	2.6[b]	3.6
Austria	8.5	10.6	15.4	19.1	c	6.6	4.5	4.9	5.3	6.0	c	5.0	3.0	3.6	3.7	4.1	c	3.2
Belgium	12.4[b]	14.8	23.0[b]	24.5	6.1[b]	7.2	6.9[b]	7.5	9.4[b]	10.6	4.1[b]	6.1	3.7[b]	4.1	4.9[b]	5.7	c	4.0
Canada	9.7	10.4	13.3	13.9	7.8	9.2	5.9	6.8	6.6	8.1	5.3	6.7	4.6	4.7	5.3	5.1	4.1	4.8
Chile[1]	m	5.2	m	8.9	m	3.8	m	5.6	m	7.5	m	3.8	m	4.9	m	7.2	m	3.3
Czech Republic	24.4[b]	20.7	35.5[b]	29.0	13.7[b]	13.4	6.2[b]	4.4	7.0[b]	6.2	4.9[b]	4.2	2.0[b]	2.2	2.4[b]	3.1	c	1.9
Denmark	6.5[b]	8.5	9.7[b]	13.2	6.5[b]	5.7	4.0[b]	4.7	4.3[b]	5.7	5.7[b]	4.4	3.7[b]	4.8	5.0[b]	7.6	3.6[b]	3.3
Estonia	13.0	12.5	17.0	15.2	c	8.2	8.4	6.2	7.2	5.8	5.9	7.1	3.8	3.8	3.1	2.5	c	4.5
Finland	10.7[b]	12.1	17.4[b]	17.5	9.0[b]	9.2	7.4[b]	8.2	8.0[b]	9.2	7.0[b]	8.3	4.4[b]	6.4	4.8[b]	8.1	4.6[b]	6.8
France[2]	11.1	14.0	18.8	24.2	6.3	9.6	6.6	8.8	9.3	13.5	4.6	6.7	5.4	5.7	6.4	7.9	4.3	5.7
Germany	20.1[b]	11.4	25.6[b]	17.3	18.3[b]	8.2	11.0[b]	4.3	10.9[b]	4.6	13.9[b]	5.2	5.6[b]	2.3	5.8[b]	3.2	7.8[b]	2.5
Greece	8.3[b]	26.3	11.1[b]	36.7	4.5[b]	19.9	9.6[b]	25.5	13.1[b]	31.7	c	19.1	7.1[b]	19.0	13.3[b]	30.2	c	10.7
Hungary	12.4[b]	15.5	16.7[b]	21.0	6.4[b]	12.9	6.0[b]	5.7	7.3[b]	7.2	4.0[b]	5.7	2.3[b]	2.2	3.1[b]	3.4	c	1.7
Iceland	2.6	4.0	c	5.9	c	3.2	c	3.1	c	4.4	c	4.1	c	2.8	c	3.3	c	2.1
Ireland	6.0[b]	15.9	10.4[b]	26.9	3.1[b]	10.9	3.1[b]	9.9	3.7[b]	14.1	c	6.9	2.0[b]	5.1	2.4[b]	6.1	c	5.0
Israel	14.0[b]	6.5	14.1[b]	5.7	10.2[b]	5.8	9.4[b]	5.4	10.4[b]	6.7	9.9[b]	4.4	5.0[b]	3.6	5.4[b]	4.9	5.0[b]	3.2
Italy	7.8[b]	14.2	11.8[b]	23.3	4.8[b]	9.4	5.2[b]	8.9	8.1[b]	16.0	2.4[b]	3.8	5.7[b]	6.8	13.8[b]	16.3	1.0[b]	1.2
Japan[3]	m	m	m	m	m	m	m	m	m	m	m	m	3[b]	3[d]	5[b]	4[d]	2[b]	2[d]
Korea	2.9	2.7	8.1	10.5	2.3	2.4	3.8	3.3	5.7	6.4	3.3	3.1	2.9	3.2	4.2	5.0	1.8	3.1
Latvia	12.9	19.6	16.4	18.6	7.6	16.4	9.0	10.7	9.4	9.4	10.1	10.9	4.1	4.5	4.0	6.0	4.3	3.9
Luxembourg	5.1[b]	8.3	8.1[b]	10.5	c	6.9	3.2[b]	5.4	4.0[b]	7.1	c	4.4	3.2[b]	4.6	2.7[b]	5.7	c	3.4
Mexico	2.3[b]	3.1	2.8[b]	4.2	1.9[b]	2.5	3.1[b]	4.0	4.1[b]	5.3	2.4[b]	2.9	3.7[b]	4.2	5.5[b]	6.5	3.1[b]	2.0
Netherlands	5.8[b]	9.3	8.7[b]	12.2	4.5[b]	9.0	4.1[b]	6.8	3.9[b]	7.1	4.6[b]	9.3	2.8[b]	3.7	2.6[b]	3.2	3.1[b]	5.8
New Zealand	3.4	6.2	5.5	11.2	1.8	4.2	2.3	4.8	3.0	6.8	1.7	3.2	2.3	2.8	3.3	3.3	1.9	3.0
Norway	7.4	7.7	14.4	12.3	c	3.8	2.6	3.3	4.1	4.8	c	1.9	2.1	2.5	3.1	4.4	c	0.6
Poland	27.1[b]	15.5	38.3[b]	22.9	13.6[b]	11.9	16.6[b]	7.1	19.9[b]	9.4	13.0[b]	5.6	6.2[b]	3.5	9.8[b]	5.5	4.5[b]	1.8
Portugal	7.5[b]	13.0	9.0[b]	13.8	6.4[b]	14.6	6.7[b]	11.4	8.3[b]	12.5	c	11.5	5.4[b]	8.2	9.2[b]	13.0	c	3.6
Slovak Republic	49.2[b]	34.2	73.8[b]	38.0	36.5[b]	18.8	12.7[b]	9.9	13.8[b]	11.8	11.6[b]	9.4	4.4[b]	5.6	5.3[b]	7.6	7.7[b]	4.8
Slovenia	8.7[b]	13.6	16.1[b]	18.4	2.9[b]	9.0	5.7[b]	9.4	6.7[b]	13.3	6.3[b]	9.0	3.0[b]	5.7	5.1[b]	10.5	c	4.7
Spain	m	28.9	m	34.6	m	25.7	m	19.2	m	23.3	m	15.1	m	12.4	m	17.5	m	8.4
Sweden	8.5[b]	13.1	17.8[b]	17.5	5.2[b]	7.8	6.0[b]	4.6	8.5[b]	6.1	5.4[b]	5.7	4.5[b]	4.0	7.1[b]	5.1	2.3[b]	3.2
Switzerland	7.2[b]	9.6	11.8[b]	14.6	6.0[b]	8.8	3.7[b]	3.6	4.7[b]	4.1	3.7[b]	3.4	2.7[b]	3.2	3.4[b]	4.0	2.3[b]	2.9
Turkey	9.1	9.1	11.3	10.9	4.2	7.2	9.1	9.2	11.9	10.1	4.5	8.3	6.9	8.4	10.9	11.9	4.3	5.6
United Kingdom[4]	5.1[b]	6.8	7.8[b]	11.6	3.2[b]	4.5	3.1[b]	3.6	4.1[b]	5.1	2.4[b]	3.0	2.1[b]	2.7	2.4[b]	3.4	2.8[b]	2.8
United States	9.0	9.2	11.7	12.5	7.5	6.9	5.1	6.0	6.9	8.3	4.2	4.6	2.6	2.7	3.0	2.9	2.3	3.3
OECD average	10.8	12.4	16.6	17.4	7.6	9.1	6.3	7.3	7.5	9.2	5.8	6.4	3.8	4.9	5.3	6.9	3.6	3.8
EU22 average	12.9	15.4	19.5	21.2	8.8	11.2	6.9	8.5	8.2	10.7	6.6	7.6	4.0	5.5	5.6	8.0	m	4.2
Partners																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[2]	m	4.4	m	7.3	m	2.1	m	5.7	m	7.6	m	2.9	m	3.5	m	5.1	m	1.7
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	6.0	m	8.1	m	5.4	m	8.2	m	10.1	m	5.6	m	7.8	m	9.8	m	5.8
Costa Rica	m	7.4	m	10.9	m	5.1	m	7.6	m	11.2	m	8.5	m	5.7	m	9.6	m	2.3
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia[1]	m	2.6	m	4.4	m	1.2	m	4.2	m	6.4	m	2.1	m	3.6	m	6.9	m	1.2
Lithuania	c	23.3	c	17.6	c	23.1	8.9[b]	11.3	c	11.1	c	11.7	c	3.2	c	4.3	c	1.8
Russian Federation[1]	m	12.5	m	15.3	m	6.6	m	6.2	m	c	m	4.4	m	c	m	c	m	2.9
Saudi Arabia[2]	m	0.8	m	2.1	m	0.1	m	4.1	m	8.4	m	0.2	m	7.9	m	19.6	m	m
South Africa[2]	m	26.1	m	36.9	m	10.2	m	20.8	m	28.5	m	5.4	m	9.2	m	15.9	m	2.1
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Notes: In most countries there is a break in the series, represented by the code "b", as data for the latest year refer to ISCED 2011 while data for previous years refer to ISCED-97. For China and Korea data refer to ISCED-97 for all years. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013 instead of 2015.
2. Year of reference 2014 instead of 2015.
3. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).
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 (18% of the adults are under this group).

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A5.5. Employment, unemployment and inactivity rates of 25-34 year-olds, by programme orientation and educational attainment (2015)

		Employment rate				Unemployment rate				Inactivity rate			
		Below upper secondary	Upper secondary or post-secondary non-tertiary		Tertiary	Below upper secondary	Upper secondary or post-secondary non-tertiary		Tertiary	Below upper secondary	Upper secondary or post-secondary non-tertiary		Tertiary
			Vocational	General			Vocational	General			Vocational	General	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	59	82	74	85	15.5	3.7	6.4	3.4	31	14	20	12
	Austria	58	86	71	86	19.1	5.7	7.7	4.1	29	9	23	11
	Belgium	51	81	68	87	24.5	9.8	12.8	5.7	33	11	22	8
	Canada	57	87	73	84	13.9	6.5	8.9	5.1	33	7	20	11
	Chile[1]	61	77	68	84	8.9	6.9	7.7	7.2	32	17	26	9
	Czech Republic	42	m	m	77	29.0	m	m	3.1	41	m	m	20
	Denmark	58	85	70	82	13.2	5.3	6.9	7.6	34	10	25	11
	Estonia	62	82	81	85	15.2	6.2	5.2	2.5	27	12	14	13
	Finland	53	77	67	81	17.5	8.4	11.9	8.1	36	16	24	12
	France[2]	54	75	73	85	24.2	14.0	12.1	7.9	28	12	17	8
	Germany	56	86	54	88	17.3	4.5	6.0	3.2	32	10	43	10
	Greece	52	63	54	65	36.7	33.7	29.9	30.2	19	6	23	7
	Hungary	51	80	71	82	21.0	7.0	7.9	3.4	35	14	23	15
	Iceland	79	92	76	88	5.9	2.5	6.2	3.3	16	6	19	9
	Ireland	44	70	67	84	26.9	14.6	13.9	6.1	40	18	23	11
	Israel	58	82	70	86	5.7	7.0	6.7	4.9	39	12	25	10
	Italy	51	68	49	62	23.3	15.3	18.3	16.3	33	20	40	26
	Japan[3]	m	m	m	83[d]	m	m	m	3.7[d]	m	m	m	13[d]
	Korea	52	x(3)	65[d]	76	10.5	x(7)	6.4[d]	5.0	41	x(11)	30[d]	20
	Latvia	64	83	78	85	18.6	8.6	10.0	6.0	21	9	13	10
	Luxembourg	76	86	80[r]	87	10.5	5.5	12.7[r]	5.7	15	9	8[r]	8
	Mexico	66	x(3)	70[d]	80	4.2	x(7)	5.3[d]	6.5	31	x(11)	26[d]	14
	Netherlands	65	83	73	91	12.2	6.5	10.2	3.2	25	11	19	6
	New Zealand	63	80	76	86	11.2	7.5	5.3	3.3	29	14	19	11
	Norway	61	88	72	86	12.3	3.7	6.9	4.4	31	8	22	10
	Poland	46	76	72	87	22.9	9.1	10.2	5.5	40	16	19	8
	Portugal	75	79	78	80	13.8	13.7	11.6	13.0	13	8	12	8
	Slovak Republic	39	76	69	75	38.0	12.0	8.1	7.6	38	14	24	19
	Slovenia	63	81	66	82	18.4	13.3	13.0	10.5	23	7	25	8
	Spain	56	71	63	75	34.6	22.9	23.8	17.5	14	8	18	9
	Sweden	66	89	76	87	17.5	4.9	8.1	5.1	20	7	17	9
	Switzerland	65	89	80	89	14.6	4.1	4.2	4.0	24	8	17	7
	Turkey	53	71	61	76	10.9	8.4	11.8	11.9	40	23	30	14
	United Kingdom[4]	58	84	82	88	11.6	4.9	5.4	3.4	35	12	14	9
	United States	56	m	m	83	12.5	m	m	2.9	36	m	m	14
	OECD average	58	80	70	83	17.4	9.2	10.0	6.9	30	12	22	11
	EU22 average	56	79	70	82	21.2	10.8	11.7	8.0	29	11	21	11
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	72	m	m	88	7.3	m	m	5.1	23	m	m	7
	China	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	73	m	m	84	8.1	m	m	9.8	21	m	m	6
	Costa Rica	68	74	74	81	10.9	9.0	11.4	9.6	24	18	16	10
	India	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia[1]	69	m	m	84	4.4	m	m	6.9	28	m	m	10
	Lithuania	60	78	76	91	17.6	11.3	10.9	4.3	28	13	15	5
	Russian Federation[1]	58	m	m	88	15.3	m	m	c	32	m	m	9
	Saudi Arabia[2]	65	m	m	62	2.1	m	m	19.6	33	m	m	23
	South Africa[2]	42	m	m	74	36.9	m	m	15.9	34	m	m	m
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Notes: In most countries data refer to ISCED 2011. The countries with data that refer to ISCED-97 are: Indonesia, the Russian Federation, Saudi Arabia and South Africa. See the description of the levels of education in the *Definitions* section.

1. Year of reference 2013.

2. Year of reference 2014.

3. Data for tertiary education include upper secondary and post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

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 (18% of the adults are under this group).

Source: OECD (2016), "Educational attainment and labour-force status", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC. Indonesia, Saudi Arabia, South Africa: ILO. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A5.6. Employment rates of tertiary-educated adults, by field of education studied and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students

	Men and women													
	Teacher training and education science		Humanities, languages and arts		Social sciences, business and law		Science, mathematics and computing		Engineering, manufacturing and construction		Health and welfare		All fields of education	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD														
National entities														
Australia	81	(2.9)	79	(3.6)	87	(1.5)	86	(2.6)	89	(2.3)	85	(2.2)	85	(0.7)
Austria	84	(2.8)	84	(4.9)	91	(1.9)	88	(5.0)	87	(2.7)	94	(2.6)	87	(1.3)
Canada	85	(1.6)	82	(1.9)	84	(1.0)	89	(1.2)	91	(1.1)	85	(1.8)	86	(0.6)
Chile	92	(2.4)	81	(7.0)	92	(4.4)	91	(3.3)	93	(2.5)	92	(2.7)	90	(1.6)
Czech Republic	88	(2.7)	88	(3.6)	82	(3.0)	93	(2.8)	85	(5.5)	81	(6.7)	85	(2.0)
Denmark	84	(1.5)	88	(2.3)	91	(1.3)	91	(2.0)	90	(1.8)	87	(1.8)	88	(0.6)
Estonia	88	(1.9)	93	(1.9)	86	(1.4)	88	(3.0)	85	(1.3)	93	(2.2)	88	(0.7)
Finland	90	(2.8)	84	(3.5)	88	(1.4)	90	(3.7)	89	(1.5)	90	(1.6)	88	(0.8)
France	84	(2.4)	84	(2.3)	85	(1.5)	84	(1.8)	88	(2.2)	87	(1.9)	85	(0.6)
Germany	84	(3.5)	85	(3.7)	90	(1.7)	90	(3.1)	93	(1.3)	90	(2.1)	90	(0.8)
Greece	57	(3.7)	72	(6.1)	71	(2.4)	74	(4.0)	71	(4.0)	75	(4.4)	68	(1.5)
Ireland	81	(2.9)	78	(2.9)	81	(1.7)	88	(2.2)	78	(3.4)	93	(1.6)	83	(0.9)
Israel	77	(2.5)	84	(3.0)	88	(1.3)	89	(2.7)	91	(2.0)	90	(2.3)	86	(0.6)
Italy	c	c	69	(4.7)	90	(2.0)	78	(5.6)	93	(3.1)	85	(5.2)	83	(1.9)
Japan	70	(3.2)	66	(3.1)	84	(1.9)	91	(3.3)	93	(1.4)	76	(2.4)	80	(0.8)
Korea	73	(2.9)	70	(2.3)	83	(1.8)	82	(2.3)	85	(1.6)	79	(2.7)	79	(0.8)
Netherlands	86	(2.8)	87	(2.8)	90	(1.4)	89	(3.0)	88	(2.8)	87	(2.6)	88	(0.9)
New Zealand	86	(2.1)	82	(3.1)	88	(1.5)	91	(2.0)	89	(2.3)	86	(2.3)	87	(0.9)
Norway	92	(1.8)	91	(2.5)	91	(1.2)	94	(2.4)	93	(1.8)	93	(1.6)	92	(0.6)
Poland	87	(2.7)	83	(3.2)	89	(1.8)	85	(3.3)	93	(1.5)	94	(3.0)	88	(1.0)
Slovak Republic	77	(3.8)	83	(4.2)	93	(2.0)	91	(2.7)	85	(3.1)	90	(4.5)	87	(1.1)
Slovenia	77	(3.8)	87	(3.9)	81	(1.6)	84	(3.9)	86	(2.5)	85	(3.8)	83	(1.3)
Spain	76	(4.2)	72	(3.6)	83	(2.2)	83	(3.8)	84	(2.1)	82	(3.0)	80	(1.1)
Sweden	90	(2.2)	89	(4.1)	92	(1.6)	92	(2.5)	95	(1.6)	93	(1.8)	92	(0.7)
Turkey	72	(4.1)	c	c	68	(3.4)	69	(5.7)	74	(5.1)	63	(9.9)	69	(1.7)
United States	82	(2.8)	88	(2.1)	88	(1.7)	82	(2.9)	86	(3.1)	87	(2.4)	85	(0.9)
Subnational entities														
Flanders (Belgium)	84	(2.1)	88	(2.3)	93	(1.4)	90	(1.6)	94	(1.7)	89	(1.9)	90	(0.6)
England (UK)	79	(3.6)	86	(2.2)	88	(1.2)	84	(2.2)	85	(2.1)	81	(3.2)	84	(0.8)
Northern Ireland (UK)	73	(7.7)	83	(3.8)	86	(2.4)	88	(2.9)	89	(2.6)	79	(4.3)	84	(1.5)
Average	82	(0.6)	82	(0.7)	86	(0.4)	87	(0.6)	88	(0.5)	86	(0.7)	85	(0.2)
Partners														
Jakarta (Indonesia)	74	(5.4)	67	(6.7)	69	(2.9)	69	(4.1)	88	(5.2)	71	(6.1)	71	(1.8)
Lithuania	87	(2.6)	86	(4.2)	88	(2.0)	91	(2.6)	85	(2.4)	93	(3.4)	88	(1.1)
Russian Federation*	72	(2.9)	64	(3.0)	70	(2.6)	61	(6.5)	75	(2.6)	71	(4.6)	68	(1.7)
Singapore	82	(4.8)	87	(3.3)	85	(1.4)	88	(1.9)	93	(1.2)	91	(3.3)	88	(0.7)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data by gender are available for consultation on line (see *StatLink* below).

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397015

Table A5.7. Frequency of use of information and communication technologies at work, by educational attainment (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students

	Daily use of e-mail at work						Daily use of the Internet at work						Daily use of word processors at work					
	Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
National entities																		
Australia	62	(2.4)	69	(1.7)	87	(1.0)	42	(2.8)	45	(1.9)	67	(1.4)	29	(2.1)	35	(1.6)	61	(1.3)
Austria	48	(4.2)	69	(1.4)	80	(1.4)	31	(3.8)	44	(1.4)	58	(1.9)	30	(3.6)	38	(1.5)	53	(1.6)
Canada	46	(3.3)	66	(1.3)	83	(0.7)	30	(3.6)	43	(1.4)	59	(1.0)	26	(3.4)	36	(1.3)	52	(1.0)
Chile	39	(6.2)	64	(3.0)	78	(2.3)	43	(7.8)	46	(3.8)	66	(2.2)	5	(2.2)	32	(3.1)	52	(2.7)
Czech Republic	25	(6.6)	65	(1.6)	87	(2.1)	30	(7.3)	51	(2.2)	74	(2.4)	20	(6.7)	35	(1.9)	60	(3.1)
Denmark	54	(2.6)	71	(1.4)	85	(0.9)	30	(2.6)	43	(1.6)	62	(1.3)	26	(2.4)	35	(1.3)	57	(1.4)
Estonia	44	(4.3)	58	(1.8)	85	(0.8)	30	(4.5)	46	(1.4)	68	(1.0)	15	(3.3)	23	(1.5)	45	(1.3)
Finland	53	(4.2)	59	(1.7)	86	(0.9)	25	(3.3)	29	(1.5)	54	(1.3)	14	(2.8)	14	(1.0)	39	(1.1)
France	57	(2.7)	64	(1.2)	85	(0.9)	23	(2.1)	28	(1.3)	53	(1.2)	25	(2.3)	30	(1.1)	56	(1.2)
Germany	39	(6.5)	61	(1.4)	80	(1.3)	18	(5.3)	36	(1.4)	52	(1.8)	23	(5.6)	41	(1.5)	57	(1.6)
Greece	20	(6.3)	44	(3.4)	68	(2.4)	18	(6.1)	41	(3.4)	62	(2.7)	5	(2.9)	28	(2.8)	51	(2.4)
Ireland	50	(4.3)	64	(2.2)	79	(1.3)	35	(4.5)	38	(2.1)	59	(1.6)	28	(3.4)	38	(2.0)	60	(1.6)
Israel	50	(7.6)	71	(2.3)	86	(1.0)	40	(6.3)	41	(2.3)	58	(1.5)	16	(5.9)	29	(2.2)	54	(1.6)
Italy	55	(3.6)	72	(1.9)	83	(2.0)	37	(4.3)	49	(2.0)	70	(2.2)	26	(3.8)	50	(1.9)	64	(2.5)
Japan	39	(4.7)	42	(1.7)	61	(1.5)	24	(4.0)	31	(1.7)	51	(1.4)	18	(3.8)	18	(1.4)	35	(1.3)
Korea	8	(3.0)	37	(1.7)	62	(1.2)	16	(4.2)	39	(1.8)	62	(1.2)	6	(2.9)	24	(1.8)	46	(1.2)
Netherlands	67	(2.4)	79	(1.3)	91	(0.9)	37	(2.4)	46	(2.0)	66	(1.5)	32	(2.2)	47	(1.8)	68	(1.4)
New Zealand	64	(2.9)	72	(1.9)	86	(1.1)	35	(2.7)	49	(2.1)	65	(1.5)	26	(2.3)	37	(2.0)	57	(1.5)
Norway	64	(2.9)	71	(1.4)	89	(0.8)	29	(2.5)	39	(1.5)	56	(1.2)	19	(2.3)	27	(1.6)	55	(1.5)
Poland	29	(12.2)	48	(2.3)	76	(1.6)	18	(11.6)	41	(2.2)	65	(1.9)	c	c	26	(2.0)	54	(1.8)
Slovak Republic	16	(8.8)	55	(1.9)	81	(1.7)	23	(9.9)	38	(2.0)	65	(1.8)	c	c	38	(1.8)	62	(2.1)
Slovenia	36	(6.3)	67	(1.7)	93	(0.9)	27	(5.9)	50	(1.5)	80	(1.6)	8	(3.7)	33	(1.6)	69	(1.6)
Spain	46	(3.4)	66	(3.1)	80	(1.3)	31	(3.2)	50	(2.9)	65	(1.8)	21	(2.6)	44	(2.8)	59	(1.5)
Sweden	52	(3.1)	69	(1.3)	89	(0.9)	25	(3.0)	36	(1.3)	53	(1.6)	10	(2.1)	27	(1.3)	46	(1.4)
Turkey	30	(3.9)	41	(4.0)	67	(2.3)	37	(3.4)	44	(3.1)	64	(2.6)	11	(3.7)	26	(3.4)	39	(2.8)
United States	40	(10.3)	61	(2.0)	88	(1.2)	30	(8.5)	43	(1.9)	67	(1.5)	14	(5.5)	30	(1.8)	56	(1.5)
Subnational entities																		
Flanders (Belgium)	58	(4.0)	68	(1.6)	89	(0.8)	31	(3.7)	38	(1.7)	62	(1.2)	19	(3.6)	32	(1.6)	58	(1.2)
England (UK)	61	(3.1)	70	(2.0)	85	(1.1)	34	(3.1)	41	(2.1)	59	(1.5)	36	(3.1)	44	(2.2)	61	(1.5)
Northern Ireland (UK)	48	(4.3)	69	(2.9)	82	(1.7)	32	(4.2)	40	(2.8)	56	(2.0)	30	(3.5)	40	(2.9)	62	(1.8)
Average	45	(1.0)	62	(0.4)	82	(0.3)	30	(1.0)	42	(0.4)	62	(0.3)	20	(0.7)	33	(0.4)	55	(0.3)
Partners																		
Jakarta (Indonesia)	37	(7.7)	46	(3.5)	63	(3.2)	34	(9.4)	39	(3.5)	61	(2.9)	9	(6.0)	37	(4.1)	49	(2.9)
Lithuania	c	c	49	(3.1)	84	(1.3)	39	(21.7)	46	(2.7)	76	(1.8)	c	c	27	(3.1)	57	(2.1)
Russian Federation*	c	c	29	(6.5)	45	(3.1)	c	c	15	(3.8)	37	(1.9)	c	c	25	(4.7)	49	(3.6)
Singapore	50	(4.3)	73	(1.5)	92	(0.6)	35	(4.4)	55	(1.9)	75	(1.2)	25	(4.0)	38	(2.0)	60	(1.2)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933397025

A5

Table A5.8. [1/2] Proficiency, use and need of information and communication technologies at work, by main industry (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students

	Education						Human health and social work activities					
	Use of computer at work		Moderate or complex ICT skills required at work		Good ICT and problem-solving skills		Use of computer at work		Moderate or complex ICT skills required at work		Good ICT and problem-solving skills	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(3)	(4)	(5)	(6)	(7)	(8)	(11)	(12)	(13)	(14)	(15)	(16)
OECD												
National entities												
Australia	93	(1.7)	78	(2.9)	57	(4.1)	84	(2.3)	49	(3.0)	38	(3.3)
Austria	82	(3.0)	60	(3.2)	43	(4.1)	80	(2.3)	34	(2.4)	29	(3.0)
Canada	93	(1.2)	68	(2.2)	47	(2.8)	81	(1.4)	40	(1.6)	34	(2.1)
Chile	79	(3.2)	48	(4.2)	22	(4.8)	74	(4.1)	38	(4.2)	11	(3.3)
Czech Republic	76	(4.8)	54	(5.3)	43	(6.6)	64	(5.9)	42	(6.0)	20	(6.7)
Denmark	93	(1.7)	80	(2.3)	45	(3.5)	89	(1.4)	52	(1.9)	33	(2.3)
Estonia	79	(2.2)	65	(2.8)	21	(2.4)	75	(2.9)	49	(3.4)	21	(3.2)
Finland	95	(1.6)	71	(2.9)	52	(3.7)	91	(1.2)	44	(1.9)	29	(2.4)
France	81	(2.1)	64	(2.9)	m	m	63	(1.7)	32	(1.7)	m	m
Germany	86	(2.9)	65	(3.8)	47	(5.0)	76	(2.0)	38	(2.3)	32	(2.8)
Greece	77	(3.5)	69	(3.2)	32	(5.5)	74	(3.7)	53	(4.6)	15	(4.7)
Ireland	81	(3.1)	52	(3.5)	30	(3.7)	59	(2.7)	25	(2.0)	18	(2.0)
Israel	73	(2.4)	50	(2.8)	23	(2.9)	61	(2.7)	34	(2.9)	20	(3.0)
Italy	59	(4.4)	37	(3.9)	m	m	63	(4.4)	35	(4.5)	m	m
Japan	85	(2.6)	65	(3.6)	50	(4.2)	71	(2.3)	35	(2.5)	30	(2.9)
Korea	84	(2.3)	59	(3.2)	43	(4.0)	76	(3.1)	42	(3.7)	33	(4.3)
Netherlands	98	(1.0)	84	(2.6)	56	(4.0)	85	(1.3)	55	(1.9)	36	(2.3)
New Zealand	93	(1.4)	72	(2.3)	53	(3.0)	78	(2.4)	42	(3.1)	39	(3.1)
Norway	93	(1.6)	79	(2.3)	46	(3.7)	87	(1.6)	48	(2.0)	31	(2.1)
Poland	79	(3.0)	57	(3.4)	25	(3.5)	63	(3.6)	26	(4.3)	14	(4.1)
Slovak Republic	76	(3.1)	60	(3.5)	28	(4.5)	56	(3.8)	38	(3.7)	22	(3.2)
Slovenia	80	(2.6)	63	(3.0)	32	(3.5)	71	(3.4)	40	(3.3)	23	(3.9)
Spain	82	(2.5)	50	(3.6)	m	m	67	(3.7)	26	(3.6)	m	m
Sweden	94	(1.5)	66	(3.1)	42	(3.2)	91	(1.4)	42	(2.4)	32	(2.8)
Turkey	78	(4.9)	41	(4.0)	23	(4.7)	75	(7.6)	44	(7.6)	13	(6.3)
United States	95	(1.5)	74	(2.8)	45	(4.0)	79	(2.1)	42	(2.8)	29	(2.7)
Subnational entities												
Flanders (Belgium)	89	(2.0)	71	(2.9)	44	(4.4)	78	(2.2)	48	(2.7)	27	(2.8)
England (UK)	90	(2.1)	62	(3.4)	49	(3.7)	79	(2.6)	46	(2.5)	27	(3.1)
Northern Ireland (UK)	79	(3.0)	54	(3.5)	36	(4.1)	68	(3.3)	38	(3.0)	21	(3.6)
Average	84	(0.5)	63	(0.6)	40	(0.8)	75	(0.6)	41	(0.6)	26	(0.7)
Partners												
Jakarta (Indonesia)	71	(12.4)	41	(12.8)	m	m	14	(5.0)	3	(2.2)	m	m
Lithuania	64	(3.4)	52	(3.4)	19	(3.0)	53	(4.1)	33	(4.0)	19	(4.3)
Russian Federation*	56	(4.9)	37	(3.8)	29	(4.2)	39	(4.4)	19	(4.0)	17	(5.9)
Singapore	87	(2.4)	69	(3.1)	48	(3.6)	86	(2.5)	41	(4.2)	36	(4.2)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for mean age of workers by industry and data on all industries are available for consultation on line (see *StatLink* below). Each of the selected industry represent at least 10% of the employed 25-64 year-old non-students.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397038

Table A5.8. [2/2] Proficiency, use and need of information and communication technologies at work, by main industry (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students

	Manufacturing						Wholesale and retail trade; repair of motor vehicules and motorcycles					
	Use of computer at work		Moderate or complex ICT skills required at work		Good ICT and problem-solving skills		Use of computer at work		Moderate or complex ICT skills required at work		Good ICT and problem-solving skills	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(19)	(20)	(21)	(22)	(23)	(24)	(27)	(28)	(29)	(30)	(31)	(32)
OECD												
National entities												
Australia	66	(2.9)	41	(3.0)	29	(3.0)	81	(2.1)	45	(2.4)	37	(3.0)
Austria	72	(2.1)	47	(2.7)	38	(2.8)	79	(2.1)	42	(2.5)	30	(3.0)
Canada	69	(1.9)	44	(2.3)	32	(2.1)	78	(1.7)	41	(1.9)	29	(1.9)
Chile	40	(4.5)	18	(3.9)	11	(2.7)	49	(3.8)	19	(3.5)	6	(2.1)
Czech Republic	58	(2.8)	34	(2.4)	29	(2.6)	67	(4.6)	41	(3.9)	29	(3.8)
Denmark	86	(1.5)	61	(2.1)	40	(2.3)	88	(2.0)	58	(3.4)	42	(3.2)
Estonia	49	(1.9)	32	(1.8)	16	(1.4)	77	(1.6)	55	(1.9)	27	(2.1)
Finland	84	(1.9)	55	(2.7)	42	(2.5)	91	(1.6)	57	(2.6)	43	(3.0)
France	65	(1.8)	41	(1.8)	m	m	79	(1.8)	42	(2.1)	m	m
Germany	72	(1.9)	46	(1.9)	36	(2.2)	69	(2.3)	34	(2.7)	27	(3.1)
Greece	46	(4.3)	30	(4.7)	12	(3.3)	52	(2.7)	34	(2.9)	17	(2.9)
Ireland	69	(3.0)	43	(2.8)	30	(2.5)	69	(2.8)	34	(2.7)	19	(2.3)
Israel	68	(2.7)	49	(3.1)	29	(3.1)	71	(2.4)	33	(3.0)	20	(2.9)
Italy	43	(2.6)	29	(2.4)	m	m	62	(2.9)	30	(2.7)	m	m
Japan	74	(1.7)	49	(1.9)	43	(2.0)	76	(2.2)	33	(2.3)	29	(2.6)
Korea	60	(2.0)	39	(1.9)	26	(2.3)	71	(2.0)	34	(2.3)	22	(2.3)
Netherlands	74	(2.2)	54	(2.6)	38	(3.1)	88	(1.7)	56	(2.2)	37	(3.2)
New Zealand	71	(2.8)	48	(3.0)	38	(3.3)	85	(1.9)	49	(2.9)	36	(3.1)
Norway	85	(2.1)	61	(2.8)	36	(3.9)	92	(1.5)	63	(2.7)	44	(2.8)
Poland	43	(2.4)	28	(2.0)	17	(2.1)	62	(2.8)	32	(2.7)	19	(2.7)
Slovak Republic	43	(2.2)	28	(1.9)	25	(2.3)	61	(3.1)	39	(3.0)	26	(3.0)
Slovenia	57	(1.8)	35	(1.7)	17	(1.8)	82	(2.2)	47	(3.0)	30	(3.1)
Spain	55	(3.1)	31	(3.0)	m	m	59	(2.9)	28	(2.4)	m	m
Sweden	84	(2.0)	54	(2.5)	42	(2.7)	95	(1.3)	58	(2.6)	47	(3.2)
Turkey	29	(2.8)	13	(2.1)	9	(2.7)	47	(3.4)	22	(3.1)	12	(2.6)
United States	77	(2.7)	49	(3.2)	30	(3.3)	78	(2.4)	33	(2.9)	26	(3.6)
Subnational entities												
Flanders (Belgium)	74	(2.0)	51	(2.4)	36	(2.5)	82	(2.4)	50	(3.2)	31	(3.0)
England (UK)	71	(2.9)	50	(3.2)	35	(3.4)	71	(2.8)	38	(3.2)	26	(3.3)
Northern Ireland (UK)	63	(4.0)	37	(4.0)	26	(4.7)	75	(2.7)	34	(3.6)	28	(3.7)
Average	64	(0.5)	41	(0.5)	29	(0.5)	74	(0.5)	41	(0.5)	28	(0.6)
Partners												
Jakarta (Indonesia)	21	(3.5)	9	(2.0)	m	m	22	(2.0)	11	(1.7)	m	m
Lithuania	33	(2.6)	23	(2.3)	12	(2.0)	57	(2.9)	37	(2.7)	20	(3.4)
Russian Federation*	36	(3.8)	20	(2.1)	23	(3.7)	53	(5.1)	28	(3.3)	27	(3.0)
Singapore	82	(1.6)	55	(1.8)	32	(2.5)	76	(2.0)	44	(2.3)	26	(3.0)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data for mean age of workers by industry and data on all industries are available for consultation on line (see *StatLink* below). Each of the selected industry represent at least 10% of the employed 25-64 year-old non-students.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397038

A5

Table A5.9. (L) [1/2] Mean literacy score, by occupation and level of education (2012 or 2015)

Survey of Adult Skills, employed 25-64 year-old non-students

	Skilled occupations								Semi-skilled white-collar occupations							
	Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
National entities																
Australia	273	(3.2)	291	(2.7)	312	(1.3)	303	(1.2)	263	(3.6)	277	(3.0)	291	(3.8)	277	(1.7)
Austria	266	(7.0)	284	(1.6)	301	(1.8)	290	(1.2)	255	(3.8)	267	(1.8)	292	(5.4)	266	(1.6)
Canada	243	(5.8)	277	(1.7)	301	(1.1)	293	(0.9)	223	(5.4)	261	(2.1)	272	(2.4)	262	(1.4)
Chile	c	c	225	(4.9)	258	(3.0)	252	(2.7)	182	(5.2)	219	(2.6)	240	(5.5)	213	(2.3)
Czech Republic	c	c	279	(2.5)	304	(3.0)	291	(2.2)	258	(9.0)	274	(2.3)	309	(9.4)	277	(2.5)
Denmark	270	(4.6)	278	(1.8)	297	(1.2)	291	(1.0)	249	(4.5)	269	(2.1)	289	(3.2)	269	(1.7)
Estonia	260	(9.0)	278	(1.8)	295	(1.3)	291	(1.1)	245	(5.4)	268	(2.1)	282	(2.9)	271	(1.7)
Finland	274	(7.8)	296	(2.7)	315	(1.4)	310	(1.3)	268	(4.9)	282	(2.4)	302	(2.4)	288	(1.6)
France	246	(3.7)	267	(1.4)	299	(1.1)	285	(0.9)	241	(3.7)	260	(1.5)	287	(2.3)	263	(1.3)
Germany	c	c	281	(2.0)	301	(1.5)	295	(1.3)	222	(8.3)	264	(1.7)	283	(3.0)	265	(1.6)
Greece	c	c	258	(4.3)	279	(3.4)	274	(2.8)	231	(6.4)	250	(3.2)	270	(4.2)	249	(2.4)
Ireland	246	(6.0)	280	(2.6)	297	(1.5)	290	(1.4)	238	(4.2)	265	(2.7)	288	(3.0)	266	(1.9)
Israel	240	(8.8)	256	(2.8)	284	(1.5)	277	(1.3)	205	(7.3)	236	(3.5)	257	(4.3)	239	(2.8)
Italy	240	(6.0)	274	(2.0)	285	(2.1)	275	(1.6)	241	(3.6)	263	(3.1)	275	(4.8)	254	(2.5)
Japan	c	c	292	(3.0)	318	(1.1)	311	(1.1)	267	(5.2)	290	(1.8)	308	(1.9)	296	(1.3)
Korea	243	(7.3)	273	(2.8)	295	(1.4)	289	(1.4)	238	(3.8)	264	(1.7)	288	(1.7)	272	(1.3)
Netherlands	266	(4.0)	293	(2.0)	313	(1.4)	302	(1.2)	263	(3.1)	281	(2.3)	307	(4.3)	279	(1.7)
New Zealand	268	(3.8)	290	(2.3)	307	(1.4)	300	(1.2)	256	(3.7)	279	(2.5)	283	(2.9)	275	(1.8)
Norway	282	(4.2)	288	(2.6)	307	(1.2)	302	(1.0)	256	(3.6)	269	(2.1)	286	(5.2)	268	(1.7)
Poland	c	c	275	(2.6)	299	(1.7)	293	(1.5)	c	c	259	(2.5)	291	(3.8)	267	(2.2)
Slovak Republic	c	c	281	(1.8)	297	(1.7)	289	(1.2)	261	(6.4)	277	(1.8)	291	(5.6)	278	(1.7)
Slovenia	c	c	263	(2.6)	287	(1.6)	279	(1.3)	234	(8.6)	256	(2.0)	275	(4.9)	256	(2.0)
Spain	246	(4.4)	259	(3.8)	288	(1.9)	278	(1.6)	232	(2.8)	258	(3.0)	274	(2.4)	253	(1.7)
Sweden	255	(6.7)	295	(2.0)	313	(1.5)	303	(1.3)	253	(3.5)	275	(2.1)	297	(5.6)	273	(1.7)
Turkey	223	(6.0)	249	(4.9)	261	(2.3)	249	(2.5)	216	(3.2)	244	(3.5)	266	(4.7)	231	(2.5)
United States	c	c	277	(3.0)	303	(1.8)	293	(1.4)	205	(6.2)	257	(2.6)	291	(3.0)	260	(2.4)
Subnational entities																
Flanders (Belgium)	251	(6.2)	280	(2.5)	306	(1.3)	298	(1.1)	249	(4.6)	269	(2.1)	300	(3.2)	274	(2.0)
England (UK)	270	(5.0)	292	(3.2)	303	(1.9)	298	(1.7)	249	(3.3)	273	(2.7)	288	(3.8)	272	(2.1)
Northern Ireland (UK)	259	(6.4)	288	(4.1)	302	(2.6)	295	(2.3)	246	(4.2)	268	(3.8)	291	(4.5)	268	(2.9)
Average	256	(1.3)	277	(0.5)	298	(0.3)	289	(0.3)	241	(1.0)	265	(0.5)	285	(0.8)	265	(0.4)
Partners																
Jakarta (Indonesia)	180	(13.9)	220	(7.2)	243	(6.3)	225	(5.5)	173	(3.6)	210	(2.6)	235	(5.6)	200	(2.2)
Lithuania	c	c	269	(2.8)	289	(1.9)	283	(1.7)	c	c	266	(2.9)	283	(4.2)	269	(2.5)
Russian Federation*	c	c	264	(8.4)	285	(3.8)	282	(3.8)	c	c	276	(5.9)	283	(3.2)	280	(2.6)
Singapore	201	(7.1)	252	(2.3)	291	(1.4)	282	(1.3)	194	(4.6)	238	(2.1)	262	(3.9)	231	(1.9)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933397042

Table A5.9. (L) [2/2] **Mean literacy score, by occupation and level of education (2012 or 2015)**

Survey of Adult Skills, employed 25-64 year-old non-students

	Semi-skilled blue-collar occupations								Elementary occupations							
	Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
OECD																
National entities																
Australia	244	(4.4)	272	(2.6)	282	(4.7)	264	(2.0)	241	(5.4)	271	(4.7)	273	(13.1)	256	(3.7)
Austria	234	(4.4)	260	(2.0)	275	(5.1)	257	(1.7)	229	(4.6)	244	(5.1)	c	c	236	(3.3)
Canada	224	(4.2)	259	(2.9)	269	(2.7)	256	(1.9)	199	(6.5)	252	(3.8)	256	(7.8)	239	(3.5)
Chile	186	(3.3)	219	(3.4)	240	(6.3)	207	(2.4)	176	(4.5)	210	(6.6)	c	c	192	(4.0)
Czech Republic	245	(5.5)	265	(2.1)	c	c	263	(2.0)	223	(11.8)	250	(6.8)	c	c	243	(5.8)
Denmark	234	(4.9)	260	(2.1)	279	(5.6)	256	(2.0)	228	(5.9)	251	(4.7)	250	(9.6)	240	(3.5)
Estonia	251	(3.5)	265	(1.6)	268	(2.9)	263	(1.5)	242	(5.7)	261	(3.4)	273	(5.6)	259	(2.5)
Finland	250	(4.2)	276	(2.5)	292	(5.3)	272	(2.2)	232	(14.2)	264	(5.5)	c	c	258	(5.4)
France	224	(3.1)	254	(1.7)	288	(5.0)	248	(1.4)	206	(3.4)	252	(2.8)	c	c	230	(2.4)
Germany	225	(7.5)	255	(2.3)	269	(4.3)	254	(2.2)	217	(5.5)	249	(4.3)	c	c	238	(3.3)
Greece	225	(4.5)	246	(3.4)	251	(8.8)	236	(2.9)	222	(5.7)	256	(6.4)	c	c	236	(4.4)
Ireland	240	(4.1)	265	(3.4)	286	(5.2)	259	(2.6)	235	(5.4)	255	(5.7)	266	(11.2)	249	(3.9)
Israel	206	(5.7)	229	(3.6)	245	(5.1)	228	(2.9)	190	(12.0)	218	(8.4)	c	c	216	(7.1)
Italy	233	(3.0)	253	(3.3)	c	c	239	(2.6)	228	(4.3)	255	(5.0)	c	c	234	(3.7)
Japan	262	(4.0)	287	(2.2)	307	(3.5)	286	(1.7)	249	(8.0)	276	(4.2)	304	(6.3)	273	(3.3)
Korea	233	(3.2)	263	(2.1)	282	(2.4)	258	(1.8)	224	(4.2)	253	(3.2)	265	(7.8)	241	(2.4)
Netherlands	244	(4.2)	274	(3.8)	c	c	261	(2.7)	229	(4.4)	264	(8.7)	c	c	242	(3.9)
New Zealand	241	(3.9)	270	(4.4)	280	(5.6)	262	(2.7)	244	(6.7)	259	(6.7)	277	(8.2)	258	(4.1)
Norway	258	(4.8)	268	(2.7)	277	(10.4)	266	(2.4)	221	(9.4)	240	(9.2)	c	c	230	(6.3)
Poland	234	(5.6)	249	(2.0)	284	(6.7)	249	(2.0)	225	(6.5)	253	(4.6)	c	c	249	(4.1)
Slovak Republic	248	(4.1)	274	(1.6)	c	c	271	(1.5)	239	(6.0)	266	(3.9)	c	c	258	(3.1)
Slovenia	224	(4.9)	243	(1.9)	c	c	239	(1.9)	209	(6.1)	231	(5.6)	c	c	218	(4.7)
Spain	235	(2.6)	256	(5.0)	265	(4.8)	244	(2.2)	227	(3.1)	248	(5.7)	256	(8.5)	234	(2.8)
Sweden	252	(4.1)	272	(2.5)	287	(7.3)	268	(2.2)	229	(9.8)	253	(8.2)	c	c	243	(5.9)
Turkey	221	(3.5)	244	(3.9)	240	(9.3)	227	(2.8)	210	(5.6)	c	c	c	c	215	(5.4)
United States	209	(5.9)	255	(2.1)	278	(6.1)	250	(2.3)	196	(9.2)	246	(5.2)	c	c	234	(4.7)
Subnational entities																
Flanders (Belgium)	239	(4.3)	264	(2.4)	296	(7.4)	260	(2.2)	215	(6.8)	248	(4.1)	c	c	238	(3.6)
England (UK)	249	(4.2)	269	(3.2)	282	(6.5)	265	(2.3)	231	(4.9)	255	(7.0)	247	(10.6)	242	(3.7)
Northern Ireland (UK)	241	(5.2)	271	(5.3)	270	(8.0)	256	(4.1)	234	(6.0)	259	(6.8)	c	c	245	(5.2)
Average	235	(0.8)	260	(0.6)	275	(1.3)	254	(0.4)	222	(1.3)	251	(1.1)	m	m	240	(0.8)
Partners																
Jakarta (Indonesia)	176	(4.5)	206	(4.3)	c	c	192	(3.3)	159	(4.7)	203	(7.1)	c	c	174	(4.2)
Lithuania	250	(7.5)	256	(2.1)	272	(6.5)	257	(2.1)	c	c	244	(4.2)	c	c	245	(3.7)
Russian Federation*	c	c	270	(4.7)	278	(3.9)	273	(3.3)	c	c	271	(5.7)	c	c	275	(6.1)
Singapore	192	(3.8)	223	(4.1)	c	c	208	(3.0)	161	(5.2)	203	(7.3)	c	c	172	(4.2)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

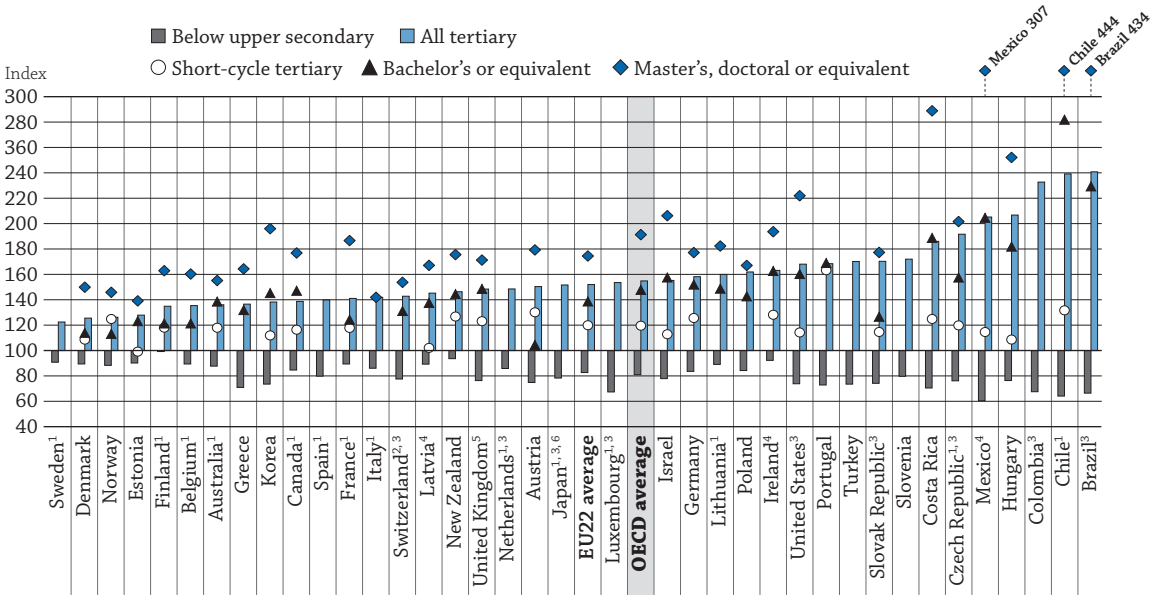
StatLink http://dx.doi.org/10.1787/888933397042

WHAT ARE THE EARNINGS ADVANTAGES FROM EDUCATION?

- In all OECD countries, earnings differentials between adults with tertiary education and those with upper secondary education are generally more pronounced than the difference between the earnings of those with upper secondary education and those with below upper secondary education. This suggests large earnings advantages for tertiary education.
- On average, adults with a master's, doctoral or equivalent degree earn almost twice as those with upper secondary education across OECD countries, and those with a bachelor's or equivalent degree earn 48% more, while those with a short-cycle tertiary degree earn only about 20% more.
- Across all levels of educational attainment, the gender gap in earnings persists, and although women generally have higher educational attainment, a large gender gap in earnings is seen between male and female full-time workers with tertiary education. Across OECD countries, tertiary-educated women earn only 73% as much as tertiary-educated men. This gender gap of 27% in earnings for tertiary-educated adults is higher than the gender gap for adults with below upper secondary (24%) and adults with upper secondary or post-secondary non-tertiary education (22%).

Figure A6.1. Relative earnings of adults working full time, by educational attainment (2014)

25-64 year-olds with income from employment; upper secondary education = 100



Note: Tertiary education includes short-cycle tertiary, bachelor's, master's, doctoral or equivalent degrees.

1. Year of reference differs from 2014. Refer to Table A6.1 for details.

2. Some levels of education are included with others. Refer to "x" code in Table A6.1 for details.

3. Index 100 refers to the combined ISCED levels 3 and 4 of the educational attainment levels in the ISCED 2011 or ISCED-97 classification.

4 Earnings net of income tax.

5. 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 (18% of the adults are under this group).

6. Data refer to all earners.

Countries are ranked in ascending order of the relative earnings of 25-64 year-olds with tertiary education.

Source: OECD. Table A6.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397166

Context

Higher levels of education usually translate into better chances of employment (see Indicator A5) and higher earnings. While people with higher qualification are generally better placed to see increases in their earnings over time, the lower-educated, who usually have lower earnings at the start of their career, tend to see a decrease in their earnings with age. Hence, the potential for higher earnings and

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faster earning progression can be one of the important incentives for individuals to pursue education and training (see Indicator A7), and this may also be one of the decisive factors when they choose their field of education.

In addition to education, a number of other factors play a role in individuals' earnings. In many countries, earnings are systematically lower for women than men across all levels of educational attainment. This may be related to the gender differences in the sectors where they work and the types of occupation (OECD, 2016b). Variations in earnings also reflect factors, including the demand for skills in the labour market, the supply of workers and their skills, the minimum wage and other labour market laws, structures and practices, such as the strength of labour unions, the coverage of collective-bargaining agreements and the quality of working environments. These factors also contribute to differences in the distribution of earnings. In some countries, earnings are tightly centred around a narrower range, while in others there are large earning disparities, leading to widening inequalities.

Other findings

- Cross-country variations in relative earnings for adults without upper secondary qualifications are small compared to the considerable differences for those with tertiary education. Among OECD and partner countries, the relative earnings for tertiary education are largest in Brazil, Chile, Colombia, Hungary and Mexico where adults with tertiary education earn on average more than twice as much as adults with upper secondary education for full-time work, while Denmark, Norway and Sweden have the smallest relative earnings, only about 25% higher.
- On average across OECD countries, 44% of adults with upper secondary or post-secondary non-tertiary education earns more than median earnings, and 70% of the tertiary-educated earn more than the median. Among OECD and partner countries, the share of the tertiary-educated with earnings more than twice the median is highest (over 50%) in Brazil, Chile, Colombia and Mexico.
- Across the OECD countries and subnational entities that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), the fields of education associated with higher earnings are engineering, manufacturing and construction; social sciences, business and law; and science, mathematics and computing. On average, workers who studied in these fields at the tertiary level earn about 10% more than the average of tertiary-educated earners for full-time work. But the average earnings of those who graduated in teacher training and education science, or humanities, language and arts are about 15% lower than the average earnings.

Note

Data are analysed with different specifications for this indicator. Relative earnings by educational attainment compare the earnings of adults with income who have an educational attainment other than upper secondary with a benchmark earning of those with upper secondary education (upper secondary education only, not combined with post-secondary non-tertiary education).

Earnings by field of education refer to monthly earnings for the tertiary-educated with a specific field of education and are analysed relative to the mean monthly earnings of the tertiary-educated across all fields of education. These data are taken from the Survey of Adult Skills. This survey was not specifically designed to analyse the tertiary-educated population, so the sample size for specific fields of education can be small and should therefore be interpreted with caution.

Most of the analyses use full-time full-year earnings, but relative earnings referring to the total population for specific educational attainment are also analysed by taking into account part-time earners and people with no income from employment. For distribution of earnings, data include part-time workers and do not control for hours worked, although they are likely to influence earnings in general and the distribution in particular (see the *Methodology* section at the end of this indicator for further information). Any other incomes not directly related to work, such as government social transfers or investment income, are not included as part of earnings.

A6

Analysis

Relative earnings by educational attainment

In all OECD countries, earnings differentials between adults with tertiary education and those with upper secondary education are generally more pronounced than the difference between upper secondary and below upper secondary education. Across OECD countries, compared to adults with upper secondary education, those without this qualification earn on average 19% less for full-time employment, while those with a tertiary degree have a large earning advantage, of 55% more (Figure A6.1 and Table A6.1).

Cross-country variations in relative earnings for adults without upper secondary qualification are small compared to the considerable differences for the tertiary-educated. In Mexico, the earning disadvantage for adults without upper secondary qualification is the largest across OECD and partner countries: they earn on average 40% less for full-time work than adults with upper secondary education. Earnings disadvantages for the lowest-educated are also large in Brazil, Chile, Colombia and Luxembourg. On the other hand, in Finland, adults with below upper secondary and those with upper secondary earn almost the same amount, and earning differences are 10% or less in Estonia, Ireland, New Zealand and Sweden. In tertiary education, the relative earnings are largest in Brazil, Chile, Colombia, Hungary and Mexico, where the tertiary-educated earn on average more than twice as much as adults with upper secondary education, while Denmark, Norway and Sweden have the smallest relative earnings, only about 25% higher (Figure A6.1 and Table A6.1). The extent of earnings advantages may be partly related to the pool of the tertiary-educated in the labour force, as the share of tertiary-educated is relatively low among adults in Brazil, Chile, Colombia, Hungary and Mexico, but relatively high in Denmark, Norway and Sweden (see Indicator A1).

Among the tertiary-educated, earnings advantages are much higher for those with a master's, doctoral or equivalent degree. On average, 25-64 year-olds with a master's, doctoral or equivalent degree earn almost twice as much as adults with upper secondary education across OECD countries. While those with a short-cycle tertiary degree earn only about 20% more, those with a bachelor's or equivalent degree earn 48% more. This shows that continuing tertiary education after a bachelor's degree pays off significantly (Table A6.1) and, even taking into account the cost of investing in education, is supported by much higher financial returns (see Indicator A7). According to an exploratory study, relative earnings advantages are also substantial for young graduates who recently earned a master's or equivalent degree compared to those who recently earned a bachelor's or equivalent degree (Box A6.1).

The cross-country variation in relative earnings is largest for those with a master's, doctoral or equivalent degree. While people with these degrees earn more than four times as much as those with upper secondary education for full-time work in Brazil and Chile, relative earnings are lowest in Estonia and Italy, at approximately 40% higher. In Estonia, this may be explained partly by a large supply of people with a master's or equivalent degree, as the share of adults with this level of educational attainment is one of the largest in the OECD (see Indicator A1). Variations in relative earnings among OECD and partner countries are much smaller for other levels of tertiary education. For short-cycle tertiary, Portugal has the highest earning advantage (over 60%) compared to average full-time earnings of adults with upper secondary education, while the earning advantage is negligible in Estonia. As for bachelor's or equivalent degree, relative earnings range from the high of over twice as much in Brazil, Chile and Mexico and the low of approximately 5% in Austria (Table A6.1).

Taking into account part-time earners and individuals with no earnings from work, earnings differentials become even larger because the likelihood of being employed rises with educational attainment (see Indicator A5), as does the likelihood of having full-time employment. While adults with tertiary education earn on average about 55% more than those with upper secondary education for full-time employment in the OECD, earnings advantages amount to 75% when covering the whole population, including people with no earnings and part-time earners. Similarly, across OECD countries, earnings of adults with below upper secondary education are on average about 19% less than those with upper secondary education for full-time work, but relative earnings are 39% lower when considering the whole population, reflecting lower employment rates and higher unemployment and inactivity rates among the low-educated. The proportion of part-time workers in the entire population and their working hours can have an impact on differences in relative earnings for full-time employment and for the total population (Tables A6.1 and A6.3, and OECD, 2016).

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Box A6.1. New data on earnings for recent tertiary graduates

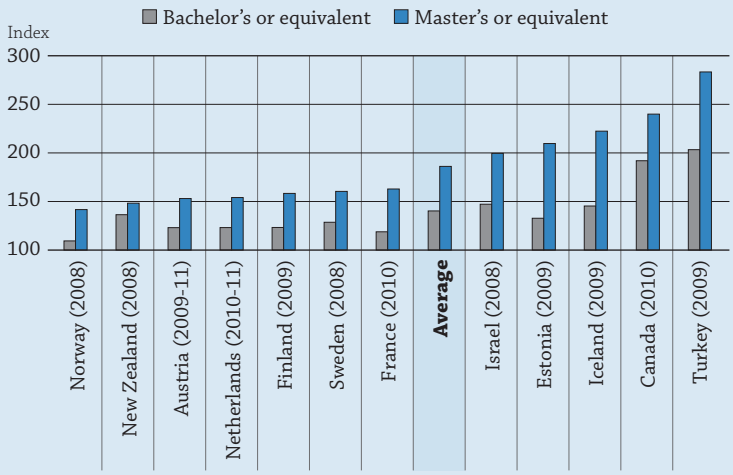
Governments around the world have emphasised the need for young people to obtain higher education in order to increase their skills, remain competitive in the labour market and increase their earnings potential. Particularly with the economic crisis of recent years, many young people have continued their education instead of entering an unstable labour market, with the hope that additional qualifications will make them more competitive for jobs with higher earning potential. However, they may face challenges in entering the labour market after completing higher qualifications.

For a few countries, different data can be explored to analyse labour market outcomes of young graduates. A few countries have longitudinally-linked administrative data at the student level, combining study information with post-study employment information. Administrative sources can provide near full coverage of students and their post-study employment experiences. Along with existing sample-based graduate surveys available in other countries, this provides growing opportunities to develop new rich cohort-based data for international comparisons. These data can provide further insights on the education-related earnings advantages of young graduates and how these patterns of earnings change over time.

Based on the true-cohort data collected in 2015/16 for OECD countries with available data, young bachelor's and master's graduates have post-study earnings advantages relative to their peers who left education after completing upper secondary, despite these peers having worked longer in the labour market (Figure A6.a). For example, in Norway, the median annual earnings of a master's graduate three years after leaving study were 42% higher than those of a similarly-aged upper secondary graduate with more years of work. While the extent of earnings advantage for young recent graduates may differ from cross-country results, based on labour force surveys previously shown in this indicator, the pattern of earnings advantages across the countries shown is broadly consistent.

Figure A6.a. Relative median earnings of young tertiary graduates three years after completing a bachelor's or master's degree

Young tertiary graduates with income from employment (upper secondary education = 100)



Notes: The year(s) in brackets relate to the year(s) the cohort of tertiary graduates left study.
These data exclude graduates who left their home country.

The ranges used for the typical graduating ages of young graduates vary by tertiary education level and country. All graduates are under 30 years old except for France, where data relate to all graduates who have taken a first break in their education career of at least one year.

All data are from linked administrative sources except for Canada and France, where data are survey-based.

Countries are ranked in ascending order of the relative earnings of young tertiary graduates with a master's or equivalent degree.

Source: 2015 INES LSO Survey of Employment Outcomes of Recent Graduates. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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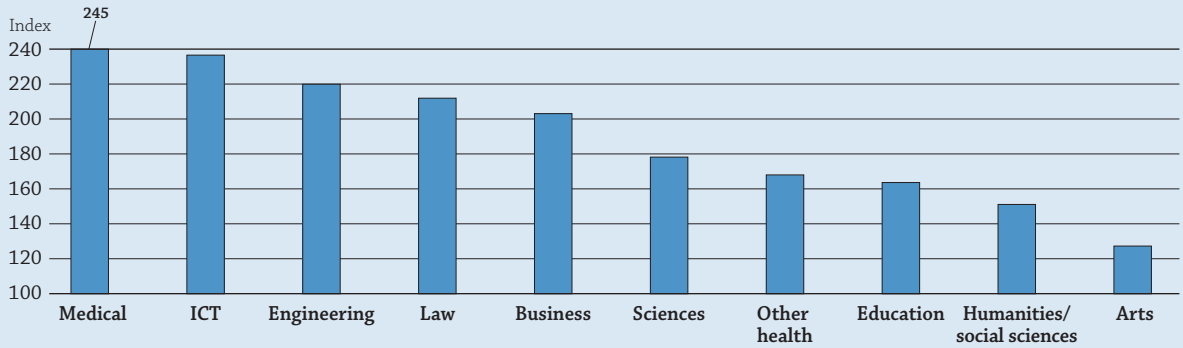
The analysis by field of education shows that, in general, graduates with medical degrees earn the most and those with master's degrees in business, engineering, information and communications technology (ICT) and law also have high earnings, while graduates of humanities, social sciences and arts earn the least. While Figure A6.b shows results at master's level, the pattern is similar at bachelor's level, with the exception of medical qualifications at bachelor's level which ranked behind ICT, engineering and law.

Figure A6.b. Relative median earnings of young tertiary graduates three years after completing a master's degree, by field of study

Young tertiary graduates with income from employment (upper secondary education = 100), average across countries



Notes: Countries included in the analysis (reference year in brackets) are Austria (2009-11), Estonia (2009), Finland (2009), France (2010), Iceland (2009), Israel (2008), Netherlands (2010-11), New Zealand (2008), Norway (2008), Sweden (2008), Turkey (2009). These data exclude graduates who left their home country and the reference year in brackets relate to the year(s) the cohort of tertiary graduates left study.
The ranges used for the typical graduating ages of young graduates vary by tertiary education level and country. All graduates are under 30 years old except for France, where data relate to all graduates who have taken a first break in their education career of at least one year.
All data are from linked administrative sources except for France and Canada, where data are survey-based.
Field of studies are ranked in descending order of the relative earnings of young tertiary graduates with a master's or equivalent degree.
Source: 2015 INES LSO Survey of Employment Outcomes of Recent Graduates. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933397212

However, this pattern is not always the same across countries. While recent graduates with master's degrees in medicine were the highest paid in seven of eleven countries with available data, they were fourth highest in Israel (after engineering, business and ICT) and third highest in Canada (after business and law) and in Estonia (after ICT and law). In Iceland, master's level graduates in science earned the most.

Note: Unlike the main analysis which presents average earnings of full-time full-year earners relative to those with upper secondary education, median earnings of bachelor's and master's graduates here have been presented relative to the median earnings of upper secondary graduates (including part-time or part-year earners).

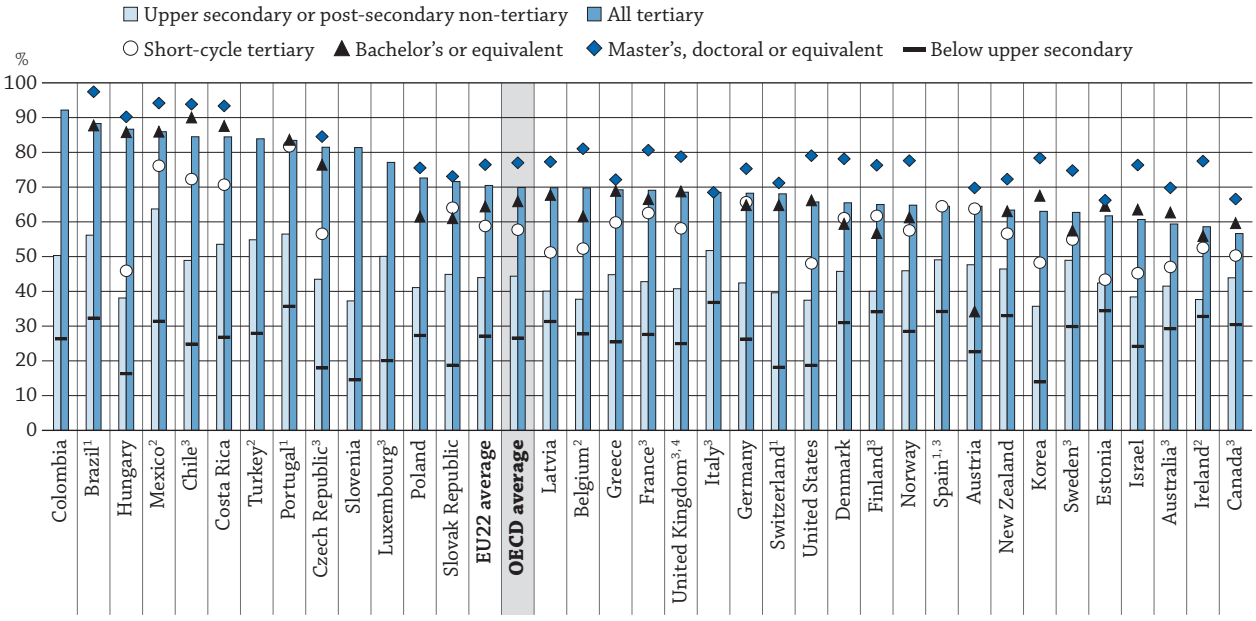
Distribution of earnings by educational attainment

For workers with below upper secondary education, the likelihood of earning more than the median is low across countries. Across OECD countries, one in four adults with below upper secondary education on average earn more than median earnings (which refer to earnings of all workers without adjusting for differences in hours worked). Although the share of the low-educated with more than median earnings is lower in countries such as Korea and Slovenia, at under 15%, it is over 35% in Italy and Portugal (Figure A6.2 and OECD, 2016a). This may be partly related to differences in the share of adults with below upper secondary education among the employed across countries.

On average, 44% of adults with upper secondary or post-secondary non-tertiary education earns more than median earnings across OECD countries. While less than 38% of workers with this education level earn more than median earnings in Belgium, Ireland, Korea, Slovenia and the United States, 64% have earnings exceeding the median in Mexico (Figure A6.2 and OECD, 2016a).

Figure A6.2. Percentage of adults earning more than the median, by educational attainment (2014)

25-64 year-olds



Note: Tertiary education includes short-cycle tertiary, bachelor's, master's, doctoral or equivalent degrees.

1. Italy: Short-cycle tertiary, bachelor's or equivalent attainment included in master's, doctoral or equivalent attainment. Portugal: Bachelor's or equivalent attainment included in short-cycle tertiary attainment. Switzerland: Short-cycle tertiary attainment included in bachelor's, master's, doctoral or equivalent attainment. Brazil: Short-cycle tertiary attainment included in bachelor's or equivalent attainment.

2. Earnings net of income tax.

3. Canada, Chile, Czech Republic, Finland, Luxembourg, Spain, United Kingdom: Year of reference 2013. Australia, France, Italy: Year of reference 2012.

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 (18% of the adults are under this group).

Countries are ranked in descending order of the percentage of 25-64 year-olds with tertiary education earning more than the median.

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Those with tertiary education are more likely to earn over median earnings, and 70% of them earn more than the median across OECD countries. But there are some notable differences in how tertiary-educated individuals fare across OECD and partner countries, ranging from as high as over 90% earning more than the median in Colombia to less than 60% earning more than the median in Australia, Canada and Ireland (Figure A6.2 and OECD, 2016a).

The proportion of adults with short-cycle tertiary education earning more than the median is generally lower than the proportion for other tertiary levels, but the difference varies across countries. In some countries, including Denmark, Germany and Portugal, the proportion of adults with short-cycle tertiary education earning more than the median is as high as those with bachelor's or equivalent degree (less than 3 percentage-point difference). Austria, however, is a notable exception: the share of those earning more than the median is 30 percentage points lower among adults with a bachelor's degree than among adults with a short-cycle tertiary education. On average across OECD countries, the share of adults with a master's, doctoral or equivalent degree earning more than the median is 11% higher than for those with bachelor's or equivalent degree (Figure A6.2 and OECD, 2016a).

Across countries, highly-educated individuals are more likely than the low-educated to earn more than twice the median and less likely to earn less than half the median. On average across OECD countries, one in four adults with tertiary education earns more than twice the median earnings for all employed, including both full-time and part-time earners, while only 3% of those with below upper secondary education have this level of earnings. At the other end of the earning distribution, one in ten tertiary-educated adults earns below half the median earnings, but more than one in four adults without upper secondary qualification earn this low level (OECD, 2016a).

Among OECD and partner countries, the share of the tertiary-educated with earnings more than twice the median is highest (over 50%) in Brazil, Chile, Colombia and Mexico. In these countries, the share of the tertiary-educated with below half the median earning is much lower than the OECD average, providing further insights on the large relative earnings for tertiary education seen in Figure A6.1, and possibly signalling equity concerns in these countries (OECD, 2016a).

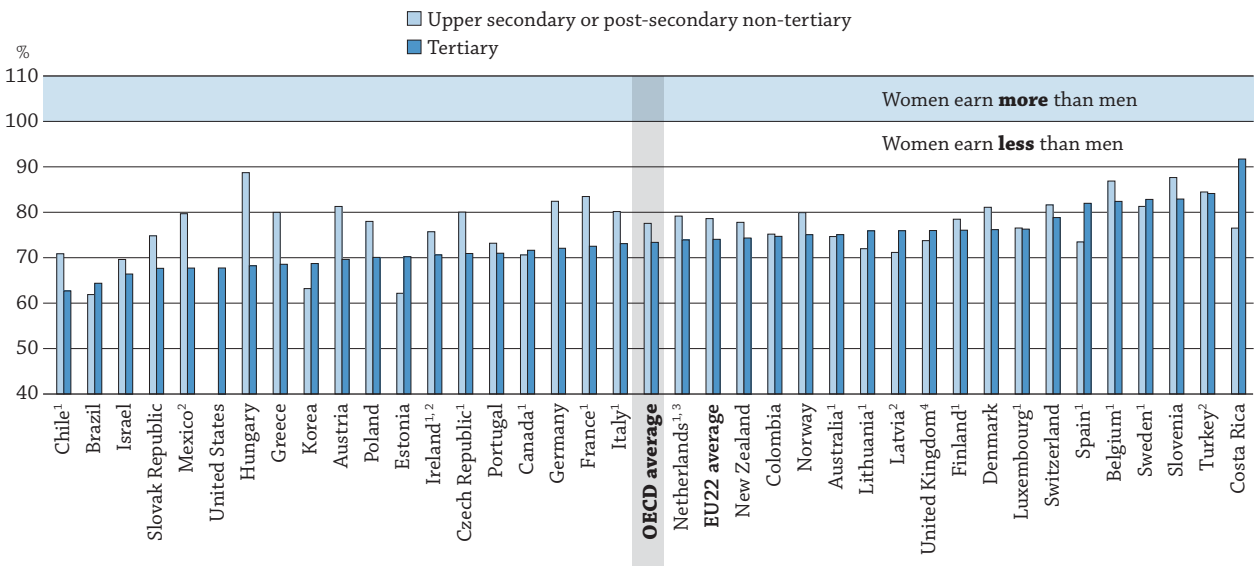
In all countries, individuals with low qualifications usually face large earnings disadvantages, but in several countries, at least some of them earn the highest level of earnings (more than twice the median). Among adults with below upper secondary education, the share of those earning less than half the national median varies substantially, ranging from the high of about 40% and more in Canada, Germany and the United States to the low of less than 10% in Hungary, Latvia, Portugal and Slovenia. But in Australia, Brazil, Canada, Estonia, Mexico, Portugal and Spain, the share of the low-educated with the highest earning level is 5% and over, suggesting that factors other than educational attainment also play an important role in high remuneration in these countries (OECD, 2016a).

Differences in earnings between women and men, by educational attainment

Across all levels of educational attainment, the gender gap in earnings persists, and although women generally have higher education attainment (see Indicator A1), a large gender gap is seen between male and female full-time workers with tertiary education. Across OECD countries, tertiary-educated women earn only 73% of the earnings of tertiary-educated men. This gender gap of 27% in earnings is higher than the gap for adults with below upper secondary (24%) and adults with upper secondary or post-secondary non-tertiary education (22%) (Figure A6.3 and Table A6.2). Although there are many possible reasons for the gender gap in earnings, one of the leading explanations is related to the fact that women continue to do most housework and family care in many countries. Due to these household commitments, women may seek less competitive career paths and greater flexibility at work, likely leading to lower earnings than men with the same educational attainment (OECD, 2016b).

Figure A6.3. Women's earnings as a percentage of men's earnings, by educational attainment (2014)

25-64 year-olds with income from full-time employment



Note: Tertiary education includes short-cycle tertiary, bachelor's, master's, doctoral or equivalent degrees.

1. Year of reference differs from 2014. Refer to Table A6.2 for details.
2. Earnings net of income tax.
3. Educational attainment levels are based on the ISCED-97 classification.
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 (18% of the adults are under this group).

Countries are ranked in ascending order of women's earnings as a percentage of men's earnings with tertiary education.

Source: OECD. Tables A6.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397182

But the gender gap varies across countries. Among workers with below upper secondary education, although women earn as low as 61% of men's earnings in Canada and 63% in Estonia, women earn as high as 85% of men's earnings in Belgium and Hungary. Among workers with upper secondary or post-secondary non-tertiary education, women earn as low as 62% of men's earnings in Brazil and Estonia, but as much as 89% of men's earnings in Hungary and 88% in Slovenia. Among the tertiary-educated, Chile and Brazil have the highest gender gap, over 35% (i.e. women earn less than 65% of men's earnings), but the gap is lowest at 8% in Costa Rica, followed by 16% in Turkey (Figure A6.3 and Table A6.2).

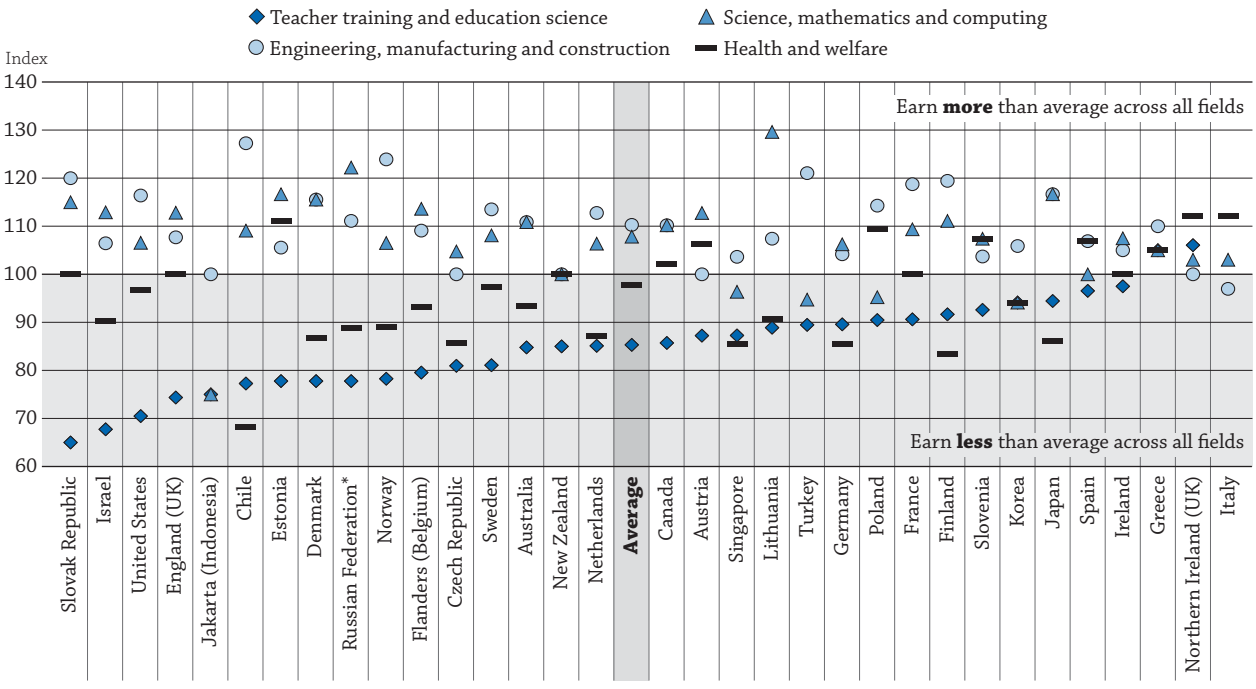
Based on the average earnings of workers, including part-time earners, the gender gap is even larger across countries, because more women work part time than men. Across OECD countries, the share of part-time part-year earners is 28% of women aged 25-64 and 17% of men in the same age group (Table A6.3). On average, among those without upper secondary qualification, female workers earn 24% less than male workers across OECD countries. This gender gap is 22% for upper secondary education and 27% for tertiary education (OECD, 2016a).

Levels of earnings by field of education studied

The earning advantages for tertiary-educated people also vary by field of education studied (Figure A6.4). Across the OECD countries and subnational entities that participated in the Survey of Adult Skills, the fields of education associated with higher earnings are engineering, manufacturing and construction; social sciences, business and law; and science, mathematics and computing. On average, workers who studied in these fields at the tertiary level earn about 10% higher than the average of tertiary-educated earners for full-time work. Earnings of full-time workers with education in health and welfare are close to the average earnings, while the average earnings of those who graduated in teacher training and education science, or humanities, language and arts are about 15% lower than the average earnings (Figure A6.4 and Table A6.4).

Figure A6.4. Relative earnings of adults with tertiary education, by field of education studied (2012 or 2015)

Survey of Adult Skills, 25-64 year-old non-students full-time workers; all fields of education = 100



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in ascending order of the ratio of the mean monthly earnings of adults who studied teacher training and education science over that of all fields of education.

Source: OECD. Table A6.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397196

Even though the fields of education associated with higher and lower earnings are approximately the same across countries, cross-country variations exist for each field of education. One of the largest cross-country variations is found in teacher training and education science. Although not all adults who studied teacher training and education science work as teachers after completing a tertiary degree, teachers' salary relative to earnings of tertiary-educated workers also vary widely across countries (see Indicator D3). The smallest variation across countries is in the fields of humanities, languages and arts; social science, business and law; and engineering, manufacturing and construction. For example, those who studied engineering, manufacturing and construction earn about the average for adults with tertiary education in Austria, the Czech Republic, Italy, Jakarta (Indonesia), New Zealand and Northern Ireland (United Kingdom) while in Chile, the Slovak Republic, Norway and Turkey they earn up to 20% more (Figure A6.4 and Table A6.4).

A larger share of men than women studied in the fields of education associated with higher earnings, such as engineering, manufacturing and construction, or science, mathematics and computing, while a higher share of women studied in fields associated with lower earnings including teacher training and education science, and humanities, languages and arts (see Indicator A1). This may be associated with the fact that women tend to earn less even if they studied in the same field of education, and the share of women in a specific field of education influences the average earnings among men and women who studied this field. For example, in social sciences, business and law, which was studied by a relatively large share of both women and men and is associated with relatively high earnings, on average across OECD countries, women earn only about 75% as much as men who studied in the same field of education.

Within fields of education, a number of different specialisations are available and cross-country variations and differences in gender gap in earnings may be also related to differences in the specific specialisation studied and the professions chosen subsequently. For example, doctors who earn high remuneration represent about 5% of the workforce in the health and social sector (OECD, 2016c), and the share of women accounts for 45% of doctors on average across OECD countries (OECD, 2015). Since, on average, 18% of women studied in health and welfare and only 6% of men did so (see Indicator A1), a large number of women who studied in this field of education are likely to have other professions within the sector, such as nurses and long-term care workers, who are usually paid less than doctors. In addition to differences by profession, other factors may also explain differences in earnings across countries and differences between men and women within countries, such as the sectors where they work after completing tertiary education, the types of occupation (such as management positions) and the types of contracts (OECD, 2016b).

Definitions

Age groups: adults refers to 25-64 year-olds.

Levels of education: In this indicator two ISCED (International Standard Classification of Education) classifications are used: ISCED 2011 and ISCED-97.

ISCED 2011 is used for all the analyses that are not based on the Survey of Adult Skills. For ISCED 2011, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2, and includes recognised qualifications from ISCED 2011 level 3 programmes, which are not considered as sufficient for ISCED 2011 level 3 completion, and without direct access to post-secondary non-tertiary education or tertiary education; **upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4; and **tertiary** corresponds to ISCED 2011 levels 5, 6, 7 and 8 (UNESCO Institute for Statistics, 2012)

ISCED-97 is used for all analyses based on the Survey of Adult Skills. For ISCED-97, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

See the section *About the new ISCED 2011 classification*, at the beginning of this publication for a presentation of all ISCED 2011 levels and Annex 3 for a presentation of all ISCED-97 levels.

Methodology

The indicator is based on the data collection on education and earnings by the OECD LSO (Labour Market and Social Outcomes of Learning) Network that takes account of earnings from work for individuals working full-time full-year as well as part-time or part-year during the reference period. This database contains data on dispersion of earnings from work and on student versus non-student earnings. Data on earning levels by field of education are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). See Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for additional information.

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Earnings data collection

Earnings data collection (used in Tables A6.1, A6.2 and A6.3) provides information based on an annual, monthly or weekly reference period, depending on the country. The length of the reference period for earnings also differs. Australia, New Zealand and the United Kingdom reported data on weekly earnings. Belgium, Brazil, Chile, Costa Rica, Colombia, Estonia, Israel, Korea, Latvia, Poland and Portugal reported monthly data. All other countries reported annual data. Data on earnings are before income tax, except for Ireland, Latvia, Mexico and Turkey, where earnings reported are net of income tax. For Belgium, data on dispersion of earnings from work and earnings of students and non-students are net of income tax. 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 the business.

Since earnings data differ across countries in a number of ways, the results should be interpreted with caution. For example:

- In countries reporting annual earnings, differences in the incidence of seasonal work among individuals with different levels of educational attainment will have an effect on relative earnings that is not similarly reflected in the data for countries reporting weekly or monthly earnings.
- Countries may include earnings for self-employed or part-time work.
- Countries may differ in the extent to which there are employer contributions to pensions, health insurance, etc. on top of salaries.

This indicator does not take into consideration the impact of effective income from free government services. In some countries, incomes could be high but they may have to cover, for instance, health care and schooling/tertiary education for children/students, while in other countries incomes could be lower but the state provides both free health care and schooling.

The total (men plus women, i.e. M+W) average for earnings is not the simple average of the earnings figures for men and women, but the average based on earnings of the total population. This overall average weights the average earnings figure separately for men and women by the share of men and women at different levels of attainment.

Full-time and full-year earnings

For the definition of full-time earnings, countries were asked whether they had applied a self-designated full-time status or a threshold value of the typical number of hours worked per week. Belgium, France, Germany, Italy, Latvia, Lithuania, Portugal, Spain and the United Kingdom reported self-designated full-time status. The other countries defined the full-time status by the number of working hours per week. The threshold was 44/45 hours per week in Chile, 36 hours per week in Hungary, the Slovak Republic and Slovenia, 35 hours in Australia, Brazil, Canada, Costa Rica, Colombia, Estonia, Israel, Korea, Mexico, Norway and the United States, and 30 hours in the Czech Republic, Greece, Ireland, New Zealand and Turkey. Other participating countries did not report a minimum normal number of working hours for full-time work. For some countries, data on full-time, full-year earnings are based on the European Survey on Income and Living Conditions (EU-SILC), which uses a self-designated approach in establishing full-time status. Data on earning based on the Survey of Adult Skills refer to income from employment working full-time which is 30 hours or more.

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator A6 Tables

StatLink http://dx.doi.org/10.1787/888933397112

	Table A6.1	Relative earnings of full-time full-year workers, by educational attainment (2014)
	Table A6.2	Differences in earnings between female and male workers, by educational attainment and age group (2014)
	Table A6.3	Percentage of full-time, full-year earners, part-time earners and people with no earnings, by educational attainment (2014)
	Table A6.4	Mean monthly earnings of tertiary-educated adults, by field of education studied and gender (2012 or 2015)
WEB	Table A6.4 (L)	Mean monthly earnings of workers, by educational attainment, literacy proficiency level and gender (2012 or 2015)
WEB	Table A6.4 (N)	Mean monthly earnings of workers, by educational attainment, numeracy proficiency level and gender (2012 or 2015)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table A6.1. Relative earnings of full-time full-year workers, by educational attainment (2014)

25-64 year-olds with income from employment; upper secondary education = 100

		Year	Below upper secondary	Post-secondary non-tertiary	Short-cycle tertiary	Bachelor's or equivalent	Master's, doctoral or equivalent	All tertiary education
			(1)	(2)	(3)	(4)	(5)	(6)
OECD	Australia	2012	88	102	118	139	155	136
	Austria	2014	75	113	130	105	179	150
	Belgium	2013	89	c	c	121	160	135
	Canada	2013	85	119	116	147	177	139
	Chile	2013	64	a	132	282	444	239
	Czech Republic[1]	2013	76	m	120	158	202	192
	Denmark	2014	89	117	109	114	150	126
	Estonia	2014	90	91	99	123	139	128
	Finland	2013	99	113	118	121	163	135
	France	2012	89	c	118	124	187	141
	Germany	2014	84	110	126	152	177	158
	Greece	2014	71	98	c	132	164	137
	Hungary	2014	76	100	109	182	252	207
	Iceland		m	m	m	m	m	m
	Ireland[2]	2014	92	97	128	163	194	163
	Israel	2014	78	a	113	158	206	155
	Italy	2012	86	m	x(5)	x(5)	142[d]	142
	Japan		m	m	m	m	m	m
	Korea	2014	74	a	112	145	196	138
	Latvia[2]	2014	89	100	102	138	167	145
	Luxembourg[1]	2013	67	m	m	m	m	154
	Mexico[2]	2014	60	a	115	205	307	205
	Netherlands[3]	2010	86	m	m	m	m	149
	New Zealand	2014	94	113	127	145	176	146
	Norway	2014	88	108	125	113	146	126
	Poland	2014	84	100	m	143	167	162
	Portugal	2014	73	104	163	169[d]	x(4)	168
	Slovak Republic[1]	2014	74	m	115	127	177	170
	Slovenia	2014	80	a	m	m	m	172
	Spain	2013	80	99	m	m	m	140
	Sweden	2012	91	124	m	m	m	123
	Switzerland[1]	2014	78	m	x(4, 5)	131[d]	154[d]	143
	Turkey[2]	2014	74	a	m	m	m	170
	United Kingdom[4]	2014	76	a	123	149	171	148
	United States[1]	2014	74	m	114	160	222	168
	OECD average		81	m	120	148	191	155
	EU22 average		83	105	120	139	175	152
Partners	Argentina		m	m	m	m	m	m
	Brazil[1]	2014	66	m	x(4)	229[d]	434	241
	China		m	m	m	m	m	m
	Colombia[1]	2014	68	m	m	m	m	233
	Costa Rica	2014	70	137	125	189	289	186
	India		m	m	m	m	m	m
	Indonesia		m	m	m	m	m	m
	Lithuania	2013	89	106	a	149	182	160
	Russian Federation		m	m	m	m	m	m
	Saudi Arabia		m	m	m	m	m	m
	South Africa		m	m	m	m	m	m
	G20 average		m	m	m	m	m	m

Note: Columns showing data for men and women separately and for other age groups are available for consultation on line (see *StatLink* below).

1. Index 100 refers to the combined ISCED levels 3 and 4 of the educational attainment levels in the ISCED 2011 classification.
2. Earnings net of income tax.
3. Index 100 refers to the combined ISCED levels 3 and 4 of the educational attainment levels in the ISCED-97 classification.
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 (18% of the adults are under this group).

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397122

Table A6.2. Differences in earnings between female and male workers, by educational attainment and age group (2014)

Adults with income from employment; average annual full-time full-year earnings of women as a percentage of men's earnings

		Year	Below upper secondary education			Upper secondary or post-secondary non-tertiary education			Tertiary education		
			25-64	35-44	55-64	25-64	35-44	55-64	25-64	35-44	55-64
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD	Australia	2012	79	78	82	75	74	78	75	75	69
	Austria	2014	77	79	70	81	79	81	70	72	69
	Belgium	2013	85	c	c	87	86	c	82	87	c
	Canada	2013	61	64	70	71	64	76	72	75	66
	Chile	2013	77	77	78	71	68	85	63	65	60
	Czech Republic	2013	80	81	80	80	73	87	71	66	86
	Denmark	2014	83	80	83	81	79	83	76	78	74
	Estonia	2014	63	59	74	62	61	70	70	69	73
	Finland	2013	79	75	79	78	76	78	76	75	74
	France	2012	74	c	c	83	71	c	73	76	c
	Germany	2014	78	c	c	82	85	84	72	66	76
	Greece	2014	72	59	75	80	81	57	69	66	66
	Hungary	2014	85	84	84	89	86	94	68	63	75
	Iceland		m	m	m	m	m	m	m	m	m
	Ireland[1]	2014	73	c	c	76	73	73	71	74	67
	Israel	2014	80	87	61	70	75	68	66	68	70
	Italy	2012	76	81	73	80	80	78	73	80	74
	Japan		m	m	m	m	m	m	m	m	m
	Korea	2014	66	62	66	63	62	57	69	69	63
	Latvia[1]	2014	73	75	75	71	65	80	76	74	77
	Luxembourg	2013	83	83	70	77	82	69	76	85	67
	Mexico[1]	2014	74	76	68	80	80	100	68	66	65
	Netherlands[2]	2010	77	79	76	79	85	79	74	83	74
	New Zealand	2014	75	74	75	78	80	78	74	72	79
	Norway	2014	82	80	82	80	79	80	75	77	73
	Poland	2014	71	67	74	78	71	85	70	67	73
	Portugal	2014	77	77	73	73	74	69	71	75	70
	Slovak Republic	2014	72	74	72	75	70	82	68	61	74
	Slovenia	2014	84	83	84	88	83	97	83	81	89
	Spain	2013	74	78	72	73	75	75	82	76	84
	Sweden	2012	83	75	96	81	79	88	83	85	87
	Switzerland	2014	79	78	81	82	84	84	79	84	83
	Turkey[1]	2014	70	69	71	84	80	c	84	86	c
	United Kingdom[3]	2014	83	83	84	74	72	72	76	78	73
	United States	2014	73	64	87	m	m	m	68	68	68
	OECD average		76	75	76	78	76	79	73	74	73
	EU22 average		77	76	77	79	77	79	74	75	75
Partners	Argentina		m	m	m	m	m	m	m	m	m
	Brazil	2014	67	66	67	62	61	57	64	63	62
	China		m	m	m	m	m	m	m	m	m
	Colombia	2014	80	79	82	75	76	74	75	73	70
	Costa Rica	2014	76	77	78	77	80	64	92	84	97
	India		m	m	m	m	m	m	m	m	m
	Indonesia		m	m	m	m	m	m	m	m	m
	Lithuania	2013	c	m	m	72	m	m	76	m	m
	Russian Federation		m	m	m	m	m	m	m	m	m
	Saudi Arabia		m	m	m	m	m	m	m	m	m
	South Africa		m	m	m	m	m	m	m	m	m
	G20 average		m	m	m	m	m	m	m	m	m

Note: Columns showing the relative earnings for all levels of education combined are available for consultation on line (see *StatLink* below).

1. Earnings net of income tax.

2. Educational attainment levels are based on the ISCED-97 classification.

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 (18% of the adults are under this group).

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A6.3. [1/3] Percentage of full-time, full-year earners, part-time earners and people with no earnings, by educational attainment (2014)

25-64 year-olds

How to read this table: In Australia, 58% of 25-64 year-old men with below upper secondary education have earnings from a full-time employment, 9% have earnings from a part-time employment and 33% have no earnings from work.

			Full-time, full-year earners				Part-time earners				No earnings			
	Year	Gender	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD **Australia**	2012	Men	58	75	79	73	9	8	10	9	33	16	11	18
		Women	22	35	48	37	26	32	30	29	53	34	22	33
		M + W	38	58	61	54	18	19	21	20	43	24	17	26
Austria	2014	Men	38	62	69	61	25	21	19	21	37	17	12	18
		Women	19	28	42	30	35	47	44	44	46	25	14	27
		M + W	26	45	55	45	31	34	32	33	43	21	13	22
Belgium	2013	Men	42	67	77	65	13	14	12	13	45	18	11	22
		Women	13	27	49	34	26	40	35	35	61	33	16	32
		M + W	28	48	62	49	19	26	24	24	53	25	14	27
Canada	2013	Men	46	58	64	60	28	29	25	27	25	13	10	13
		Women	21	38	49	43	30	37	35	35	48	25	16	22
		M + W	35	49	56	51	29	33	31	31	36	18	13	17
Chile	2013	Men	42	47	49	46	42	38	41	40	16	14	10	14
		Women	14	24	35	22	27	34	43	33	60	42	22	45
		M + W	27	35	41	33	34	36	42	36	40	29	16	30
Czech Republic		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	2014	Men	27	43	62	44	45	46	31	42	28	11	7	15
		Women	19	33	43	33	40	50	49	47	42	16	9	19
		M + W	24	38	51	39	42	48	41	44	34	14	8	17
Estonia	2014	Men	62	76	84	77	3	4	5	4	34	20	11	19
		Women	43	61	73	65	8	7	7	7	49	32	19	27
		M + W	55	69	77	71	5	5	7	6	40	26	16	23
Finland	2013	Men	51	74	86	74	5	6	5	5	44	21	9	21
		Women	42	66	80	70	10	14	11	12	48	20	9	18
		M + W	47	70	83	72	7	10	9	9	46	20	9	19
France	2012	Men	48	69	82	69	19	14	10	14	33	17	8	17
		Women	23	46	65	47	29	33	25	29	48	21	10	24
		M + W	34	58	72	58	24	22	18	22	42	19	9	21
Germany	2014	Men	50	68	78	69	14	12	13	13	35	20	8	18
		Women	16	30	43	32	37	42	38	40	47	28	18	27
		M + W	31	47	61	50	27	29	25	27	42	24	13	23
Greece	2014	Men	46	53	67	55	16	16	11	15	38	32	22	30
		Women	17	29	52	32	12	14	15	14	71	57	33	54
		M + W	31	41	59	44	14	15	13	14	55	44	28	42
Hungary		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Iceland		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	2014	Men	25	42	62	44	30	33	26	30	45	25	12	27
		Women	11	26	47	31	24	34	35	33	65	40	18	36
		M + W	19	33	54	37	28	34	31	31	54	33	15	31
Israel	2014	Men	55	72	83	76	8	10	8	9	36	18	9	15
		Women	16	45	57	49	10	21	27	24	73	33	16	26
		M + W	36	59	68	62	9	15	18	16	54	25	13	21
Italy	2012	Men	58	72	78	67	21	17	12	18	21	11	10	15
		Women	21	44	59	38	22	27	25	25	57	29	16	38
		M + W	40	58	67	52	21	22	19	21	38	20	14	26
Korea	2014	Men	32	43	44	43	12	14	28	20	56	43	28	37
		Women	24	25	21	23	13	18	31	22	63	57	48	55
		M + W	27	34	34	33	12	16	29	21	60	50	37	46

Notes: The length of the reference period varies from one week to one year. Self-employed individuals are excluded in some countries. See the *Methodology* section and Annex 3 for further information. Columns showing data for other age groups are available for consultation on line (see *StatLink* below).

1. Earnings net of income tax.

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 (18% of the adults are under this group).

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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A6

Table A6.3. [2/3] Percentage of full-time, full-year earners, part-time earners and people with no earnings, by educational attainment (2014)

25-64 year-olds

How to read this table: In Australia, 58% of 25-64 year-old men with below upper secondary education have earnings from a full-time employment, 9% have earnings from a part-time employment and 33% have no earnings from work.

			Full-time, full-year earners				Part-time earners				No earnings			
	Year	Gender	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD Latvia[1]	2014	Men	49	62	70	61	2	2	2	2	49	36	29	37
		Women	35	55	71	59	4	4	4	4	61	41	24	36
		M + W	44	59	71	60	3	3	3	3	54	38	26	37
Luxembourg	2013	Men	65	75	82	74	11	8	7	9	24	17	11	17
		Women	25	37	56	38	33	31	27	30	41	33	17	31
		M + W	44	58	69	56	23	18	17	19	33	24	14	24
Mexico[1]	2014	Men	76	80	78	77	7	5	9	7	17	16	13	16
		Women	23	40	53	31	10	8	15	11	67	52	31	58
		M + W	46	59	66	52	9	6	12	9	45	35	22	39
Netherlands		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
New Zealand	2014	Men	70	82	84	79	7	7	8	7	24	11	8	13
		Women	42	45	59	50	21	22	22	22	37	32	19	29
		M + W	55	65	70	64	14	14	16	15	31	21	14	21
Norway	2014	Men	41	62	66	58	35	30	29	31	23	9	5	11
		Women	20	33	46	36	48	53	48	50	32	14	6	15
		M + W	31	49	55	47	41	40	39	40	27	11	6	13
Poland		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Portugal		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Slovak Republic		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Spain	2013	Men	45	62	71	57	27	22	18	23	28	16	11	20
		Women	21	37	55	37	30	32	29	30	48	31	16	33
		M + W	33	50	63	47	29	27	24	27	38	24	14	26
Sweden	2012	Men	60	74	79	75	9	9	9	9	31	16	12	16
		Women	25	44	59	50	6	9	13	11	69	46	28	40
		M + W	44	61	67	62	8	9	12	10	48	30	21	28
Switzerland	2014	Men	68	76	77	76	9	11	15	13	23	13	8	12
		Women	21	24	32	26	40	52	51	50	39	24	17	24
		M + W	42	48	58	51	26	33	30	31	32	19	12	18
Turkey[1]	2014	Men	58	71	77	65	31	20	18	26	11	8	5	9
		Women	40	56	71	54	43	32	23	34	16	12	6	12
		M + W	54	68	74	62	34	23	20	28	13	9	5	10
United Kingdom[2]	2014	Men	61	78	82	76	9	6	7	7	30	15	11	16
		Women	22	39	54	42	24	33	27	29	54	28	18	29
		M + W	42	59	67	59	17	20	18	18	42	21	15	23
United States	2014	Men	52	m	77	68	20	m	14	16	28	m	10	16
		Women	25	m	57	48	20	m	24	23	55	m	20	29
		M + W	39	m	66	58	20	m	19	19	41	m	15	23
OECD average		Men	51	66	73	65	18	16	15	17	31	18	11	18
		Women	24	39	53	41	25	30	29	28	51	32	19	31
		M + W	37	53	63	53	22	23	22	23	41	25	15	25
EU22 average		Men	49	65	75	65	17	16	13	15	35	20	12	21
		Women	24	40	57	43	24	29	27	27	53	31	17	31
		M + W	36	53	65	53	21	22	20	21	44	25	15	26

Notes: The length of the reference period varies from one week to one year. Self-employed individuals are excluded in some countries. See the *Methodology* section and Annex 3 for further information. Columns showing data for other age groups are available for consultation on line (see *StatLink* below).

1. Earnings net of income tax.

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 (18% of the adults are under this group).

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397143

Table A6.3. [3/3] Percentage of full-time, full-year earners, part-time earners and people with no earnings, by educational attainment (2014)

25-64 year-olds

How to read this table: In Australia, 58% of 25-64 year-old men with below upper secondary education have earnings from a full-time employment, 9% have earnings from a part-time employment and 33% have no earnings from work.

	Year	Gender	Full-time, full-year earners				Part-time earners				No earnings			
			Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education	Below upper secondary education	Upper secondary or post-secondary non-tertiary education	Tertiary education	All levels of education
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Partners														
Argentina		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	2014	Men	61	70	71	65	22	18	19	21	17	12	9	15
		Women	24	42	51	34	27	24	29	27	49	34	20	39
		M + W	42	55	59	49	25	21	25	24	33	24	16	27
China		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	2014	Men	79	81	81	80	8	6	9	8	13	13	10	12
		Women	30	44	63	42	18	16	14	17	51	40	23	42
		M + W	55	62	71	60	13	11	12	12	32	27	18	27
Costa Rica	2014	Men	71	82	82	76	7	3	2	5	22	15	16	19
		Women	18	39	64	33	10	6	4	8	72	55	32	59
		M + W	44	59	72	54	8	5	3	6	48	36	24	40
India		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
South Africa		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m
G20 average		Men	m	m	m	m	m	m	m	m	m	m	m	m
		Women	m	m	m	m	m	m	m	m	m	m	m	m
		M + W	m	m	m	m	m	m	m	m	m	m	m	m

Notes: The length of the reference period varies from one week to one year. Self-employed individuals are excluded in some countries. See the *Methodology* section and Annex 3 for further information. Columns showing data for other age groups are available for consultation on line (see *StatLink* below).

1. Earnings net of income tax.

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 (18% of the adults are under this group).

Source: OECD (2016), "Education and earnings", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_EARNINGS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397143

A6

Table A6.4. [1/3] Mean monthly earnings of tertiary-educated adults, by field of education studied and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds with income from employment working full time (i.e. 30 or more hours per week), in equivalent 2012 USD converted using PPPs for private consumption

	Men and women													
	Teacher training and education science		Humanities, languages and arts		Social sciences, business and law		Science, mathematics and computing		Engineering, manufacturing and construction		Health and welfare		All fields of education	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD														
National entities														
Australia	3 900	(125)	3 800	(258)	4 800	(171)	5 100	(240)	5 100	(219)	4 300	(175)	4 600	(84)
Austria	4 100	(161)	4 000	(316)	5 300	(226)	5 300	(551)	4 700	(211)	5 000	(325)	4 700	(104)
Canada	4 200	(112)	3 500	(117)	5 300	(202)	5 400	(337)	5 400	(248)	5 000	(244)	4 900	(113)
Chile	1 700	(160)	2 100	(320)	2 300	(186)	2 400	(186)	2 800	(219)	1 500	(288)	2 200	(115)
Czech Republic	1 700	(66)	2 100	(245)	2 300	(140)	2 200	(142)	2 100	(133)	1 800	(167)	2 100	(52)
Denmark	3 500	(50)	4 100	(159)	5 300	(117)	5 200	(148)	5 200	(118)	3 900	(110)	4 500	(42)
Estonia	1 400	(72)	1 700	(111)	1 900	(63)	2 100	(124)	1 900	(60)	2 000	(115)	1 800	(37)
Finland	3 300	(90)	3 100	(87)	3 600	(69)	4 000	(190)	4 300	(87)	3 000	(96)	3 600	(36)
France	2 900	(87)	2 600	(101)	3 300	(83)	3 500	(86)	3 800	(109)	3 200	(106)	3 200	(37)
Germany	4 300	(140)	3 900	(261)	5 400	(234)	5 100	(169)	5 000	(163)	4 100	(220)	4 800	(97)
Greece	2 100	(179)	1 600	(296)	1 900	(122)	2 100	(185)	2 200	(237)	2 100	(157)	2 000	(71)
Ireland	3 900	(190)	3 300	(220)	4 200	(136)	4 300	(154)	4 200	(262)	4 000	(156)	4 000	(70)
Israel	2 100	(91)	2 600	(277)	3 600	(193)	3 500	(209)	3 300	(153)	2 800	(201)	3 100	(84)
Italy	c	c	2 800	(213)	3 300	(227)	3 400	(231)	3 200	(285)	3 700	(260)	3 300	(105)
Japan	3 400	(176)	3 000	(129)	4 100	(127)	4 200	(331)	4 200	(121)	3 100	(115)	3 600	(56)
Korea	3 200	(133)	2 900	(114)	3 700	(126)	3 200	(108)	3 600	(88)	3 200	(190)	3 400	(49)
Netherlands	4 000	(175)	3 900	(299)	5 000	(127)	5 000	(234)	5 300	(208)	4 100	(227)	4 700	(70)
New Zealand	3 400	(117)	3 000	(203)	4 700	(223)	4 000	(184)	4 000	(147)	4 000	(226)	4 000	(82)
Norway	3 600	(64)	4 000	(184)	4 900	(96)	4 900	(137)	5 700	(139)	4 100	(96)	4 600	(46)
Poland	1 900	(104)	1 800	(105)	2 200	(83)	2 000	(133)	2 400	(109)	2 300	(282)	2 100	(45)
Slovak Republic	1 300	(51)	1 500	(98)	2 300	(138)	2 300	(189)	2 400	(144)	2 000	(182)	2 000	(56)
Slovenia	2 500	(95)	2 700	(129)	2 600	(60)	2 900	(112)	2 800	(108)	2 900	(170)	2 700	(41)
Spain	2 800	(116)	2 900	(171)	2 900	(108)	2 900	(151)	3 100	(126)	3 100	(100)	2 900	(52)
Sweden	3 000	(56)	2 900	(175)	4 000	(119)	4 000	(123)	4 200	(101)	3 600	(87)	3 700	(40)
Turkey	1 700	(71)	c	c	1 900	(95)	1 800	(151)	2 300	(201)	c	c	1 900	(50)
United States	4 300	(157)	5 200	(330)	7 000	(445)	6 500	(400)	7 100	(455)	5 900	(390)	6 100	(192)
Subnational entities														
Flanders (Belgium)	3 500	(71)	4 000	(198)	4 700	(163)	5 000	(170)	4 800	(188)	4 100	(178)	4 400	(73)
England (UK)	2 900	(171)	3 400	(183)	4 300	(214)	4 400	(251)	4 200	(183)	3 900	(226)	3 900	(94)
Northern Ireland (UK)	3 500	(176)	3 100	(217)	3 300	(161)	3 400	(180)	3 300	(153)	3 700	(398)	3 300	(78)
Average	3 004	(24)	3 054	(40)	3 797	(32)	3 797	(41)	3 883	(35)	3 443	(40)	3 521	(15)
Partners														
Jakarta (Indonesia)	900	(84)	c	c	1 500	(140)	900	(72)	1 200	(136)	c	c	1 200	(74)
Lithuania	4 800	(208)	4 900	(254)	5 500	(257)	7 000	(379)	5 800	(310)	4 900	(435)	5 400	(138)
Russian Federation*	700	(40)	900	(69)	1 000	(85)	1 100	(86)	1 000	(39)	800	(50)	900	(29)
Singapore	4 800	(322)	4 000	(331)	6 100	(214)	5 300	(213)	5 700	(175)	4 700	(299)	5 500	(101)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
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Table A6.4. [2/3] Mean monthly earnings of tertiary-educated adults, by field of education studied and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds with income from employment working full time (i.e. 30 or more hours per week), in equivalent 2012 USD converted using PPPs for private consumption

	Men													
	Teacher training and education science		Humanities, languages and arts		Social sciences, business and law		Science, mathematics and computing		Engineering, manufacturing and construction		Health and welfare		All fields of education	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
OECD														
National entities														
Australia	4 300	(211)	4 100	(378)	5 600	(234)	5 400	(306)	5 300	(262)	5 500	(474)	5 200	(129)
Austria	c	c	c	c	5 800	(282)	c	c	4 900	(230)	c	c	5 100	(145)
Canada	5 000	(220)	3 900	(213)	6 500	(387)	5 800	(475)	5 500	(271)	7 700	(821)	5 700	(187)
Chile	c	c	c	c	3 000	(289)	2 500	(208)	2 800	(238)	c	c	2 500	(125)
Czech Republic	c	c	c	c	2 900	(280)	2 400	(157)	2 300	(152)	c	c	2 400	(82)
Denmark	3 800	(107)	4 100	(226)	5 900	(172)	5 500	(201)	5 400	(139)	4 700	(393)	5 200	(76)
Estonia	c	c	c	c	2 700	(172)	2 700	(199)	2 200	(87)	c	c	2 300	(72)
Finland	3 700	(152)	c	c	4 100	(150)	4 500	(350)	4 400	(87)	4 100	(394)	4 200	(63)
France	c	c	c	c	3 500	(132)	3 700	(122)	3 800	(110)	3 600	(250)	3 600	(58)
Germany	4 800	(217)	c	c	5 900	(272)	5 600	(202)	5 200	(176)	5 200	(480)	5 200	(124)
Greece	c	c	c	c	1 900	(177)	2 300	(257)	2 300	(307)	c	c	2 200	(121)
Ireland	c	c	3 700	(375)	4 600	(207)	4 500	(176)	4 300	(277)	4 800	(331)	4 300	(114)
Israel	c	c	3 000	(425)	4 400	(323)	4 300	(279)	3 600	(172)	c	c	3 800	(129)
Italy	c	c	c	c	3 900	(491)	c	c	3 300	(327)	c	c	3 700	(179)
Japan	4 600	(365)	4 000	(256)	4 400	(143)	4 600	(433)	4 300	(124)	4 200	(458)	4 200	(74)
Korea	c	c	3 400	(164)	4 100	(140)	3 400	(127)	3 800	(89)	3 800	(300)	3 700	(57)
Netherlands	4 500	(271)	c	c	5 400	(176)	5 200	(243)	5 400	(208)	4 700	(347)	5 200	(95)
New Zealand	c	c	3 300	(307)	5 700	(354)	4 200	(227)	4 000	(152)	5 300	(631)	4 600	(117)
Norway	3 800	(179)	3 800	(188)	5 300	(150)	5 200	(185)	5 900	(147)	5 200	(298)	5 200	(76)
Poland	c	c	c	c	2 400	(155)	2 400	(232)	2 600	(113)	c	c	2 400	(80)
Slovak Republic	c	c	c	c	2 500	(231)	2 600	(256)	2 500	(168)	c	c	2 400	(87)
Slovenia	c	c	c	c	2 900	(119)	3 100	(170)	2 900	(123)	c	c	2 900	(74)
Spain	c	c	3 400	(259)	3 600	(159)	3 300	(200)	3 200	(123)	c	c	3 300	(72)
Sweden	3 300	(130)	c	c	4 300	(204)	4 200	(160)	4 300	(131)	4 000	(227)	4 100	(72)
Turkey	1 800	(77)	c	c	1 900	(112)	1 900	(186)	2 300	(236)	c	c	2 000	(70)
United States	4 500	(395)	5 600	(499)	7 800	(562)	7 200	(445)	7 300	(479)	7 100	(752)	7 000	(236)
Subnational entities														
Flanders (Belgium)	3 700	(138)	5 000	(323)	5 400	(278)	5 400	(221)	4 900	(200)	4 800	(313)	5 000	(115)
England (UK)	c	c	3 700	(349)	4 900	(334)	4 600	(294)	4 300	(208)	5 000	(447)	4 400	(137)
Northern Ireland (UK)	c	c	3 400	(344)	3 900	(283)	3 600	(262)	3 300	(175)	c	c	3 600	(111)
Average	m	m	m	m	4 317	(49)	4 078	(50)	4 010	(39)	m	m	3 979	(21)
Partners														
Jakarta (Indonesia)	c	c	c	c	1 600	(203)	900	(84)	1 200	(144)	c	c	1 300	(95)
Lithuania	c	c	c	c	6 400	(553)	7 900	(683)	6 100	(358)	c	c	6 200	(235)
Russian Federation*	c	c	c	c	c	c	1 100	(115)	1 000	(54)	c	c	1 000	(40)
Singapore	c	c	c	c	7 200	(357)	5 700	(266)	6 000	(208)	c	c	6 100	(146)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
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Table A6.4. [3/3] Mean monthly earnings of tertiary-educated adults, by field of education studied and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds with income from employment working full time (i.e. 30 or more hours per week), in equivalent 2012 USD converted using PPPs for private consumption

	Women													
	Teacher training and education science		Humanities, languages and arts		Social sciences, business and law		Science, mathematics and computing		Engineering, manufacturing and construction		Health and welfare		All fields of education	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
OECD														
National entities														
Australia	3 700	(154)	3 500	(326)	3 900	(145)	4 400	(331)	4 400	(303)	3 700	(186)	3 900	(79)
Austria	4 100	(139)	c	c	4 600	(354)	c	c	c	c	4 200	(286)	4 100	(135)
Canada	3 900	(119)	3 200	(131)	4 100	(143)	4 400	(305)	4 000	(372)	4 200	(161)	3 900	(84)
Chile	1 700	(154)	c	c	1 700	(164)	c	c	2 500	(260)	1 400	(244)	1 700	(92)
Czech Republic	1 600	(56)	c	c	1 800	(197)	c	c	c	c	1 700	(193)	1 700	(79)
Denmark	3 300	(41)	4 100	(189)	4 700	(129)	4 700	(165)	4 600	(270)	3 700	(104)	4 000	(50)
Estonia	1 400	(79)	1 700	(139)	1 600	(53)	1 500	(77)	1 300	(78)	1 900	(114)	1 500	(32)
Finland	3 100	(113)	3 000	(111)	3 300	(80)	3 500	(199)	3 700	(161)	2 900	(70)	3 100	(35)
France	2 900	(114)	2 500	(127)	3 100	(105)	3 200	(103)	c	c	3 000	(116)	3 000	(50)
Germany	4 000	(187)	3 800	(335)	4 600	(299)	c	c	2 800	(254)	3 600	(180)	3 900	(116)
Greece	1 700	(126)	c	c	1 900	(137)	c	c	c	c	1 800	(105)	1 800	(84)
Ireland	3 800	(209)	3 000	(220)	3 800	(168)	4 100	(273)	c	c	3 800	(168)	3 700	(87)
Israel	2 000	(106)	2 200	(378)	2 700	(124)	2 700	(240)	2 300	(226)	2 500	(208)	2 400	(64)
Italy	c	c	2 600	(278)	2 900	(179)	c	c	c	c	c	c	2 900	(111)
Japan	2 900	(162)	2 400	(134)	2 500	(167)	c	c	c	c	2 900	(77)	2 600	(52)
Korea	2 900	(146)	2 400	(157)	2 600	(197)	2 700	(206)	2 300	(132)	2 800	(189)	2 600	(73)
Netherlands	3 500	(207)	c	c	4 300	(237)	c	c	c	c	3 800	(253)	3 900	(124)
New Zealand	3 200	(128)	2 700	(243)	3 600	(191)	3 400	(244)	c	c	3 500	(165)	3 400	(76)
Norway	3 500	(50)	4 200	(306)	4 400	(107)	4 300	(170)	4 900	(269)	3 700	(73)	4 000	(55)
Poland	1 900	(115)	1 700	(117)	2 100	(97)	1 600	(88)	c	c	1 900	(174)	1 900	(57)
Slovak Republic	1 300	(53)	1 500	(117)	2 100	(169)	1 800	(227)	c	c	1 800	(187)	1 700	(68)
Slovenia	2 500	(80)	2 700	(129)	2 400	(68)	2 500	(159)	c	c	2 900	(214)	2 500	(49)
Spain	2 800	(142)	2 500	(189)	2 400	(106)	2 300	(163)	c	c	2 800	(109)	2 600	(54)
Sweden	2 900	(64)	2 600	(189)	3 700	(111)	3 600	(201)	3 800	(152)	3 600	(106)	3 400	(48)
Turkey	1 600	(123)	c	c	2 000	(221)	c	c	c	c	c	c	1 800	(82)
United States	4 300	(157)	4 800	(385)	6 000	(411)	5 400	(573)	c	c	5 600	(473)	5 200	(203)
Subnational entities														
Flanders (Belgium)	3 400	(86)	3 400	(193)	4 000	(154)	4 100	(277)	c	c	3 800	(188)	3 700	(79)
England (UK)	2 700	(166)	3 100	(164)	3 700	(269)	3 900	(365)	c	c	3 400	(226)	3 300	(110)
Northern Ireland (UK)	3 200	(168)	2 800	(209)	2 800	(135)	3 200	(259)	c	c	3 800	(422)	3 100	(112)
Average	2 850	(25)	2 887	(47)	3 217	(35)	3 365	(57)	m	m	3 137	(40)	3 010	(16)
Partners														
Jakarta (Indonesia)	c	c	c	c	1 200	(125)	c	c	c	c	c	c	900	(65)
Lithuania	4 700	(190)	4 800	(291)	5 000	(261)	6 100	(379)	5 100	(469)	4 500	(482)	4 900	(135)
Russian Federation*	700	(43)	800	(87)	900	(67)	1 100	(111)	800	(36)	700	(69)	800	(36)
Singapore	4 600	(363)	4 400	(439)	5 200	(218)	4 400	(361)	4 000	(207)	4 400	(375)	4 600	(107)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
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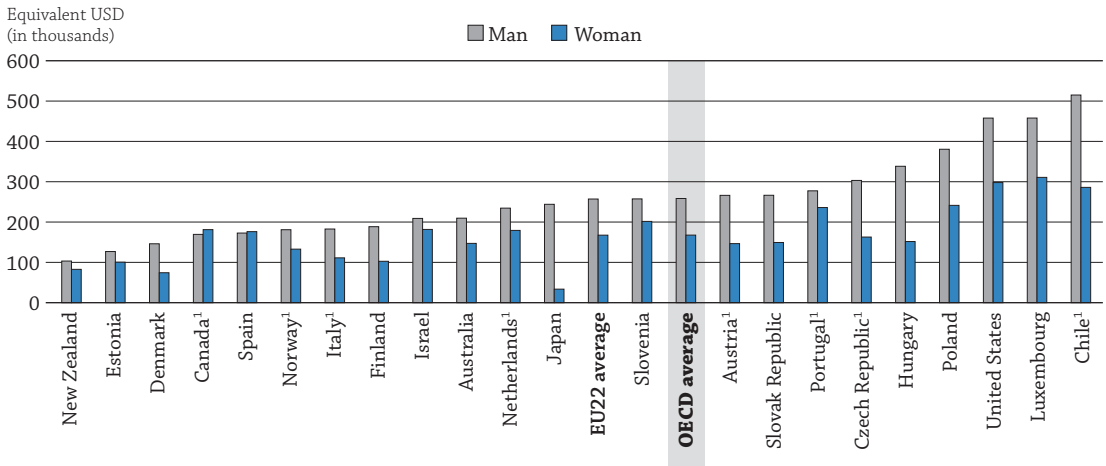
WHAT ARE THE FINANCIAL INCENTIVES TO INVEST IN EDUCATION?

- On average, across OECD countries, the private net financial returns for a woman attaining tertiary education are about two-thirds of the private net financial returns for a man with a similar level of education.
- Higher levels of educational attainment yield higher financial returns. Financial net returns are highest for tertiary education, but individuals and society also greatly benefit from upper secondary or post-secondary non-tertiary education, compared to lower levels of educational attainment.
- The public benefits of education outweigh the costs, through greater tax revenues and social contributions from a larger proportion of tertiary-educated adults.

Figure A7.1. Private net financial returns on attaining tertiary education, by gender (2012)

As compared with adults attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP



1. Year of reference differs from 2012, please see Tables A7.3a and A7.3b for further details.

Countries are ranked in ascending order of private net financial returns for a man.

Source: OECD. Tables A7.3a and A7.3b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397317

Context

Investing time and money in education is an investment in human capital. For adults, the labour market outcomes of higher educational attainment outweigh the initial cost of pursuing education. Better chances of employment (see Indicator A5) and higher earnings (see Indicator A6) are strong incentives for adults to invest in education and postpone labour market activities. Although women currently have higher levels of education than men (see Indicator A1), men reap more benefits from their investment, as they have better employment and earning outcomes of education.

Countries, in turn, benefit from having individuals with higher education, through reduced public expenditure on social welfare programmes and higher revenues earned through taxes paid once individuals enter the labour market. As both individuals and governments benefit from higher levels of educational attainment, it is important to consider the financial returns to education together with other indicators, such as access to higher education (see Indicator A3).

In countries with lengthy tertiary programmes and relatively high incomes after upper secondary or post-secondary non-tertiary education, the effect of foregone earnings is considerable. The magnitude of this effect also depends on expected wage levels and the probability of finding a job with or without tertiary qualifications. When the labour market for young adults worsens, the effect of foregone earnings is reduced, making tertiary education a less costly investment.

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It should be kept in mind that factors not reflected in this indicator affect the returns to education. The financial returns may be affected by the field of study and by country-specific economic situations, labour market contexts and institutional settings, as well as by social and cultural factors which are not accounted for. Furthermore, returns to education are not limited to financial returns but also include other economic outcomes, such as increased productivity that boosts economic growth, and social outcomes, such as better health and well-being and higher social participation (see Indicator A8).

Other findings

- On average, across OECD countries, the private net financial returns for a man attaining tertiary education are about USD 258 400 over his career, compared to a man with upper secondary or post-secondary non-tertiary education. The equivalent for a woman is only about USD 167 600.
- The gender gap in private net financial returns to tertiary education is the largest in Japan, where the returns for a man are seven times greater than the returns for a woman.
- Across OECD countries, Chile, Luxembourg and the United States have the largest private net financial returns for a tertiary-educated adult (over USD 450 000 for a man and over USD 280 000 for a woman).

Note

This indicator provides information on the incentives to invest in further education by considering its costs and benefits, including net financial returns and internal rate of return. It examines the choice between pursuing higher levels of education and entering the labour market, focusing on two scenarios:

- investing in tertiary education, compared to entering the labour market with an upper secondary or post-secondary non-tertiary degree
- investing in upper secondary or post-secondary non-tertiary education, compared to entering the labour market without an upper secondary or post-secondary non-tertiary degree.

Two types of investors are considered:

- the individual (referred to here as "private") who chooses to pursue higher levels of education, based on the additional net earnings and costs he or she can expect
- the government (referred to here as "public") that decides to invest in education, based on the additional revenue it would receive (tax revenue) and the costs involved.

Values are presented separately for men and women to account for gender-specific differences in earnings and unemployment rates.

More details on measuring net financial returns are provided in the *Methodology* section at the end of this indicator. Please note that due to continuous improvement of this indicator's methodology, values presented in this edition of *Education at a Glance* might not be comparable with values in previous editions. For further details, please refer to the *Methodology* section of this indicator and Annex 3.

Analysis

Financial incentives for individuals to invest in education (private net financial returns on investment)

Investing in education pays off in the long run for both men and women. Even if it may seem costly for individuals at the time of making the choice to pursue further education, the gains they will make over their career exceed the costs they bear during their studies. This is true for tertiary education (Figure A7.1), and it also holds for upper secondary or post-secondary non-tertiary education (Tables A7.1a and b, A7.3a and b).

Private net financial returns generally rise with the level of education attained. Across OECD countries, an individual's returns from tertiary education are higher than from upper secondary or post-secondary non-tertiary education. For a man, the net financial returns from tertiary education (USD 258 400) are more than twice as high as the net financial returns from upper secondary or post-secondary non-tertiary education (USD 112 400). These differences are the largest in Poland, where returns for a tertiary-educated man are almost eight times higher than for a man with upper secondary or post-secondary non-tertiary education. It means that, particularly in Poland, pursuing additional levels of education largely benefits adults who complete tertiary education (Tables A7.1a and b, A7.3a and b).

Although young women tend to complete higher education more often than young men (see Indicator A1), women have lower relative net financial returns than men (Figure A7.1). This is the case in all OECD countries with available data, with the exception of Canada and Spain. For a woman, on average, net financial returns for tertiary education are USD 167 600, representing only two-thirds of a man's net financial returns for tertiary education. Men also tend to have a higher internal rate of returns to education than women with similar levels of education, 14% for a man with tertiary education (compared to 12% for a woman) and 12% for a man with upper secondary or post-secondary non-tertiary education (compared to 8% for a woman) (Tables A7.1a and b, A7.3a and b).

The lower returns for women can be attributed to different factors, such as lower earnings, higher unemployment rates and a higher share of part-time work among women. In Japan, where the gender difference is the largest (seven times higher net financial returns for a tertiary-educated man than for a woman with a similar level of education), the tax system and the labour market structure tend to drive down women's returns from tertiary education. For example, the tax system disincentivises married women from seeking full-time employment, and there is also a shortage of available resources for early childhood education and care. However, private net financial returns may increase for Japanese women in the future, as the current government aims to promote higher labour market participation among women by introducing a number of policy measures (Cabinet Secretariat, 2016) (Tables A7.3a and b).

The costs and benefits of education for individuals

Private net financial returns are the difference between the costs and benefits associated with attaining an additional level of education. Costs include direct costs for attaining education and foregone earnings. Benefits include earnings from employment and unemployment benefits. To show the impact of the tax system on the total benefits, income tax effect, social contributions effect and social transfers effect are all analysed.

Total private costs, composed of direct costs and foregone earnings, generally rise with the level of education. The direct costs for a man or a women entering upper secondary or post-secondary non-tertiary education are, on average, about USD 2 500 across OECD countries, while they amount to about USD 10 500 for tertiary education. Across all OECD countries except Chile, the main costs of tertiary education are foregone earnings. They vary substantially across countries, depending on the length of education, earnings levels and the difference in earnings across levels of educational attainment. Foregone earnings for a man attaining tertiary education vary from less than USD 18 000 in Poland and the Slovak Republic to more than USD 90 000 in the Netherlands. When direct costs and foregone earnings are combined, Japan has the highest total private costs. A man or a woman attaining tertiary education in Japan can expect total costs to be more than five times higher than those in Poland (Tables A7.1a and b, A7.3a and b).

Earning advantages for higher education bring considerable benefits for individuals, but differences in labour market outcomes lead to a wide variation between men and women in private benefits associated with investment in education. On average, the total benefit for a tertiary-educated man is USD 312 600, while the total benefit for a tertiary-educated woman is USD 221 900 (Figure A7.2). This means that, over a career of 40 years, a tertiary-educated man will get about USD 2 270 more per year in total benefits than a woman with the same level of education. This is mainly due to gender gaps in earnings (see Indicator A6), but it is also related to higher unemployment rates for women (see Indicator A5) (Tables A7.3a and b).

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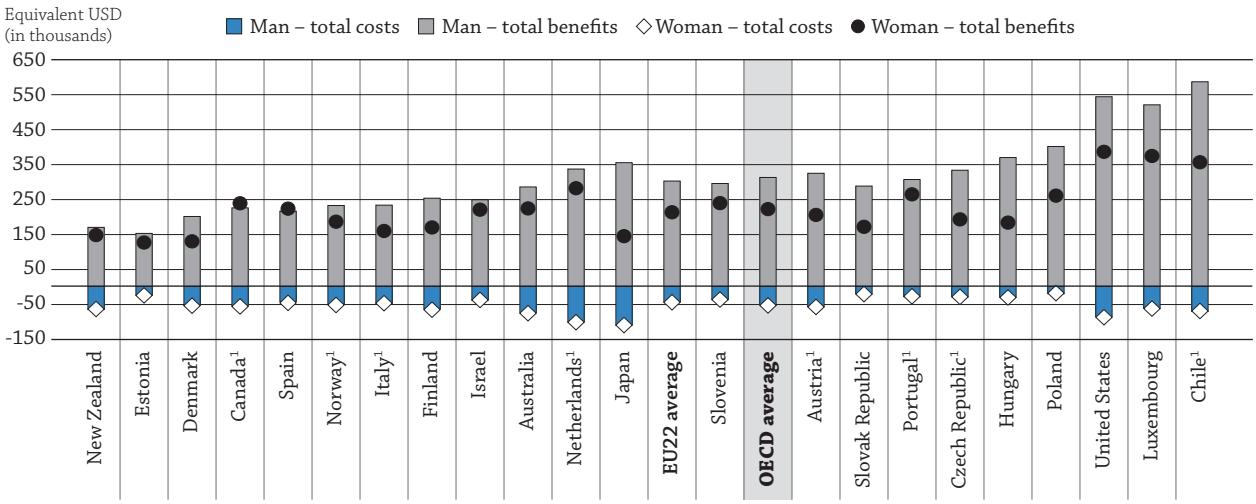
Figure A7.2. Private costs and benefits of education on attaining tertiary education, by gender (2012)

In equivalent USD converted using PPPs for GDP



1. Year of reference differs from 2012, please see Tables A7.3a and A7.3b for further details.

Countries are ranked in ascending order of private net financial returns for a man.

Source: OECD. Tables A7.3a and A7.3b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397324

While further education yields higher earnings over the career of an individual, private benefits from investing in education also depend on countries' tax and social benefits systems. Higher income taxes and social contributions, and lower social transfers related to higher earnings can act as disincentives to investing in further education by creating a wedge between the level of gross earnings needed to recover the cost of education and the final net earnings perceived by the individual (Brys and Torres, 2013). For instance, a man who chooses to invest in tertiary education will pay, on average, about 40% of his additional income associated with tertiary education in taxes and social contributions. In Canada, Chile, the Czech Republic, Estonia, Japan, New Zealand, Poland and the Slovak Republic, income taxes and social contributions amount to less than a third of the gross earning benefits, while in Denmark, Italy and Slovenia, they add up to about half of the gross earning benefits. As women tend to have lower earnings, they often fall into lower income tax brackets. For example, in Denmark the income tax and social contributions relative to the gross earnings for a tertiary-educated woman are 10 percentage points lower than for a tertiary-educated man (Tables A7.3a and b).

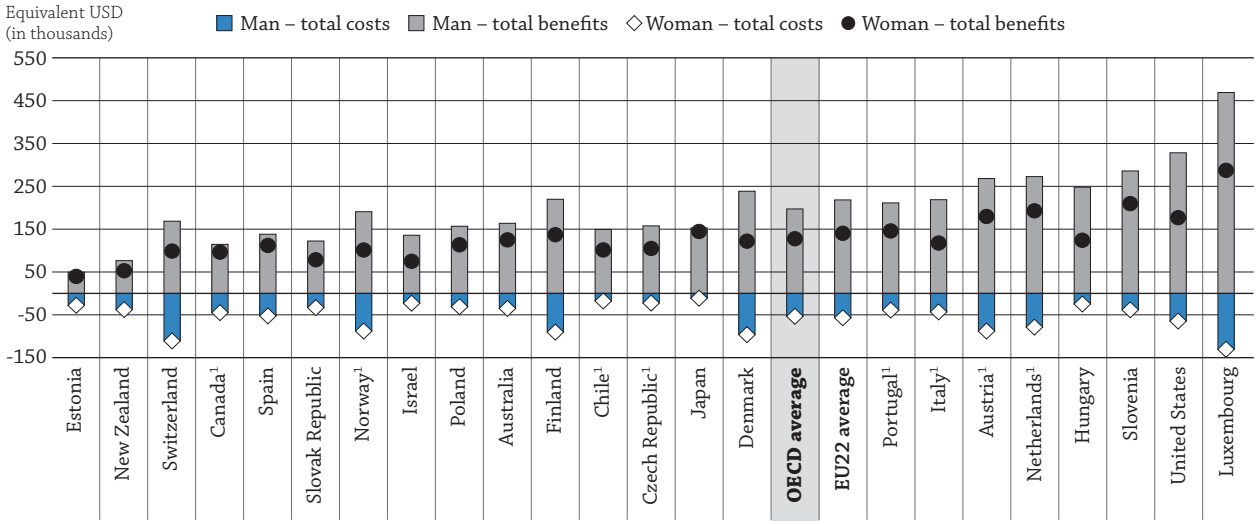
Financial incentives for governments to invest in education (public net financial returns on investment)

Governments are major investors in education (see Indicator B3) and, from a budgetary point of view, they want to know if they will recover their investment, particularly in an era of fiscal constraints. Since higher levels of educational attainment tend to translate into higher income (see Indicator A6), investments in education generate higher public returns, because tertiary-educated adults pay higher income taxes and social contributions, and require fewer social transfers. Across OECD countries, on average, the public net financial returns are about USD 67 200 for a man with upper secondary or post-secondary non-tertiary education and about USD 143 700 for a man who completed tertiary education (Tables A7.2a and A7.4a).

Comparison of Figures A7.2 and A7.3 shows that net financial returns on investment for governments are generally closely related to private returns. Countries where individuals benefit the most from pursuing tertiary education are also those where governments gain the largest returns. This is the case in Luxembourg and the United States, two countries with very large net financial private and public returns. The opposite is observed in Estonia and New Zealand, where net financial private and public returns are lowest. However, countries such as the Slovak Republic and Slovenia are exceptions. Although these two countries have similar net financial private returns (about USD 260 000 for a tertiary-educated man), the net financial public returns are more than USD 150 000 higher in Slovenia than in the Slovak Republic. This difference is mostly explained by larger income tax and social contribution effects in Slovenia (Tables A7.3a and b, A7.4a and b).

Figure A7.3. Public costs and benefits of education on attaining tertiary education, by gender (2012)

In equivalent USD converted using PPPs for GDP



1. Year of reference differs from 2012, please see Tables A7.4a and A7.4b for further details.

Countries are ranked in ascending order of public net financial returns for a man.

Source: OECD. Tables A7.4a and A7.4b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397332

The costs and benefits of education for governments

Public net financial returns are measured in a similar fashion to private net financial returns and are also based on the difference between costs and benefits associated with an individual attaining an additional level of education. Costs include direct public costs for supporting education and foregone tax revenue on earnings. Benefits are calculated using income tax, social contributions, social transfers and unemployment benefits.

Direct costs are much more important for governments than for individuals. This is particularly true in countries such as Denmark, Finland and Norway, where students pay low or no tuition fees and have access to generous public subsidies for higher education (see Indicator B5). However, to finance these subsidies, individuals in these countries pay high income tax rates in progressive tax regimes.

For governments, direct costs represent the largest share of total public costs. This explains why countries with high direct costs, such as Austria, Denmark, Finland, Luxembourg, Norway and Switzerland, are also the countries with the largest total public costs (more than USD 85 000 for tertiary education). In contrast, across OECD countries, Japan has the lowest total public costs (about USD 11 000 for tertiary education), partly because direct costs for education are largely born by individuals. On average, across OECD countries, the total public cost of attaining tertiary education is USD 53 500 (Tables A7.4a and b).

Governments offset the costs of direct investment and foregone tax revenue associated with education by receiving additional tax revenue and social contributions from higher-paid adults, who often have higher educational attainment. On average, total public benefits are USD 99 800 over the career of a man whose highest level of attainment is upper secondary or post-secondary non-tertiary education and USD 197 200 for a man with tertiary education (Tables A7.2a and A7.4a).

Total public benefits also differ between men and women, due to differences in labour market outcomes. This suggests that governments have a role to play in easing the integration and participation of women in the labour market, in order to assure higher gains from the large investment of women in their education. On average, the total public benefits of education for a man attaining tertiary education are about 50% larger than the total public benefits for a tertiary-educated woman. Across OECD countries, Luxembourg has the largest total public benefits of tertiary education for both a man (USD 469 000) and a woman (USD 287 300). Estonia has the lowest total public benefits of tertiary education, USD 49 400 for man and USD 39 700 for a woman (Tables A7.4a and b).

The internal rate of return to governments is also higher for a man (10% for tertiary and 9% for upper secondary or post-secondary non-tertiary) than for a woman with similar levels of education (8% for both tertiary and upper secondary or post-secondary non-tertiary) (Tables A7.2a and b, A7.4a and b).

On average, the total public benefits (USD 197 200) for a tertiary-educated man can be broken down into income tax effect (USD 130 100), social contribution effect (USD 44 100), transfers effect (USD 400) and unemployment benefits effect (USD 22 600) (Tables A7.4a). Since higher taxes can sometimes deter private investment in different areas, including education, a number of countries have tax policies that effectively lower the actual tax paid by adults, particularly by those in high-income brackets. For example, tax relief for interest payments on mortgage debt has been introduced in many OECD countries to encourage home ownership. These benefits favour those with higher levels of education and high marginal tax rates. The tax incentives for housing are particularly large in the Czech Republic, Denmark, Finland, Greece, the Netherlands, Norway and the United States (Andrews, Caldera Sánchez and Johansson, 2011).

Box A7.1. **Financial returns to tertiary education, differing returns by tertiary level**

Financial returns differ for adults with short-cycle tertiary, bachelor's, master's and doctoral degrees. This difference is mostly attributable to the divergence in lifetime earnings of adults at each of these levels. Also, the costs of the qualifications differ at each level, as higher qualifications require more time to complete and students forego earnings for a longer period of time.

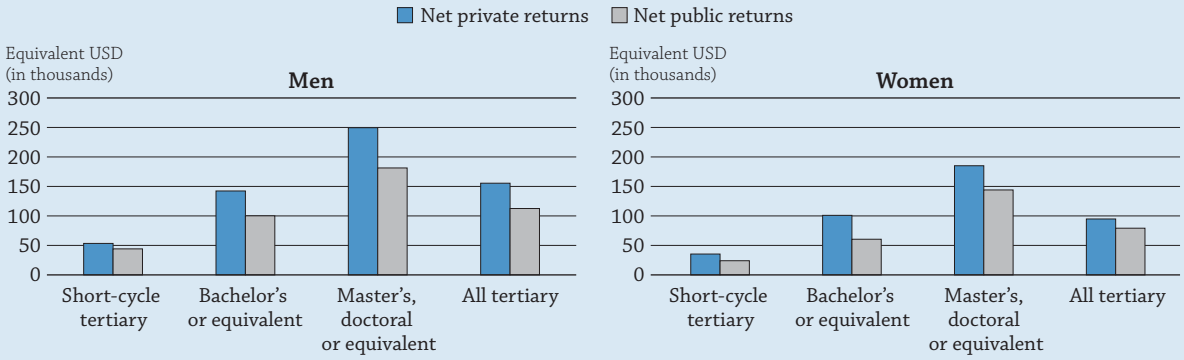
The composition of the population with qualifications at each tertiary level differs between countries (see Indicator A1), and the mix of qualifications can have a large effect in the financial returns to education for the aggregate tertiary level. For example, financial returns to tertiary education will under-represent the value of investing in bachelor's, master's and doctoral degrees in countries with a larger share of tertiary-educated adults with short-cycle tertiary than in countries with a smaller share of adults with short-cycle tertiary. Depending on their mix of qualifications, countries may have exactly the same returns at each level, but quite different returns at the aggregated tertiary level.

Figure A7.a explores the impact of this for a sample of seven OECD countries with available data and illustrates the difference in financial returns by tertiary level. For both men and women, the returns increase by level of tertiary attainment. The net private returns for men with short-cycle tertiary education are USD 53 370, USD 142 290 for bachelor's or equivalent degrees, and USD 249 536 for master's, doctoral and equivalent degrees. Similar patterns are observed for women and for net public returns.

Disaggregating financial returns by ISCED level would give readers a better indication of the expected returns in a given country by tertiary level. This is being explored for future editions of *Education at a Glance*.

Figure A7.a. **Public and private financial returns on attaining tertiary education, by gender and educational level (2012)**

In equivalent USD converted using PPPs for GDP, selected OECD countries



Note: Figures are based on data from Australia, Canada, Finland, Italy, New Zealand and Norway.
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933397349

Definitions

Adults refers to 15-64 year-olds.

Direct costs are the direct expenditure on education per student during the time spent in school.

- **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.).
- **Public direct costs** are the spending by government on a student's education. They include direct public expenditure on educational institutions, government scholarships and other grants to students and households, and transfers and payments to other private entities for educational purposes.

Foregone earnings are the net earnings an individual would have had if he or she had entered the labour market and successfully found a job instead of choosing to pursue further studies.

Foregone taxes on earnings are the tax revenues the government would have received if the individual had chosen to enter the labour force and successfully found a job instead of choosing to pursue further studies.

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, provided that the individual successfully enters the labour market.

The **income tax effect** is the discounted sum of additional levels of income tax paid by the private individual or earned by the government over the course of a working-age life 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:

- **Below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2.
- **Upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4.
- **Tertiary** corresponds to ISCED2011 levels 5, 6, 7 and 8.

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.

The **social contribution effect** is the discounted sum of additional employee social contributions paid by the private individual or received by the government over the course of a working-age life and associated with a higher level of education.

The **transfers effect** is the discounted sum of additional social transfers from the government to the private individual associated with a higher education level over the course of a working-age life. Social transfers include two types of benefits: housing benefits and social assistance.

The **unemployment benefit effect** is the discounted sum of additional unemployment benefits associated with a higher education level over the course of a working-age life and received during periods of unemployment.

Methodology

The general approach

This indicator estimates the financial returns on investment in education from the age of entry into further education to a theoretical age of retirement (64 years old). Returns to education are studied purely from the perspective of financial investment that weighs the costs and benefits of the investment.

Two periods are considered (Diagram 1):

- time spent in school during which the private individual and the government pay the cost of education
- time spent in the labour market during which the individual and the government receive the added payments associated with further education.

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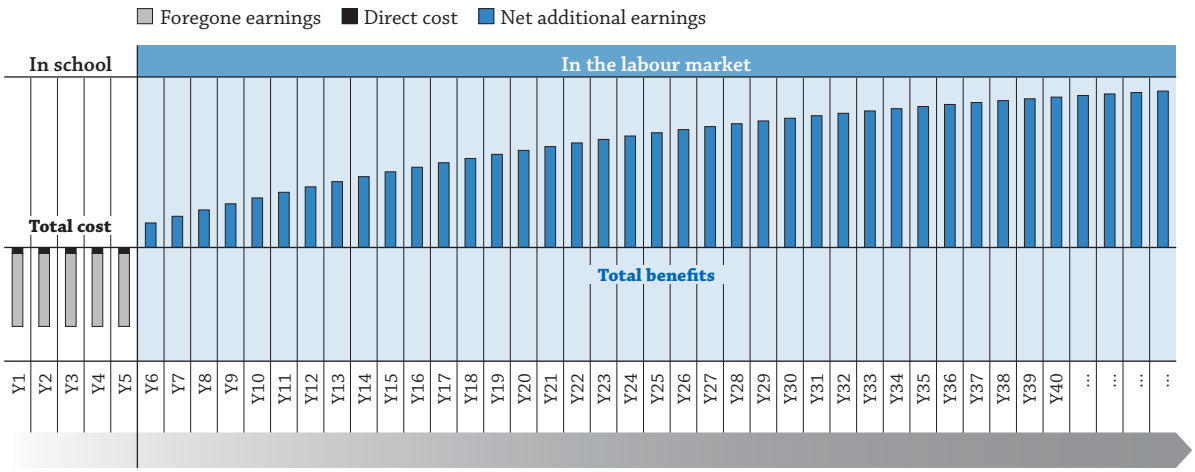
Diagram 1. Financial returns on investment in education over a life-time for a representative individual



In calculating the returns to education, the approach taken here is the net present value of the investment. The net present value expresses in present value cash transfers happening at different times, to allow direct comparisons of costs and benefits. 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 (Y1 in Figure 1) with a fixed interest rate (discount rate).

To set a value for the discount rate, long-term government bonds have been used as a benchmark. Across OECD countries, the average long-term interest rate was approximately 4.12% in 2012, which leads to an average real interest on government bonds of approximately 2%. The 2% real discount rate used in this indicator reflects the fact that calculations are made in constant prices (OECD, 2016a; OECD, 2016b).

The choice of discount rate is difficult, as it should reflect not only the overall time horizon of the investment, but also the cost of borrowing or the perceived risk of the investment. To allow for comparability and to facilitate interpretation of results, the same discount rate (2%) is applied across all OECD countries. All values presented in the tables in this indicator are in net present value equivalent, USD using purchasing power parities (PPP).

Net financial returns

The net financial return to education is the difference between the costs and benefits of an added level of education, calculated as:

Net financial returns = total benefits – absolute value of total costs

The costs

Total costs

Investing in a higher level of education has direct costs and indirect costs. Direct costs are the upfront expenditure paid during the years of additional studies. Indirect costs for a private individual are the foregone earnings that the individual would have received if he or she had decided to work instead of pursuing an additional degree of education. Similarly, indirect costs for the public sector are the foregone tax revenues not received because the individual chose to pursue further education instead of entering the labour market.

Private costs = direct costs + foregone earnings

Public costs = direct costs + foregone tax revenues

Direct costs of education

The source of direct costs of education is the UOE data collection on finance (year of reference 2012 unless otherwise specified in the tables). Direct costs include all expenditures on education for all levels of government combined (public direct costs) and all education-related household expenditure (private direct costs). The direct costs of education are differentiated by fields of education.

Private direct costs are net of loans and grants, and public loans are not included in public direct costs. The exclusion of loans from public costs may lead to an underestimation of public costs for some countries, particularly at the tertiary level. In cases where loans and grants cover more than the private direct costs, the private direct costs are set to null. Further details on student loans can be found in Indicator B5.

Please note that, because of significant changes in methodology, direct costs are not comparable between this edition of *Education at a Glance* and previous editions. For further details, please refer to Annex 3.

Foregone earnings and tax receipts

Investing in further education also has opportunity costs: income the private individual does not earn and tax payments that the government does not receive while the student is in school.

To simplify calculations, the indicator assumes that students do not have earnings or pay taxes while they are studying. To compute foregone earnings and foregone tax revenues, the indicator assumes that the foregone earnings are equal to the minimum wage. This simplification is used to allow better comparability of data across countries. The price for this assumption is an upward bias in the calculated net present value, as the potential earnings of many young people are likely to be higher than the minimum wage.

The benefits

Total benefits

The benefits of investing in education are the additional income associated with a higher level of education, given the probability of successfully finding a job. For the private individual, this additional income is the additional net earnings expected from an additional level of education, given that the individual successfully enters the labour market. Public benefits are constructed to mirror private benefits. Public benefits are the sum of added tax revenues that accrue to the government from an individual with a higher level of education, provided that the individual successfully enters the labour market.

For *j*, the highest level of educational attainment, and *j-1*, a lower level of attainment, total public and private benefits can be written as:

$$\begin{aligned}
\textit{Total private benefits}_j &= \{\textit{Expected net earnings at level}_j\} - \{\textit{Expected net earnings at level}_{j-1}\} \\
&= \{(1\text{-}\textit{Unemployment rate})_j * (\textit{Net earnings})_j + (\textit{Unemployment rate})_j * (\textit{Net unemployment benefits})_j\} \\
&\quad - \{(1\text{-}\textit{Unemployment rate})_{j-1} * (\textit{Net earnings})_{j-1} + (\textit{Unemployment rate})_{j-1} * (\textit{Net unemployment benefits})_{j-1}\} \\
\textit{Total public benefits}_j &= \{\textit{Expected tax receipts at level}_j\} - \{\textit{Expected tax receipts at level}_{j-1}\} \\
&= \{(1\text{-}\textit{Unemployment rate})_j * (\textit{tax receipt})_j - (\textit{Unemployment rate})_j * (\textit{Net unemployment benefits})\} \\
&\quad - \{(1 - \textit{unemployment rate})_{j-1} * (\textit{tax receipt})_{j-1} - (\textit{Unemployment rate})_{j-1} * (\textit{Net unemployment benefits})_{j-1}\}
\end{aligned}$$

Decomposition of net earnings and tax receipt effects

This indicator also presents the decomposition of net earnings and tax revenue effects, based on additional income associated with a higher level of attainment. These elements help to explain the differences in total benefits between countries, as tax levels and benefits levels can create a wedge between additional gross earnings associated with a higher level of education and net earnings.

- Gross earnings effect is the discounted sum of the additional gross earnings level associated with a higher level of educational attainment. The data are from the OECD Network on Labour Market and Social Outcomes earnings data collection. Earnings are age-, gender- and attainment level-specific.
- The income tax effect is the discounted sum of the additional amount of income tax paid by the individual and received by the government for a higher level of education. 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 2016* (OECD, 2016c).
- The social contribution effect is the discounted sum of the additional amount of employee social contributions paid by the individual and received by the government for a higher level of attainment. Employee social contributions are computed using the OECD *Taxing Wages* model's scenario of a single worker with no children, aged 40. For country-specific details on employee social contributions in this model, again see *Taxing Wages 2016* (OECD, 2016c).

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- The social transfers effect is the discounted sum of the additional amount of social transfers paid to individuals by the government for a higher level of attainment. Social transfers correspond to the sum of social assistance and housing benefits paid by the government to individuals. Social transfers are computed using the OECD Tax-Benefit model, under the assumption of a single worker with no children, aged 40. For country-specific details on social transfers in the Tax-Benefit model, see OECD Benefits and Wages country-specific information, available on line at www.oecd.org/els/soc/benefits-and-wages-country-specific-information.htm.
- The unemployment benefit effect is the discounted sum of additional unemployment benefits associated with a higher education level over the course of a working-age life and received during periods of unemployment. Unemployment benefit effect looks at the difference between the unemployment benefits of an individual with a higher level of education and the net earnings of an individual with a lower level of education. Unemployment benefits are computed using the OECD Tax-Benefit model, under the assumption of a single worker with no children, aged 40. Individuals are considered eligible for full unemployment benefits during unemployment. For country-specific details on unemployment benefits in the Tax-Benefit model, again see OECD Benefits and Wages country-specific information, available on line at www.oecd.org/els/soc/benefits-and-wages-country-specific-information.htm.

Please note that, because of significant changes in methodology, earnings benefit decomposition is not comparable between this edition of *Education at a Glance* and previous editions. For further details, please refer to Annex 3.

Methodological caveats

To allow for better comparability across countries, the model relies on some assumptions and simplifications. A list of the main assumptions and model limitations is available on line in Annex 3.

In addition, the data reported are accounting-based values only. The results probably differ from econometric estimates that would use the same data on the micro level (i.e. data from household or individual surveys) rather than a stream of earnings derived from average earnings during a working-age life.

The approach used here estimates future earnings for adults with different levels of education, based on knowledge of how average present gross earnings vary by level of attainment and age. However, the relationship between different levels of educational attainment and earnings may differ in the future, as technological, economic and social changes may all alter how wage levels relate to education levels.

In estimating benefits, the effect of education on the likelihood of finding employment when an individual wants to work is taken into account. However, this also makes the estimate sensitive to the stage in the economic cycle at which the data are collected. As more highly educated adults typically have better labour market outcomes, the value of education generally increases in times of slow economic growth.

Given these factors, the returns on education in different countries should be interpreted with caution.

For further information on methodology, see Annex 3.

Note regarding data from Israel

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

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A7

Indicator A7 Tables

StatLink http://dx.doi.org/10.1787/888933397224

Table A7.1a	Private costs and benefits for a man attaining upper secondary or post-secondary non-tertiary education (2012)
Table A7.1b	Private costs and benefits for a woman attaining upper secondary or post-secondary non-tertiary education (2012)
Table A7.2a	Public costs and benefits for a man attaining upper secondary or post-secondary non-tertiary education (2012)
Table A7.2b	Public costs and benefits for a woman attaining upper secondary or post-secondary non-tertiary education (2012)
Table A7.3a	Private costs and benefits for a man attaining tertiary education (2012)
Table A7.3b	Private costs and benefits for a woman attaining tertiary education (2012)
Table A7.4a	Public costs and benefits for a man attaining tertiary education (2012)
Table A7.4b	Public costs and benefits for a woman attaining tertiary education (2012)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table A7.1a. Private costs and benefits for a man attaining upper secondary or post-secondary non-tertiary education (2012)

As compared with a man with below upper secondary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Gross earnings benefits	Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+(6)+(7)+(8)	(10)=(9)+(3)	(11)
OECD											
Australia	- 3 000	- 29 100	**- 32 100**	180 000	- 62 000	0	- 900	31 600	**148 700**	**116 600**	16%
Austria[1]	0	- 47 200	**- 47 200**	269 600	- 68 200	- 51 300	- 2 400	34 900	**182 600**	**135 400**	10%
Belgium	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Canada[2]	- 1 300	- 32 900	**- 34 200**	181 800	- 47 200	- 12 800	0	36 600	**158 400**	**124 200**	13%
Chile[3]	- 3 700	- 19 000	**- 22 700**	163 800	- 5 300	- 27 800	- 1 500	12 300	**141 500**	**118 800**	13%
Czech Republic[3]	- 1 900	- 17 900	**- 19 800**	91 100	- 18 300	- 10 000	- 6 500	41 700	**98 000**	**78 200**	13%
Denmark	0	- 36 200	**- 36 200**	237 700	- 97 400	0	- 15 600	25 800	**150 500**	**114 300**	13%
Estonia	0	- 11 400	**- 11 400**	44 100	- 9 000	- 1 200	0	40 800	**74 700**	**63 300**	16%
Finland	0	- 34 000	**- 34 000**	87 900	- 28 700	- 7 000	- 4 000	19 200	**67 400**	**33 400**	6%
France	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Hungary	- 1 200	- 15 300	**- 16 500**	69 000	- 11 000	- 12 800	0	29 600	**74 800**	**58 300**	12%
Iceland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Israel	- 3 700	- 25 200	**- 28 900**	205 400	- 32 100	- 23 900	0	35 500	**184 900**	**156 000**	12%
Italy[3]	- 7 500	- 35 100	**- 42 600**	206 300	- 65 200	- 19 600	0	24 800	**146 300**	**103 700**	7%
Japan	- 12 000	- 51 700	**- 63 700**	237 400	- 25 300	- 32 500	- 4 400	11 200	**186 400**	**122 700**	7%
Korea	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Luxembourg	- 2 000	- 65 000	**- 67 000**	360 000	- 103 900	- 44 800	- 10 200	24 700	**225 800**	**158 800**	9%
Mexico	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 1 100	- 51 800	**- 52 900**	185 300	- 64 900	- 10 900	0	15 800	**125 300**	**72 400**	6%
New Zealand	- 5 100	- 36 000	**- 41 100**	168 500	- 47 000	0	- 600	26 200	**147 100**	**106 000**	10%
Norway[1]	0	- 40 700	**- 40 700**	271 700	- 76 700	- 21 200	- 100	31 500	**205 200**	**164 500**	15%
Poland	- 4 600	- 17 100	**- 21 700**	58 100	- 5 100	- 10 400	0	28 900	**71 500**	**49 800**	9%
Portugal[1]	0	- 21 200	**- 21 200**	204 500	- 46 400	- 22 500	0	31 100	**166 700**	**145 500**	12%
Slovak Republic	- 2 500	- 9 000	**- 11 500**	55 700	- 9 200	- 7 500	0	97 400	**136 400**	**124 900**	26%
Slovenia	- 700	- 35 800	**- 36 500**	103 800	- 19 500	- 22 900	- 200	18 600	**79 800**	**43 300**	6%
Spain	- 2 100	- 9 900	**- 12 000**	89 700	- 23 800	- 5 700	0	64 100	**124 300**	**112 300**	16%
Sweden	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Switzerland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Turkey	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United States	- 3 500	- 27 800	**- 31 300**	330 100	- 75 400	- 18 600	- 2 700	65 600	**299 000**	**267 700**	17%
OECD average	- 2 500	- 30 400	**- 32 900**	172 800	- 42 800	- 16 500	- 2 200	34 000	**145 300**	**112 400**	12%
EU22 average	- 1 700	- 29 100	**- 30 800**	147 300	- 40 800	- 16 200	- 2 800	35 500	**123 000**	**92 200**	11%

Notes: Values are based on the difference between men who attained upper secondary or post-secondary non-tertiary education compared with those who have not attained that level of education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011.
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.1b. Private costs and benefits for a woman attaining upper secondary or post-secondary non-tertiary education (2012)

As compared with a woman with below upper secondary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Gross earnings benefits	Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+(6)+(7)+(8)	(10)=(9)+(3)	(11)
OECD											
Australia	- 3 000	- 28 300	**- 31 300**	102 500	- 25 400	0	- 14 900	21 000	**83 200**	**51 900**	9%
Austria[1]	0	- 45 500	**- 45 500**	187 000	- 30 200	- 38 200	- 20 500	11 300	**109 400**	**63 900**	6%
Belgium	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Canada[2]	- 1 300	- 33 500	**- 34 800**	130 500	- 26 600	- 11 500	0	28 200	**120 600**	**85 800**	10%
Chile[3]	- 3 700	- 14 400	**- 18 100**	92 500	- 1 600	- 18 100	- 1 100	16 600	**88 300**	**70 200**	10%
Czech Republic[3]	- 1 900	- 19 700	**- 21 600**	78 300	- 15 700	- 8 600	- 15 700	30 200	**68 500**	**46 900**	9%
Denmark	0	- 36 700	**- 36 700**	174 200	- 70 100	0	0	16 900	**121 000**	**84 300**	10%
Estonia	0	- 10 900	**- 10 900**	21 900	- 4 500	- 600	0	18 100	**34 900**	**24 000**	14%
Finland	0	- 34 700	**- 34 700**	64 000	- 14 800	- 5 100	- 15 500	16 800	**45 400**	**10 700**	3%
France	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Hungary	- 1 200	- 14 600	**- 15 800**	59 000	- 9 400	- 10 900	0	28 900	**67 600**	**51 800**	10%
Iceland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Israel	- 3 700	- 25 800	**- 29 500**	103 500	- 4 200	- 5 400	0	24 400	**118 300**	**88 800**	9%
Italy[3]	- 7 500	- 30 600	**- 38 100**	144 400	- 42 900	- 13 700	0	21 300	**109 100**	**71 000**	6%
Japan	- 12 000	- 51 400	**- 63 400**	126 200	- 11 000	- 17 300	- 88 500	500	**9 900**	**- 53 500**	-5%
Korea	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Luxembourg	- 2 000	- 64 600	**- 66 600**	312 500	- 58 900	- 38 900	- 42 000	16 200	**188 900**	**122 300**	6%
Mexico	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 1 100	- 51 600	**- 52 700**	193 400	- 44 700	- 37 000	- 6 600	11 200	**116 300**	**63 600**	6%
New Zealand	- 5 100	- 34 700	**- 39 800**	85 500	- 14 500	0	- 5 700	13 800	**79 100**	**39 300**	5%
Norway[1]	0	- 41 500	**- 41 500**	185 900	- 48 400	- 14 500	- 9 100	10 700	**124 600**	**83 100**	8%
Poland	- 4 600	- 15 100	**- 19 700**	56 300	- 5 000	- 10 000	0	20 800	**62 100**	**42 400**	7%
Portugal[1]	0	- 20 500	**- 20 500**	135 900	- 23 600	- 15 000	0	26 000	**123 300**	**102 800**	10%
Slovak Republic	- 2 500	- 8 000	**- 10 500**	38 700	- 6 400	- 5 200	0	67 700	**94 800**	**84 300**	21%
Slovenia	- 700	- 35 600	**- 36 300**	100 400	- 20 800	- 22 200	- 9 600	24 100	**71 900**	**35 600**	5%
Spain	- 2 100	- 9 000	**- 11 100**	67 500	- 12 900	- 4 300	0	55 100	**105 400**	**94 300**	12%
Sweden	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Switzerland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Turkey	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United States	- 3 500	- 28 000	**- 31 500**	205 700	- 43 400	- 11 600	- 10 300	47 200	**187 600**	**156 100**	13%
OECD average	- 2 500	- 29 800	**- 32 300**	121 200	- 24 300	- 13 100	- 10 900	24 000	**96 900**	**64 600**	8%
EU22 average	- 1 700	- 28 400	**- 30 100**	116 700	- 25 700	- 15 000	- 7 900	26 000	**94 100**	**64 000**	9%

Notes: Values are based on the difference between women who attained upper secondary or post-secondary non-tertiary education compared with those who have not attained that level of education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011.
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.2a. Public costs and benefits for a man attaining upper secondary or post-secondary non-tertiary education (2012)

As compared with a man with below upper secondary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)=(4)+(5)+(6)+(7)	(9)=(8)+(3)	(10)
OECD										
Australia	- 16 200	- 3 100	**- 19 300**	62 000	0	900	25 600	**88 500**	**69 200**	15%
Austria[1]	- 45 800	- 9 100	**- 54 900**	68 200	51 300	2 400	46 600	**168 500**	**113 600**	8%
Belgium	m	m	**m**	m	m	m	m	**m**	**m**	m
Canada[2]	- 30 000	- 3 300	**- 33 300**	47 200	12 800	0	31 800	**91 800**	**58 500**	8%
Chile[3]	- 12 800	200	**- 12 600**	5 300	27 800	1 500	3 200	**37 800**	**25 200**	8%
Czech Republic[3]	- 21 300	3 500	**- 17 800**	18 300	10 000	6 500	88 100	**122 900**	**105 100**	20%
Denmark	- 36 700	- 14 400	**- 51 100**	97 400	0	15 600	49 900	**162 900**	**111 800**	9%
Estonia	- 21 800	- 1 800	**- 23 600**	9 000	1 200	0	44 000	**54 200**	**30 600**	7%
Finland	- 26 900	- 100	**- 27 000**	28 700	7 000	4 000	39 000	**78 700**	**51 700**	12%
France	m	m	**m**	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	**m**	**m**	m
Hungary	- 16 400	- 3 400	**- 19 800**	11 000	12 800	0	49 000	**72 800**	**53 000**	11%
Iceland	m	m	**m**	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	**m**	**m**	m
Israel	- 14 700	- 1 900	**- 16 600**	32 100	23 900	0	21 100	**77 100**	**60 500**	11%
Italy[3]	- 33 400	- 5 600	**- 39 000**	65 200	19 600	0	29 600	**114 400**	**75 400**	6%
Japan	- 25 700	11 200	**- 14 500**	25 300	32 500	4 400	1 700	**63 900**	**49 400**	11%
Korea	m	m	**m**	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	**m**	**m**	m
Luxembourg	- 73 500	- 6 000	**- 79 500**	103 900	44 800	10 200	35 700	**194 600**	**115 100**	7%
Mexico	m	m	**m**	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 29 100	- 3 100	**- 32 200**	64 900	10 900	0	30 800	**106 600**	**74 400**	10%
New Zealand	- 22 100	- 3 800	**- 25 900**	47 000	0	600	18 500	**66 100**	**40 200**	8%
Norway[1]	- 48 500	- 10 100	**- 58 600**	76 700	21 200	100	41 200	**139 200**	**80 600**	7%
Poland	- 19 300	- 8 800	**- 28 100**	5 100	10 400	0	36 000	**51 500**	**23 400**	5%
Portugal[1]	- 31 100	- 2 700	**- 33 800**	46 400	22 500	0	10 200	**79 100**	**45 300**	5%
Slovak Republic	- 19 000	- 1 300	**- 20 300**	9 200	7 500	0	88 800	**105 500**	**85 200**	13%
Slovenia	- 27 500	- 4 200	**- 31 700**	19 500	22 900	200	51 400	**94 000**	**62 300**	9%
Spain	- 16 000	- 600	**- 16 600**	23 800	5 700	0	46 700	**76 200**	**59 600**	8%
Sweden	m	m	**m**	m	m	m	m	**m**	**m**	m
Switzerland	- 40 600	- 15 100	**- 55 700**	47 800	18 100	0	57 000	**122 900**	**67 200**	7%
Turkey	m	m	**m**	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	**m**	**m**	m
United States	- 34 100	- 3 500	**- 37 600**	75 400	18 600	2 700	30 900	**127 600**	**90 000**	8%
OECD average	- 28 800	- 3 800	**- 32 600**	43 000	16 600	2 100	38 100	**99 800**	**67 200**	9%
EU22 average	- 29 800	- 4 100	**- 33 900**	40 800	16 200	2 800	46 100	**105 900**	**72 000**	9%

Notes: Values are based on the difference between men who attained upper secondary or post-secondary non-tertiary education compared with those who have not attained that level of education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011.
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.2b. Public costs and benefits for a woman attaining upper secondary or post-secondary non-tertiary education (2012)

As compared with a woman with below upper secondary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)=(4)+(5)+(6)+(7)	(9)=(8)+(3)	(10)
OECD										
Australia	- 16 200	- 3 000	**- 19 200**	25 400	0	14 900	24 600	**64 900**	**45 700**	19%
Austria[1]	- 45 800	- 8 700	**- 54 500**	30 200	38 200	20 500	25 600	**114 500**	**60 000**	7%
Belgium	m	m	**m**	m	m	m	m	**m**	**m**	m
Canada[2]	- 30 000	- 3 300	**- 33 300**	26 600	11 500	0	19 200	**57 300**	**24 000**	5%
Chile[3]	- 12 800	200	**- 12 600**	1 600	18 100	1 100	4 700	**25 500**	**12 900**	5%
Czech Republic[3]	- 21 300	3 800	**- 17 500**	15 700	8 600	15 700	65 000	**105 000**	**87 500**	17%
Denmark	- 36 700	- 14 600	**- 51 300**	70 100	0	0	35 300	**105 400**	**54 100**	6%
Estonia	- 21 800	- 1 700	**- 23 500**	4 500	600	0	15 700	**20 800**	**- 2 700**	1%
Finland	- 26 900	- 100	**- 27 000**	14 800	5 100	15 500	54 800	**90 200**	**63 200**	14%
France	m	m	**m**	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	**m**	**m**	m
Hungary	- 16 400	- 3 300	**- 19 700**	9 400	10 900	0	46 600	**66 900**	**47 200**	10%
Iceland	m	m	**m**	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	**m**	**m**	m
Israel	- 14 700	- 2 000	**- 16 700**	4 200	5 400	0	7 200	**16 800**	**100**	2%
Italy[3]	- 33 400	- 4 900	**- 38 300**	42 900	13 700	0	28 400	**85 000**	**46 700**	5%
Japan	- 25 700	11 100	**- 14 600**	11 000	17 300	88 500	6 200	**123 000**	**108 400**	23%
Korea	m	m	**m**	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	**m**	**m**	m
Luxembourg	- 73 500	- 6 000	**- 79 500**	58 900	38 900	42 000	39 500	**179 300**	**99 800**	8%
Mexico	m	m	**m**	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 29 100	- 3 100	**- 32 200**	44 700	37 000	6 600	29 900	**118 200**	**86 000**	12%
New Zealand	- 22 100	- 3 600	**- 25 700**	14 500	0	5 700	13 100	**33 300**	**7 600**	4%
Norway[1]	- 48 500	- 10 300	**- 58 800**	48 400	14 500	9 100	23 900	**95 900**	**37 100**	5%
Poland	- 19 300	- 7 800	**- 27 100**	5 000	10 000	0	35 600	**50 600**	**23 500**	5%
Portugal[1]	- 31 100	- 2 600	**- 33 700**	23 600	15 000	0	7 500	**46 100**	**12 400**	3%
Slovak Republic	- 19 000	- 1 100	**- 20 100**	6 400	5 200	0	54 500	**66 100**	**46 000**	10%
Slovenia	- 27 500	- 4 200	**- 31 700**	20 800	22 200	9 600	67 100	**119 700**	**88 000**	11%
Spain	- 16 000	- 500	**- 16 500**	12 900	4 300	0	23 800	**41 000**	**24 500**	7%
Sweden	m	m	**m**	m	m	m	m	**m**	**m**	m
Switzerland	- 40 600	- 17 400	**- 58 000**	21 500	12 300	0	37 400	**71 200**	**13 200**	3%
Turkey	m	m	**m**	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	**m**	**m**	m
United States	- 34 100	- 3 600	**- 37 700**	43 400	11 600	10 300	35 300	**100 600**	**62 900**	9%
OECD average	- 28 800	- 3 800	**- 32 600**	24 200	13 100	10 400	30 500	**78 200**	**45 600**	8%
EU22 average	- 29 800	- 3 900	**- 33 700**	25 700	15 000	7 900	37 800	**86 400**	**52 700**	8%

Notes: Values are based on the difference between women who attained upper secondary or post-secondary non-tertiary education compared with those who have not attained that level of education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.3a. Private costs and benefits for a man attaining tertiary education (2012)

As compared with a man attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Gross earnings benefits	Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+(6)+(7)+(8)	(10)=(9)+(3)	(11)
OECD											
Australia	- 21 200	- 54 600	**- 75 800**	423 000	- 153 200	0	0	15 600	**285 400**	**209 600**	9%
Austria[1]	0	- 58 400	**- 58 400**	558 900	- 182 100	- 70 000	0	17 800	**324 600**	**266 200**	11%
Belgium	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Canada[2]	- 17 300	- 38 800	**- 56 100**	300 300	- 91 900	- 4 600	0	21 700	**225 500**	**169 400**	9%
Chile[3]	- 38 100	- 33 900	**- 72 000**	701 400	- 64 600	- 76 400	- 1 200	27 800	**587 000**	**515 000**	15%
Czech Republic[3]	- 2 900	- 27 200	**- 30 100**	454 700	- 91 400	- 50 000	0	20 000	**333 300**	**303 200**	22%
Denmark	0	- 54 600	**- 54 600**	394 000	- 201 300	0	- 9 000	17 000	**200 700**	**146 100**	9%
Estonia	- 3 200	- 22 100	**- 25 300**	165 700	- 33 800	- 4 600	0	24 900	**152 200**	**126 900**	16%
Finland	0	- 64 600	**- 64 600**	411 500	- 156 000	- 32 000	0	29 600	**253 100**	**188 500**	10%
France	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Hungary	- 12 400	- 19 000	**- 31 400**	528 600	- 106 500	- 97 800	0	45 400	**369 700**	**338 300**	24%
Iceland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Israel	- 8 400	- 31 200	**- 39 600**	342 900	- 75 500	- 41 200	0	22 400	**248 600**	**209 000**	14%
Italy[3]	- 8 500	- 42 000	**- 50 500**	426 000	- 163 700	- 42 300	0	13 200	**233 200**	**182 700**	9%
Japan	- 35 300	- 75 700	**- 111 000**	459 500	- 72 800	- 60 900	0	29 200	**355 000**	**244 000**	8%
Korea	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Luxembourg	0	- 63 000	**- 63 000**	952 200	- 340 200	- 115 600	0	24 500	**520 900**	**457 900**	16%
Mexico	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 7 700	- 94 500	**- 102 200**	579 300	- 257 200	- 1 200	0	15 800	**336 700**	**234 500**	8%
New Zealand	- 12 200	- 54 000	**- 66 200**	226 300	- 69 600	0	0	12 800	**169 500**	**103 300**	7%
Norway[1]	0	- 51 200	**- 51 200**	395 000	- 142 500	- 30 800	0	10 500	**232 200**	**181 000**	9%
Poland	- 3 200	- 17 700	**- 20 900**	488 100	- 43 200	- 87 000	0	43 500	**401 400**	**380 500**	30%
Portugal[1]	- 4 200	- 25 100	**- 29 300**	460 800	- 140 700	- 50 700	0	37 300	**306 700**	**277 400**	19%
Slovak Republic	- 4 400	- 17 100	**- 21 500**	339 300	- 56 300	- 43 200	0	48 100	**287 900**	**266 400**	23%
Slovenia	0	- 37 900	**- 37 900**	517 100	- 135 300	- 114 300	0	27 800	**295 300**	**257 400**	15%
Spain	- 13 400	- 29 800	**- 43 200**	236 600	- 67 000	- 14 300	0	60 600	**215 900**	**172 700**	10%
Sweden	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Switzerland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Turkey	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United States	- 38 200	- 48 100	**- 86 300**	734 900	- 224 100	- 41 500	0	74 800	**544 100**	**457 800**	15%
OECD average	- 10 500	- 43 700	**- 54 200**	458 900	- 130 400	- 44 500	- 500	29 100	**312 600**	**258 400**	14%
EU22 average	- 4 300	- 40 900	**- 45 200**	465 200	- 141 100	- 51 600	- 600	30 400	**302 300**	**257 100**	16%

Notes: Values are based on the difference between men who attained tertiary education compared with those who have attained upper secondary or post-secondary non-tertiary education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.3b. Private costs and benefits for a woman attaining tertiary education (2012)

As compared with a woman attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Gross earnings benefits	Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+(6)+(7)+(8)	(10)=(9)+(3)	(11)
OECD											
Australia	- 21 200	- 55 500	**- 76 700**	321 600	- 113 600	0	0	15 800	**223 800**	**147 100**	9%
Austria[1]	0	- 58 700	**- 58 700**	362 500	- 100 100	- 68 300	0	11 100	**205 200**	**146 500**	8%
Belgium	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Canada[2]	- 17 300	- 40 000	**- 57 300**	299 600	- 63 800	- 23 800	0	26 500	**238 500**	**181 200**	12%
Chile[3]	- 38 100	- 32 100	**- 70 200**	411 100	- 23 100	- 67 200	- 1 200	36 600	**356 200**	**286 000**	12%
Czech Republic[3]	- 2 900	- 26 700	**- 29 600**	255 100	- 51 300	- 28 100	- 3 200	19 900	**192 400**	**162 800**	15%
Denmark	0	- 55 100	**- 55 100**	222 300	- 91 100	0	- 13 600	11 800	**129 400**	**74 300**	7%
Estonia	- 3 200	- 22 400	**- 25 600**	135 600	- 27 700	- 3 800	0	22 000	**126 100**	**100 500**	14%
Finland	0	- 66 600	**- 66 600**	266 800	- 88 200	- 21 500	- 4 700	16 900	**169 300**	**102 700**	7%
France	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Hungary	- 12 400	- 19 100	**- 31 500**	256 700	- 48 800	- 47 500	0	22 800	**183 200**	**151 700**	14%
Iceland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Israel	- 8 400	- 30 200	**- 38 600**	263 300	- 39 500	- 30 100	0	26 600	**220 300**	**181 700**	13%
Italy[3]	- 8 500	- 39 500	**- 48 000**	252 900	- 83 600	- 24 000	0	13 900	**159 200**	**111 200**	8%
Japan	- 35 300	- 75 400	**- 110 700**	267 300	- 22 600	- 36 600	- 72 700	8 900	**144 300**	**33 600**	3%
Korea	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Luxembourg	0	- 63 400	**- 63 400**	609 900	- 197 900	- 75 900	0	38 100	**374 200**	**310 800**	17%
Mexico	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 7 700	- 94 800	**- 102 500**	455 700	- 179 900	- 6 400	0	12 400	**281 800**	**179 300**	7%
New Zealand	- 12 200	- 52 400	**- 64 600**	172 100	- 40 100	0	- 2 000	17 300	**147 300**	**82 700**	7%
Norway[1]	0	- 53 000	**- 53 000**	282 100	- 79 000	- 22 000	0	4 700	**185 800**	**132 800**	9%
Poland	- 3 200	- 15 900	**- 19 100**	301 400	- 26 700	- 53 700	0	39 500	**260 500**	**241 400**	24%
Portugal[1]	- 4 200	- 24 000	**- 28 200**	347 500	- 90 000	- 38 200	0	44 900	**264 200**	**236 000**	19%
Slovak Republic	- 4 400	- 17 400	**- 21 800**	191 400	- 31 500	- 25 600	0	36 800	**171 100**	**149 300**	16%
Slovenia	0	- 37 400	**- 37 400**	393 200	- 93 200	- 86 900	0	25 900	**239 000**	**201 600**	13%
Spain	- 13 400	- 33 600	**- 47 000**	221 900	- 57 500	- 14 100	0	72 900	**223 200**	**176 200**	11%
Sweden	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Switzerland	m	m	**m**	m	m	m	m	m	**m**	**m**	m
Turkey	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	m	**m**	**m**	m
United States	- 38 200	- 50 100	**- 88 300**	485 000	- 118 400	- 27 400	0	47 000	**386 200**	**297 900**	12%
OECD average	- 10 500	- 43 800	**- 54 300**	308 000	- 75 800	- 31 900	- 4 400	26 000	**221 900**	**167 600**	12%
EU22 average	- 4 300	- 41 000	**- 45 300**	305 200	- 83 400	- 35 300	- 1 500	27 800	**212 800**	**167 500**	13%

Notes: Values are based on the difference between women who attained tertiary education compared with those who have attained upper secondary or post-secondary non-tertiary education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.4a. Public costs and benefits for a man attaining tertiary education (2012)

As compared with a man attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)=(4)+(5)+(6)+(7)	(9)=(8)+(3)	(10)
OECD										
Australia	- 29 300	- 5 700	**- 35 000**	153 200	0	0	10 500	**163 700**	**128 700**	10%
Austria[1]	- 76 600	- 11 200	**- 87 800**	182 100	70 000	0	16 100	**268 200**	**180 400**	7%
Belgium	m	m	**m**	m	m	m	m	**m**	**m**	m
Canada[2]	- 40 900	- 3 900	**- 44 800**	91 900	4 600	0	18 000	**114 500**	**69 700**	6%
Chile[3]	- 18 100	400	**- 17 700**	64 600	76 400	1 200	7 100	**149 300**	**131 600**	16%
Czech Republic[3]	- 27 700	5 300	**- 22 400**	91 400	50 000	0	16 300	**157 700**	**135 300**	16%
Denmark	- 74 500	- 21 800	**- 96 300**	201 300	0	9 000	28 300	**238 600**	**142 300**	6%
Estonia	- 24 300	- 3 400	**- 27 700**	33 800	4 600	0	11 000	**49 400**	**21 700**	5%
Finland	- 90 200	- 200	**- 90 400**	156 000	32 000	0	31 800	**219 800**	**129 400**	7%
France	m	m	**m**	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	**m**	**m**	m
Hungary	- 20 500	- 4 300	**- 24 800**	106 500	97 800	0	43 800	**248 100**	**223 300**	22%
Iceland	m	m	**m**	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	**m**	**m**	m
Israel	- 20 600	- 2 400	**- 23 000**	75 500	41 200	0	19 100	**135 800**	**112 800**	12%
Italy[3]	- 36 900	- 6 700	**- 43 600**	163 700	42 300	0	12 800	**218 800**	**175 200**	9%
Japan	- 27 500	16 400	**- 11 100**	72 800	60 900	0	19 200	**152 900**	**141 800**	21%
Korea	m	m	**m**	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	**m**	**m**	m
Luxembourg	- 124 700	- 5 800	**- 130 500**	340 200	115 600	0	13 200	**469 000**	**338 500**	8%
Mexico	m	m	**m**	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 73 000	- 5 700	**- 78 700**	257 200	1 200	0	14 300	**272 700**	**194 000**	8%
New Zealand	- 32 300	- 5 700	**- 38 000**	69 600	0	0	7 000	**76 600**	**38 600**	5%
Norway[1]	- 74 700	- 12 700	**- 87 400**	142 500	30 800	0	17 500	**190 800**	**103 400**	5%
Poland	- 22 800	- 9 100	**- 31 900**	43 200	87 000	0	26 600	**156 800**	**124 900**	12%
Portugal[1]	- 35 900	- 3 200	**- 39 100**	140 700	50 700	0	19 900	**211 300**	**172 200**	9%
Slovak Republic	- 30 800	- 2 400	**- 33 200**	56 300	43 200	0	22 800	**122 300**	**89 100**	9%
Slovenia	- 33 900	- 4 500	**- 38 400**	135 300	114 300	0	36 300	**285 900**	**247 500**	13%
Spain	- 50 500	- 1 700	**- 52 200**	67 000	14 300	0	56 900	**138 200**	**86 000**	6%
Sweden	m	m	**m**	m	m	m	m	**m**	**m**	m
Switzerland	- 90 900	- 20 000	**- 110 900**	124 200	36 600	0	7 800	**168 600**	**57 700**	4%
Turkey	m	m	**m**	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	**m**	**m**	m
United States	- 58 100	- 6 100	**- 64 200**	224 100	41 500	0	62 700	**328 300**	**264 100**	12%
OECD average	- 48 500	- 5 000	**- 53 500**	130 100	44 100	400	22 600	**197 200**	**143 700**	10%
EU22 average	- 51 600	- 5 300	**- 56 900**	141 100	51 600	600	25 000	**218 300**	**161 400**	10%

Notes: Values are based on the difference between men who attained tertiary education compared with those who have attained upper secondary or post-secondary non-tertiary education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table A7.4b. Public costs and benefits for a woman attaining tertiary education (2012)

As compared with a woman attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the unemployment effect): Income tax effect	Social contribution effect	Transfers effect	Unemployment benefits effect	Total benefits	Net financial returns	Internal rate of return
	(1)	(2)	(3)=(1)+(2)	(4)	(5)	(6)	(7)	(8)=(4)+(5)+(6)+(7)	(9)=(8)+(3)	(10)
OECD										
Australia	- 29 300	- 5 800	**- 35 100**	113 600	0	0	11 400	**125 000**	**89 900**	10%
Austria[1]	- 76 600	- 11 300	**- 87 900**	100 100	68 300	0	11 200	**179 600**	**91 700**	5%
Belgium	m	m	**m**	m	m	m	m	**m**	**m**	m
Canada[2]	- 40 900	- 4 000	**- 44 900**	63 800	23 800	0	8 800	**96 400**	**51 500**	6%
Chile[3]	- 18 100	400	**- 17 700**	23 100	67 200	1 200	10 000	**101 500**	**83 800**	13%
Czech Republic[3]	- 27 700	5 200	**- 22 500**	51 300	28 100	3 200	22 400	**105 000**	**82 500**	12%
Denmark	- 74 500	- 21 900	**- 96 400**	91 100	0	13 600	17 300	**122 000**	**25 600**	3%
Estonia	- 24 300	- 3 500	**- 27 800**	27 700	3 800	0	8 200	**39 700**	**11 900**	4%
Finland	- 90 200	- 200	**- 90 400**	88 200	21 500	4 700	22 600	**137 000**	**46 600**	4%
France	m	m	**m**	m	m	m	m	**m**	**m**	m
Germany	m	m	**m**	m	m	m	m	**m**	**m**	m
Greece	m	m	**m**	m	m	m	m	**m**	**m**	m
Hungary	- 20 500	- 4 300	**- 24 800**	48 800	47 500	0	27 800	**124 100**	**99 300**	13%
Iceland	m	m	**m**	m	m	m	m	**m**	**m**	m
Ireland	m	m	**m**	m	m	m	m	**m**	**m**	m
Israel	- 20 600	- 2 300	**- 22 900**	39 500	30 100	0	5 400	**75 000**	**52 100**	7%
Italy[3]	- 36 900	- 6 300	**- 43 200**	83 600	24 000	0	10 000	**117 600**	**74 400**	6%
Japan	- 27 500	16 300	**- 11 200**	22 600	36 600	72 700	12 700	**144 600**	**133 400**	28%
Korea	m	m	**m**	m	m	m	m	**m**	**m**	m
Latvia	m	m	**m**	m	m	m	m	**m**	**m**	m
Luxembourg	- 124 700	- 5 900	**- 130 600**	197 900	75 900	0	13 500	**287 300**	**156 700**	6%
Mexico	m	m	**m**	m	m	m	m	**m**	**m**	m
Netherlands[1]	- 73 000	- 5 700	**- 78 700**	179 900	6 400	0	6 500	**192 800**	**114 100**	7%
New Zealand	- 32 300	- 5 500	**- 37 800**	40 100	0	2 000	10 800	**52 900**	**15 100**	4%
Norway[1]	- 74 700	- 13 200	**- 87 900**	79 000	22 000	0	300	**101 300**	**13 400**	3%
Poland	- 22 800	- 8 200	**- 31 000**	26 700	53 700	0	33 100	**113 500**	**82 500**	10%
Portugal[1]	- 35 900	- 3 100	**- 39 000**	90 000	38 200	0	17 600	**145 800**	**106 800**	8%
Slovak Republic	- 30 800	- 2 400	**- 33 200**	31 500	25 600	0	21 400	**78 500**	**45 300**	6%
Slovenia	- 33 900	- 4 400	**- 38 300**	93 200	86 900	0	29 500	**209 600**	**171 300**	10%
Spain	- 50 500	- 2 000	**- 52 500**	57 500	14 100	0	40 400	**112 000**	**59 500**	5%
Sweden	m	m	**m**	m	m	m	m	**m**	**m**	m
Switzerland	- 90 900	- 20 000	**- 110 900**	70 600	29 100	0	- 900	**98 800**	**- 12 100**	1%
Turkey	m	m	**m**	m	m	m	m	**m**	**m**	m
United Kingdom	m	m	**m**	m	m	m	m	**m**	**m**	m
United States	- 58 100	- 6 400	**- 64 500**	118 400	27 400	0	31 000	**176 800**	**112 300**	8%
OECD average	- 48 500	- 5 000	**- 53 500**	75 600	31 700	4 200	16 100	**127 600**	**74 100**	8%
EU22 average	- 51 600	- 5 300	**- 56 900**	83 400	35 300	1 500	20 100	**140 300**	**83 400**	7%

Notes: Values are based on the difference between women who attained tertiary education compared with those who have attained upper secondary or post-secondary non-tertiary education. Values have been rounded up to the nearest hundred.

1. Year of reference 2010.
2. Year of reference for direct costs is 2011
3. Year of reference 2011.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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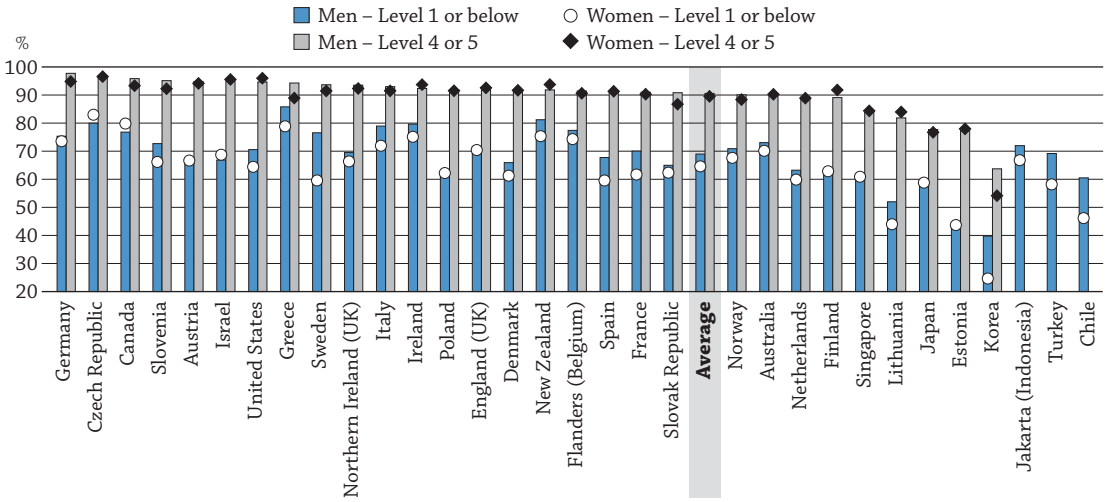
HOW ARE SOCIAL OUTCOMES RELATED TO EDUCATION?

- The proportion of adults reporting good health is high among those who have both high educational attainment and high proficiency levels. On average across OECD countries and subnational entities that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), the share of tertiary-educated adults reporting good health is 92% among those with the highest literacy proficiency level and also 92% among those with highest numeracy proficiency level.
- People with higher educational attainment are less likely than those with lower educational attainment to report activity limitation due to health problems across all age groups. Overall, the difference in the share of people with activity limitation between those with below upper secondary education and those with tertiary education increases with age but decreases later in life.
- Individuals with higher educational attainment are more likely to report satisfaction with their life. On average across OECD countries, 92% of the tertiary-educated report satisfaction with their life, compared to 83% among those with upper secondary or post-secondary non-tertiary education.

Figure A8.1. Percentage of adults reporting that they are in good health, by literacy proficiency level and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

Countries and subnational entities are ranked in descending order of the percentage of 25-64 year-old men with literacy proficiency Level 4 or 5 reporting that they are in good health.

Source: OECD. Table A8.1 (L). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397396

Context

A number of important social outcomes in an individual's life are associated with education. Educational attainment is positively associated with social outcomes including health status, volunteering, interpersonal trust and political efficacy, even after accounting for gender, age, earnings and proficiency in literacy or numeracy. Proficiency in literacy and numeracy, which can be developed through education, is also found to be an important explanatory factor for all these social outcomes (OECD, 2015a), suggesting that high levels of proficiency may play a significant role in attaining higher social outcomes. Furthermore, educational attainment is an important factor in explaining differences in subjective well-being, along with age, income, employment status, health, social connections (such as having friends to count on and volunteering) and civic engagement (including freedom to choose what you like to do) (Boarini et al., 2012). Research across countries shows that education is also considered to be associated with health outcomes, and better-educated people have lower morbidity rates and longer life expectancy (Cutler and Lleras-Muney, 2006).

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In recent years, it has become increasingly important to examine intrinsically subjective outcomes to complement objective evidence, to drive changes in systems and policies while putting people at the centre. Efforts have been made to measure, monitor and report these at the national and international levels, based on individuals' perceptions and experiences. The OECD analyses and reports on the well-being of individuals, encompassing both material living conditions based on conventional economic measures, such as income, wealth, employment and earnings, and quality of life, including objective and subjective measures, such as self-reported health status and life satisfaction (OECD, 2011; OECD, 2013a). These subjective social outcomes are also valuable to help shape future education systems.

However, cross-country variations in self-reported social outcomes and their associations with educational attainment need to be interpreted with care. This is because subjective measures may be affected by social and cultural factors which can vary both within and across countries. In addition, social circumstances may also influence access to education. For instance, those with poor health status or activity limitation may have difficulty pursuing higher education.

Other findings

- In general, a larger share of men than women report being in good health across literacy and numeracy proficiency levels, with the smallest gender gap among adults with tertiary education and high proficiency levels. The gender gap in activity limitation due to health problems also generally decreases as educational attainment increases. Among those aged 25 and over with below upper secondary education, across countries that participated in the EU Statistics on Income and Living Conditions, the difference between men and women in the share of those with activity limitation is 10 percentage points, but it decreases to 5 percentage points among those with upper secondary or post-secondary non-tertiary education and 2 percentage points among those with tertiary education.
- Overall, the share of people who expect to be satisfied with their life in five years increases by level of educational attainment. On average across OECD countries, the share of adults who expect to be satisfied with their life in five years is 87% for those with upper secondary and post-secondary non-tertiary education and 94% for the tertiary-educated.

Note

Social outcomes included in this indicator draw from different surveys. The Survey of Adult Skills is used to analyse self-reported health among 25-64 year-olds. EU Statistics on Income and Living Conditions (EU-SILC) and national surveys are used to evaluate complementary health information on activity limitation. They refer to people in wider age groups including those aged 65 and over, as health conditions deteriorate with age and health-related outcomes are particularly relevant to those in old age. To evaluate life satisfaction of 25-64 year-olds, the Gallup World Poll is used. Other social outcomes, such as volunteering, interpersonal trust and political efficacy, also drawn from the Survey of Adult Skills, include a wider range of countries than previously reported (OECD, 2014; OECD, 2015b), and these data are made available on line (Tables A8.4 [L], A8.4 [N], A8.5 [L], A8.5 [N], A8.6 [L] and A8.6 [N]).

Analysis

Self-reported health

Across countries and subnational entities that participated in the Survey of Adult Skills, a majority of adults report being in good health, and the share of individuals with good self-reported health increases with educational attainment (see the *Definitions* section at the end of this indicator). On average across OECD countries and subnational entities that participated in the Survey of Adult Skills, the share of those who report being in good health is 65% among 25-64 year-olds with below upper secondary education, 79% among those with upper secondary or post-secondary non-tertiary education and 88% among those with tertiary education (OECD, 2015b). This is in line with many studies across countries and suggests that higher educational attainment is associated with better health outcomes. In fact, across 15 OECD countries with available data, life expectancy at age 30 is 6 years longer among those with tertiary education (53 additional years at age 30) than for those with below upper secondary education (47 additional years at age 30) (OECD, 2015a; OECD, 2012).

While educational attainment has a larger role in self-reported health than proficiency in literacy or numeracy (OECD, 2015b), good self-reported health is also related to higher proficiency levels. For example, on average across OECD countries and subnational entities, 67% of those with the lowest level of literacy proficiency report being in good health, while the share is much higher (78%) among those with proficiency Level 2, 85% among those with proficiency Level 3, and 90% among those with the highest literacy proficiency level (Table A8.1 [L]). This positive relationship also holds between self-reported health and numeracy proficiency (Table A8.1 [N], available on line).

The proportion of adults reporting good health is highest among those who have both a high qualification and high proficiency levels. On average across OECD countries and subnational entities, the share of tertiary-educated adults reporting good health is 92% among those with the highest literacy proficiency level and also 92% among those with highest numeracy proficiency level (Table A8.1 [L] and Table A8.1 [N], available on line). These days, a vast amount of information is available on health conditions and care, as health care supported by the use of information and communication technologies (ICT) is expanding. People seem to need ICT skills to seek the appropriate information and process it properly. Higher-qualified and higher-skilled people appear to be better equipped in terms of skills and resources to do so, and can, therefore, manage their own health better by seeking health care more appropriately, getting involved in taking care of their own health, and having a healthy lifestyle.

Differences in self-reported health can be explained by a number of factors, including living and working conditions, access to and utilisation of care, and lifestyles and risk factors, such as smoking, harmful alcohol drinking, physical inactivity and obesity. These are associated not only with educational attainment and proficiency levels, but also with other socio-economic factors such as income (OECD, 2015a).

But the share of people reporting good health may not always relate to overall health outcomes, such as life expectancy. For example, in Japan, which has the longest life expectancy in the OECD, the share of 25-64 year-olds reporting good health is lower than in many other countries. On the other hand, in Turkey, with relatively low life expectancy, the share of adults reporting good health is about the OECD average across educational attainment and proficiency levels (OECD, 2015a).

Even though life expectancy is generally lower among men than women, in general, a larger share of men than women consistently report being in good health across proficiency levels, but the gender gap is small among those with higher educational attainment and higher proficiency levels. For instance, while 69% of men with the lowest proficiency level in literacy report being in good health, compared to 65% of women, the gap is smaller among those with highest proficiency level (91% for men and 90% for women) across OECD countries and subnational entities (Figure A8.1 and Table A8.1 [L]). Across OECD countries, the gender difference is not often significant with exceptions of Chile, Korea, Sweden and Turkey for lowest proficiency level in literacy. Similar patterns are found by proficiency levels in numeracy (Table A8.1 [N], available on line).

Activity limitation

People with higher educational attainment report lower activity limitation due to health problems across all age groups, suggesting that the higher-educated are more likely to have longer years of healthy life, compared to the lower-educated. On average across countries participated in EU-SILC, the difference in the share of people with activity limitation between those with below upper secondary education and those with tertiary education is 12 percentage points among 25-34 year-olds, but it increases to 15 percentage points among 35-44 year-olds, 18 percentage points among 45-54 year-olds, and 20 percentage points among 55-64 year-olds. Activity limitation due to health problems may partly explain lower labour market outcomes of people with lower levels of educational attainment.

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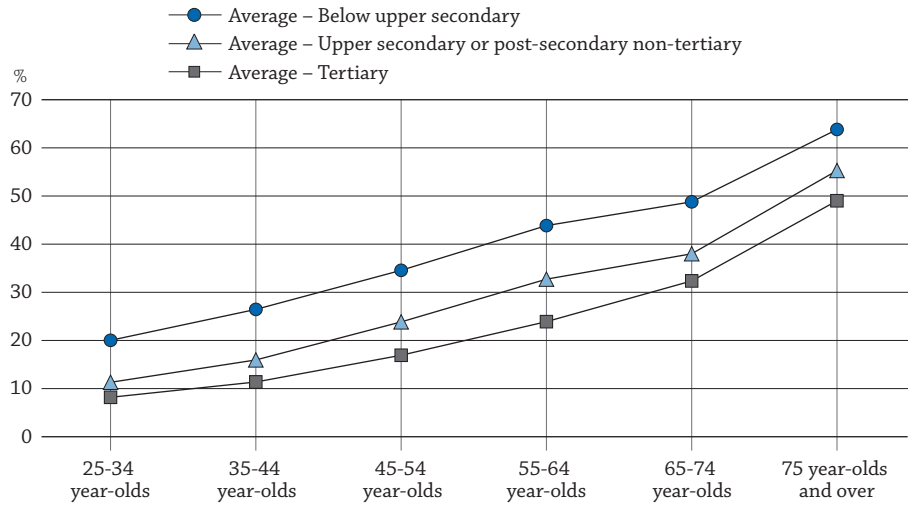
Later in life, the share decreases, to 16 percentage points among 65-74 year-olds and 15 percentage points among those aged 75 and over (Figure A8.2 and Table A8.2a and see the *Definitions* sections at the end of this indicator). A narrower gap at older ages may be explained partly by the fact that the low-educated have lower life expectancy than the tertiary-educated.

Figure A8.2. Percentage of adults reporting activity limitation due to health problem, by educational attainment and age group (2014)

European Union Statistics on Income and Living Conditions (EU-SILC)



Source: OECD. Table A8.2a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397408

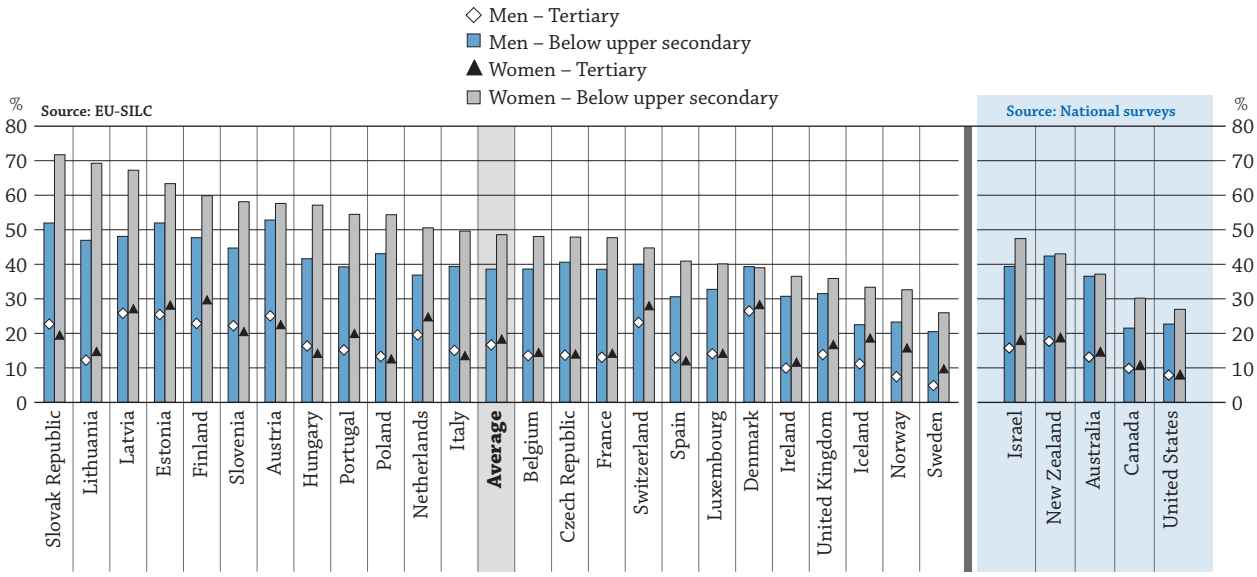
Some Nordic countries have a narrower gap in activity limitation by educational attainment than other countries. The difference in the share of people aged 25 and over with activity limitation by educational attainment is small for both men and women in Denmark (13 percentage points between below upper secondary and tertiary education levels for men and 11 percentage points for women) and Iceland (11 percentage points for men and 15 percentage points for women). Norway and Sweden also have narrower gaps than other countries (Figure A8.3). In these countries, the small gap in activity limitation by educational attainment may translate partly into a relatively small gap in life expectancy at age 25 by educational attainment, compared to other countries (Eurostat, 2016).

Several countries, however, have large disparities in the shares of people with activity limitation due to health problems by educational attainment. Lithuania has the largest difference, 35 percentage points for men (47% among those with below upper secondary education and 12% among those with tertiary education) and as large as 55 percentage points for women (69% for those with below upper secondary education and 15% for those with tertiary education). The Slovak Republic also has a large difference, 29 percentage points for men (52% among those with below upper secondary education and 23% among those with tertiary education) and 52 percentage points for women (72% among those with below upper secondary education and 19% among those with tertiary education) (Figure A8.3). In the Slovak Republic, where data are available, the gap in life expectancy at age 25 is also large between people with below upper secondary education and people with tertiary education (Eurostat, 2016). This suggests that public health efforts targeting low-educated people may be needed, and education may also play a role in reducing activity limitation due to health problems.

The share of activity limitation is generally higher among women than among men, but the gender gap in activity limitation due to health problems generally decreases as educational attainment increases. Among those aged 25 and over, on average across countries, the share of those with activity limitation is 49% among women with below upper secondary education, compared to 39% among men with the same level of educational attainment. But the difference decreases to 5 percentage points among those with upper secondary or post-secondary non-tertiary education (28% for women and 23% for men) and 2 percentage points among those with tertiary education (18% for women and 17% for men) (Figure A8.3 and Tables A8.2b and c, available on line).

Figure A8.3. Percentage of men and women aged 25 and over reporting activity limitation due to health problem, by educational attainment (2014)

European Union Statistics on Income and Living Conditions (EU-SILC) and other national surveys



Note: Switzerland: Year of reference 2013. Average refers to EU-SILC average and does not include data from other national surveys.
Countries are ranked in descending order of the percentage of women 25 years old and over with below upper secondary education reporting activity limitation due to health problem.

Source: OECD. Tables A8.2b and A8.2c, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397416

In some countries, the gender gap is particularly large among those with lower levels of educational attainment. Among those aged 25 years and over with below upper secondary education, in Lithuania and the Slovak Republic, the difference is as large as 20 percentage points or more between men and women, while the difference is negligible in Denmark. In several countries, among those with higher levels of educational attainment, the share of men with activity limitation is sometimes higher than that of women. The reverse pattern is observed in countries including Austria and the Slovak Republic, where the share of tertiary-educated adults with activity limitation is 3 percentage points higher among men than among women.

Life satisfaction

Throughout the 2010-15 period, individuals with tertiary education were more likely to report satisfaction with their life than those with upper secondary or post-secondary non-tertiary education. On average across OECD countries participated in the Gallup World Poll, 92% of tertiary-educated adults were satisfied with their life in 2015, compared to 83% among those with upper secondary or post-secondary non-tertiary education (Figure A8.4 and see the *Definitions* sections at the end of this indicator).

The share of people reporting satisfaction with their life varies across countries, particularly among those with lower educational attainment. For example, among those with upper secondary or post-secondary non-tertiary education, it ranges from 43% in India, followed by 52% in South Africa to 97% in the Netherlands and New Zealand. The variation is smaller among the tertiary-educated. India has the lowest share at 67%, while in Iceland, all those with tertiary education reported satisfaction with their life, and the share is also high in the Slovak Republic and Sweden (98%) (Table A8.3a).

Education appears to play some role in improving subjective well-being, but mainly through its impact on other life outcomes. This is because a correlation between subjective well-being and higher educational attainment, which exists across countries, becomes weak if other aspects of well-being such as income and health status are controlled for (Boarini et al., 2012; OECD, 2013a). In addition to income and health status, subjective well-being may also be related to other factors, including unemployment, specific life events and circumstances (such as the onset of disability), or specific patterns of behaviours and daily events (such as interaction with friends and family) (OECD, 2013b).

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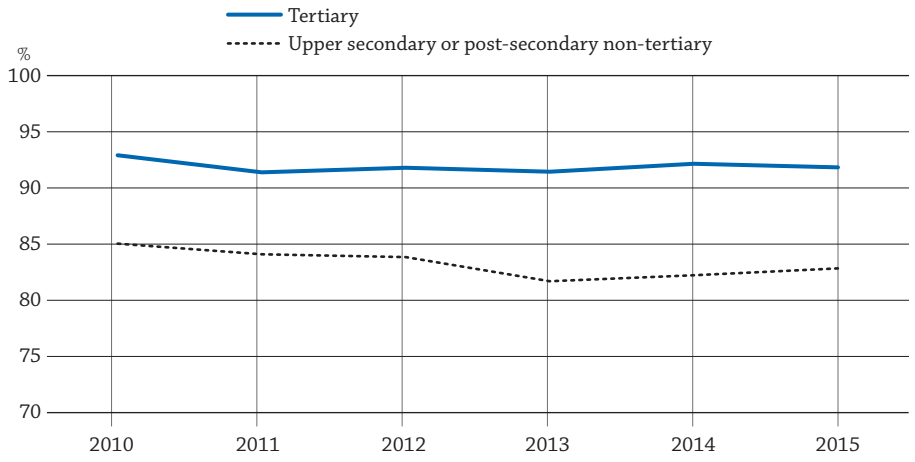
Figure A8.4. Trend in life satisfaction, by educational attainment (2010-15)

Percentage of 25-64 year-olds reporting they stand on the positive side of the Cantril ladder of life satisfaction, OECD average

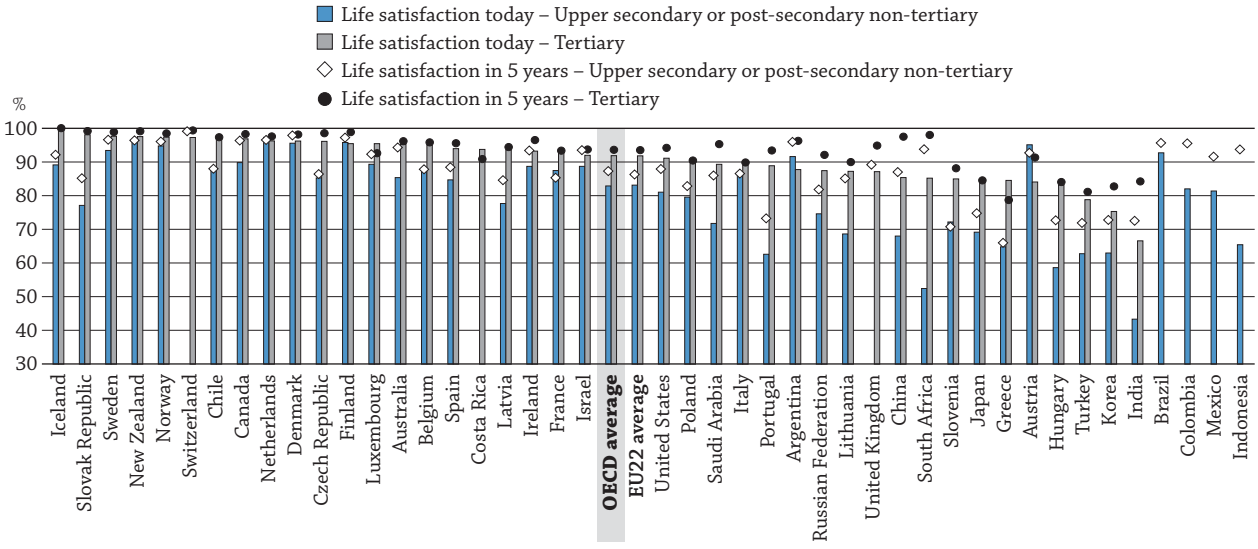


Note: Educational attainment categories collected by Gallup may differ from ISCED 2011.
Source: OECD. Table A8.3b, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933397420

Overall, the share of adults who expect to be satisfied with their life in five years increases by level of educational attainment and it is also higher than those reporting satisfaction with their life today. On average across OECD countries, the share of adults who expect to be satisfied with their life in five years is 87% among those with upper secondary and post-secondary non-tertiary education and 94% among the tertiary-educated. It is higher than the share of people reporting life satisfaction today for the same level of educational attainment (Figure A8.5, Table A8.3a and see the *Definitions* sections at the end of this indicator).

Figure A8.5. Life satisfaction today and in five years, by educational attainment (2015)

Percentage of 25-64 year-olds reporting they stand on the positive side of the Cantril ladder of life satisfaction



Note: Educational attainment categories collected by Gallup may differ from ISCED 2011. Refer to the *Definitions* section at the end of this indicator for more information on life satisfaction today and in five years.
Countries are ranked in descending order of the percentage of 25-64 year-olds with tertiary education reporting they stand on the positive side of the Cantril ladder of life satisfaction at the time of the survey.
Source: OECD. Table A8.3a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933397435

The share of people reporting that they are satisfied with their life today and expect to be satisfied with their life in five years is generally high in the Nordic countries and several other countries. Across educational attainment levels, the share of people reporting life satisfaction today is high in Denmark, Finland, the Netherlands, New Zealand and Norway, with about 95% of people with upper secondary and post-secondary non-tertiary education and those with tertiary education. The share of people expecting to be satisfied with their life in five years is also high, at approximately 95% for the same levels of educational attainment in those countries and also in Argentina, Canada, Sweden and Switzerland (Figure A8.5 and Table A8.3a).

In emerging economies, where the share of people reporting satisfaction with their life today is relatively low, a large share of people expect to be satisfied with their life in five years. In India, for example, only 43% of people with upper secondary and post-secondary non-tertiary education report satisfaction with their life today, and the share is also low (67%) among the tertiary-educated, but 72% of those with upper secondary and post-secondary non-tertiary education consider that they expect to be satisfied with their life in five years, while the share goes up to 84% among the tertiary-educated. Similar patterns are also observed in other partner countries, such as China, Indonesia and South Africa (Figure A8.5).

Definitions

Activity limitation refers to when adults reported that, because of a health problem, they were limited to a greater or lesser degree in doing normal activities during at least the six months prior to the survey.

Adults generally refers to 25-64 year-olds but for activity limitation, adults refers to those aged 25 and over.

Levels of education: In this indicator, two ISCED (International Standard Classification of Education) classifications are used: ISCED 2011 and ISCED-97.

- ISCED 2011 is used for all the analyses that are not based on the Survey of Adult Skills. For ISCED 2011, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2, and includes recognised qualifications from ISCED 2011 level 3 programmes, which are not considered as sufficient for ISCED 2011 level 3 completion, and without direct access to post-secondary non-tertiary education or tertiary education; **upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4; and **tertiary** corresponds to ISCED 2011 levels 5, 6, 7 and 8 (UNESCO Institute for Statistics, 2012). Educational attainment categories collected by Gallup may differ from ISCED-A 2011.
- ISCED-97 is used for all analyses based on the Survey of Adult Skills. For ISCED-97, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

See the section *About the new ISCED 2011 classification*, at the beginning of this publication, for a presentation of all ISCED 2011 levels and Annex 3 for a presentation of all ISCED-97 levels.

Life satisfaction (subjective well-being): Data on "Life satisfaction today" represent the proportion of adults who answered "6 or above" to the following question: "Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step, the better you feel about your life, and the lower the step, the worse you feel about it? Which step comes closest to the way you feel?" Data on "Life satisfaction in 5 years" are based on the same type of questions, but the respondents reported where they think they would stand five years after the survey.

Literacy is the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential. Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts. It does not, however, involve the production of text (writing). Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.

Numeracy is the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life. To this end, numeracy involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways.

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Proficiency levels for literacy and numeracy are based on a 500-point scale. Each level has been defined by particular score-point ranges. Six levels are defined for literacy and numeracy (Below Level 1 and Levels 1 through 5) which are grouped in four proficiency levels in *Education at a Glance*:

- Level 1 or below: all scores below 226 points
- Level 2: scores from 226 points to less than 276 points
- Level 3: scores from 276 points to less than 326 points
- Level 4 or 5: scores from 326 points and higher.

Reporting being in good health includes adults who reported that they are in excellent, very good or good health.

Reporting believing they have a say in government includes adults who strongly disagreed or disagreed with the statement: "People like me don't have any say about what the government does".

Reporting trusting others includes adults who strongly disagreed or disagreed that there are only a few people you can trust completely.

Reporting volunteering includes adults who reported that they volunteer at least once a month.

Methodology

Data on activity limitation due to health problems are based on the European Union Statistics on Income and Living Conditions (EU-SILC) for European countries and on other national surveys for non-European countries. The educational attainment variable used in EU-SILC is based on ISCED-A 2011.

The analyses on life satisfaction are based on Gallup World Poll data for all countries. The educational attainment categories in the Gallup World Poll may differ from those in the Labour Force Surveys (used as a source for Indicator A1). In order to ensure international comparability, the Gallup World Poll's educational attainment variable was remapped to ISCED-A 2011 to the closest possible match.

Data on self-reported health, volunteering, interpersonal trust and political efficacy are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). The educational attainment variable used in the Survey of Adult Skills is based on ISCED-97.

See Annex 3 for additional information on the different sources used in this indicator (www.oecd.org/education/education-at-a-glance-19991487.htm).

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator A8 Tables

StatLink http://dx.doi.org/10.1787/888933397355

	Table A8.1 (L)	Percentage of adults reporting that they are in good health, by educational attainment, literacy proficiency level and gender (2012 or 2015)
WEB	Table A8.1 (N)	Percentage of adults reporting that they are in good health, by educational attainment, numeracy proficiency level and gender (2012 or 2015)
	Table A8.2a	Percentage of adults reporting activity limitation due to health problem, by educational attainment and age group (2014)
WEB	Table A8.2b	Percentage of men reporting activity limitation due to health problem, by educational attainment and age group (2014)
WEB	Table A8.2c	Percentage of women reporting activity limitation due to health problem, by educational attainment and age group (2014)
	Table A8.3a	Life satisfaction today and in 5 years, by educational attainment (2015)
WEB	Table A8.3b	Trends in life satisfaction, by educational attainment (2010-2015)
WEB	Table A8.4 (L)	Percentage of adults reporting that they volunteer at least once a month, by educational attainment, literacy proficiency level and gender (2012 or 2015)
WEB	Table A8.4 (N)	Percentage of adults reporting that they volunteer at least once a month, by educational attainment, numeracy proficiency level and gender (2012 or 2015)
WEB	Table A8.5 (L)	Percentage of adults reporting that they trust others, by educational attainment, literacy proficiency level and gender (2012 or 2015)
WEB	Table A8.5 (N)	Percentage of adults reporting that they trust others, by educational attainment, numeracy proficiency level and gender (2012 or 2015)
WEB	Table A8.6 (L)	Percentage of adults reporting that they believe they have a say in government, by educational attainment, literacy proficiency level and gender (2012 or 2015)
WEB	Table A8.6 (N)	Percentage of adults reporting that they believe they have a say in government, by educational attainment, numeracy proficiency level and gender (2012 or 2015)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table A8.1 (L). Percentage of adults reporting that they are in good health, by educational attainment, literacy proficiency level and gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Men and women				Men				Women			
	All levels of education				All levels of education				All levels of education			
	Level 0/1	Level 2	Level 3	Level 4/5	Level 0/1	Level 2	Level 3	Level 4/5	Level 0/1	Level 2	Level 3	Level 4/5
	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.
	(25) (26)	(27) (28)	(29) (30)	(31) (32)	(57) (58)	(59) (60)	(61) (62)	(63) (64)	(89) (90)	(91) (92)	(93) (94)	(95) (96)
OECD												
National entities												
Australia	72 (2.2)	82 (1.4)	87 (0.9)	90 (1.1)	73 (3.0)	82 (1.9)	87 (1.4)	90 (1.8)	70 (3.3)	83 (2.1)	86 (1.4)	90 (1.5)
Austria	67 (2.2)	79 (1.3)	88 (1.1)	95 (1.7)	67 (2.9)	79 (1.7)	88 (1.5)	95 (1.9)	67 (3.2)	79 (1.8)	88 (1.6)	94 (2.5)
Canada	78 (1.2)	87 (0.8)	92 (0.5)	95 (0.9)	77 (2.0)	86 (1.2)	92 (0.9)	96 (1.1)	80 (1.3)	87 (0.9)	91 (0.7)	93 (1.4)
Chile	53 (2.2)	77 (2.1)	86 (2.9)	91 (7.0)	60 (2.4)	83 (2.7)	85 (4.0)	c c	46 (2.5)	71 (2.8)	88 (3.4)	c c
Czech Republic	82 (3.1)	84 (1.9)	90 (1.5)	97 (1.8)	80 (6.0)	84 (2.7)	91 (1.7)	97 (2.1)	83 (3.3)	85 (2.2)	90 (2.5)	97 (2.8)
Denmark	64 (1.7)	79 (1.1)	88 (0.9)	92 (1.8)	66 (2.5)	79 (1.8)	89 (1.3)	92 (2.6)	61 (2.5)	79 (1.6)	86 (1.2)	92 (2.3)
Estonia	43 (2.1)	55 (1.2)	67 (1.1)	78 (2.2)	43 (3.2)	56 (1.7)	67 (1.6)	77 (3.3)	44 (2.8)	54 (1.9)	67 (1.5)	78 (2.7)
Finland	62 (2.7)	73 (1.4)	84 (1.1)	90 (1.2)	62 (3.7)	71 (2.1)	82 (1.8)	89 (1.8)	63 (4.2)	76 (2.2)	87 (1.4)	92 (1.4)
France	66 (1.6)	79 (1.0)	86 (1.0)	91 (1.7)	70 (2.0)	80 (1.3)	87 (1.2)	91 (2.6)	62 (2.2)	78 (1.4)	85 (1.3)	90 (2.3)
Germany	74 (2.0)	86 (1.1)	92 (1.0)	97 (1.4)	75 (2.9)	88 (1.5)	93 (1.2)	98 (1.2)	74 (3.3)	85 (1.9)	91 (1.4)	95 (2.6)
Greece	83 (1.8)	86 (1.2)	89 (1.5)	91 (3.4)	86 (2.4)	89 (1.8)	91 (2.1)	94 (4.8)	79 (2.3)	84 (1.6)	88 (2.2)	89 (5.3)
Ireland	77 (1.9)	87 (1.0)	91 (0.9)	93 (1.6)	80 (2.7)	88 (1.7)	91 (1.3)	92 (2.3)	75 (2.5)	87 (1.4)	92 (1.1)	94 (1.9)
Israel	68 (1.5)	86 (1.3)	91 (1.0)	95 (1.6)	67 (2.2)	85 (1.9)	91 (1.5)	95 (2.4)	69 (2.1)	86 (1.8)	91 (1.5)	96 (2.4)
Italy	76 (1.8)	80 (1.4)	85 (1.7)	92 (3.1)	79 (2.4)	84 (1.9)	90 (1.7)	93 (3.3)	72 (2.7)	77 (1.8)	81 (2.7)	91 (5.3)
Japan	58 (4.4)	66 (1.9)	74 (1.2)	77 (1.6)	58 (5.8)	65 (2.8)	73 (1.8)	78 (2.6)	59 (6.2)	66 (2.7)	75 (1.7)	77 (2.5)
Korea	31 (2.0)	43 (1.2)	53 (1.3)	60 (3.4)	40 (3.5)	48 (1.9)	58 (1.8)	64 (4.4)	25 (2.4)	38 (1.6)	48 (1.8)	54 (6.1)
Netherlands	61 (2.5)	79 (1.5)	84 (1.1)	89 (1.5)	63 (3.6)	83 (2.1)	86 (1.4)	89 (2.1)	60 (3.6)	76 (2.0)	82 (1.7)	89 (2.3)
New Zealand	78 (2.0)	85 (1.2)	90 (0.8)	93 (1.3)	81 (2.7)	85 (1.7)	89 (1.2)	92 (2.0)	75 (3.1)	84 (1.8)	90 (1.2)	94 (1.7)
Norway	69 (2.6)	77 (1.5)	86 (1.0)	89 (1.8)	71 (3.7)	78 (2.2)	86 (1.6)	90 (2.1)	68 (3.4)	75 (2.2)	85 (1.2)	88 (2.7)
Poland	62 (1.9)	77 (1.2)	85 (1.2)	92 (2.2)	62 (3.0)	79 (1.9)	87 (1.9)	92 (3.1)	62 (2.5)	75 (1.6)	84 (1.6)	92 (2.7)
Slovak Republic	64 (2.8)	74 (1.4)	83 (0.9)	89 (2.6)	65 (3.9)	75 (2.0)	86 (1.2)	91 (3.0)	62 (3.9)	72 (1.9)	81 (1.5)	87 (4.0)
Slovenia	70 (1.5)	79 (1.3)	89 (1.0)	94 (2.3)	73 (1.8)	80 (1.7)	91 (1.2)	95 (2.8)	66 (2.1)	77 (1.8)	87 (1.5)	92 (3.4)
Spain	63 (1.5)	79 (1.2)	85 (1.3)	91 (2.4)	68 (2.3)	81 (1.6)	85 (1.8)	91 (3.2)	60 (1.9)	78 (1.7)	85 (1.9)	91 (3.7)
Sweden	68 (2.5)	80 (1.7)	87 (1.1)	93 (1.4)	77 (3.6)	82 (2.3)	87 (1.5)	94 (1.4)	60 (3.7)	77 (2.4)	86 (1.4)	91 (2.3)
Turkey	63 (1.6)	76 (1.6)	80 (2.6)	84 (13.1)	69 (2.2)	79 (2.2)	82 (3.3)	c c	58 (2.0)	73 (2.4)	78 (4.2)	c c
United States	67 (1.9)	81 (1.6)	90 (1.0)	95 (1.2)	71 (3.0)	82 (2.2)	90 (1.4)	95 (1.7)	64 (2.6)	81 (1.9)	89 (1.3)	96 (1.5)
Subnational entities												
Flanders (Belgium)	76 (1.7)	82 (1.2)	88 (0.9)	91 (1.5)	77 (2.5)	82 (1.7)	89 (1.2)	91 (1.7)	74 (2.3)	82 (1.7)	88 (1.4)	91 (2.8)
England (UK)	71 (2.1)	82 (1.3)	88 (1.2)	92 (1.4)	72 (3.2)	81 (1.9)	88 (1.5)	92 (1.9)	70 (2.7)	83 (1.6)	88 (1.6)	93 (2.0)
Northern Ireland (UK)	68 (2.7)	77 (1.7)	86 (1.4)	93 (1.7)	70 (4.5)	78 (2.7)	88 (2.0)	94 (2.3)	66 (3.3)	77 (2.2)	84 (1.7)	92 (2.6)
Average	67 (0.4)	78 (0.3)	85 (0.2)	90 (0.6)	69 (0.6)	79 (0.4)	86 (0.3)	91 (0.5)	65 (0.6)	77 (0.4)	84 (0.3)	90 (0.6)
Partners												
Jakarta (Indonesia)	69 (1.2)	81 (1.6)	86 (3.2)	78 (16.0)	72 (1.7)	81 (2.2)	87 (4.2)	c c	67 (1.1)	81 (2.0)	85 (5.2)	c c
Lithuania	48 (3.1)	57 (1.8)	71 (1.9)	83 (3.8)	52 (4.9)	61 (2.5)	73 (2.5)	82 (6.1)	44 (3.5)	54 (2.1)	69 (2.7)	84 (4.2)
Russian Federation*	q q	q q	q q	q q	q q	q q	q q	q q	q q	q q	q q	q q
Singapore	61 (1.4)	75 (1.5)	80 (1.3)	84 (2.4)	61 (2.2)	75 (2.2)	81 (1.7)	84 (3.2)	61 (1.9)	76 (1.9)	79 (1.9)	84 (3.4)

Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. Columns showing data by levels of educational attainment are available for consultation on line (see *StatLink* below).

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397365

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Table A8.2a. Percentage of adults reporting activity limitation due to health problem, by educational attainment and age group (2014)

		European Union Statistics on Income and Living Conditions (EU-SILC)															
		25-year-olds and over				25-44 year-olds				45-64 year-olds				65-year-olds and over			
		Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(17)	(18)	(19)	(20)	(29)	(30)	(31)	(32)
OECD	Austria	56	35	24	36	34	20	13	19	51	37	28	37	71	52	42	57
	Belgium	44	24	14	26	32	14	8	14	40	26	16	27	52	39	29	43
	Czech Republic	46	24	14	25	20	10	5	9	43	23	14	24	58	44	36	46
	Denmark	39	31	27	32	41	18	18	20	40	37	34	37	38	38	36	37
	Estonia	58	37	27	37	26	17	10	15	54	40	28	37	76	68	61	68
	Finland	54	35	27	37	32	25	18	22	50	38	27	36	59	48	44	53
	France	44	25	14	27	21	15	9	13	37	25	16	26	56	42	30	48
	Greece	45	15	11	26	12	6	3	6	27	16	13	20	67	46	42	61
	Hungary	52	25	15	29	20	6	3	7	45	28	15	29	74	57	44	62
	Iceland	29	16	16	20	21	10	13	14	32	21	15	22	31	21	29	27
	Ireland	33	16	11	20	18	11	7	10	32	17	12	20	42	31	27	37
	Italy	45	20	14	31	15	11	7	11	33	21	18	26	67	48	37	62
	Latvia	58	42	27	41	26	15	9	15	53	45	29	42	81	70	68	74
	Luxembourg	37	24	14	26	21	14	11	15	37	29	14	29	52	37	27	43
	Netherlands	45	34	22	33	28	25	13	20	46	35	27	35	51	46	37	46
	Norway	28	21	12	18	18	14	8	11	31	23	15	21	32	23	16	24
	Poland	50	25	13	26	23	10	6	9	38	27	18	28	63	51	43	55
	Portugal	47	19	18	38	23	14	11	17	41	26	25	37	70	39	41	67
	Slovak Republic	65	34	21	35	25	13	11	13	54	39	27	38	84	72	62	75
	Slovenia	53	33	21	34	21	17	12	16	48	36	23	36	68	53	41	55
	Spain	36	16	12	25	15	10	7	10	30	19	16	24	56	37	34	52
	Sweden	24	13	8	13	21	8	5	8	24	13	7	13	25	19	14	20
	Switzerland[1]	43	31	25	31	30	20	19	21	44	31	26	31	51	46	40	46
	United Kingdom	34	18	15	25	18	10	8	12	31	19	17	24	50	42	37	46
	Average	44	26	18	29	23	14	10	14	40	28	20	29	57	45	38	50
Partner	Lithuania	60	28	14	29	26	9	5	9	42	26	12	23	75	59	48	64

		National surveys[2]															
		25-year-olds and over				25-44 year-olds				45-64 year-olds				65-year-olds and over			
		Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education	Below upper secondary	Upper secondary or post-secondary non-tertiary	Tertiary	All levels of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(17)	(18)	(19)	(20)	(29)	(30)	(31)	(32)
OECD	Australia	37	19	14	23	19	10	6	10	32	20	16	23	54	48	42	50
	Canada	26	16	10	15	13	7	5	6	21	16	12	15	38	32	26	32
	Israel	43	23	17	23	19	12	8	11	45	29	20	27	62	46	40	49
	New Zealand	43	27	18	29	26	18	9	16	39	25	19	28	61	53	50	56
	United States	25	16	8	13	9	7	3	5	23	15	8	13	46	31	22	30

Note: Columns showing data for detailed 10-year age group are available for consultation on line (see *StatLink* below).

1. Switzerland: Year of reference 2013.

2. Year of reference vary from 2014, refer to Annex 3 for more information.

Sources: European Union Statistics on Income and Living Conditions (EU-SILC) and other national surveys. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397372

Table A8.3a. Life satisfaction today and in 5 years, by educational attainment (2015)

Percentage of 25-64 year-olds reporting they stand on the positive side of the Cantril ladder of life satisfaction

		Life satisfaction today								Life satisfaction in 5 years							
		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		All levels of education	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia	c	c	85	(3.9)	95	(1.5)	90	(1.7)	c	c	94	(2.5)	96	(1.3)	94	(1.3)
	Austria	c	c	95	(1.4)	84	(3.4)	90	(1.5)	c	c	93	(1.8)	91	(2.6)	92	(1.3)
	Belgium	c	c	87	(2.8)	95	(1.0)	91	(1.5)	c	c	88	(2.7)	96	(0.9)	90	(1.6)
	Canada	c	c	90	(2.9)	97	(0.9)	95	(0.9)	c	c	96	(1.9)	98	(0.7)	98	(0.7)
	Chile	85	(3.8)	88	(2.4)	97	(1.6)	89	(1.7)	77	(5.1)	88	(2.7)	97	(1.1)	87	(2.3)
	Czech Republic	c	c	85	(2.1)	96	(1.8)	88	(1.7)	c	c	86	(2.1)	98	(1.1)	89	(1.8)
	Denmark	c	c	96	(1.7)	96	(1.0)	93	(1.4)	c	c	98	(1.0)	98	(0.7)	97	(0.9)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	c	c	96	(1.4)	95	(1.7)	95	(1.2)	c	c	97	(0.9)	99	(0.7)	97	(0.7)
	France	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
	Greece	c	c	65	(4.0)	84	(2.9)	67	(3.1)	c	c	66	(4.3)	79	(3.9)	65	(3.3)
	Hungary	c	c	59	(4.3)	83	(3.6)	59	(3.9)	c	c	73	(3.1)	84	(3.9)	69	(3.4)
	Iceland	c	c	89	(3.6)	100	(0.0)	94	(1.7)	c	c	92	(3.2)	100	(0.0)	95	(1.7)
	Ireland	86	(3.9)	89	(2.2)	93	(2.0)	89	(1.5)	90	(3.3)	93	(1.7)	96	(1.3)	94	(1.2)
	Israel	c	c	89	(3.0)	92	(1.6)	90	(1.6)	c	c	93	(1.8)	94	(1.5)	93	(1.4)
	Italy	86	(3.1)	87	(2.4)	89	(3.1)	87	(1.8)	84	(3.2)	87	(2.2)	90	(2.7)	86	(1.7)
	Japan	c	c	69	(5.0)	85	(2.4)	78	(2.5)	c	c	75	(4.2)	84	(2.3)	80	(2.2)
	Korea	c	c	63	(4.7)	75	(2.8)	70	(2.5)	c	c	73	(4.2)	83	(2.3)	79	(2.1)
	Latvia	c	c	78	(3.1)	94	(1.8)	81	(2.3)	c	c	85	(2.3)	94	(1.7)	86	(1.8)
	Luxembourg	c	c	89	(2.5)	95	(1.3)	91	(1.7)	c	c	92	(2.0)	93	(1.7)	93	(1.4)
	Mexico	76	(4.5)	81	(3.8)	c	c	78	(3.5)	77	(3.9)	92	(2.2)	c	c	82	(2.8)
	Netherlands	c	c	97	(1.0)	96	(1.1)	95	(0.9)	c	c	96	(1.2)	98	(0.8)	95	(1.0)
	New Zealand	c	c	97	(2.7)	97	(1.2)	95	(1.3)	c	c	96	(2.6)	99	(0.5)	98	(1.0)
	Norway	c	c	95	(1.8)	97	(0.9)	95	(1.2)	c	c	96	(1.4)	98	(0.7)	97	(0.9)
	Poland	c	c	80	(2.2)	91	(3.0)	80	(2.2)	c	c	83	(2.2)	90	(2.9)	82	(1.9)
	Portugal	36	(3.5)	63	(4.7)	89	(3.2)	51	(2.6)	53	(3.7)	73	(3.9)	93	(1.8)	65	(2.4)
	Slovak Republic	c	c	77	(3.3)	98	(1.3)	80	(2.5)	c	c	85	(2.1)	99	(0.7)	86	(1.8)
	Slovenia	46	(5.0)	72	(3.9)	85	(2.8)	66	(2.6)	52	(4.9)	71	(3.7)	88	(2.6)	68	(2.4)
	Spain	78	(4.5)	85	(3.2)	94	(1.4)	85	(2.0)	85	(3.5)	88	(2.5)	96	(1.2)	89	(1.6)
	Sweden	c	c	93	(1.6)	98	(0.9)	94	(1.2)	c	c	97	(1.1)	99	(0.7)	97	(0.9)
	Switzerland	c	c	c	c	97	(1.3)	96	(1.7)	c	c	99	(0.7)	99	(0.7)	98	(1.2)
	Turkey	59	(3.6)	63	(4.2)	79	(4.2)	63	(2.6)	67	(3.7)	72	(3.7)	81	(3.8)	70	(2.5)
	United Kingdom	87	(2.7)	c	c	87	(2.5)	86	(1.8)	93	(2.0)	89	(4.0)	95	(1.4)	93	(1.3)
	United States	c	c	81	(3.4)	91	(1.8)	85	(2.0)	c	c	88	(2.3)	94	(1.5)	91	(1.4)
	OECD average	m	m	83	(0.6)	92	(0.4)	84	(0.4)	m	m	87	(0.5)	94	(0.3)	87	(0.3)
	EU22 average	m	m	83	(0.7)	92	(0.5)	83	(0.5)	m	m	86	(0.6)	93	(0.5)	86	(0.4)
Partners	Argentina	88	(2.5)	92	(1.9)	88	(4.7)	89	(1.6)	91	(2.5)	96	(1.3)	96	(1.8)	94	(1.4)
	Brazil	74	(3.2)	93	(2.0)	c	c	83	(2.4)	87	(2.0)	96	(1.4)	c	c	91	(1.2)
	China	54	(2.9)	68	(3.3)	85	(2.9)	60	(2.4)	82	(2.3)	87	(2.2)	97	(0.9)	85	(1.8)
	Colombia	68	(3.9)	82	(3.1)	c	c	79	(2.3)	81	(3.0)	95	(1.5)	c	c	91	(1.5)
	Costa Rica	83	(3.0)	c	c	94	(3.2)	87	(2.4)	82	(2.6)	c	c	91	(3.3)	86	(2.0)
	India	26	(4.0)	43	(3.9)	67	(5.6)	34	(3.3)	49	(4.3)	72	(3.0)	84	(3.4)	60	(3.1)
	Indonesia	41	(5.4)	65	(4.4)	c	c	52	(4.7)	82	(4.9)	94	(2.5)	c	c	87	(3.8)
	Lithuania	c	c	69	(4.3)	87	(2.4)	73	(3.0)	c	c	85	(3.1)	90	(2.2)	85	(2.3)
	Russian Federation	c	c	75	(3.6)	87	(2.1)	78	(2.9)	c	c	82	(2.9)	92	(1.7)	85	(2.2)
	Saudi Arabia	72	(4.6)	72	(3.8)	89	(2.3)	77	(2.3)	80	(4.0)	86	(2.9)	95	(1.4)	86	(1.9)
	South Africa	c	c	52	(3.6)	85	(3.5)	48	(2.9)	c	c	94	(1.6)	98	(1.2)	90	(1.7)
	G20 average	m	m	74	(0.9)	86	(0.8)	74	(0.6)	m	m	87	(0.7)	92	(0.6)	85	(0.5)

Notes: Educational attainment categories collected by Gallup may differ from ISCED-A 2011, refer to Annex 3 for more information. Data on "Life satisfaction today" represent the proportion of 25-64 year-olds who answered "6 or above" to the following question: "Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?" Data on "Life satisfaction in 5 years" are based on the same type of questions, but the respondents reported where they think they would stand five years after the survey.

Sources: Gallup World Poll, www.gallup.com/services/170945/world-poll.aspx. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

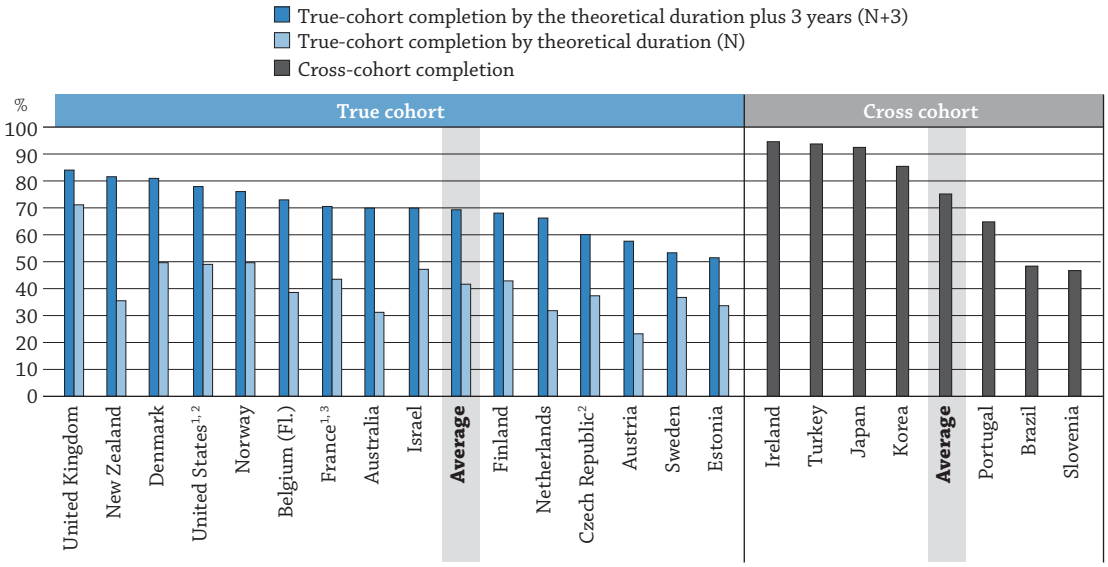
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

StatLink http://dx.doi.org/10.1787/888933397383

HOW MANY STUDENTS COMPLETE TERTIARY EDUCATION?

- On average across countries with true-cohort data (data on individual students), 41% of students who enter a bachelor's or equivalent programme graduate within the theoretical duration of the programme, although sometimes from a different educational level. Within three years after the theoretical duration of the programme, the average completion rate increases to 69%. For countries with cross-cohort data (aggregate data on student cohorts), the average completion rate is of 75%.
- In nearly all countries, women have higher completion rates than men at the short-cycle tertiary, bachelor's and long first-degree levels.
- Of the students who enter a bachelor's or equivalent programme, an average of 1% transfer and graduate instead from a short-cycle tertiary programme within the theoretical duration of the original programme. Within three years after the theoretical duration, over 1% transfer and graduate from a long first degree.

Figure A9.1. Completion rate of full-time students who entered at bachelor's or equivalent level, by method and duration (2014)



Note: Please refer to the *Methodology* section for an explanation on the true-cohort and cross-cohort methodologies. For countries that submitted true-cohort data, the figures presented in this figure correspond to students who entered at bachelor's or equivalent level and graduated from any educational level within the specified time frame.

1. Data provided using a longitudinal survey. For the United States, year of graduation is 2009 instead of 2014.
2. N+3 refers to N+2.
3. Excludes international students.

Countries are ranked in descending order of completion rate for cross-cohort and completion by N+3 for true cohort.

Source: OECD. Table A9.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397478

Context

Tertiary completion rates can indicate the efficiency of tertiary education systems, as they show how many of the students who enter a tertiary programme ultimately graduate from it. However, low completion rates do not necessarily imply an inadequate tertiary system, as students may leave a programme for a variety of reasons. They may realise that they have chosen a subject or educational programme that is not a good fit for them, or they may find attractive employment opportunities before completing the programme. In some education systems, it may also be common for students to enrol without intending to graduate from a specific programme, but rather to pursue a few courses as part of lifelong learning or upskilling.

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In addition to higher education policies and practices, completion rates may also be influenced by social and economic factors. It is important, therefore, to understand how factors such as gender, immigrant status and parents' educational background can have an impact on individuals' likelihood of succeeding in tertiary education (Box A9.1). Indeed, addressing potential at-risk groups is a vital step to successfully widening tertiary attainment.

Given the growing flexibility in tertiary education systems, completion of a programme may be defined differently across countries. This indicator focuses on full-time students (see Box A9.2. for completion rate of part-time students) and only two specific time frames for completion: 1) the share of students who graduate within the theoretical duration of the programme in which they began; and 2) the share of students who graduate within three years after the theoretical duration. The difference between these two time frames can shed light on the extent to which students tend to graduate "on time" (within the amount of time expected given the theoretical duration of the programme). This indicator also examines the share of students who leave the education system without graduating, the share of students who continue in education after the theoretical time frame and the share of students who graduate from a different educational level than the one in which they began.

Other findings

- Of students who enter a bachelor's or equivalent programme, on average, by the end of the theoretical duration of the programme, 41% have graduated, 18% have left the education system, and 40% are still in education. Within the theoretical duration plus three years, the share of students who have graduated increases to 69%, the share of students who have left the education system increases to 23%, and the share of students still in education decreases to 8%.
- In bachelor's or equivalent programmes, the gender gap for completion within the theoretical duration favours women in all countries that submitted true-cohort data. With only one exception (Turkey), women's completion rates at this level are also higher than men's in nearly all countries with cross-cohort data.
- For countries with cross-cohort data, the average completion rate in short-cycle tertiary education (68%) is considerably lower than the averages for bachelor's or equivalent level (75%) and for long first degrees (72%).

Note

Completion and graduation rates are two different measures. Completion describes the percentage of students who enter a tertiary programme for the first time and who graduate from it a given number of years after they entered. The calculation is made taking into account the number of years usually allocated for completing the programme (the theoretical duration), and an additional three years.

This measure of tertiary completion should not be confused with the indicator on tertiary graduation rates. Graduation rates represent the estimated percentage of people from a certain age cohort that are expected to graduate at some point during their lifetime (see Indicator A3). It measures the number of graduates from tertiary education relative to the country's population. For each country, for a given year, the number of students who graduate is broken down into age groups (for example, the number of 22-year-old graduates divided by the total number of 22-year-olds in the country). The overall graduation rate is the sum of these age-specific graduation rates.

A third indicator in *Education at a Glance* uses the notion of educational attainment (see Indicator A1). Attainment measures the percentage of a population that has reached a certain level of education, in this case those who graduated from tertiary education. It represents the relationship between all graduates (of the given year and previous years) and the total population.

A9

Analysis

Completion rates for true-cohort and cross-cohort data

Completion rate in this indicator is calculated using two different methods, depending on data availability. The first method, true cohort, follows individual students from entry into a tertiary programme until a specified number of years later. Completion is then calculated as the share of entrants who have graduated in that time frame. The second method, cross cohort, is used when individual data are not available. It calculates completion by dividing the number of graduates in a year by the number of new entrants to that programme a certain number of years before, when the number of years corresponds to the theoretical duration of the programme.

Because of the difference in methodologies, caution must be exercised when comparing true-cohort and cross-cohort completion rates. On the one hand, countries with true-cohort data are able to report exactly how many students from a given entry cohort have graduated within a specific time frame. That means that the true-cohort completion rate includes students who graduated before or exactly at the end of the time frame (even if they graduated from a different tertiary level than the one in which they began) and excludes students who took longer than the time frame to graduate.

On the other hand, the number of graduates used in the cross-cohort calculation is the total number of graduates of a tertiary level in a given calendar year. Thus, it includes every student who graduated that year, regardless of the time they took to successfully complete the programme. As an example, consider a programme with a theoretical duration of two years. Completion rates will then be calculated using the graduation cohort in 2014 and an entry cohort two academic years earlier, in 2012/2013. For countries with cross-cohort data, the graduation cohort in 2014 will include students who entered in 2012/2013 and graduated on time (within two years) as well as all others who entered before 2012/2013 and graduated in 2014. As a result, in countries where a significant share of students take longer to graduate, cross-cohort completion will be overestimated when compared to true-cohort completion, for which the time frame is limited.

The theoretical duration of tertiary programmes may vary across countries. Therefore, despite having the same reference year for graduates (2014 unless specified otherwise), the year used for entry cohorts differs across countries. Please see Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for more information on each country's theoretical duration for tertiary programmes.

True-cohort completion rates

On average across countries that submitted true-cohort data, 47% of students who entered short-cycle tertiary education graduated within the theoretical duration of the programme in which they began. Three years after the theoretical duration, the average completion in short-cycle tertiary education increases to 65%, but is the lowest of the three first-time tertiary levels (short-cycle, bachelor's and long first degrees).

At the bachelor's or equivalent level, the average rate of completion is 41% within the theoretical duration of the programme and 69% three years later. There is a wide variation in completion rates among countries, ranging from 23% in Austria to 71% in the United Kingdom within the theoretical duration, and from 51% in Estonia to 84% in the United Kingdom three years after the theoretical duration. The completion rate for all countries increases between theoretical duration and three years after the theoretical duration, but for some countries the increase is substantial. Notably, the completion rate at this level increases by over 30 percentage points in Australia, Austria, Belgium (Flemish Community), Denmark and the Netherlands and by over 40 percentage points in New Zealand.

Only seven countries have data available on the completion rate for long first degrees, and three countries and economies – Australia, Belgium (Flemish Community) and New Zealand – do not offer such programmes. In nearly all countries, the completion rate for long first degrees is higher than at the bachelor's or equivalent level. The only exceptions are the Czech Republic, where completion within theoretical duration at the bachelor's level is 8 percentage points higher, and Norway, where completion within three years after the theoretical duration is also 8 percentage points higher at the bachelor's level. The average completion rate among countries with available data is 49% within the theoretical duration and 68% three years later.

A large difference in completion rates between the shorter and longer time frames is not necessarily a negative outcome. In Belgium (Flemish Community), for example, higher education programmes are very flexible and are not divided into years of study. Instead, students are required to take a certain number of credits to graduate, but the years of study, even if full-time, may not be consecutive. This type of flexible system tends to increase

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the number of students that do not graduate "on time", but could be beneficial to students in many other ways. Particularly in countries that provide relatively broad access to tertiary education, as is the case in Belgium (Flemish Community), flexibility may be important to give students more time to meet the standards set by their educational institution.

Cross-cohort completion rates

The completion rate in short-cycle tertiary education is 68% on average across countries that submitted cross-cohort data. This average increases to 75% at the bachelor's or equivalent level and to 72% for long first degrees. At all three levels, Slovenia has the lowest completion rate: 18% in short-cycle, 47% in bachelor's or equivalent and 60% in long first degrees. The highest completion rates are observed in Japan for short-cycle tertiary education (86%), in Ireland and Turkey for bachelor's or equivalent level (both at 94%) and in Turkey for long first degrees (84%).

Gender differences in completion rate

In nearly all countries with available data, women have higher completion rates than men in first-time tertiary levels (Table A9.1). In bachelor's or equivalent programmes, the gender gap for completion within the theoretical duration favours women in all countries that submitted true-cohort data. The difference reaches 20 percentage points or more in Estonia and Finland. A similar pattern holds true for completion rates within three years after the theoretical duration, with the sole exception of Israel, where men's completion rate is 2 percentage points higher than women's. Among countries that submitted cross-cohort data, Turkey is the only country where men's completion rate is higher than women's in bachelor's or equivalent programmes, a difference of 1 percentage point.

For countries with true-cohort data, the gender gap in completion of bachelor's or equivalent programmes tends to decrease with a longer time frame. Three years after the theoretical duration, the gender gap decreases in 8 out of the 15 countries with available data. Among those eight countries, the most notable example is Finland, where the gender gap in favour of women is the highest within the theoretical duration and decreases by 5 percentage points within the theoretical duration plus three years.

Pathways of students who enter tertiary education

For countries that submitted true-cohort data, it is possible to analyse what has happened to students after the theoretical duration of the programme in which they began, and three years later. Have they graduated? If not, are they still in education or have they left the education system? These questions are treated in Figure A9.2, which shows the distribution of students who entered a bachelor's or equivalent programme after the theoretical duration of the programme and three years later.

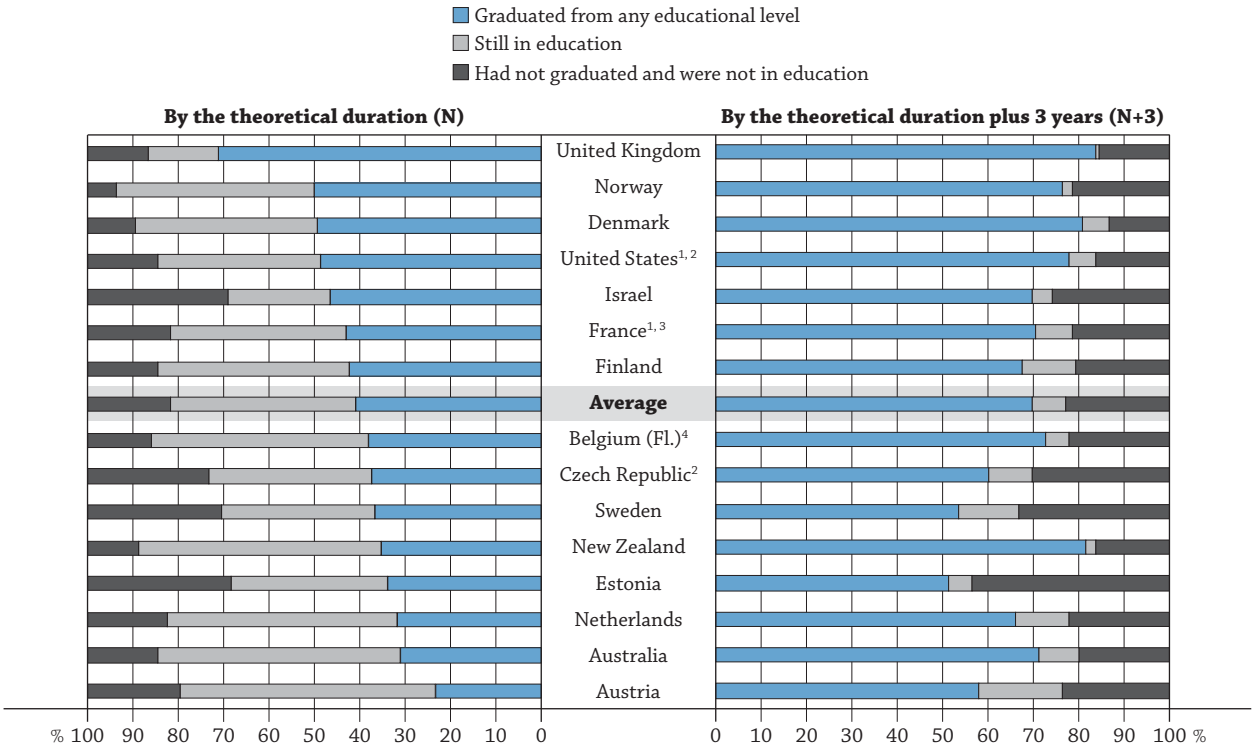
On average across countries with available data, about 41% of students who enter a bachelor's or equivalent programme graduate by the theoretical duration of the programme in which they began. Within this same time frame, 18% leave the education system and 40% are still in education. Within the theoretical duration plus three years, a considerable number of students who were still in education either graduate or leave the education system. The share of students who graduate increases to 69%, and the share of students who leave the education system increases to 23%, while the share of students still in education decreases to 8%.

In some countries, it is relatively common for students to enter a tertiary level, transfer to another level before finishing and end up graduating at that new level. This is the case, for example, in France, where 8% of students who enter at the bachelor's or equivalent level graduate from the short-cycle tertiary level within the theoretical duration of the bachelor's programme they had originally entered. In Austria, 1% of students who enter a bachelor's or equivalent programme transfer and graduate from a short-cycle tertiary programme, and 4% transfer to a long first-degree programme and graduate from it within three years after the theoretical duration of the original bachelor's programme.

Some students who enter short-cycle tertiary programmes also transfer and graduate from a different tertiary level. Because short-cycle programmes tend to have a lower theoretical duration than bachelor's or equivalent programmes, it is difficult for students to transfer and still graduate within the original shorter time frame. Nevertheless, about 1% of entrants to a short-cycle tertiary programme, on average, transfer and graduate from a bachelor's or equivalent programme within the theoretical duration of the original short-cycle programme. The average increases considerably three years after the original programme's theoretical duration, reaching 4% of entrants. In Sweden and the United States, 8% of entrants to a short-cycle tertiary programme transfer and graduate from a bachelor's or equivalent programme in the longer time frame.

Figure A9.2. Distribution of full-time students who entered the bachelor's or equivalent level, by duration (2014)

True cohort only



1. Data provided using a longitudinal survey. For the United States, year of graduation is 2009 instead of 2014.
2. N+3 refers to N+2.
3. Excludes international students.
4. Data for "Had not graduated and were not in education" refer to students who were not enrolled in either bachelor's or master's degrees. They could still be enrolled at other levels or in adult education.

Countries are ranked in descending order of completion rate at any educational level by N.

Source: OECD. Table A9.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397483

Box A9.1. Completion rate by socio-economic factors

Studies have shown that coming from a disadvantaged socio-economic background has a strong impact on completion, perhaps even more so than ethnicity and gender (Vossensteyn et al., 2015; Thomas and Quinn, 2006). Even among students with high qualifications, students from disadvantaged backgrounds tend to be more at risk of dropping out because of financial constraints, family problems or peer pressure (Quinn, 2013).

Figure A9.a shows the completion rate of students who entered bachelor's or equivalent programmes and graduated from the same level, broken down by two measures of socio-economic background: parents' educational attainment and immigrant status. In France, Norway and the United States, the completion rate of students increases as their parents' educational attainment increases. In France, the completion rate of students whose mother or father attained tertiary education is 11 percentage points higher than the completion rate of students whose parents did not attain upper secondary education. The difference is 10 percentage points in Norway and 27 percentage points in the United States. These results reflect the main findings in the literature, which show that first-generation students (when no one in the family has attended higher education) encounter more obstacles in tertiary education and are therefore more likely to drop out (Aina, 2013; Rose-Adams, 2012).

...

This is not the case in all countries with available data. In Denmark and Israel, the completion rate of students is actually highest among those whose parents have upper secondary or post-secondary non-tertiary education as their highest level of attainment. Nevertheless, in these countries, the completion rate remains lowest among students whose parents did not complete upper secondary education. In Finland, the completion rate is highest among students whose parents did not attain upper secondary education. In fact, their completion rate is 10 percentage points higher than that of students whose parents attained tertiary education. It is important to note, however, that 64% of the entry cohort in Finland had parents who had attained tertiary education versus only 5% whose parents did not complete upper secondary education. The result for this small share must therefore be interpreted with caution. One possible explanation for their comparatively high completion rate is that, given the extra difficulties in attending tertiary education if both parents did not complete upper secondary education, the few who do make it are especially highly motivated.

Being an immigrant also seems to affect a student's chance of succeeding in higher education. The completion rate for native-born students is higher than the completion rate for both first-generation and second-generation immigrant students in all countries with available data. The difference in completion rates between first-generation and second-generation students differs across countries, but is never greater (in absolute terms) than the difference between native-born and either first or second-generation immigrants. The lower completion rates among students with an immigrant background add to existing concerns regarding their educational outcomes, such as the fact that immigrant students underperform in the OECD Programme for International Student Assessment (PISA), even after adjusting for socio-economic differences (OECD, 2012). Please see Indicator A4 for more information on educational outcomes of immigrants.

These results highlight the fact that learning outcomes among students with an immigrant background or from families with low levels of education should be an area of focus among education policy makers, particularly in countries where these students show significantly lower completion rates than their peers who do not come from these social groups.

Figure A9.a. Completion rate in bachelor's or equivalent programmes, by parents' educational attainment and student's immigrant status (2014)

Full-time students who entered the bachelor's or equivalent level and graduated that same level within the programme's theoretical duration

	Completion rate by the highest level of parents' educational attainment							
	Below upper secondary		Upper secondary and post-secondary non-tertiary		Tertiary		Unknown	
	Completion rate	% of entry cohort	Completion rate	% of entry cohort	Completion rate	% of entry cohort	Completion rate	% of entry cohort
Denmark	43	5%	49	26%	46	46%	57	23%
Finland	51	5%	44	27%	41	64%	47	4%
France[1]	29	34%	37	17%	40	48%	32	0%
Israel	57	15%	63	32%	60	47%	48	6%
Norway	39	7%	47	40%	49	52%	a	a
United States[1]	26	3%	35	31%	53	65%	32	1%

	Completion rate by the student's immigrant status							
	First generation (excluding international students)		Second generation		Native-born		Unknown	
	Completion rate	% of entry cohort	Completion rate	% of entry cohort	Completion rate	% of entry cohort	Completion rate	% of entry cohort
Denmark	39	4%	35	3%	50	93%	50	0%
Finland	36	1%	m	m	42	99%	0	0%
Israel	55	12%	61	26%	61	57%	44	5%
Norway	38	8%	36	2%	49	90%	a	a
United States[1]	35	6%	43	7%	48	84%	41	3%

Notes: The data in columns "% of entry cohort" refer to the share of students who belong to each of the categories. For example, in the first table, 46% of students in Denmark's entry cohort had at least one tertiary-educated parent. In the second table, 4% of students in Denmark's entry cohort were first generation immigrants.

Data in this box may not be comparable to the data in the rest of the indicator because they may be based on different datasets.

1. Data provided using a longitudinal survey. For the United States, year of graduation is 2009 instead of 2014.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397493

Box A9.2. Completion rate of part-time students

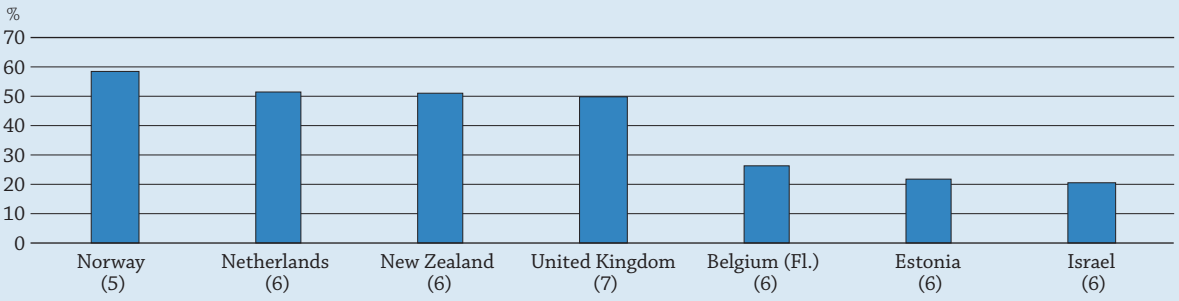
Determining the completion rate of part-time students using an internationally comparable method is challenging because, as measured in this indicator, the completion rate relies on the theoretical duration of a programme. Given the wide variety and flexibility of part-time studies across programmes, it would be difficult to determine a theoretical duration for part-time students that would be consistent both within and across countries. Please see Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for more information on the definition of part-time students across countries. As a result, data collected for the calculation of the completion rate of part-time students was based on the time frame deemed most relevant for each country. In other words, countries selected the shortest time period that takes into account completion by the large majority of part-time students.

For example, consider a short-cycle tertiary programme with a full-time theoretical duration of two years. Most part-time students will not have graduated within two years, but the number of years they will take to graduate will differ across countries. Thus, if most part-time students in a country complete the programme within seven years of study, the time frame for the calculation of completion rates will be seven years (please see the *Methodology* section at the end of this indicator for more information).

Completion rates of part-time students are of great relevance to policy makers, especially in countries such as New Zealand and Norway, where they represent over 35% of students enrolled in bachelor's or equivalent programmes (see Indicator C1 for the prevalence of part-time study in each country). Moreover, studies have shown that part-time students may be more at risk of dropping out than full-time students (Vossensteyn et al., 2015). Figure A9.b shows the completion rate of part-time students in bachelor's or equivalent programmes within the duration specified in parentheses after name of each country. This rate ranges from 59% in Norway to 20% in Israel. In Norway, the completion rate of full-time students is 50% within the theoretical duration of the programme and 76% three years later, while in Israel it is 47% within the theoretical duration and 70% three years later.

The reasons why students choose to study part time may have an impact on their likelihood of succeeding in higher education. Studies have found, for example, that students who choose to study part time for financial reasons need sufficient funding to prevent them from exceeding a certain threshold of working hours, above which they are significantly more likely to drop out (Hovdhaugen, 2014; Vossensteyn, 2013). Other reasons why students may choose to study on a part-time basis include illnesses, having a disability, having to care for a child or family member, or a fear of failing courses. Regardless of the reason, low completion rates for part-time students warrant further investigation, as they could indicate discrepancies between students' needs and what is being offered by the education system.

Figure A9.b. Completion rate of part-time students in bachelor's or equivalent programmes (2014)



Note: The number in parentheses corresponds to the duration chosen by each country as the most relevant for the measurement of part-time completion rates. Thus, the completion rate is the result of the number of part-time graduates divided by the number of part-time entrants N years before, where N is the number in parentheses by each country.

Countries are ranked in descending order of completion rate at bachelor's or equivalent level for part-time students.

Source: OECD. Education database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397504

Definitions

The **true-cohort** method requires following an entry cohort through a specific time frame, which in the case of this survey corresponds to the theoretical duration N and the theoretical duration plus three years (N+3). Only countries with longitudinal surveys or registers are able to provide such information. Panel data can be available in the form of an individual student registry (a system including unique personal ID numbers for students) or a cohort of students used for conducting a longitudinal survey.

The **cross-cohort** method only requires the number of new entrants to a given ISCED level and the number of graduates N years later, where N corresponds to the theoretical duration of the programme. Under the assumption of constant student flows (constant increase or decrease in the number of students entering a given ISCED level throughout the years), the cross-cohort completion is closer to a total completion rate (i.e. the completion rate of all students, regardless of the time it took them to graduate). As such, in countries where a large share of students do not graduate "on time" given the theoretical duration of the programme, the cross-cohort completion may be more comparable to longer time frames of the true-cohort completion.

The **theoretical duration** of studies is the regulatory or common-practice time it takes a full-time student to complete a level of education. Please see Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for information on each country's theoretical duration for tertiary programmes.

Parents' educational attainment:

- **below upper secondary** means that both parents have attained ISCED-97 level 0, 1, 2 or 3C short programmes
- **upper secondary** or **post-secondary non-tertiary** means that at least one parent (mother or father) has attained ISCED-97 level 3A, 3B, 3C long programmes or level 4
- **tertiary** means that at least one parent (mother or father) has attained ISCED-97 level 5A, 5B or 6.

First-generation immigrants refer to those born outside the country and whose parents were both also born in another country. In this indicator it excludes international students.

Second-generation immigrants refer to those born in the country but whose parents were both born in another country.

Methodology

Data on completion rates refer to the academic year 2013/2014 and were collected through a special survey undertaken in 2015. Countries could submit data using either true-cohort or cross-cohort methodology.

Completion rate for both methods is calculated as the number of graduates divided by the number of entrants N or N+3 years before (where N is the theoretical duration of the programme).

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 and 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+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+3 calendar years before.

For cross-cohort data, only one completion rate is calculated: the number of graduates in a given calendar year and ISCED level divided by the number of entrants to that same ISCED level N calendar years before.

If countries offer programmes of different theoretical durations within the same ISCED level, the completion rate of each programme is calculated separately and then weighted by the number of new entrants to each program. This calculation is done for the theoretical duration N for both cross-cohort and true-cohort methodologies, and for the timeframe N+3 for true-cohort data.

For countries that submit true-cohort data it is also possible to calculate the share of students still in education and the share of students who have neither graduated nor are still enrolled – all of which is calculated within the timeframes of N and N+3. Both shares are calculated by dividing the number of students in the given situation by the number of new entrants.

Given the difficulty in determining the theoretical duration of part-time studies, the information on part-time completion is gathered based on the time frame deemed most relevant by each country for each ISCED level. This time frame is chosen by countries based on the shortest time frame after which most part-time students have graduated or the number of part-time students completing their studies drops significantly. The completion rate is then calculated as the number of part-time graduates divided by the number of part-time new entrants N years before, where N is the duration chosen by each country.

Note regarding data from Israel

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

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Indicator A9 Tables

StatLink http://dx.doi.org/10.1787/888933397448

Table A9.1	**Completion rate of full-time students by level of education, gender, method and duration (2014)**
Table A9.2	**Distribution of full-time students who entered a given educational level, by theoretical duration (N) and theoretical duration plus three years (N+3) (2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table A9.1. Completion rate of full-time students by level of education, gender, method and duration (2014)

	Entered short-cycle tertiary			Entered bachelor's or equivalent programme			Entered master's or equivalent programme (long first degree)		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	True cohort – Completed any educational level by theoretical duration (N)								
Australia	m	m	m	28	33	31	a	a	a
Austria	66	73	70	21	25	23	36	38	37
Belgium (Fl.)	m	m	m	32	44	38	a	a	a
Czech Republic	m	m	m	27	45	37	22	32	29
Denmark	48	58	53	46	52	50	m	m	m
Estonia	m	m	m	22	42	34	19	52	36
Finland	a	a	a	30	53	43	m	m	m
France[1, 2]	63	63	63	37	47	43	56	52	54
Israel	m	m	m	46	47	47	m	m	m
Netherlands	m	m	m	24	38	32	m	m	m
Norway	45	53	49	47	52	50	58	59	59
New Zealand	51	52	51	28	41	36	a	a	a
Sweden	26	39	32	27	43	36	42	58	52
United Kingdom	53	42	46	68	74	71	78	82	79
United States[1]	15	15	15	43	53	49	m	m	m
Average	46	49	47	35	46	41	45	53	49
	True cohort – Completed any educational level by theoretical duration plus 3 years (N+3)								
Australia	m	m	m	65	74	70	a	a	a
Austria	81	86	84	53	62	58	58	63	61
Belgium (Fl.)	m	m	m	67	78	73	a	a	a
Czech Republic[3]	m	m	m	49	68	60	58	68	65
Denmark	69	75	72	77	83	81	m	m	m
Estonia	m	m	m	39	59	51	41	67	54
Finland	a	a	a	58	76	68	m	m	m
France[1, 2]	79	77	78	66	73	70	m	m	m
Israel	m	m	m	71	69	70	m	m	m
Netherlands	m	m	m	58	73	66	m	m	m
Norway	55	62	59	72	79	76	64	71	68
New Zealand	60	64	62	77	84	81	a	a	a
Sweden	36	51	44	43	60	53	62	77	71
United Kingdom	72	79	76	81	86	84	87	90	88
United States[1, 3]	41	46	44	74	80	78	m	m	m
Average	62	68	65	63	74	69	62	73	68
	Cross cohort								
Brazil	53	51	51	43	52	48	a	a	a
Czech Republic	71	82	78	m	m	m	m	m	m
Ireland	77	92	84	91	98	94	a	a	a
Japan	84	87	86	90	95	92	m	m	m
Korea	71	88	80	81	90	85	m	m	m
Portugal	a	a	a	58	71	65	65	78	71
Slovenia	18	18	18	45	48	47	55	63	60
Spain	76	82	79	m	m	m	m	m	m
Turkey	65	69	67	94	93	94	81	88	84
Average	64	71	68	72	78	75	67	76	72

Note: Please refer to the *Methodology* section for an explanation on the true-cohort and cross-cohort methodologies.
1. Data provided using a longitudinal survey. For the United States, year of graduation is 2009 instead of 2014.
2. Excludes international students.
3. N+3 corresponds to N+2. For the United States, only for bachelors' or equivalent programmes.
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933397457

A9

Table A9.2. Distribution of full-time students who entered a given educational level, by theoretical duration (N) and theoretical duration plus three years (N + 3) (2014)

True cohort only

	Entered bachelor's or equivalent programmes								
	Graduated from bachelor's or equivalent programmes		Graduated from short-cycle tertiary		Graduated from master's or equivalent programmes (long first degree)	Still in education		Had not graduated and were not in education	
	By theoretical duration (N)	By N+3	By theoretical duration (N)	By N+3	By N+3	By theoretical duration (N)	By N+3	By theoretical duration (N)	By N+3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD									
Australia	31	70	0	0	a	54	9	15	20
Austria	23	53	1	1	4	57	19	20	24
Belgium (Fl.)[1]	38	73	m	m	m	48	5	14	22
Czech Republic[2]	37	60	0	0	0	36	9	26	31
Denmark	49	79	1	2	m	40	6	10	13
Estonia	34	51	a	a	a	35	5	31	43
Finland	43	68	a	a	a	42	12	15	21
France[3, 4]	36	62	8	8	0	39	8	18	21
Israel	47	70	a	a	a	22	5	31	26
Netherlands[5]	31	65	0	0	0	51	12	17	22
Norway	50	76	a	a	a	44	3	6	21
New Zealand	33	79	2	3	a	54	3	11	16
Sweden	36	51	1	1	2	34	13	29	34
United Kingdom	71[d]	84[d]	x(1)	x(2)	x(2)	16	0	13	16
United States[2, 3, 6]	46	74	3[d]	3[d]	a	36	6	15	17
Average	40	68	1	1	1	40	8	18	23

	Entered short-cycle tertiary							
	Graduated from short-cycle tertiary		Graduated from bachelor's or equivalent programmes		Still in education		Had not graduated and were not in education	
	By theoretical duration (N)	By N+3	By theoretical duration (N)	By N+3	By theoretical duration (N)	By N+3	By theoretical duration (N)	By N+3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD								
Australia	m	m	m	m	m	m	m	m
Austria	70	83	0	0	14	2	16	14
Belgium (Fl.)[1]	m	m	m	m	m	m	m	m
Czech Republic	m	m	m	m	m	m	m	m
Denmark	53	69	0	3	28	5	19	23
Estonia	m	m	m	m	m	m	m	m
Finland	a	a	a	a	a	a	a	a
France[3, 4]	63	76	0	2	22	2	15	20
Israel	m	m	m	m	m	m	m	m
Netherlands	m	m	m	m	m	m	m	m
New Zealand	50	58	2	5	26	1	23	36
Norway	49	56	a	3	44	2	6	40
Sweden	30	36	3	8	27	10	41	46
United Kingdom	46[d]	76[d]	x(1)	x(2)	41	0	13	23
United States[3, 7]	15[d]	36[d]	0	8	54	12	30	44
Average	47	61	1	4	32	4	20	31

1. Data for "Had not graduated and were not in education" refer to students who were not enrolled in either bachelor's or master's degrees or equivalent programmes. They could still be enrolled at other levels or in adult education.
2. N+3 corresponds to N+2.
3. Data provided using a longitudinal survey. For the United States, year of graduation is 2009 instead of 2014.
4. Excludes international students.
5. In the Netherlands, a few students enter a bachelor's programme and graduate from a long first degree within the theoretical duration of the original bachelor's programme. They represent less than 0.001% of total new entrants and are included with "Graduated from a long first degree" by N+3.
6. In the United States, students who enter a bachelor's programme may also transfer and graduate from a post-secondary non-tertiary programme. These students are included in "Graduated from short-cycle tertiary" and they represent 0.5% of the entrants to a bachelor's programme by N and 0.7% by N+3.
7. Graduated from short-cycle tertiary includes entrants to a short-cycle tertiary programme who graduated from a post-secondary non-tertiary programme. They represent 1.3% of entrants by N and 2.3% by N+3.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Chapter

B

Financial and Human Resources Invested In Education

Indicator B1 How much is spent per student?
StatLink http://dx.doi.org/10.1787/888933397510

Indicator B2 What proportion of national wealth is spent on education?
StatLink http://dx.doi.org/10.1787/888933397664

Indicator B3 How much public and private investment in education is there?
StatLink http://dx.doi.org/10.1787/888933397754

Indicator B4 What is the total public spending on education?
StatLink http://dx.doi.org/10.1787/888933397855

Indicator B5 How much do tertiary students pay and what public support do they receive?
StatLink http://dx.doi.org/10.1787/888933397928

Indicator B6 On what resources and services is education funding spent?
StatLink http://dx.doi.org/10.1787/888933398014

Indicator B7 Which factors influence the level of expenditure on education?
StatLink http://dx.doi.org/10.1787/888933398071

Classification of educational expenditure

Educational expenditure in this chapter is classified through three dimensions:

- The first dimension – represented by the horizontal axis in the diagram below – relates to the location where spending occurs. Spending on schools and universities, education ministries and other agencies directly involved in providing and supporting education is one component of this dimension. Spending on education outside these institutions is another.
- The second dimension – represented by the vertical axis in the diagram below – classifies the goods and services that are purchased. Not all expenditure on educational institutions can be classified as direct educational or instructional expenditure. Educational institutions in many OECD countries offer various ancillary services – such as meals, transport, housing, etc. – in addition to teaching services to support students and their families. At the tertiary level, spending on research and development can be significant. Not all spending on educational goods and services occurs within educational institutions. For example, families may purchase textbooks and materials themselves or seek private tutoring for their children.
- The third dimension – represented by the colours in the diagram below – distinguishes among the sources from which funding originates. These include the public sector and international agencies (indicated by light blue), and households and other private entities (indicated by medium-blue). Where private expenditure on education is subsidised by public funds, this is indicated by cells in the grey colour.

Public sources of funds | Private sources of funds | Private funds publicly subsidised

	Spending on educational institutions (e.g. schools, universities, educational administration and student welfare services)	**Spending on education outside educational institutions** (e.g. private purchases of educational goods and services, including private tutoring)
Spending on core educational services	e.g. public spending on instructional services in educational institutions	e.g. subsidised private spending on books
	e.g. subsidised private spending on instructional services in educational institutions	e.g. private spending on books and other school materials or private tutoring
	e.g. private spending on tuition fees	
Spending on research and development	e.g. public spending on university research	
	e.g. funds from private industry for research and development in educational institutions	
Spending on educational services other than instruction	e.g. public spending on ancillary services such as meals, transport to schools, or housing on the campus	e.g. subsidised private spending on student living costs or reduced prices for transport
	e.g. private spending on fees for ancillary services	e.g. private spending on student living costs or transport

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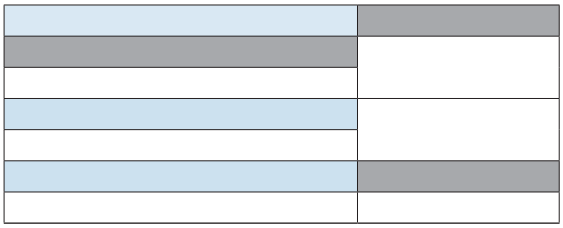
Coverage diagrams

For Indicators B1, B2, B3 and B6

For Indicator B4

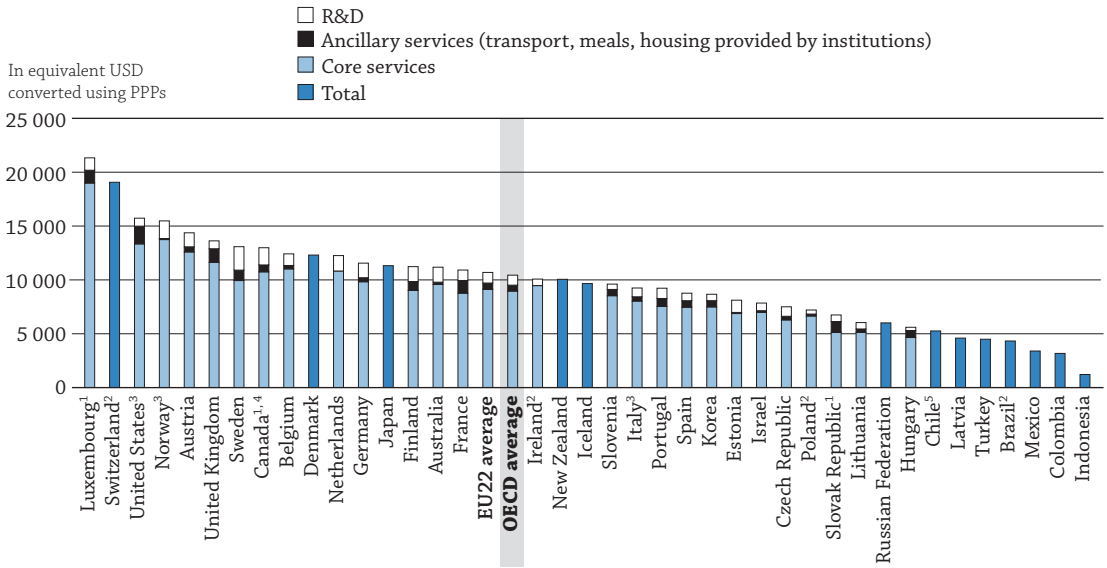


HOW MUCH IS SPENT PER STUDENT?

- On average, OECD countries spend USD 10 429 per student per year on primary through tertiary educational institutions: USD 8 412 per primary student, USD 9 914 per lower secondary student, USD 9 933 per upper secondary student and USD 15 704 per tertiary student.
- In primary, secondary and post-secondary non-tertiary education, USD 8 677 per student is devoted to core educational services, while expenditure on ancillary services accounts for only USD 519. At the tertiary level, a much lower share of expenditure goes to core services, although roughly one-third of total expenditure per student (USD 4 806) is spent in research and development.
- From 2008 to 2013, expenditure on primary, secondary and post-secondary non-tertiary educational institutions increased by 5%, on average across OECD countries, while the number of students decreased by 1%, resulting in an increase of 7% in expenditure per student over the same period.

Figure B1.1. Annual expenditure by educational institutions per student, by types of service (2013)

In equivalent USD converted using PPPs, based on full-time equivalents, for primary through tertiary education



1. Public institutions only for tertiary level.
2. Public institutions only.
3. Public institutions only except in tertiary education. Primary to tertiary education excludes post-secondary non-tertiary education.
4. Year of reference 2012.
5. Year of reference 2014.

Countries are ranked in descending order of total expenditure per student by educational institutions.

Source: OECD. Table B1.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

The provision of high-quality education, which can translate into higher costs per student, must be balanced against other demands on public expenditure and the overall tax burden. Policy makers must also balance the importance of improving the quality of education services with the desirability of expanding access to education opportunities, notably at the tertiary level. A comparative review of trends in expenditure per student by educational institutions shows that, in many OECD countries, expenditure has not kept up with expanding enrolments at the tertiary level. On the other hand, at primary, secondary and post-secondary non-tertiary levels, the number of students has remained stable or even decreased in some countries, while expenditure surged.

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Expenditure per student by educational institutions is largely influenced by teachers' salaries (see Indicators B7 and D3), pension systems, instructional and teaching hours (see Indicator B7), the cost of teaching materials and facilities, the programme provided (e.g. general or vocational) and the number of students enrolled in the education system (see Indicator C1). Policies to attract new teachers, to reduce average class size or to change staffing patterns (see Indicator D2) have also contributed to changes in expenditure per student by educational institutions over time. Ancillary and research and development (R&D) services can also influence the level of expenditure per student.

Other findings

- Across their lifetime, students are expected to spend six years in primary education, leading to a total cost of USD 50 270 during this period. The sum is even higher for secondary education, where students are expected to spend seven years at a total cost of USD 70 810. At the end of their primary and secondary studies, the total expenditure adds up to USD 121 080 per student.
- In almost all countries, expenditure per student increases for higher educational levels, with the exception of post-secondary non-tertiary education, where expenditure per student is, on average, lower than in other levels.
- Excluding activities peripheral to instruction (R&D and ancillary services, such as welfare services to students), OECD countries annually spend USD 8 952 per student from primary through tertiary education, on average.
- At tertiary level, expenditure per student on R&D accounts for around one-third of total expenditure per student, averaging USD 4 806 on R&D versus total expenditure of USD 15 695 per student at that level.
- Expenditure per student at primary and secondary level varies from 22% to 26% of GDP per capita, on average across the OECD. This figure is much higher at tertiary level, where countries spend, on average, 41% of the equivalent GDP per capita on funding bachelor's, master's and doctoral degrees.

Trends

At primary, secondary and post-secondary non-tertiary levels, the period from 2005 to 2013 was one of relative stability in student enrolment in most countries. During that time, expenditure per student by educational institutions increased in most countries, by an average of 17% among countries with available data for all years. This is explained by an average increase in expenditure of 14% and a slight decrease in the number of students (3%), chiefly due to smaller cohorts reaching school age. Some former East European countries, such as Estonia, Poland and the Slovak Republic, saw more than 20% fewer students in 2013 than in 2005. Unsurprisingly, those are also among the countries with the sharpest increase in expenditure per student over the same period.

Expenditure and enrolment at tertiary level showed the opposite pattern from early levels of education. Expenditure on tertiary education rose rapidly in most countries and is 29% higher in 2013 than it was in 2005. However, this increase was offset by a significant expansion of tertiary enrolment – 16% on average across the OECD. This rapid growth in enrolment is not caused by demographic factors, but by more accessible tertiary education in most countries. Emerging economies saw the number of students enrolled in tertiary education shoot up, as in Brazil (by 50%), Chile (by 82%), Mexico (36%) and Turkey (by 36%). As a result of increasing total expenditure and enrolment, expenditure per student increased by 12% between 2005 and 2013.

B1

Analysis

Expenditure per student by educational institutions

Expenditure per student by educational institutions rises with the level of education in almost all countries, but the size of the differentials varies markedly (Table B1.1a and Figure B1.3). Expenditure per student on secondary education is 1.2 times greater than expenditure per student on primary education, on average. This ratio exceeds 1.5 in the Czech Republic and in France, largely because of the concurrent increase in the number of instructional hours for students and significant decrease in the number of teachers' teaching hours between primary and secondary education, compared to the OECD average. The ratio may also be greater due to differentials in teachers' salaries (see Indicators B7, D1 and D4).

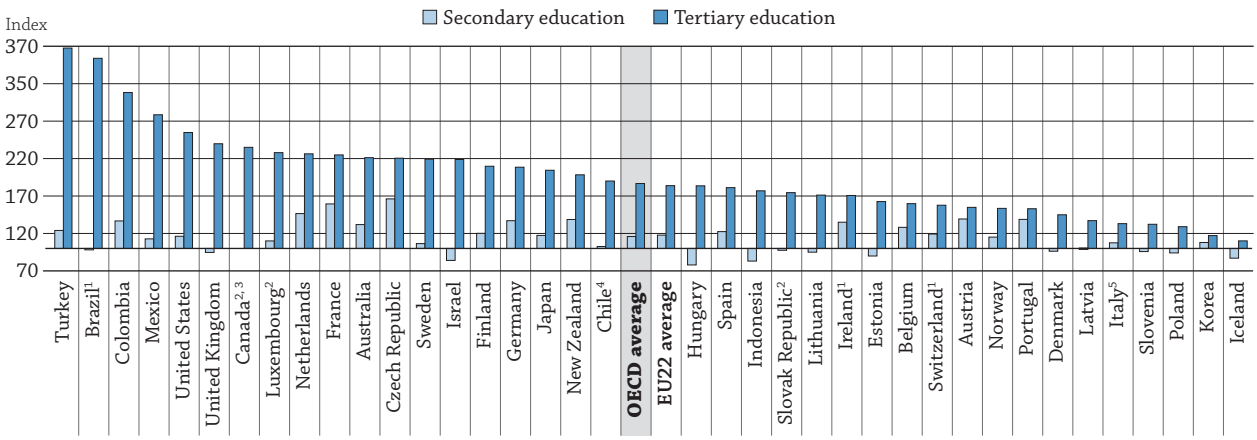
Educational institutions in OECD countries spend an average of 1.9 times more per tertiary student than per primary student, but spending patterns vary widely, mainly because education policies vary more at the tertiary level (see Indicator B5). For example, Denmark, Iceland, Italy, Korea, Latvia, Poland and Slovenia spend under 1.5 times more on a tertiary student than on a primary student, but Brazil, Colombia and Turkey spend 3 times as much (Table B1.1 and Figure B1.3).

Overall, annual spending per student from primary through tertiary education in 2013 ranged from USD 5 000 or less per student in Brazil, Colombia, Indonesia, Latvia, Mexico and Turkey to more than USD 15 000 in Luxembourg, Norway and Switzerland (Figure B1.1 and Table B1.1).

Even when spending per student from primary through tertiary education is similar among some OECD countries, the ways in which resources are allocated to the different levels of education vary widely. Spending per student by educational institutions in a typical OECD country (as represented by the simple mean among all OECD countries) amounts to USD 8 412 at the primary level, USD 9 751 at the secondary level and USD 15 704 at the tertiary level (Table B1.1a and Figure B1.2). The average spending per tertiary student is affected by high expenditure – more than USD 20 000 – in a few OECD countries, notably Canada, Luxembourg, Norway, Sweden, Switzerland, the United Kingdom and the United States.

Figure B1.2. Expenditure per student by educational institutions for all services, at secondary and tertiary levels of education relative to primary education (2013)

Primary education = 100



Note: A ratio of 300 for tertiary education means that expenditure per tertiary student by educational institutions is three times the expenditure per primary student by educational institutions.
A ratio of 50 for secondary education means that expenditure per secondary student by educational institutions is half the expenditure per primary student by educational institutions.

1. Public institutions only.
2. Public institutions only for tertiary level.
3. Year of reference 2012.
4. Year of reference 2014.
5. Public institutions only except in tertiary education. Primary to tertiary education excludes post-secondary non-tertiary education.

Countries are ranked in descending order of expenditure per student by educational institutions in tertiary education relative to primary education.

Source: OECD. Table B1.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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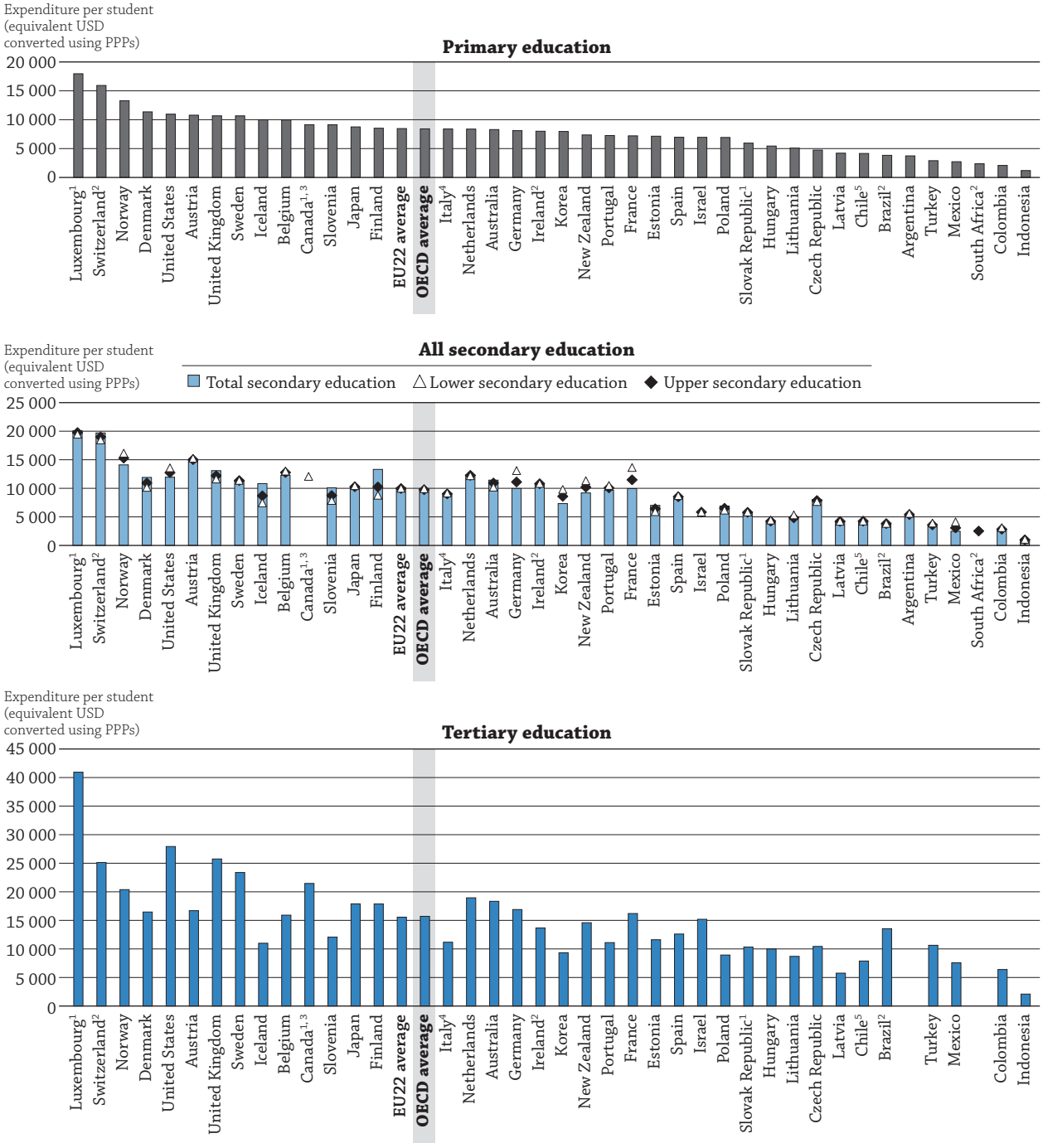
Figure B1.3. Annual expenditure per student by educational institutions for all services, by level of education (2013)

Expenditure on core educational services, ancillary services and R&D, in equivalent USD converted using PPPs, based on full-time equivalents



1. Public institutions only for tertiary level.
2. Public institutions only.
3. Year of reference 2012.
4. Public institutions only except in tertiary education. Primary to tertiary education excludes post-secondary non-tertiary education.
5. Year of reference 2014.

Countries are ranked in descending order of expenditure by educational institutions per student in primary education.

Source: OECD. Table B1.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397604

These averages mask a large variation of expenditure per student by educational institutions across OECD countries. At the primary level, expenditures range from USD 2 500 or less per student in Colombia, Indonesia and South Africa, to roughly USD 20 000 in Luxembourg. At the secondary level, expenditure ranges from USD 3 100 or less per student in Colombia, Indonesia, Mexico and South Africa to almost USD 20 000 in Luxembourg (Table B1.1 and Figure B1.2). These differences in annual expenditure per student at each level of education can also lead to large differences in the cumulative expenditure per student over the duration of studies (Table B1.3).

These comparisons are based on purchasing power parities (PPPs) for GDP, not on market exchange rates. Therefore, they reflect the amount of a national currency required to produce the same basket of goods and services in a given country as produced by the United States in USD.

Differences in expenditure per student between general and vocational programmes at upper secondary level

On average across the 25 OECD countries for which data are available, USD 876 more is spent per student in vocational than in general programmes at upper secondary level, but this masks large differences in expenditure per student within countries. In 8 of the 25 countries, expenditure per student in institutions is higher for general programmes than vocational programmes. In the case of the United Kingdom, for example, USD 3 981 more is spent per student on institutions for general programmes than for vocational programmes. Underestimation of the expenditure by private enterprises on dual vocational programmes can partly explain these differences (see Table C1.3 and Box B3.1).

On the other hand, countries like Germany and Sweden spend over USD 4 000 more per student on institutions for vocational programmes. Although Luxembourg and Switzerland are the countries that spend the most on upper secondary vocational education (USD 18 571 in Luxembourg and USD 18 855 in Switzerland), the sum is not very different from that spent on general training at the same level (USD 20 742 in Luxembourg and USD 17 530 in Switzerland).

Expenditure per student on core educational services, ancillary services and R&D

At the primary, secondary and post-secondary non-tertiary levels, expenditure is dominated by spending on core educational services. On average, OECD countries for which data are available spend 94% of the total expenditure per student (or USD 8 677) on core educational services. However, in Finland, France, Hungary, the Slovak Republic and Sweden, ancillary services (which are peripheral services including student welfare services, transport, meals and housing provided by educational institutions) account for over 10% of the expenditure per student (Table B1.2).

Core educational services also form the largest expenditure of all countries at tertiary level, and ancillary services are even less important at tertiary than at lower levels. On average, a mere 5% of expenditure on tertiary institutions targets ancillary services, and in Estonia, Finland, Ireland and Sweden the sum is negligible. The United Kingdom and the United States stand out as countries spending over USD 3 500 on ancillary services per student on tertiary institutions.

However, research and development takes up a large part of the budget at tertiary level, accounting for 31% of expenditure per student on average. R&D accounts for over half of the total expenditure per student at tertiary level in Denmark (USD 9 144), Sweden (USD 12 405) and Switzerland (USD 14 121). In the OECD countries in which most R&D is performed in tertiary educational institutions (e.g. Portugal and Switzerland, and Sweden for publicly funded R&D), expenditure per student in these activities is higher. Other countries may have lower R&D expenditure per student because a large proportion of research is performed outside the academic environment.

Cumulative expenditure over the expected duration of studies

In order to compare how costly education is across countries, it is important to consider not only the yearly expenditure per student, but also the cumulative expenditure students incur over the total period of time they are expected to spend at that educational level. High expenditure per student, for example, can be offset by short programmes or weaker access to education in certain levels. On the contrary, a seemingly inexpensive education system can prove to be costly if enrolment is high and students spend more time in school.

Across the OECD countries, students are expected to spend on average six years in primary education. This leads to a total of USD 50 270 expected to be spent per student during primary studies. Cumulative expenditure on primary education is USD 11 153 in Colombia and USD 7 345 in Indonesia, more as a result of low annual expenditure (Table B1.1) than of fewer years spent in education. In contrast, in other countries, cumulative expenditure is well below average mostly because primary students are not expected to spend many years in education, for example, in the Czech Republic (USD 23 814 over five years), Hungary (USD 21 818 over four years) and Lithuania (USD 20 650 over four years).

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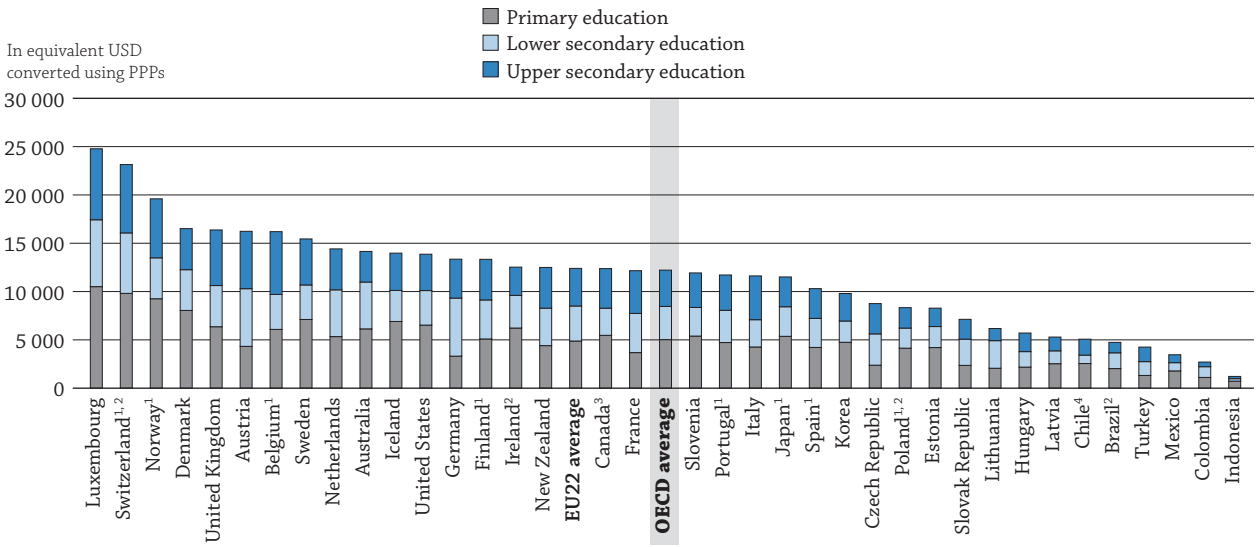
Lower secondary (on average 3.5 years) and upper secondary levels (on average 3.7 years) are shorter in duration. However, in Chile, Israel, Indonesia and Slovenia, students are expected to spend less than 3 years in lower secondary education, and in Colombia and the Russian Federation, students are expected to spend less than 2 years in upper secondary education.

Primary and secondary education are usually compulsory across the OECD, and the expected expenditure per student over these levels shows how much a student is expected to cost following the current patterns in enrolment and expenditure. On average across OECD countries, over the 13.1 years students are expected to be enrolled at primary or secondary level, expenditure adds up to USD 121 080. Luxembourg and Switzerland spend over USD 200 000 per student across those two levels, while in Colombia, Indonesia and Mexico, such expenditure is below USD 40 000.

Figure B1.4. Cumulative expenditure per student by educational institutions over the expected duration of primary and secondary studies (2013)

Annual expenditure by educational institutions per student multiplied by the theoretical duration of studies, in equivalent USD converted using PPPs



1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Public institutions only.
3. Year of reference 2012 for expenditure per student.
4. Year of reference 2014 for expenditure per student.

Countries are ranked in descending order of the total expenditure by educational institutions per student over the theoretical duration of primary and secondary studies.

Source: OECD. Table B1.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397619

Box B1.1 Relation between expenditure on research and development activities and international mobility in tertiary education

Across OECD countries, there are very large differences in the amount of expenditure per student at the tertiary level, partly because R&D expenditure can account for a significant proportion of spending on education. On average across OECD countries, expenditure on R&D at the tertiary level represents 30% of all expenditure per student by tertiary institutions. In 8 of the 30 countries for which data on R&D are available separately from total expenditure (Australia, Denmark, Finland, Germany, Norway, Portugal, Sweden and Switzerland), expenditure on R&D activities represents at least 39% of total expenditure per student by tertiary educational institutions. This can translate into significant amounts: in Denmark, Norway, Sweden and Switzerland, expenditure for R&D and ancillary services amounts to more than USD 8 000 per student.

...

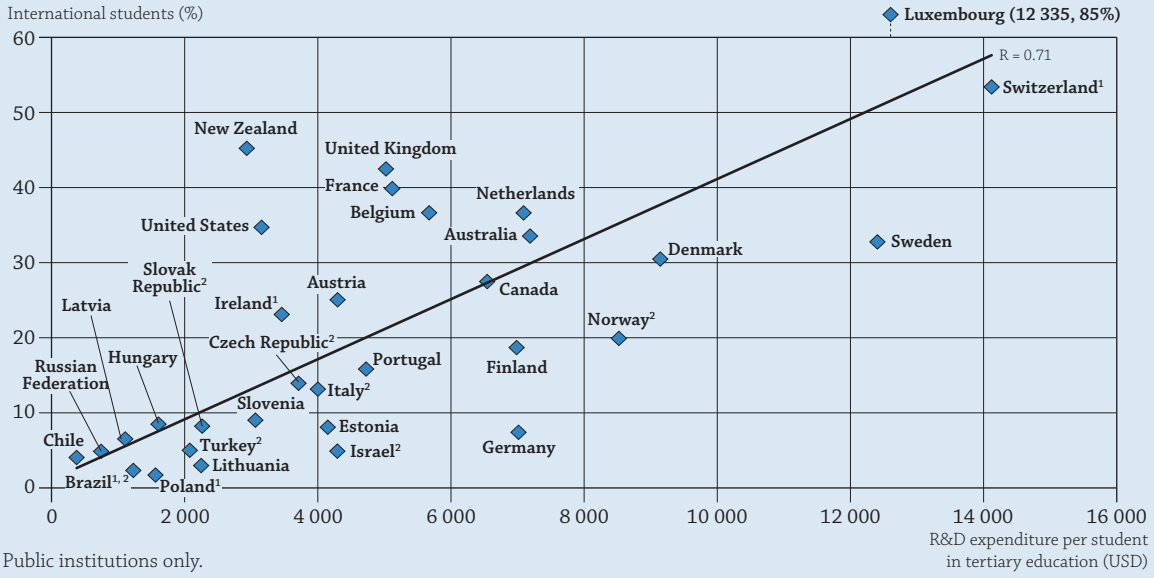
There are marked differences across OECD countries in the way R&D activities are funded. Several countries rely significantly on general government funding, which tertiary educational institutions can choose to allocate to R&D. On average, public funding represents 80% of total expenditure on R&D activities. Funds from abroad, especially from international organisations but also from the business sector, also represent a significant source of financing in many countries. The involvement of domestic businesses and private non-profit organisations is largest in Canada, the Czech Republic, Lithuania, New Zealand, the Russian Federation and Slovenia, but at least 30% of R&D activities are funded by international organisations or businesses. These figures may understate the full extent of the overall contribution of business to R&D, which can also involve payments for the use of facilities or the outcomes of R&D carried out within universities, in the form of licences or investment in spinoffs.

Interestingly, there is a strong relation between the investment on R&D activities and international mobility in tertiary education. Doctoral students tend to study in countries investing substantial resources in R&D in tertiary educational institutions. For example, Switzerland, the country with the highest level of expenditure on R&D per student in tertiary educational institutions (around USD 14 121), is also the country with the second highest proportion of international students at the doctoral level (after Luxembourg). Australia, Belgium, France, Luxembourg, the Netherlands, Sweden and the United Kingdom spend more than USD 5 000 in R&D per student in tertiary educational institutions and have a high proportion of international students (more than 30%). In contrast, Brazil, Chile, Poland and the Russian Federation have 5% or less of international students at the doctoral level and spend less than USD 2 000 per student on R&D in tertiary educational institutions (see Figure B1.a).

The correlation of expenditure on R&D per student in tertiary educational institutions with the proportion of international doctoral students is 0.71. R&D expenditure on tertiary educational institutions could attract international doctoral students to countries by enhancing the quality of research training in their universities, as well as their research capacity and visibility. Alternatively, it could be a proxy for other factors attracting international students, such as the general innovativeness of the economy (where students might stay to work after their degree) or other social and cultural factors, such as the presence of a thriving knowledge society.

Figure B1.a. Relationship between share of international doctoral students and countries' R&D investment in tertiary educational institutions (academic year 2013/14)

International or foreign students as a percentage of total enrolment at the doctoral or equivalent level, and expenditure on R&D per student in tertiary educational institutions



1. Public institutions only.
2. Foreign students instead of international students.

Sources: OECD. Tables B1.2 and C4.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397646

Box B1.2 Cumulative expenditure per student by educational institutions for all services over the average duration of tertiary studies (2013)

Table B1.3 shows the cumulative expenditure per student over the expected years in education for primary through secondary education. The measure of "expected years in education" is a sum of the age-specific probabilities of enrolment of the total population of a given country. Therefore, it provides a realistic approximation of the number of years spent in school for levels of education in which the majority of the population at the typical age is enrolled. However, the same is not true at the tertiary level, which is usually attended by a smaller share of the population.

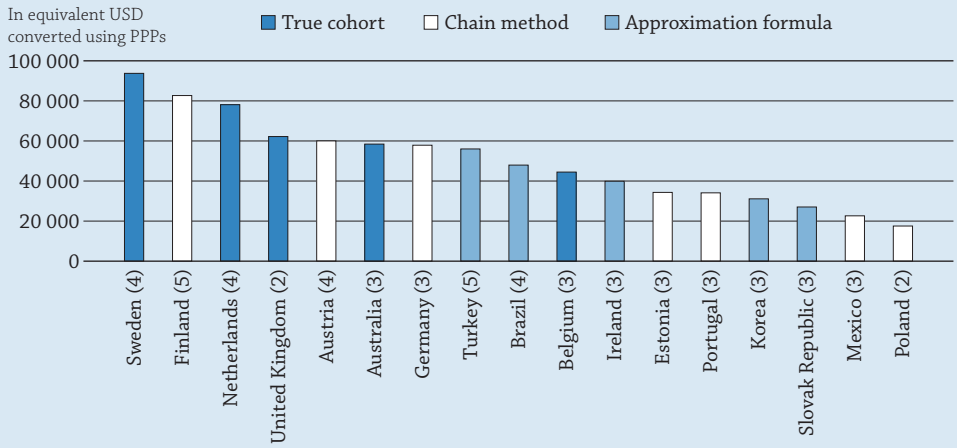
At the tertiary level, a calculation of the average duration of studies better reflects the amount of time spent in school by tertiary students. The average duration of studies uses conditional probabilities (conditional on enrolment in previous years of study), thus restraining the calculation of duration to students who have already entered tertiary education. This is very different from expected years in education, which measures the amount of time an individual in the population is expected to spend in tertiary education given current enrolment rates.

The calculation of the average duration presented in this indicator is based on full-time equivalent enrolments. That is, it measures the average amount of time a new entrant to a tertiary level spends at that level, regardless of whether he or she actually completes it. As a result, the average duration will decrease as the number of part-time students and dropouts increases.

Figure B1.b shows the cumulative expenditure per student by tertiary educational institutions over the average duration of tertiary studies of full-time equivalent students. The values vary from more than USD 90 000 in Sweden to less than USD 20 000 in Poland and can be highly influenced by expenditure on R&D, but also by the different average duration across countries. Australia, for example, spends USD 1 642 more per year per student in tertiary education than Austria, but because students spend on average less time in tertiary education, the cumulative expenditure over the average duration is higher in Austria than in Australia.

Figure B1.b. Cumulative expenditure per student by educational institutions for all services over the average duration of tertiary studies (2013)

In equivalent USD converted using PPPs for GDP



Notes: The average duration of tertiary studies is indicated in parenthesis besides each country. For Belgium, average duration refers to Flemish community only. For Brazil and Ireland, expenditure refers to public institutions only. For Germany, average duration does not include international students.

The average duration of studies is calculated using the chain method, approximation formula or true cohort. Please see Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for more information on the methods and on which method was used by each country.

Countries are ranked in descending order of cumulative expenditure on tertiary education over the average duration of tertiary studies.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397655

Expenditure per student by educational institutions relative to per capita GDP

Since access to education is universal (and usually compulsory) at the lower levels of schooling in most OECD countries, spending per student by educational institutions at those levels can be interpreted as the resources spent on the school-age population relative to a country's ability to pay. At higher levels of education, this measure is more difficult to interpret because student enrolments vary sharply among countries. At the tertiary level, for example, OECD countries may rank relatively high on this measure if a large proportion of their wealth is spent on educating a relatively small number of students.

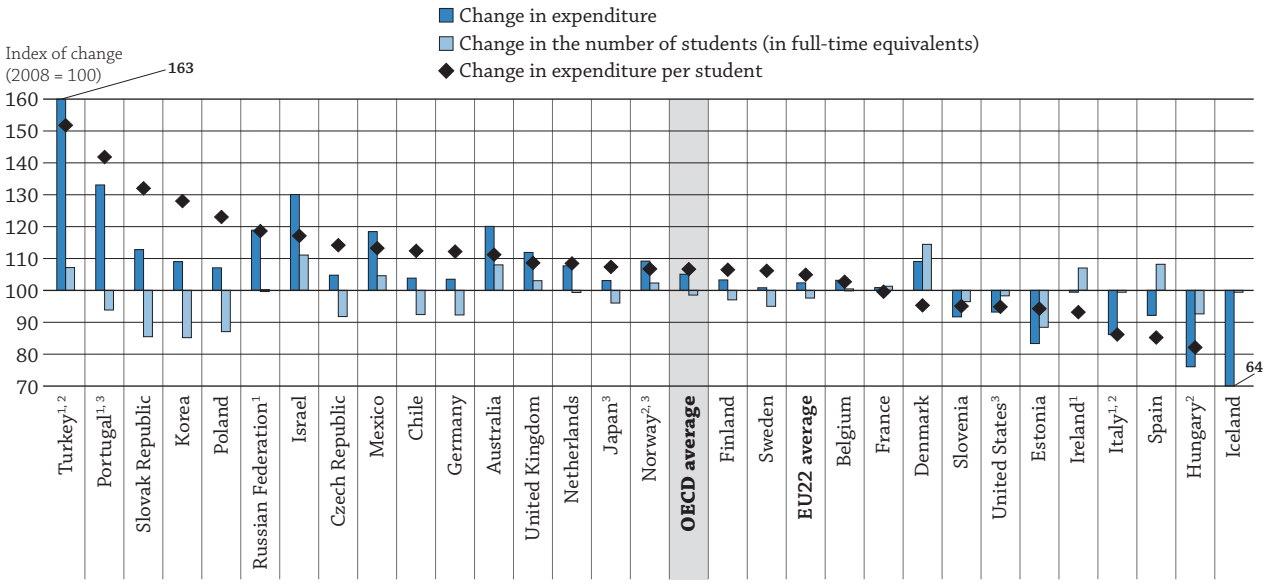
In OECD countries, expenditure per student by educational institutions averages 22% of per capita GDP at the primary level, 25% at the lower secondary level, 26% at the upper secondary level and 41% at the tertiary level. Overall, from primary to tertiary levels of education, expenditure per student averages 28% of per capita GDP in OECD countries (Table B1.4).

Countries with low levels of expenditure per student may nonetheless show distributions of investment relative to per capita GDP that are similar to those of countries with a high level of spending per student. For example, Slovenia's level of expenditure per student by educational institutions at the secondary level and per capita GDP are below the OECD average, yet it spends more per student relative to per capita GDP than the OECD average.

The relationship between per capita GDP and expenditure per student by educational institutions is difficult to interpret. However, there is a clear positive relationship between the two at both the primary and secondary levels of education – in other words, poorer countries tend to spend less per student than richer ones. Although the relationship is generally positive at these levels, there are variations, even among countries with similar levels of per capita GDP, and especially in those in which per capita GDP exceeds USD 30 000. Ireland and Austria, for example, have similar levels of per capita GDP (see Table X2.1 in Annex 2) but spend very different proportions of it on primary and secondary education. In Ireland, the proportions are 17% at the primary level (below the OECD average of 22%) and 23% at the lower secondary level (close to the OECD average of 25%), while in Australia, the proportions are 18% at the primary level and 24% at the lower secondary level (Table B1.4).

Figure B1.5a. Changes in the number of students, expenditure on educational institutions and expenditure per student in primary, secondary and post-tertiary non-tertiary education (2008, 2013)

Index of change between 2008 and 2013 (2008 = 100, 2013 constant prices)



1. Public institutions only.
2. Public expenditure only.
3. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

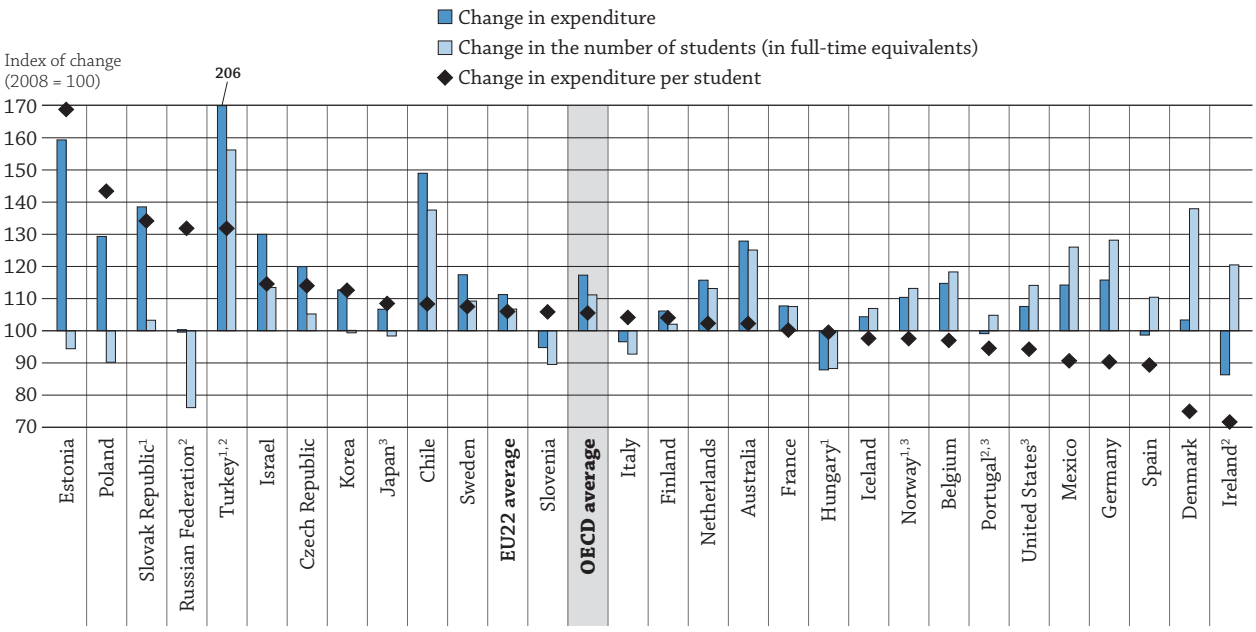
Countries are ranked in descending order of the change in expenditure per student by educational institutions.

Source: OECD. Table B5.1a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397628

Figure B1.5b. Changes in the number of students, expenditure on educational institutions and expenditure per student in tertiary education (2008, 2013)

Index of change between 2008 and 2013 (2008 = 100, 2013 constant prices)



1. Public expenditure only.
2. Public institutions only.
3. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

Countries are ranked in descending order of change in expenditure per student by educational institutions.

Source: OECD. Table B1.5b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397633

There is more variation in spending on the tertiary level institutions, and the relationship between countries' relative wealth and their expenditure levels varies as well. Canada, Sweden, Turkey, the United Kingdom and the United States spend more than 50% of per capita GDP on tertiary level institutions per student – among the largest proportions after Brazil (Table B1.4). In the case of Sweden, for example, this is clearly explained by extremely high expenditure on research and development, which take up over half of total expenditure per student (Table B1.2).

Change in expenditure per student by educational institutions between 2005 and 2013

Changes in expenditure by educational institutions largely reflect changes in the size of the school-age population and in teachers' salaries. These tend to rise over time in real terms. Teachers' salaries, the main component of costs, have increased in the majority of countries during the past decade (see Indicator D3). The size of the school-age population influences both enrolment levels and the amount of resources and organisational effort a country must invest in its education system. The larger this population, the greater the potential demand for education services. Change in expenditure per student over years may also vary between levels of education within countries, as both enrolment and expenditure may follow different trends at different levels of education.

Expenditure by primary, secondary and post-secondary non-tertiary educational institutions increased in most countries by an average of 7% between 2005 and 2008, followed by a 5% increase between 2008 and 2013, despite the economic crisis. Over the same period, enrolment at those levels decreased slowly, with a total decline of 3% over the eight-year period. Falling enrolment together with increasing expenditure resulted in greater expenditure per student at those levels – one-sixth higher in 2013 than in 2005. Most countries were spending more per student in 2013 than they did at the start of the crisis in 2008, with the exception of European countries hit hard by the economic turmoil: Denmark, Estonia, Hungary, Iceland, Ireland, Italy, Slovenia and Spain. In some countries, this fall in expenditure coincided with policy-making decisions. In Italy, for example, national public expenditure on education decreased following the Law 133 of 2008, which allowed, among other measures, for an increase in the pupil-teacher ratio and hence lower educational expenditure. On the contrary, in Turkey and the Slovak Republic,

expenditure per student increased between 2005 and 2013, by 80% in Turkey and 70% in the Slovak Republic. In the case of the Slovak Republic, this is partially explained by a steep decline (about 25%) in the number of students enrolled at primary, secondary and post-secondary non-tertiary level, the strongest decline in enrolment across OECD countries.

At tertiary level, expenditure increased much faster than in lower levels of education, rising on average by 9% between 2005 and 2008 and another 17% between 2008 and 2013. This results, in part, from enrolment that increased by a total of 16% between 2005 and 2013. Emerging economies like Brazil, Chile and Turkey saw an increase of more than 50% in their total tertiary enrolment over that period. As a result, Turkey more than doubled its expenditure on tertiary education, while expenditure per student expanded by only 33%. Yet, despite the recent advances, Brazil, Chile and Turkey still remain among the countries with the lowest expenditure per student (Table B1.1).

On average, across the OECD, expenditure per student at tertiary level increased by 6% since 2008, which is due to a large increase in expenditure that more than compensates for the increase in number of students. This differs from the picture of recent trends in primary, secondary and post-secondary non-tertiary education, where a decrease in the number of students was an important factor in explaining the increase in expenditure per student.

Definitions

Ancillary services are services provided by educational institutions that are peripheral to their main educational mission. The main component of ancillary services is student welfare services. In primary, secondary and post-secondary non-tertiary education, student welfare services include meals, school health services and transportation to and from school. At the tertiary level, they include residence halls (dormitories), dining halls and health care.

Core educational services are directly related to instruction in educational institutions, including teachers' salaries, construction and maintenance of school buildings, teaching materials, books and administration of schools.

Research and development (R&D) includes research performed at universities and other tertiary educational institutions, regardless of whether the research is financed from general institutional funds or through separate grants or contracts from public or private sponsors.

Methodology

Data refer to the financial year 2013 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Tables B1.5a and B1.5b show the changes in expenditure per student by educational institutions between the financial years 2008, 2010, 2011, 2012 and 2013. OECD countries were asked to collect 2005, 2008, 2010, 2011 and 2012 data according to the definitions and coverage of UOE 2015 data collection. All expenditure data and GDP information for 2005, 2008, 2010, 2011 and 2012 are adjusted to 2013 prices using the GDP price deflator.

The indicator shows direct public and private expenditure by educational institutions in relation to the number of full-time equivalent students enrolled. Public subsidies for students' living expenses outside educational institutions have been excluded to ensure international comparability.

Core educational services are estimated as the residual of all expenditure, that is, total expenditure on educational institutions net of expenditure on R&D and ancillary services. The classification of R&D expenditure is based on data collected from the institutions carrying out R&D, rather than on the sources of funds.

Expenditure per student by educational institutions at a particular level of education is calculated by dividing total expenditure by educational institutions at that level by the corresponding full-time equivalent enrolment. Only educational institutions and programmes for which both enrolment and expenditure data are available are taken into account. Expenditure in national currency is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP. The PPP exchange rate is used because the market exchange rate is affected by many factors (interest rates, trade policies, expectations of economic growth, etc.) that have little to do with current relative domestic purchasing power in different OECD countries (see Annex 2 for further details).

Expenditure data for students in private educational institutions are not available for certain countries, and some other countries provide incomplete data on independent private institutions. Where this is the case, only expenditure on public and government-dependent private institutions has been taken into account.

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Expenditure per student by educational institutions relative to per capita GDP is calculated by expressing expenditure per student by educational institutions in units of national currency as a percentage of per capita GDP, also in national currency. In cases where the educational expenditure data and the GDP data pertain to different reference periods, the expenditure data are adjusted to the same reference period as the GDP data, using inflation rates for the OECD country in question (see Annex 2).

Full-time equivalent student: The ranking of OECD countries by annual expenditure on educational services per student is affected by differences in how countries define full-time, part-time and full-time equivalent enrolment. Some OECD countries count every participant at the tertiary level as a full-time student, while others determine a student's intensity of participation by the credits that he/she obtains for successful completion of specific course units during a specified reference period. OECD countries that can accurately account for part-time enrolment have higher apparent expenditure per full-time equivalent student by educational institutions than OECD countries that cannot differentiate among the different types of student attendance.

Note regarding data from Israel

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

Indicator B1 Tables

StatLink http://dx.doi.org/10.1787/888933397510

Table B1.1	**Annual expenditure per student by educational institutions for all services (2013)**
Table B1.2	**Annual expenditure per student by educational institutions for core educational services, ancillary services and R&D (2013)**
Table B1.3	**Cumulative expenditure per student by educational institutions over the expected duration of primary and secondary studies (2013)**
Table B1.4	**Annual expenditure per student by educational institutions for all services, relative to per capita GDP (2013)**
Table B1.5a	**Change in expenditure per student by educational institutions for all services, relative to different factors, at the primary, secondary and post-secondary non-tertiary levels of education (2005, 2008, 2010, 2011, 2012, 2013)**
Table B1.5b	**Change in expenditure per student by tertiary educational institutions for all services, relative to different factors (2005, 2008, 2010, 2011, 2012, 2013)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

B1

Table B1.1. Annual expenditure per student by educational institutions for all services (2013)

In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

		Primary	Secondary					Post-secondary non-tertiary	Tertiary (including R&D activities)			Primary to tertiary
			Lower secondary	Upper secondary			All secondary		Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
				General programmes	Vocational programmes	All programmes						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	8 289	11 431	12 113	6 631	10 203	10 932	6 631	10 008	19 916	18 337	**11 169**
	Austria	10 780	14 831	13 260	16 554	15 255	15 024	5 322	16 453	16 742	16 695	**14 361**
	Belgium	9 957	12 267	13 158[d]	12 927[d]	13 020[d]	12 763[d]	x(5)	9 366	16 148	15 911	**12 407**
	Canada[1, 2]	9 130[d]	x(1)	x(5)	x(5)	12 086	m	m	14 764	25 083	21 458	**12 977**
	Chile[3]	4 146	4 226	4 257	4 300	4 270	4 255	a	4 206	9 366	7 880	**5 250**
	Czech Republic	4 730	8 061	6 560	8 073	7 682	7 861	2 221	16 478	10 417	10 432	**7 493**
	Denmark	11 355	11 906	x(5)	x(5)	10 165	10 933	a	x(10)	x(10)	16 460	**12 294**
	Estonia	7 138	7 009	4 778	7 987	5 909	6 417	7 039	a	11 607	11 607	**8 107**
	Finland	8 519	13 312	7 788	9 172[d]	8 786[d]	10 237[d]	x(5)	a	17 868	17 868	**11 221**
	France	7 201	9 947	13 120	14 504	13 643	11 482	9 549	13 784	16 998	16 194	**10 907**
	Germany	8 103	9 967	10 854	15 343	13 093	11 106	10 465	9 626	16 896	16 895	**11 545**
	Greece	m	m	m	m	m	m	m	m	m	m	**m**
	Hungary	5 435	3 994	4 513	4 233	4 439	4 236	4 154	7 795	10 221	9 980	**5 591**
	Iceland	9 987	10 818	6 400	9 843	7 453	8 689	12 778	8 335	11 052	10 996	**9 650**
	Ireland[4]	8 002	10 773	10 840	a	10 840	10 804	12 630	x(10)	x(10)	13 663	**10 065**
	Israel	6 941	x(5)	5 067	8 727	5 831[d]	5 831	2 672	5 904	17 446	15 185	**7 840**
	Italy[5]	8 392	8 797	x(5)	x(5)	9 174	9 023	m	7 962	11 177	11 172	**9 238**
	Japan	8 748	10 084	x(5)	x(5)	10 459[d]	10 273[d]	x(5 10)	11 339[d]	19 641[d]	17 883[d]	**11 309**
	Korea	7 957	7 324	x(5)	x(5)	9 801	8 592	m	5 370	10 491	9 323	**7 554**
	Latvia	4 199	4 228	4 414	3 941	4 220	4 224	4 312	6 195	5 685	5 758	**4 587**
	Luxembourg[2]	17 959	20 076	20 742	18 571	19 473	19 762	1 403	22 173	42 435	40 933	**21 320**
	Mexico	2 717	2 473	4 669	3 273	4 126	3 065	a	x(10)	x(10)	7 568	**3 387**
	Netherlands	8 371	12 334	10 244	13 118	12 200	12 269	11 016	11 381	18 987	18 947	**12 247**
	New Zealand	7 354	9 191	10 709	13 152	11 328	10 198	9 852	10 960	15 419	14 585	**10 045**
	Norway	13 274	14 103	x(5)	x(5)	16 153[d]	15 283[d]	x(6)	x(6)	20 379	20 379	**15 466**
	Poland	6 919	6 900	5 381	6 865[d]	6 178[d]	6 505	4 699	11 800	8 918	8 929	**7 195**
	Portugal	7 258	9 667	x(5)	x(5)	10 503[d]	10 074[d]	x(6)	a	11 106	11 106	**9 218**
	Slovak Republic[2]	5 942	5 755	4 693	6 464	5 839	5 795	6 453	6 254	10 370	10 321	**6 735**
	Slovenia	9 121	10 085	8 832	7 342	7 872	8 739	a	4 092	13 360	12 064	**9 597**
	Spain	6 956	8 303	8 348	9 467[d]	8 729[d]	8 520[d]	x(4)	9 085	13 511	12 604	**8 755**
	Sweden	10 664	11 306	8 949	14 126	11 389	11 354	4 117	6 478	24 818	23 374	**13 072**
	Switzerland[4]	15 930	19 698	17 530[d]	18 855[d]	18 479[d]	18 994[d]	x(5)	x(5)	25 126	25 126	**19 052**
	Turkey	2 894	3 337	3 580	4 217	3 914	3 590	a	x(10)	x(10)	10 637	**4 482**
	United Kingdom	10 669	13 092	13 022	9 041	11 627	12 200	a	x(10)	x(10)	25 744	**13 613**
	United States	10 959	11 947	x(5)	x(5)	13 587	12 740	x(10)	x(10)	x(10)	27 924[d]	**15 720**
	OECD average	8 412	9 914	8 993	9 869	9 993	9 751	6 783	9 992	16 114	15 704	**10 429**
	EU22 average	8 460	10 124	9 416	10 455	10 002	9 968	6 414	10 595	15 404	15 555	**10 456**
Partners	Argentina	3 729	5 266	m	m	5 608	5 399	a	m	m	m	**m**
	Brazil[4]	3 826	3 802	x(5)	x(5)	3 852	3 822	a	x(10)	x(10)	13 540	**4 318**
	China	m	m	m	m	m	m	m	m	m	m	**m**
	Colombia	2 074	2 728	x(5)	x(5)	3 117	2 835	a	3 318	7 879	6 391	**3 165**
	Costa Rica	m	m	m	m	m	m	m	m	m	m	**m**
	India	m	m	m	m	m	m	m	m	m	m	**m**
	Indonesia	1 184	918	1 453	581	1 070	984	a	x(10)	x(10)	2 094	**1 209**
	Lithuania	5 079	4 596	4 509	7 493	5 345	4 826	9 609	a	8 697	8 697	**6 027**
	Russian Federation	x(3)	x(3)	5 236[d]	3 923	5 100[d]	5 100[d]	x(5)	5 083	9 291	8 483	**5 999**
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m	**m**
	South Africa[3]	2 366	x(6)	x(6)	x(6)	x(6)	2 513	5 607	m	m	m	**m**
	G20 average	m	m	m	m	m	m	m	m	m	m	**m**

Note: Data on early childhood education are available in Indicator C2.

1. Year of reference 2012.
2. Public institutions only for tertiary level.
3. Year of reference 2014.
4. Public institutions only.
5. Public institutions only except in tertiary education. Primary to tertiary education excludes post-secondary non-tertiary education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397529

Table B1.2. Annual expenditure per student by educational institutions for core educational services, ancillary services and R&D (2013)

In equivalent USD converted using PPPs for GDP, by level of education and type of service, based on full-time equivalents

		Primary, secondary and post-secondary non-tertiary			Tertiary				Primary to tertiary			
		Educational core services	Ancillary services (transport, meals, housing provided by institutions)	Total	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	9 315	131	**9 446**	10 588	561	7 188	**18 337**	9 562	214	1 393	**11 169**
	Austria	12 735	611	**13 346**	12 245	153	4 297	**16 695**	12 587	472	1 303	**14 361**
	Belgium	11 280	305	**11 585**	9 877	362	5 672	**15 911**	11 013	316	1 078	**12 407**
	Canada[1, 2]	9 740	484	**10 224**	13 790	1 124	6 544	**21 458**	10 737	641	1 599	**12 977**
	Chile[3]	m	m	**4 202**	m	m	377	**7 880**	m	m	107	**5 250**
	Czech Republic	6 160	417	**6 578**	6 644	77	3 711	**10 432**	6 275	336	882	**7 493**
	Denmark	m	m	**11 127**	m	m	9 144	**16 460**	m	m	2 001	**12 294**
	Estonia	6 687	99	**6 786**	7 456	1	4 150	**11 607**	6 897	72	1 137	**8 107**
	Finland	8 551	1 028	**9 579**	10 883	0	6 986	**17 868**	9 013	824	1 384	**11 221**
	France	8 419	1 251	**9 670**	10 217	860	5 118	**16 194**	8 760	1 177	970	**10 907**
	Germany	9 994	273	**10 267**	9 085	795	7 015	**16 895**	9 819	373	1 353	**11 545**
	Greece	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Hungary	4 077	512	**4 589**	7 108	1 265	1 607	**9 980**	4 641	652	299	**5 591**
	Iceland	m	m	**9 317**	m	m	m	**10 996**	m	m	m	**9 650**
	Ireland[4]	9 302	0	**9 302**	10 206	0	3 458	**13 663**	9 460	0	605	**10 065**
	Israel	6 216	166	**6 382**	10 841	50	4 293	**15 185**	6 982	147	711	**7 840**
	Italy[5]	8 386	398	**8 784**	6 766	404	4 001	**11 172**	8 023	397	817	**9 238**
	Japan[6]	m	m	**9 537**	m	m	m	**17 883[d]**	m	m	m	**11 309[d]**
	Korea	7 489	831	**8 320**	7 472	81	1 770	**9 323**	7 483	578	596	**8 658**
	Latvia	m	m	**4 213**	m	m	1 107	**5 758**	m	m	268	**4 587**
	Luxembourg[2]	18 260	1 219	**19 479**	26 657	862	13 414	**40 933**	18 981	1 188	1 151	**21 320**
	Mexico	m	m	**2 877**	m	m	1 640	**7 568**	m	m	178	**3 387**
	Netherlands	10 552	a	**10 552**	11 856	a	7 091	**18 947**	10 815	a	1 431	**12 247**
	New Zealand	m	m	**8 986**	m	m	2 956	**14 585**	m	m	555	**10 045**
	Norway[6]	14 300[d]	0[d]	**14 300[d]**	11 683	173	8 522	**20 379**	13798	33	1 636	**15 466**
	Poland[4]	6 474	170	**6 644**	7 159	208	1 562	**8 929**	6 639	179	376	**7 195**
	Portugal[6]	7 976	766	**8 741**	5 747	634	4 725	**11 106**	7 526	739	953	**9 218**
	Slovak Republic[2]	4 987	866	**5 852**	5 633	1 625	3 062	**10 321**	5 115	1 012	607	**6 735**
	Slovenia	8 252	657	**8 910**	9 494	307	2 263	**12 064**	8 523	581	494	**9 597**
	Spain	7 151	612	**7 764**	8 623	568	3 412	**12 604**	7 453	603	699	**8 755**
	Sweden	9 741	1 173	**10 914**	10 814	0	12 405	**23 219**	9 929	968	2 176	**13 072**
	Switzerland[4]	m	m	**17 679**	m	m	14 121	**25 126**	m	m	2 604	**19 052**
	Turkey	m	m	**3 327**	m	m	2 077	**10 637**	m	m	328	**4 482**
	United Kingdom	10 897	646	**11 545**	15 663	4 895	5 024	**25 582**	11 615	1 265	733	**13 613**
	United States[6]	10 842	1 001	**11 843**	21 170[d]	3 679[d]	3 075[d]	**27 924[d]**	13 332	1 646	741	**15 720**
	OECD average	8 677	519	**9 196**	10 179	710	4 806	**15 695**	8 952	549	928	**10 429**
	EU22 average	8 941	579	**9 344**	10 112	685	5 201	**15 540**	9 110	587	986	**10 456**
Partners	Argentina	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Brazil[4]	m	m	**3 824**	m	m	1 229	**13 540**	m	m	63	**4 318**
	China	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Colombia	2 355	104	**2 459**	m	m	m	**6 391**	m	m	m	**3 165**
	Costa Rica	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	**1 099**	2 094	m	m	**2 094**	m	m	m	**1 209**
	Lithuania	4 863	206	**5 069**	5 833	616	2 248	**8 697**	5 119	315	594	**6 027**
	Russian Federation	m	m	**5 100**	m	m	745	**8 483**	m	m	198	**5 999**
	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**
	G20 average	m	m	**m**	m	m	m	**m**	m	m	m	**m**

1. Year of reference 2012.
2. Public institutions only for tertiary level.
3. Year of reference 2014.
4. Public institutions only.
5. Public institutions only except in tertiary education. Primary to tertiary education excludes post-secondary non-tertiary education.
6. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B1

Table B1.3. Cumulative expenditure per student by educational institutions over the expected duration of primary and secondary studies (2013)

In equivalent USD converted using PPPs for GDP, by level of education

	Expected years in education			Cumulative expenditure per student over the expected duration of studies (in USD)				
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	All secondary	Total primary and secondary
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD								
Australia	7.4	4.2	3.1	61 382	48 489	31 685	80 174	**141 556**
Austria	4.0	4.0	3.9	43 301	59 709	59 389	119 098	**162 399**
Belgium[1]	6.1	3.0	5.0	60 871	36 217	64 956[d]	101 173	**162 045**
Canada[2]	6.0	3.1	3.4	54 721	28 080	40 987	69 067	**123 788**
Chile[3]	6.2	2.1	3.9	25 523	8 719	16 477	25 197	**50 720**
Czech Republic	5.0	4.0	4.1	23 814	32 400	31 362	63 762	**87 576**
Denmark	7.1	3.5	4.2	80 485	42 174	42 507	84 682	**165 166**
Estonia	5.9	3.1	3.2	42 060	21 738	19 063	40 801	**82 860**
Finland[1]	6.0	3.0	4.8	50 952	40 382	42 064[d]	82 446	**133 398**
France	5.1	4.1	3.2	36 841	40 563	44 217	84 781	**121 621**
Germany	4.1	6.0	3.1	33 188	60 102	40 265	100 367	**133 555**
Greece	m	m	m	m	m	m	m	**m**
Hungary	4.0	4.0	4.3	21 818	16 042	19 233	35 275	**57 093**
Iceland	6.9	3.0	5.2	69 065	32 114	38 603	70 717	**139 782**
Ireland[4]	7.8	3.1	2.7	62 273	33 815	29 239	63 054	**125 328**
Israel	5.9	2.9	2.9	40 773	x(7)	x(7)	33 843	**74 616**
Italy[4]	5.1	3.2	4.9	42 655	28 239	45 329	73 568	**116 223**
Japan[1]	6.1	3.0	2.9	53 682	30 627	30 841[d]	61 468	**115 150**
Korea	6.0	3.0	2.9	47 519	22 017	28 483	50 499	**98 018**
Latvia	6.0	3.1	3.4	25 348	13 307	14 265	27 572	**52 920**
Luxembourg	5.9	3.4	3.8	105 115	69 217	73 490	142 707	**247 822**
Mexico	6.6	3.4	2.0	17 880	8 522	8 203	16 725	**34 605**
Netherlands	6.4	3.9	3.5	53 410	48 399	42 377	90 776	**144 186**
New Zealand	6.0	4.2	3.7	44 066	38 783	42 149	80 933	**124 998**
Norway[1]	7.0	3.0	3.8	92 586	42 353	61 087[d]	103 440	**196 026**
Poland[1, 4]	6.0	3.0	3.4	41 417	20 794	21 162[d]	41 956	**83 373**
Portugal[1]	6.5	3.5	3.5	47 251	33 406	36 537[d]	69 943	**117 195**
Slovak Republic	4.0	4.7	3.5	23 628	27 125	20 538	47 664	**71 292**
Slovenia	5.9	2.9	4.5	53 948	29 631	35 728	65 359	**119 307**
Spain[1]	6.1	3.6	3.5	42 195	30 086	30 776[d]	60 862	**103 057**
Sweden	6.7	3.2	4.2	71 129	35 740	47 637	83 377	**154 506**
Switzerland[1, 4]	6.2	3.2	3.8	98 157	62 588	70 753[d]	133 341	**231 497**
Turkey	4.6	4.3	3.9	13 212	14 271	15 070	29 341	**42 553**
United Kingdom	6.0	3.3	4.9	63 611	38 070	44 915	82 986	**146 597**
United States	6.0	3.0	2.8	65 302	35 755	37 635	73 390	**138 692**
OECD average	5.9	3.5	3.7	50 270	34 365	37 565	70 810	**121 080**
EU22 average	5.7	3.6	3.9	48 825	36 272	38 937	75 209	**124 034**
Partners								
Argentina	m	m	m	m	m	m	m	**m**
Brazil[4]	5.3	4.3	2.8	20 292	16 326	10 815	27 141	**47 432**
China	m	3.0	2.3	m	m	m	m	**m**
Colombia	5.4	4.1	1.5	11 153	11 087	4 814	15 901	**27 054**
Costa Rica	m	m	m	m	m	m	m	**m**
India	m	m	m	m	m	m	m	**m**
Indonesia	6.2	2.7	2.2	7 345	2 492	2 344	4 836	**12 181**
Lithuania	4.1	6.2	2.4	20 650	28 540	12 571	41 111	**61 760**
Russian Federation[1]	3.9	4.6	1.0	x(8)	x(8)	x(8)	x(8)	**48 764**
Saudi Arabia	6.5	3.0	3.3	m	m	m	m	**m**
South Africa	m	m	m	m	m	m	m	**m**
G20 average	m	3.6	3.1	m	m	m	m	**m**

1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Year of reference 2012 for expenditure per student.
3. Year of reference 2014.
4. Public institutions only.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B1.4. Annual expenditure per student by educational institutions for all services, relative to per capita GDP (2013)

By level of education, in percentage of per capita GDP

		Primary	Secondary					Post-secondary non-tertiary	Tertiary (including R&D activities)			All tertiary excluding R&D activities
			Lower secondary	Upper secondary			All secondary		Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
				General programmes	Vocational programmes	All programmes						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	18	24	26	14	22	23	14	21	42	39	**24**
	Austria	23	31	28	35	32	32	11	35	35	35	**26**
	Belgium	23	28	30[d]	30[d]	30[d]	30[d]	x(6)	22	37	37	**24**
	Canada[1, 2]	19[d]	x(1)	x(5)	x(5)	37	m	m	35	59	51	**35**
	Chile[3]	19	20	20	20	20	20	a	20	44	37	**35**
	Czech Republic	16	27	22	27	26	26	7	55	35	35	**22**
	Denmark	25	26	x(5)	x(5)	22	24	a	x(10)	x(10)	36	**16**
	Estonia	26	26	18	29	22	24	26	a	43	43	**28**
	Finland	21	32	19	22[d]	21[d]	25[d]	x(5)	a	44	44	**27**
	France	18	25	33	37	35	29	24	35	43	41	**28**
	Germany	18	23	25	35	30	25	24	22	38	38	**22**
	Greece	m	m	m	m	m	m	m	m	m	m	**m**
	Hungary	23	17	19	18	18	18	17	32	43	42	**35**
	Iceland	23	25	15	23	17	20	30	19	26	26	**m**
	Ireland[4]	17	23	23	a	23	23	26	x(10)	x(10)	29	**21**
	Israel	21	x(5)	15[d]	26[d]	17[d]	17	8	18	52	45	**32**
	Italy[5]	23	24	x(5)	x(5)	25	25	m	22	31	31	**20**
	Japan	24	28	x(5)	x(5)	29[d]	28[d]	x(5, 10)	31[d]	54[d]	49[d]	**m**
	Korea	24	22	x(5)	x(5)	30	26	m	16	32	29	**23**
	Latvia	19	19	20	18	19	19	19	28	25	26	**21**
	Luxembourg[2]	19	21	21	19	20	20	1	23	44	42	**28**
	Mexico	16	14	27	19	24	18	a	x(10)	x(10)	44	**35**
	Netherlands	17	26	21	27	25	26	23	24	40	39	**25**
	New Zealand	20	25	29	36	31	28	27	30	42	40	**32**
	Norway	25	27	x(5)	x(5)	31[d]	29[d]	x(6)	x(6)	39	39	**22**
	Poland[6]	28	28	22	28[d]	25[d]	27[d]	19	48	36	36	**30**
	Portugal	26	35	x(5)	x(5)	38[d]	36[d]	x(5)	a	40	40	**23**
	Slovak Republic[2]	22	21	17	24	21	21	24	23	38	38	**26**
	Slovenia	31	35	30	25	27	30	a	14	46	41	**34**
	Spain	21	25	25	29[d]	27[d]	26[d]	x(4)	28	41	38	**28**
	Sweden	24	25	20	31	25	25	9	14	55	52	**24**
	Switzerland[4]	27	33	29[d]	32[d]	31[d]	32[d]	x(5)	x(5)	42	42	**18**
	Turkey	15	17	19	22	20	19	a	x(10)	x(10)	55	**45**
	United Kingdom	27	34	34	23	30	31	a	x(10)	x(10)	66	**53**
	United States	21	23	x(5)	x(5)	26	25	x(10)	x(10)	x(10)	54[d]	**48**
	OECD average	22	25	23	26	26	25	18	27	41	41	**28**
	EU22 average	22	26	24	27	26	25	m	28	40	39	**27**
Partners	Argentina	16	23	m	m	25	24	a	m	m	m	**m**
	Brazil[4]	24	24	x(5)	x(5)	24	24[d]	a	x(10)	x(10)	85	**77**
	China	m	m	m	m	m	m	m	m	m	m	**m**
	Colombia	16	21	m	m	24	22	a	127	m	m	**m**
	Costa Rica	m	m	m	m	m	m	m	m	m	m	**m**
	India	m	m	m	m	m	m	m	m	m	m	**m**
	Indonesia	12	9	14	6	11	10	a	x(10)	x(10)	21	**m**
	Lithuania	19	17	17	28	20	18	36	a	33	33	**24**
	Russian Federation	x(3)	x(3)	23[d]	17[d]	23[d]	23[d]	x(5)	23	41	38	**34**
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m	**m**
	South Africa[4]	18	x(6)	x(6)	x(6)	x(6)	19	m	m	m	m	**m**
	G20 average	m	m	m	m	m	m	m	m	m	m	**m**

1. Year of reference 2012.
2. Public institutions only for tertiary level.
3. Year of reference 2014.
4. Public institutions only.
5. Public institutions only except in tertiary education.
6. Upper secondary includes lower secondary vocational education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B1

Table B1.5a. Change in expenditure per student by educational institutions for all services, relative to different factors, at the primary, secondary and post-secondary non-tertiary levels of education (2005, 2008, 2010, 2011, 2012, 2013)

Index of change (GDP deflator 2008 = 100, constant prices)

		Primary, secondary and post-secondary non-tertiary														
		Change in expenditure (2008 = 100)					Change in the number of students (2008 = 100)					Change in expenditure per student (2008 = 100)				
		2005	2010	2011	2012	2013	2005	2010	2011	2012	2013	2005	2010	2011	2012	2013
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	91	121	119	119	120	100	102	104	107	108	**91**	**119**	**114**	**111**	**111**
	Austria	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Belgium	88	100	101	103	103	104	99	99	100	100	**85**	**100**	**101**	**102**	**103**
	Canada[1]	90	109	105	107	m	m	99	98	98	m	**m**	**110**	**107**	**109**	**m**
	Chile	84	97	112	106	104	104	96	94	93	92	**81**	**100**	**119**	**115**	**112**
	Czech Republic	95	104	107	108	105	108	96	94	92	92	**88**	**109**	**114**	**118**	**114**
	Denmark	101	109	101	110	109	101	107	112	114	114	**100**	**103**	**90**	**97**	**95**
	Estonia	81	88	82	83	83	111	94	92	89	88	**73**	**94**	**89**	**93**	**94**
	Finland	93	104	105	104	103	99	99	98	97	97	**94**	**105**	**107**	**107**	**106**
	France	97	103	102	102	101	100	100	100	101	101	**97**	**103**	**102**	**100**	**100**
	Germany	98	106	105	104	103	103	97	96	94	92	**96**	**109**	**110**	**111**	**112**
	Greece	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Hungary[2]	105	88	83	79	76	104	98	96	95	93	**100**	**90**	**86**	**83**	**82**
	Iceland	93	88	91	91	64	99	100	99	100	100	**94**	**89**	**92**	**91**	**64**
	Ireland[3]	75	107	105	106	100	96	103	104	104	107	**78**	**104**	**101**	**102**	**93**
	Israel	84	108	120	128	130	96	104	106	107	111	**87**	**104**	**113**	**120**	**117**
	Italy[2, 3]	96	93	89	86	86	100	100	101	99	100	**96**	**93**	**88**	**87**	**86**
	Japan[1]	98	102	103	104	103	103	99	98	97	96	**95**	**104**	**105**	**107**	**107**
	Korea	87	109	110	109	109	102	95	92	88	85	**85**	**115**	**120**	**123**	**128**
	Latvia	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Luxembourg	111	116	111	111	102	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Mexico	97	108	112	115	118	97	102	103	104	105	**100**	**106**	**109**	**111**	**113**
	Netherlands	95	108	107	107	108	99	100	100	100	99	**96**	**107**	**107**	**107**	**108**
	New Zealand	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Norway[1, 2]	94	106	105	105	109	98	100	101	102	102	**95**	**106**	**104**	**103**	**107**
	Poland	87	105	103	107	107	113	94	92	89	87	**77**	**112**	**113**	**120**	**123**
	Portugal[1, 3]	105	113	106	128	133	100	99	97	98	94	**104**	**114**	**109**	**131**	**142**
	Slovak Republic	87	117	109	108	113	111	94	91	87	85	**78**	**124**	**120**	**124**	**132**
	Slovenia	96	99	97	94	92	108	97	97	63	96	**89**	**102**	**100**	**148**	**95**
	Spain	87	103	101	96	92	98	103	104	105	108	**89**	**100**	**97**	**91**	**85**
	Sweden	97	99	99	100	101	103	94	94	94	95	**94**	**105**	**106**	**106**	**106**
	Switzerland[3]	97	104	106	108	110	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Turkey[2, 3]	82	121	123	136	163	98	104	103	104	107	**84**	**116**	**119**	**130**	**152**
	United Kingdom	101	107	110	113	112	101	101	103	105	103	**100**	**106**	**107**	**108**	**109**
	United States[1]	90	98	96	94	93	99	98	99	98	98	**91**	**100**	**98**	**95**	**95**
	OECD average	93	105	104	105	105	102	99	99	97	99	**91**	**105**	**105**	**108**	**107**
	EU22 average	94	104	101	103	102	103	99	98	96	97	**91**	**104**	**103**	**108**	**105**
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Brazil[2, 3]	70	114	118	m	m	104	95	92	90	88	**67**	**120**	**128**	**m**	**m**
	China	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**
	Costa Rica	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**
	Lithuania	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Russian Federation[3]	73	95	99	114	119	113	99	100	100	100	**65**	**96**	**99**	**115**	**119**
	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**
	G20 average	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**

1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Public expenditure only.
3. Public institutions only.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table B1.5b. Change in expenditure per student by tertiary educational institutions for all services, relative to different factors (2005, 2008, 2010, 2011, 2012, 2013)

Index of change (GDP deflator 2008 = 100, constant prices)

		Tertiary														
		Change in expenditure (2008 = 100)					Change in the number of students (2008 = 100)					Change in expenditure per student (2008 = 100)				
		2005	2010	2011	2012	2013	2005	2010	2011	2012	2013	2005	2010	2011	2012	2013
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	90	114	116	119	128	92	116	120	123	125	**97**	**98**	**97**	**97**	**102**
	Austria	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Belgium	90	108	110	111	115	97	109	112	116	118	**93**	**99**	**98**	**96**	**97**
	Canada[1]	94	113	109	111	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Chile	85	133	141	144	149	75	121	125	134	138	**112**	**109**	**113**	**107**	**108**
	Czech Republic	76	105	124	130	120	85	111	113	110	105	**89**	**94**	**110**	**119**	**114**
	Denmark	98	109	112	m	103	100	108	101	134	138	**98**	**101**	**110**	**m**	**75**
	Estonia	80	107	122	123	159	101	101	101	97	94	**79**	**106**	**121**	**126**	**169**
	Finland	93	108	112	109	106	102	101	102	102	102	**91**	**107**	**110**	**107**	**104**
	France	89	105	106	105	108	101	103	104	106	108	**87**	**101**	**102**	**100**	**100**
	Germany	88	109	114	115	116	101	109	115	122	128	**87**	**100**	**99**	**95**	**90**
	Greece	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Hungary[2]	95	91	106	74	88	100	88	94	93	88	**94**	**103**	**112**	**80**	**100**
	Iceland	86	90	87	92	104	91	106	110	108	107	**95**	**84**	**79**	**85**	**98**
	Ireland[3]	73	102	98	98	86	99	108	108	113	120	**74**	**95**	**90**	**87**	**72**
	Israel	102	108	120	119	130	99	108	111	114	113	**102**	**101**	**108**	**104**	**115**
	Italy	89	99	101	96	97	100	98	97	95	93	**89**	**101**	**104**	**101**	**104**
	Japan[1]	91	101	105	104	107	103	99	99	98	98	**89**	**102**	**106**	**106**	**108**
	Korea	79	108	114	112	113	97	99	100	100	100	**81**	**109**	**113**	**112**	**113**
	Latvia	m	m	m	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**	**m**	**m**	**m**
	Mexico	87	112	109	118	114	91	109	115	121	126	**96**	**103**	**95**	**98**	**91**
	Netherlands	92	109	113	114	116	91	108	111	111	113	**101**	**101**	**102**	**103**	**102**
	New Zealand	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Norway[1, 2]	98	104	104	106	110	101	107	110	109	113	**98**	**97**	**95**	**98**	**98**
	Poland	110	128	119	123	129	104	98	96	92	90	**106**	**131**	**124**	**134**	**143**
	Portugal[1, 3]	94	107	100	97	99	99	105	108	107	105	**95**	**101**	**92**	**91**	**95**
	Slovak Republic[2]	88	102	123	127	139	81	100	98	94	103	**109**	**102**	**126**	**135**	**134**
	Slovenia	97	105	109	100	95	98	102	100	93	90	**99**	**103**	**109**	**108**	**106**
	Spain	84	106	104	98	99	95	106	109	112	110	**88**	**101**	**95**	**88**	**89**
	Sweden	95	111	113	115	117	107	110	113	109	109	**89**	**101**	**100**	**106**	**108**
	Switzerland[3]	109	112	117	122	124	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Turkey[2, 3]	88	127	147	170	206	89	118	135	140	156	**99**	**107**	**109**	**121**	**132**
	United Kingdom	m	m	m	m	m	99	104	109	104	106	**m**	**m**	**m**	**m**	**m**
	United States[1]	89	104	107	111	108	94	116	118	122	114	**95**	**90**	**91**	**91**	**94**
	OECD average	91	108	112	113	117	96	106	108	110	111	**94**	**102**	**104**	**103**	**106**
	EU22 average	90	107	111	108	111	98	104	105	106	107	**92**	**103**	**106**	**105**	**106**
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Brazil[2, 3]	85	121	128	m	m	91	113	136	145	136	**94**	**107**	**94**	**m**	**m**
	China	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**
	Costa Rica	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**
	Lithuania	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**
	Russian Federation[3]	43	101	94	98	100	57	89	85	81	76	**76**	**114**	**111**	**120**	**132**
	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**
	G20 average	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**

1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Public expenditure only.
3. Public institutions only.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

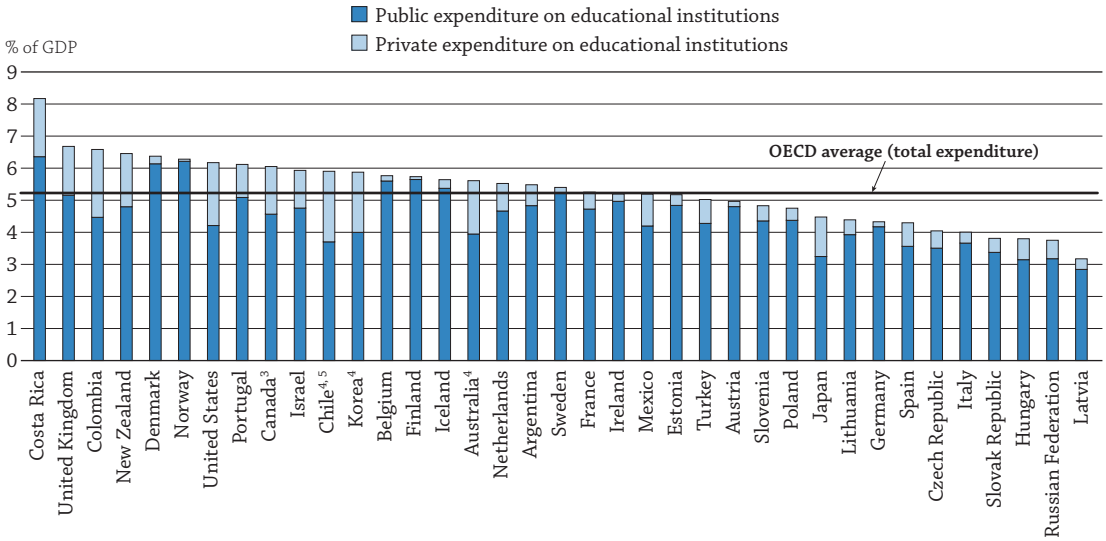
StatLink http://dx.doi.org/10.1787/888933397575

WHAT PROPORTION OF NATIONAL WEALTH IS SPENT ON EDUCATION?

- In 2013, OECD countries spent an average of 5.2% of their gross domestic product (GDP) on educational institutions from primary to tertiary education, ranging from 3.2% in Latvia to 6.7% in the United Kingdom.
- Between 2005 and 2013, 20 of the 28 countries for which data are available increased the share of GDP spent in primary to tertiary education. The average expenditure on educational institutions as a percentage of GDP, however, remained largely stable, increasing by only 0.2 percentage points over the period of eight years.
- Since the beginning of the economic crisis in 2008 and up to 2010, GDP decreased, in real terms, in 22 of 44 countries with available data, while public expenditure on educational institutions fell in only 6 of the 31 countries with available data. As a result, public expenditure as a percentage of GDP decreased in three countries during this period. Between 2010 and 2013, GDP increased on average by 4% across the OECD, while public expenditure on education remained largely stable, increasing by less than 1% yearly on average.

Figure B2.1. Public and private expenditure on educational institutions, as a percentage of GDP (2013)

From public[1] and private[2] sources, including undistributed programmes



1. Including public subsidies to households attributable to educational institutions, and direct expenditure on educational institutions from international sources.
2. Net of public subsidies attributable for educational institutions.
3. Year of reference 2012.
4. Public does not include international sources.
5. Year of reference 2014.

Countries are ranked in descending order of expenditure from both public and private sources on educational institutions.

Source: OECD. Table B2.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397719

Context

Countries invest in educational institutions to help foster economic growth, enhance productivity, contribute to personal and social development and reduce social inequality, among other reasons. The proportion of education expenditure relative to GDP depends on the different preferences of various public and private actors. However, expenditure on education largely comes from public budgets and is closely scrutinised by governments. During economic downturns, even core sectors like education can be subject to budget cuts.

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The level of expenditure on educational institutions is affected by the size of a country's school-age population, enrolment rates, level of teachers' salaries, and the organisation and delivery of instruction. At the primary and lower secondary levels of education (corresponding broadly to the 5-14 year-old population), enrolment rates are close to 100% in most OECD countries, and changes in the number of students are closely related to demographic changes. This is not as much the case in upper secondary and tertiary education, because part of the concerned population has left the education system (see Indicator C1).

This indicator presents a measure of expenditure on educational institutions relative to a nation's wealth. National wealth is estimated based on GDP, and expenditure on education includes spending by governments, enterprises, and individual students and their families.

Other findings

- Primary, secondary and post-secondary non-tertiary education accounts for two-thirds of expenditure on primary to tertiary educational institutions, or 3.6% of GDP, on average across OECD countries. New Zealand, Norway, Portugal and the United Kingdom spend the most among OECD and partner countries, with 4.7% or more of their GDP devoted to these levels of education, while Indonesia, Latvia and the Russian Federation spend less than 2.5% of their GDP on these levels of education.
- Tertiary education accounted for 1.5% of GDP in 2013, on average across OECD countries, which represents an increase, from 1.4% on average in 2005. The countries which spend the most at this level, Chile, Costa Rica, Korea and the United States, spend between 2.3% and 2.6% of their GDP on tertiary institutions.
- Private expenditure on educational institutions as a percentage of GDP is highest at the tertiary level, on average across OECD countries. In Australia, Chile, Japan, Korea and the United States, over half of the expenditure on tertiary education comes from private sources, accounting for at least 1% of GDP.

Trends

Between 2008 and 2010, public investment in primary to tertiary education increased by an average of 5% among OECD countries. However, the growth of public expenditure on educational institutions slowed afterwards, and remained stable between 2010 and 2013, on average across OECD countries.

Over the period 2008-10, Estonia, Hungary, Iceland, Italy, the Russian Federation and the United States cut public expenditure on educational institutions (in real terms), while in all other countries it increased. On average across OECD countries, public expenditure on educational institutions as a percentage of GDP surged in this period. This is explained by the fact that GDP decreased marginally, by 2% on average, while public expenditure increased by 5% over the two-year period following the economic crisis.

Between 2010 and 2013 all countries, except for Southern European economies like Greece, Italy, Portugal and Spain, saw an increase in GDP. Increased GDP combined with stable public expenditure on education over the same period led to a decrease of 3% in expenditure as a percentage of GDP. Overall, between 2008 and 2013, average public expenditure as a percentage of GDP increased considerably until 2010, when it decreased slightly, reaching a total five-year positive variation of 4%.

Analysis

Overall investment relative to GDP

The share of national wealth devoted to educational institutions is substantial in all OECD and partner countries. In 2013, OECD countries spent an average of 5.2% of their GDP on educational institutions from primary to tertiary education (see Table C2.3 for the share of GDP devoted to early childhood education).

In 2013, expenditure on primary to tertiary educational institutions relative to GDP reached 6% or more in Canada, Colombia, Costa Rica, Denmark, New Zealand, Norway, Portugal, the United Kingdom and the United States. At the other end of the spectrum, Hungary, Indonesia, Latvia, the Russian Federation and the Slovak Republic spent less than 4% of their GDP on education (Figure B2.1 and Table B2.1).

Expenditure on educational institutions, by level of education

An average of two-thirds of the expenditure on education (excluding early childhood education) in all OECD countries is devoted to primary, secondary and post-secondary non-tertiary education, and the remaining one-third to tertiary education. Primary education receives a total of 1.5% of GDP on average, while lower secondary receives 1% and upper secondary and post-secondary non-tertiary combined receive 1.2%. This breakdown is strongly influenced by the demographic composition of the country, as countries with a relatively higher fertility rate are more likely to spend a larger share of their wealth in primary education. On the other hand, all the countries where investment in primary education is below 1% of GDP are Central and East European countries with lower birth rates, namely Austria, the Czech Republic, Germany, Hungary, Lithuania and the Slovak Republic (Table B2.3 and see Indicator C1).

In all OECD and partner countries with available data, the level of national resources devoted to primary, secondary and post-secondary non-tertiary education combined is much larger than the share devoted to tertiary education. The share of resources devoted to primary, secondary and post-secondary non-tertiary levels exceeds 50% of educational expenditure in all countries, and in Argentina, Belgium, Brazil, Indonesia, Ireland, Italy, Mexico, Portugal, Slovenia and Switzerland, it accounts for over 75%. In terms of expenditure as a percentage of GDP, New Zealand, Norway and Portugal spend the most on primary, secondary and post-secondary non-tertiary education (4.7% of GDP), while in Indonesia, Latvia and the Russian Federation, expenditure on those levels accounts for less than 2.5% of GDP.

At the upper secondary level, vocational and general programmes take up on average 0.6% of GDP each. However, these figures vary widely between countries. Of the 28 countries for which data are available, 15 spend more on general programmes and 13 spend more on vocational programmes. Belgium, Finland and Switzerland spend the highest share of their GDP to maintain vocational programmes at upper secondary level, reaching 1% or higher of GDP. Post-secondary non-tertiary education, which also often has vocational components, is the object of considerably less expenditure, representing about 0.1% of GDP on average across the OECD.

Finally, tertiary education accounts for 1.6% of GDP on average, although variation between countries at this level is even higher, depending, for example, on R&D expenditure (see Indicator B1). Moreover, as it is not a compulsory level of education, enrolment and, therefore, expenditure on tertiary education are less linked to demographic pressures than in lower levels of education. Tertiary education is also the origin of most of the variation on total expenditure across time (Table B2.2). The countries where the largest share of GDP is spent on tertiary education are Canada, Chile, Costa Rica and the United States, at around 2.5%. Unsurprisingly, those countries also have some of the strongest participations of private sources of educational funding at this level: 1.2% of GDP for Canada, 1.5% for Chile, 1.0% for Costa Rica, and 1.7% for the United States (Table B2.3).

Change in educational expenditure between 2005 and 2013

Although average expenditure on primary, secondary and post-secondary non-tertiary education remained stable between 2005 and 2013, this masks significant changes in some countries. In Hungary and Iceland, for example, expenditure on primary, secondary and post-secondary non-tertiary education as a percentage of GDP decreased by 0.8 or more percentage points in the eight-year period. On the other hand, Brazil and Portugal both increased the share of expenditure on these educational levels by over 1 percentage point during the same period.

At the tertiary level, all countries except Israel, Poland, Slovenia and Switzerland spent a larger percentage of their GDP on tertiary education in 2013 than they did in 2005. The average increase across the OECD was 0.1 percentage points, although Estonia increased its expenditure on tertiary education as a percentage of GDP by 0.9 percentage points.

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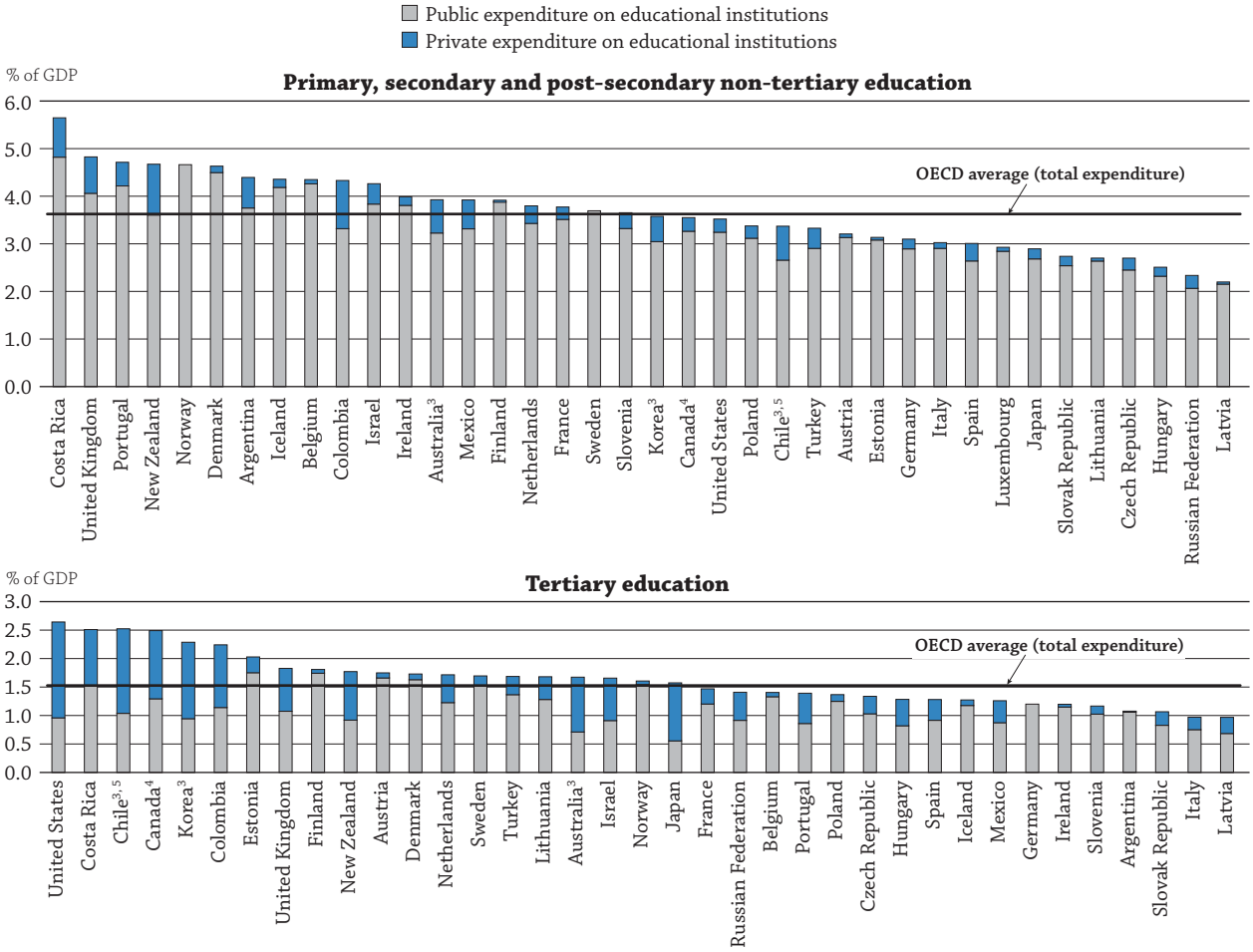
Combining all educational levels from primary to tertiary, average expenditure as a percentage of GDP across OECD countries increased by 0.2 percentage points between 2005 and 2013, most of which took place between 2008 and 2010. Emerging economies like Brazil and the Russian Federation displayed the largest increases by far in expenditure as a percentage of GDP – more a result of an increase in expenditure than of a decrease in GDP. Brazil added 1.3 percentage points to its share of GDP spent on education, and the Russian Federation added 1.1 percentage points.

Figure B2.2. Public and private expenditure on educational institutions, as a percentage of GDP, by level of education (2013)

From public[1] and private[2] sources, by level of education and source of funds



1. Including public subsidies to households attributable to educational institutions, and direct expenditure on educational institutions from international sources.
2. Net of public subsidies attributable for educational institutions.
3. Public does not include international sources.
4. Year of reference 2012.
5. Year of reference 2014.

Countries are ranked in descending order of expenditure from both public and private sources on educational institutions.

Source: OECD. Table B2.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397728

Share of public and private expenditure as a percentage of GDP

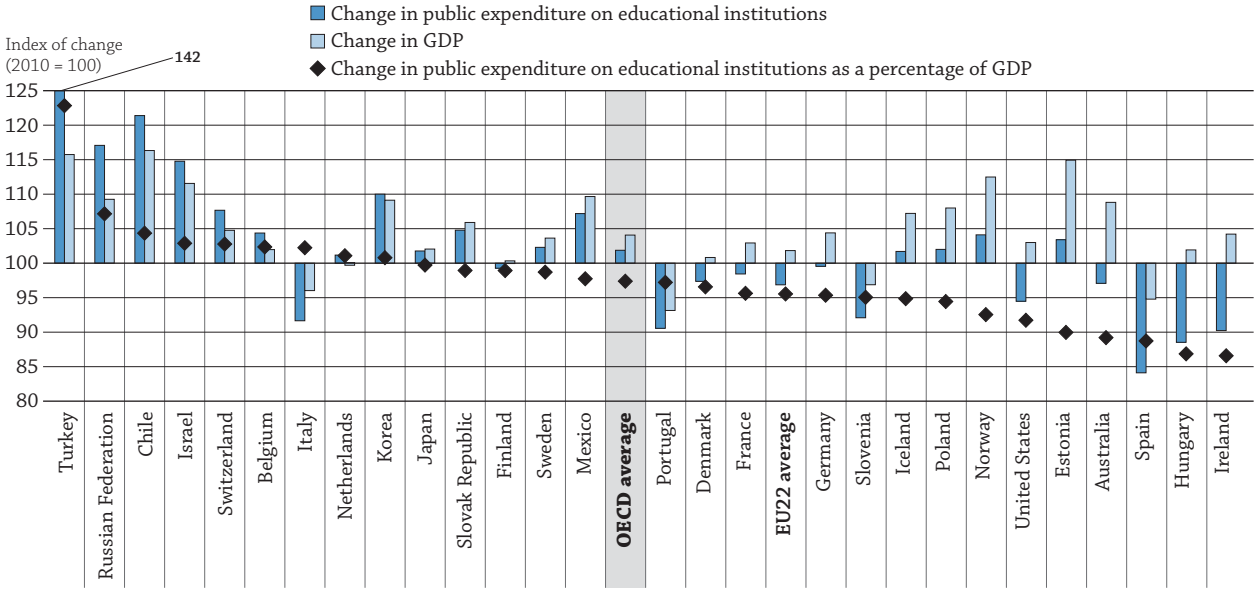
At initial levels of education, private investment is low and accounts for a combined total of 0.3% of GDP on average for primary, secondary and post-secondary non-tertiary education. At 1.1% of GDP, New Zealand is the country with the largest relative share of private sources in primary, secondary and post-secondary non-tertiary education. This is influenced by a relatively larger post-compulsory school vocational sector at upper secondary and post-secondary

non-tertiary levels in the country. Compared with compulsory schooling, a much higher proportion of institutional expenditure in New Zealand comes from private household sources via tuition fees, much of which is paid on the student's behalf directly to institutions from public sources via subsidised student loans. In Australia, private sources are relatively evenly spread between primary, secondary and post-secondary non-tertiary levels, while in Chile, private educational investment is more heavily present in primary education, where it accounts for roughly one-quarter of total expenditure.

In tertiary education, however, private sources have a more crucial role and account for around 30% of expenditure on average or 0.5% of GDP. In some countries, private sources are very important in relative and absolute terms to assure that a large percentage of national wealth goes into tertiary education. As mentioned in the previous section, Canada, Chile, Costa Rica, Korea and the United States stand out as the countries with largest percentage of GDP spent on tertiary education. Part of that is explained by the fact that they are also among the countries with the highest shares of private sources. Among countries spending more than 2% of GDP on tertiary education, only Estonia has a small percentage of private sources, at 0.3% of GDP (Table B2.3).

Figure B2.3. Impact of the economic crisis on public expenditure on education and index of change in public expenditure on educational institutions and in GDP (2010 to 2013)

Index of change between 2010 and 2013 in public expenditure on educational institutions as a percentage of GDP, primary to tertiary levels of education (2010 = 100, 2013 constant prices)



Countries are ranked in descending order of the change in public expenditure on educational institutions as a percentage of GDP.

Source: OECD. Table B2.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397736

Public expenditure and GDP variation after the crisis

The global economic crisis that began in 2008 had major adverse effects on different sectors of the economy. Data from 2008 to 2013 show clearly the impact of the crisis on the funding of educational institutions, especially when comparing the periods 2008-10 and 2010-13.

Between 2008 and 2010, GDP (expressed in constant prices) fell in the majority of the countries (20 out of 35 OECD countries), and by 5% or more in Estonia, Finland, Greece, Hungary, Iceland, Ireland, Latvia and Slovenia. As over three-quarters of education expenditure in most countries comes from public sources, how did the downturn in GDP growth affect public spending on education? Available figures show that the education sector was still relatively untouched by early budget cuts.

Since public budgets in most countries are approved many months before the funds are actually spent, there are certain built-in rigidities to the funding of education. Moreover, most governments try to protect education from dramatic reductions in public investment.

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Among the 29 OECD countries with available data for the period between 2008 and 2010, only 5 countries cut public expenditure on educational institutions (in real terms): Estonia (by 10%), Hungary (by 11%), Iceland (by 12%), Italy (by 6%) and the United States (by 1%). In Hungary, Iceland and Italy, this translated into a decrease in expenditure on educational institutions as a percentage of GDP (as the reduction in expenditure was larger than the decrease in GDP). In Estonia, the Russian Federation and the United States, the share of GDP devoted to education did not change or even increased, as the decrease in expenditure was balanced out with similar or larger decreases in GDP.

In all other countries, public expenditure on educational institutions increased or remained stable, while GDP decreased in some of them. As a result, the share of GDP devoted to education rose by 7% on average across OECD countries between 2008 and 2010.

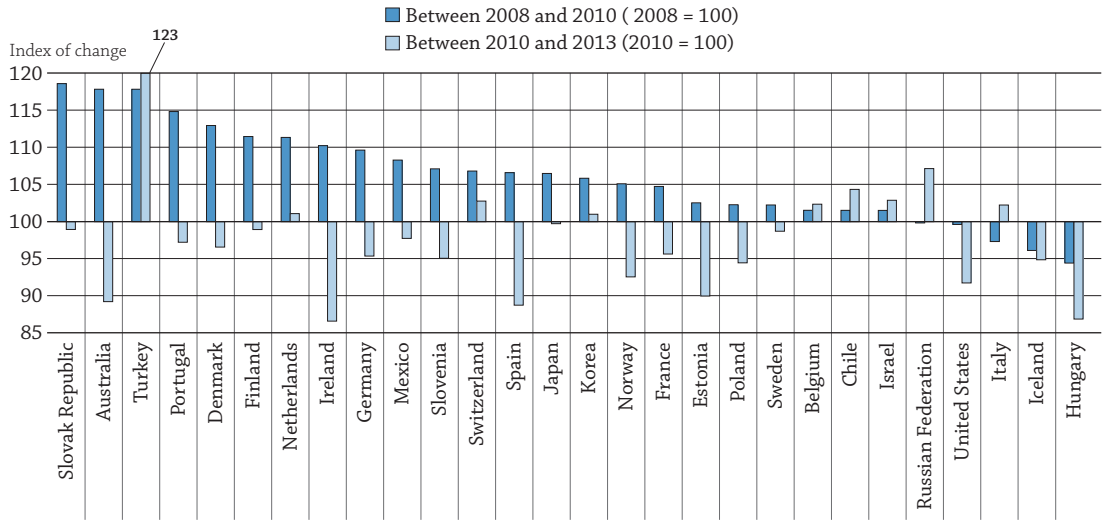
Between 2010 and 2013, the crisis had a stronger impact on public expenditure on education. While GDP decreased between 2008 and 2010 in 19 of the 35 OECD countries with available data, it stayed constant or increased between 2010 and 2013 in all countries except 5. The countries where GDP decreased between 2010 and 2013 are Greece (by 18%), Italy (by 4%), Portugal (by 7%), Slovenia (by 3%) and Spain (by 5%). On average, GDP increased by 4% across the OECD countries and by 8% across the G20 economies over this period.

Public expenditure on educational institutions, on the other hand, remained quite stable during this period, increasing by a mere 2% between 2010 and 2013 on average across OECD countries. The combination of an accelerating economy and stable public expenditure on education resulted in a decrease in public expenditure as a percentage of GDP in all but ten countries for which data are available, averaging a 3% decrease across the OECD (Figure B2.3).

In conclusion, in the five years following the crisis, public expenditure on educational institutions increased in the first two years and then stagnated between 2010 and 2013. On the other hand, GDP decreased slightly in the period between 2008 and 2010 and grew by 4% in the following three years. These factors combined resulted in a strong increase of 7% in public expenditure on educational institutions as a percentage of GDP in the aftermath of the crisis (2008-10), followed by a 3% decrease in the 2010-13 period. All countries, except Chile, Israel, Italy, the Russian Federation and Turkey, observed a more positive variation in the share of public expenditure on educational institutions as a percentage of GDP between 2008 and 2010 than between 2010 and 2013 (Figure B2.4).

Figure B2.4. Change in public expenditure on educational institutions as a percentage of GDP (2013)

Index of change between 2008 and 2010 and between 2010 and 2013 in public expenditure[1] on educational institutions as a percentage of GDP, for primary to tertiary education (2013 constant prices)



1. Excluding subsidies attributable to payments to educational institutions received from public sources.

Countries are ranked in descending order of the change in public expenditure on educational institutions as a percentage of GDP between 2008 and 2010.

Source: OECD. Table B2.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397747

Methodology

Data refer to the financial year 2013 and are based on the UOE data collection on education statistics administered by the OECD in 2014 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Note regarding data from Israel

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

Indicator B2 Tables

StatLink http://dx.doi.org/10.1787/888933397664

Table B2.1	**Expenditure on educational institutions as a percentage of GDP, by level of education (2013)**
Table B2.2	**Trends in expenditure on educational institutions as a percentage of GDP, by level of education (2005, 2008, 2010, 2011, 2012, 2013)**
Table B2.3	**Expenditure on educational institutions as a percentage of GDP, by source of funding and level of education (2013)**
Table B2.4	**Change in public expenditure on educational institutions as a percentage of GDP (2008, 2010, 2013)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table B2.1. Expenditure on educational institutions as a percentage of GDP, by level of education (2013)

From public and private sources of funds[1]

		Primary	Secondary					Post-secondary non-tertiary	Tertiary (including R&D activities)			Primary to tertiary
			Lower secondary	Upper secondary			All secondary		Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
				General programmes	Vocational programmes	All programmes						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	1.8	1.3	0.6	0.2	0.8	2.0	0.1	0.1	1.5	1.7	**5.6**
	Austria	0.9	1.2	0.4	0.7	1.1	2.3	0.0	0.3	1.5	1.7	**5.0**
	Belgium	1.6	0.9	0.8[d]	1.1[d]	1.9[d]	2.8[d]	x(5)	0.0	1.4	1.4	**5.8**
	Canada[2]	2.1[d]	x(1)	x(5)	x(5)	1.5	m	m	0.9	1.6	2.5	**6.1**
	Chile[3]	1.6	0.6	0.8	0.4	1.2	1.8	a	0.4	2.1	2.5	**5.9**
	Czech Republic	0.8	0.9	0.2	0.8	1.0	1.9	0.0	0.0	1.3	1.3	**4.0**
	Denmark	2.2	1.2	x(5)	x(5)	1.2	2.5	a	x(10)	x(10)	1.7	**6.4**
	Estonia	1.5	0.7	0.4	0.3	0.7	1.4	0.2	a	2.0	2.0	**5.2**
	Finland	1.3	1.1	0.4	1.1[d]	1.5[d]	2.6[d]	x(5)	a	1.8	1.8	**5.7**
	France	1.2	1.3	0.8	0.5	1.3	2.6	0.0	0.3	1.2	1.5	**5.3**
	Germany	0.6	1.3	0.4	0.6	1.0	2.2	0.2	0.0	1.2	1.2	**4.3**
	Greece	m	m	m	m	m	m	m	m	m	m	**m**
	Hungary	0.9	0.7	0.6	0.2	0.9	1.5	0.1	0.1	1.2	1.3	**3.8**
	Iceland	2.1	1.0	0.7	0.5	1.2	2.2	0.1	0.0	1.3	1.3	**5.6**
	Ireland	2.0	0.9	0.8	a	0.8	1.7	0.3	x(10)	x(10)	1.2	**5.2**
	Israel	2.4	x(5)	1.1[d]	0.7[d]	1.9[d]	1.9	0.0	0.4	1.3	1.7	**5.9**
	Italy	1.1	0.7	x(5)	x(5)	1.2	1.9	0.1	0.0	1.0	1.0	**4.0**
	Japan	1.3	0.8	x(5)	x(5)	0.8[d]	1.6[d]	x(5, 8, 9)	0.2[d]	1.3[d]	1.6[d]	**4.5**
	Korea	1.5	0.9	x(5)	x(5)	1.2	2.1	m	0.3	2.0	2.3	**5.9**
	Latvia	1.1	0.5	0.4	0.2	0.6	1.1	0.0	0.1	0.8	1.0	**3.2**
	Luxembourg	1.2	0.8	0.4	0.5	0.9	1.7	0.0	x(10)	x(10)	0.5	**3.5**
	Mexico	2.0	1.0	0.6	0.3	0.9	1.9	a	x(10)	x(10)	1.3	**5.2**
	Netherlands	1.3	1.3	0.3	0.9	1.2	2.5	0.0	0.0	1.7	1.7	**5.5**
	New Zealand	1.6	1.4	1.1	0.4	1.5	2.9	0.2	0.2	1.5	1.8	**6.5**
	Norway	2.1	1.0	x(5)	x(5)	1.6[d]	2.6[d]	x(5)	x(5)	1.6	1.6	**6.3**
	Poland	1.6	0.8	0.4	0.5	0.9	1.7	0.1	0.0	1.4	1.4	**4.8**
	Portugal	1.8	1.4	x(5)	x(5)	1.5[d]	2.9[d]	x(10)	a	1.4[d]	1.4[d]	**6.1**
	Slovak Republic	0.9	1.0	0.2	0.6	0.9	1.8	0.1	0.0	1.1	1.1	**3.8**
	Slovenia	1.7	0.9	0.4	0.6	1.1	2.0	a	0.1	1.1	1.2	**4.8**
	Spain	1.3	0.8	0.6	0.3[d]	0.9[d]	1.7[d]	x(5)	0.2	1.1	1.3	**4.3**
	Sweden	1.7	0.8	0.5	0.7	1.1	2.0	0.0	0.0	1.7	1.7	**5.4**
	Switzerland	1.5	1.0	0.4[d]	1.0[d]	1.3[d]	3.9	x(5)	x(10)	1.2	1.2	**5.1**
	Turkey	1.1	1.2	0.5	0.6	1.1	2.2	a	x(10)	x(10)	1.7	**5.0**
	United Kingdom	1.9	1.2	1.2	0.5	1.7	2.9	a	0.1	1.8	1.8	**6.7**
	United States	1.6	0.9	1.0[d]	x(5)	x(5)	1.9	x(10)	x(10)	x(10)	2.6[d]	**6.2**
	OECD average	1.5	1.0	0.6	0.6	1.2	2.1	0.1	0.2	1.4	1.6	**5.2**
	EU22 average	1.4	1.0	0.5	0.6	1.1	2.1	m	0.1	1.4	1.4	**4.9**
Partners	Argentina	1.9	1.5	m	m	1.0	2.5	a	x(10)	x(10)	1.1	**5.5**
	Brazil	1.7	1.6	x(5)	x(5)	1.1[d]	2.6[d]	x(5)	x(10)	x(10)	0.9	**5.2**
	China	m	m	m	m	m	m	m	m	m	m	**m**
	Colombia	2.1	1.6	x(5)	x(5)	0.6	2.2	m	0.5	1.7	2.2	**6.6**
	Costa Rica	3.0	1.8	x(5)	x(5)	0.9	2.7	a	0.2	2.4	2.6	**8.3**
	India	m	m	m	m	m	m	m	m	m	m	**m**
	Indonesia	1.4	0.5	0.3	0.1	0.4	0.9	a	0.0	0.5	0.5	**2.8**
	Lithuania	0.7	1.2	0.4	0.2	0.6	1.8	0.2	a	1.7	1.7	**4.4**
	Russian Federation	x(5)	x(5)	2.2[d]	0.2[d]	2.3[d]	2.3[d]	x(5)	0.2	1.2	1.4	**3.8**
	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**
	G20 average	m	m	m	m	m	m	m	m	m	m	**m**

Note: Data on early childhood education are available in Indicator C2.

1. Including international sources.
2. Year of reference 2012.
3. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B2.2. Trends in expenditure on educational institutions as a percentage of GDP, by level of education (2005, 2008, 2010, 2011, 2012, 2013)

From public and private sources, by year

		Primary, secondary and post-secondary non-tertiary						Tertiary						Primary to tertiary					
		2005	2008	2010	2011	2012	2013	2005	2008	2010	2011	2012	2013	2005	2008	2010	2011	2012	2013
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	3.7	3.7	4.3	4.1	4.0	3.9	1.5	1.5	1.6	1.6	1.6	1.7	**5.2**	**5.2**	**5.9**	**5.7**	**5.6**	**5.6**
	Austria	m	m	m	m	3.1	3.2	m	m	m	m	1.8	1.7	**m**	**m**	**m**	**m**	**4.9**	**5.0**
	Belgium	4.1	4.3	4.3	4.3	4.3	4.4	1.2	1.3	1.3	1.3	1.4	1.4	**5.3**	**5.6**	**5.6**	**5.6**	**5.7**	**5.8**
	Canada[1]	3.3	3.5	3.8	3.6	3.6	m	2.3	2.4	2.7	2.5	2.5	m	**5.6**	**5.8**	**6.4**	**6.0**	**6.1**	**m**
	Chile	3.8	4.0	3.7	4.0	3.6	3.4	2.0	2.1	2.6	2.6	2.5	2.5	**5.8**	**6.0**	**6.3**	**6.6**	**6.1**	**5.9**
	Czech Republic	2.8	2.5	2.7	2.7	2.8	2.7	1.0	1.1	1.2	1.4	1.4	1.3	**3.7**	**3.6**	**3.9**	**4.1**	**4.2**	**4.0**
	Denmark	4.4	4.1	4.7	4.3	4.7	4.6	1.7	1.6	1.8	1.9	m	1.7	**6.0**	**5.8**	**6.5**	**6.1**	**m**	**6.4**
	Estonia	3.4	3.8	3.8	3.3	3.2	3.1	1.1	1.3	1.6	1.7	1.6	2.0	**4.6**	**5.1**	**5.4**	**4.9**	**4.8**	**5.2**
	Finland	3.7	3.6	4.0	3.9	3.9	3.9	1.7	1.6	1.8	1.9	1.8	1.8	**5.4**	**5.2**	**5.8**	**5.8**	**5.8**	**5.7**
	France	3.9	3.8	4.0	3.9	3.8	3.8	1.3	1.4	1.5	1.5	1.4	1.5	**5.2**	**5.2**	**5.4**	**5.3**	**5.3**	**5.3**
	Germany	3.3	3.1	3.3	3.2	3.1	3.1	1.0	1.1	1.2	1.2	1.2	1.2	**4.3**	**4.2**	**4.5**	**4.4**	**4.4**	**4.3**
	Greece[1]	2.7	m	m	m	m	m	1.5	m	m	m	m	m	**4.2**	**m**	**m**	**m**	**m**	**m**
	Hungary[2]	3.4	m	m	m	2.6	2.5	1.1	m	m	m	1.2	1.3	**4.5**	**0.0**	**0.0**	**0.0**	**3.8**	**3.8**
	Iceland	5.2	4.9	4.7	4.7	4.6	4.4	1.2	1.2	1.2	1.1	1.2	1.3	**6.4**	**6.1**	**5.8**	**5.8**	**5.8**	**5.6**
	Ireland	3.2	4.0	4.5	4.3	4.3	4.0	1.1	1.4	1.5	1.4	1.4	1.2	**4.3**	**5.3**	**6.0**	**5.7**	**5.7**	**5.2**
	Israel	3.8	3.9	4.0	4.2	4.4	4.3	1.8	1.5	1.5	1.6	1.6	1.7	**5.6**	**5.4**	**5.5**	**5.8**	**5.9**	**5.9**
	Italy	3.0	3.1	3.0	2.8	3.0	3.0	0.8	0.9	1.0	1.0	0.9	1.0	**4.0**	**4.1**	**4.1**	**4.0**	**3.9**	**4.0**
	Japan[1]	2.9	2.8	2.9	3.0	2.9	2.9	1.4	1.5	1.5	1.6	1.5	1.6	**4.3**	**4.3**	**4.5**	**4.5**	**4.5**	**4.5**
	Korea	3.8	3.9	3.9	3.8	3.7	3.6	2.1	2.4	2.4	2.4	2.3	2.3	**6.0**	**6.2**	**6.3**	**6.2**	**6.0**	**5.9**
	Latvia	m	m	m	m	2.0	2.2	m	m	m	m	1.0	1.0	**m**	**m**	**m**	**m**	**3.0**	**3.2**
	Luxembourg	m	3.1	3.5	3.3	3.3	2.9	m	m	m	m	0.4	0.5	**m**	**m**	**m**	**m**	**3.8**	**3.5**
	Mexico	3.9	3.6	3.9	3.9	3.9	3.9	1.2	1.2	1.4	1.3	1.3	1.3	**5.0**	**4.9**	**5.3**	**5.2**	**5.2**	**5.2**
	Netherlands	3.6	3.5	3.8	3.7	3.8	3.8	1.5	1.4	1.6	1.6	1.7	1.7	**5.0**	**4.9**	**5.4**	**5.4**	**5.4**	**5.5**
	New Zealand	m	m	m	m	4.9	4.7	m	m	m	m	1.9	1.8	**m**	**m**	**m**	**m**	**6.8**	**6.5**
	Norway[1, 2]	5.1	4.8	5.1	4.7	4.6	4.7	m	1.6	1.7	1.6	1.6	1.6	**m**	**6.4**	**6.8**	**6.4**	**6.2**	**6.3**
	Poland	3.7	3.6	3.6	3.4	3.4	3.4	1.6	1.2	1.5	1.3	1.3	1.4	**5.3**	**4.8**	**5.0**	**4.7**	**4.8**	**4.8**
	Portugal[1]	3.6	3.3	3.7	3.6	4.5	4.7	1.3	1.3	1.4	1.3	1.3	1.4	**4.8**	**4.6**	**5.1**	**4.9**	**5.8**	**6.1**
	Slovak Republic[1]	2.8	2.6	3.0	2.7	2.7	2.7	0.9	0.9	0.9	1.0	1.0	1.1	**3.7**	**3.4**	**3.9**	**3.7**	**3.7**	**3.8**
	Slovenia	4.1	3.6	3.8	3.7	3.7	3.7	1.3	1.1	1.2	1.3	1.2	1.2	**5.3**	**4.7**	**5.1**	**5.0**	**4.9**	**4.8**
	Spain	2.8	3.0	3.2	3.2	3.1	3.0	1.1	1.2	1.3	1.3	1.3	1.3	**3.9**	**4.2**	**4.5**	**4.5**	**4.3**	**4.3**
	Sweden	4.0	3.8	3.8	3.7	3.7	3.7	1.5	1.5	1.7	1.7	1.7	1.7	**5.5**	**5.3**	**5.4**	**5.3**	**5.4**	**5.4**
	Switzerland[2]	4.0	3.7	3.8	3.8	3.8	3.9	1.3	1.1	1.2	1.2	1.2	1.2	**5.3**	**4.8**	**5.0**	**5.0**	**5.1**	**5.1**
	Turkey[2]	m	m	m	2.7	3.0	3.3	m	m	m	m	1.4	1.7	**m**	**m**	**m**	**m**	**4.4**	**5.0**
	United Kingdom	4.2	3.9	4.3	4.3	4.4	4.8	m	m	m	m	1.8	1.8	**m**	**m**	**m**	**m**	**6.2**	**6.7**
	United States[1]	3.6	3.9	3.8	3.7	3.5	3.5	2.3	2.5	2.6	2.7	2.7	2.6	**6.0**	**6.4**	**6.5**	**6.4**	**6.2**	**6.2**
	OECD average	3.7	3.6	3.8	3.7	3.6	3.6	1.4	1.5	1.6	1.6	1.5	1.6	**5.0**	**4.9**	**5.2**	**5.1**	**5.1**	**5.2**
	EU22 average	3.5	3.5	3.7	3.6	3.5	3.5	1.2	1.3	1.4	1.4	1.3	1.4	**4.7**	**4.5**	**4.8**	**4.7**	**4.8**	**4.9**
Partners	Argentina	m	m	m	m	3.1	4.4	m	m	m	m	m	1.1	**m**	**m**	**m**	**m**	**m**	**5.5**
	Brazil[2]	3.2	4.0	4.2	4.2	4.3	4.3	0.7	0.8	0.9	0.9	0.8	0.9	**3.9**	**4.7**	**5.1**	**5.1**	**5.1**	**5.2**
	China	m	m	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**	**m**
	Colombia	m	m	m	m	m	4.3	m	m	m	m	1.9	2.2	**m**	**m**	**m**	**m**	**m**	**6.6**
	Costa Rica	m	m	m	m	m	5.7	m	m	m	m	m	2.6	**m**	**m**	**m**	**m**	**m**	**8.3**
	India	m	m	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**	**m**
	Indonesia[2]	m	m	m	m	2.8	2.3	m	m	m	m	0.8	0.5	**m**	**m**	**m**	**m**	**3.6**	**2.8**
	Lithuania	m	m	m	m	m	2.7	m	m	m	m	m	1.7	**m**	**m**	**m**	**m**	**m**	**4.4**
	Russian Federation	1.9	2.1	2.1	2.0	2.3	2.3	0.8	1.5	1.6	1.4	1.4	1.4	**2.7**	**3.6**	**3.6**	**3.4**	**3.7**	**3.8**
	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**
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	**m**	**m**	**m**	**m**	**m**	**m**

1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Public expenditure only (for Switzerland, in tertiary education only; for Norway, in primary, secondary and post-secondary non-tertiary education only).

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B2.3. Expenditure on educational institutions as a percentage of GDP, by source of funding and level of education (2013)

From public and private sources of funds

		Primary			Lower secondary			Upper secondary and post-secondary non-tertiary			Tertiary			Primary to tertiary		
		Public[1]	Private[2]	Total	Public[1]	Private[2]	Total	Public[1]	Private[2]	Total	Public[1]	Private[2]	Total	Public[1]	Private[2]	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia[3]	1.6	0.2	**1.8**	1.0	0.3	**1.3**	0.7	0.2	**0.9**	0.7	1.0	**1.7**	3.9	1.7	**5.6**
	Austria	0.9	0.0	**0.9**	1.2	0.0	**1.2**	1.0	0.1	**1.1**	1.7	0.1	**1.7**	4.8	0.2	**5.0**
	Belgium	1.5	0.0	**1.6**	0.9	0.0	**0.9**	1.8	0.0	**1.9**	1.3	0.1	**1.4**	5.6	0.2	**5.8**
	Canada[4]	1.9[d]	0.2[d]	**2.1[d]**	x(1)	X(2)	**x(3)**	1.3	0.1	**1.5**	1.3	1.2	**2.5**	4.6	1.5	**6.0**
	Chile[3, 5]	1.3	0.4	**1.6**	0.5	0.1	**0.6**	0.9	0.2	**1.2**	1.0	1.5	**2.5**	3.7	2.2	**5.9**
	Czech Republic	0.7	0.1	**0.8**	0.9	0.1	**0.9**	0.9	0.1	**1.0**	1.0	0.3	**1.3**	3.5	0.5	**4.0**
	Denmark	2.1	0.0	**2.2**	1.2	0.1	**1.2**	1.2	0.0	**1.2**	1.6	0.1	**1.7**	6.1	0.2	**6.4**
	Estonia	1.5	0.0	**1.5**	0.7	0.0	**0.7**	0.9	0.0	**0.9**	1.8	0.3	**2.0**	4.8	0.3	**5.2**
	Finland	1.3	0.0	**1.3**	1.1	0.0	**1.1**	1.5	0.0	**1.5**	1.7	0.1	**1.8**	5.6	0.1	**5.7**
	France	1.1	0.1	**1.2**	1.2	0.1	**1.3**	1.2	0.1	**1.3**	1.2	0.3	**1.5**	4.7	0.5	**5.3**
	Germany	0.6	0.0	**0.6**	1.2	0.0	**1.3**	1.0	0.2	**1.2**	1.2	0.0	**1.2**	4.2	0.2	**4.3**
	Greece	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
	Hungary	0.8	0.1	**0.9**	0.6	0.1	**0.7**	0.9	0.1	**1.0**	0.8	0.5	**1.3**	3.1	0.7	**3.8**
	Iceland	2.1	0.0	**2.1**	1.0	0.0	**1.0**	1.1	0.1	**1.2**	1.2	0.1	**1.3**	5.4	0.3	**5.6**
	Ireland	1.9	0.1	**2.0**	0.9	0.1	**0.9**	1.0	0.1	**1.1**	1.1	0.0	**1.2**	5.0	0.2	**5.2**
	Israel	2.3	0.1	**2.4**	x(7)	x(8)	**x(9)**	1.5[d]	0.3[d]	**1.9[d]**	0.9	0.7	**1.7**	4.8	1.2	**5.9**
	Italy	1.0	0.0	**1.1**	0.7	0.0	**0.7**	1.2	0.1	**1.3**	0.8	0.2	**1.0**	3.7	0.3	**4.0**
	Japan	1.3	0.0	**1.3**	0.7	0.0	**0.8**	0.7	0.2	**0.8**	0.6	1.0	**1.6**	3.2	1.2	**4.5**
	Korea[3]	1.3	0.1	**1.5**	0.8	0.1	**0.9**	0.9	0.3	**1.2**	0.9	1.3	**2.3**	4.0	1.9	**5.9**
	Latvia	1.0	0.0	**1.1**	0.5	0.0	**0.5**	0.6	0.0	**0.6**	0.7	0.3	**1.0**	2.8	0.3	**3.2**
	Luxembourg	1.2	0.0	**1.2**	0.8	0.0	**0.8**	0.9	0.0	**0.9**	m	m	**m**	m	m	**m**
	Mexico	1.7	0.3	**2.0**	0.9	0.1	**1.0**	0.7	0.2	**0.9**	0.9	0.4	**1.3**	4.2	1.0	**5.2**
	Netherlands	1.3	0.0	**1.3**	1.2	0.1	**1.3**	0.9	0.3	**1.2**	1.2	0.5	**1.7**	4.7	0.9	**5.5**
	New Zealand	1.5	0.1	**1.6**	1.2	0.2	**1.4**	1.0	0.7	**1.7**	0.9	0.9	**1.8**	4.8	1.7	**6.5**
	Norway	2.1	0.0	**2.1**	1.0	0.0	**1.0**	1.6	0.0	**1.6**	1.5	0.1	**1.6**	6.2	0.1	**6.3**
	Poland	1.5	0.1	**1.6**	0.8	0.1	**0.8**	0.9	0.1	**1.0**	1.2	0.1	**1.4**	4.4	0.4	**4.8**
	Portugal	1.6	0.2	**1.8**	1.3	0.1	**1.4**	1.3	0.2	**1.5**	0.9[d]	0.5[d]	**1.4[d]**	5.1	1.0	**6.1**
	Slovak Republic	0.8	0.1	**0.9**	0.9	0.0	**1.0**	0.8	0.1	**0.9**	0.8	0.2	**1.1**	3.4	0.4	**3.8**
	Slovenia	1.5	0.1	**1.7**	0.8	0.1	**0.9**	1.0	0.1	**1.1**	1.0	0.1	**1.2**	4.4	0.5	**4.8**
	Spain	1.1	0.2	**1.3**	0.7	0.1	**0.8**	0.8	0.1	**0.9**	0.9	0.4	**1.3**	3.6	0.7	**4.3**
	Sweden	1.7	0.0	**1.7**	0.8	0.0	**0.8**	1.2	0.0	**1.2**	1.5	0.2	**1.7**	5.2	0.2	**5.4**
	Switzerland	1.5	m	**m**	1.0	m	**m**	0.9	0.4	**1.3**	1.2	m	**m**	5.1	m	**m**
	Turkey	0.9	0.1	**1.1**	1.0	0.1	**1.2**	0.9	0.1	**1.1**	1.4	0.3	**1.7**	4.3	0.7	**5.0**
	United Kingdom	1.7	0.2	**1.9**	1.0	0.2	**1.2**	1.4	0.3	**1.7**	1.1	0.8	**1.8**	5.2	1.5	**6.7**
	United States	1.5	0.1	**1.6**	0.8	0.1	**0.9**	0.9	0.1	**1.0**	1.0	1.7	**2.6**	4.2	2.0	**6.2**
	OECD average	1.4	0.1	**1.5**	0.9	0.1	**1.0**	1.1	0.2	**1.2**	1.1	0.5	**1.6**	4.5	0.7	**5.2**
	EU22 average	1.3	0.1	**1.4**	0.9	0.1	**1.0**	1.1	0.1	**1.2**	1.2	0.3	**1.4**	4.5	0.5	**5.0**
Partners	Argentina	1.6	0.3	**1.9**	1.3	0.2	**1.5**	0.9	0.1	**1.0**	1.1	0.0	**1.1**	4.8	0.7	**5.5**
	Brazil	1.7	m	**m**	1.6	m	**m**	1.1	m	**m**	0.9	m	**m**	5.2	m	**m**
	China	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
	Colombia	1.6	0.5	**2.1**	1.3	0.4	**1.6**	0.5	0.2	**0.6**	1.1	1.1	**2.2**	4.5	2.1	**6.6**
	Costa Rica	2.5	0.5	**3.0**	1.5	0.2	**1.8**	0.8	0.1	**0.9**	1.5	1.0	**2.6**	6.4	1.8	**8.3**
	India	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
	Indonesia	1.4	m	**m**	0.5	m	**m**	0.4	m	**m**	0.5	m	**m**	2.8	m	**m**
	Lithuania	0.7	0.0	**0.7**	1.2	0.0	**1.2**	0.8	0.0	**0.8**	1.3	0.4	**1.7**	3.9	0.5	**4.4**
	Russian Federation	x(7)	x(8)	**x(9)**	x(7)	x(8)	**x(9)**	2.1	0.3	**2.3**	0.9	0.5	**1.4**	3.2	0.6	**3.8**
	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**
	G20 average	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**

1. Including public subsidies to households attributable to educational institutions, and direct expenditure on educational institutions from international sources.
2. Net of public subsidies attributable to educational institutions.
3. Public does not include international sources.
4. Year of reference 2012.
5. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B2

Table B2.4. Change in public expenditure on educational institutions as a percentage of GDP (2008, 2010, 2013)

Index of change between 2008 and 2010 and between 2010 and 2013 in public expenditure on educational institutions as a percentage of GDP, for all levels of education (2013 constant prices)

	Change in public expenditure[1] on educational institutions from primary to tertiary			Change in GDP			Change in public expenditure on educational institutions in percentage of GDP		
	Between 2008 and 2010 (2008=100)	Between 2010 and 2013 (2010=100)	Between 2008 and 2013 (2008=100)	Between 2008 and 2010 (2008=100)	Between 2010 and 2013 (2010=100)	Between 2008 and 2013 (2008=100)	Between 2008 and 2010 (2008=100)	Between 2010 and 2013 (2010=100)	Between 2008 and 2013 (2008=100)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD									
Australia	123	97	120	104	109	114	118	89	105
Austria	m	m	m	98	104	102	m	m	m
Belgium	102	104	106	100	102	102	102	102	104
Canada	107	m	m	100	104	104	107	m	m
Chile	106	121	129	105	116	122	102	104	106
Czech Republic	104	m	m	97	101	98	107	m	m
Denmark	109	97	106	96	101	97	113	97	109
Estonia	90	103	93	87	115	100	103	90	92
Finland	105	99	105	94	100	95	111	99	110
France	104	98	102	99	103	102	105	95	99
Germany	108	100	107	98	104	103	110	95	105
Greece	m	m	m	90	82	74	m	m	m
Hungary	89	89	79	94	102	96	94	87	82
Iceland	88	102	90	92	107	99	96	95	91
Ireland	104	90	94	95	104	99	110	87	95
Israel	108	115	125	107	112	119	102	103	104
Italy	94	92	86	96	96	92	97	102	93
Japan	105	102	107	99	102	101	107	100	106
Korea	114	110	125	107	109	117	106	101	107
Latvia	m	m	m	82	114	94	m	m	m
Luxembourg	m	m	m	100	106	106	m	m	m
Mexico	109	107	116	100	110	110	108	98	106
Netherlands	109	101	110	98	100	98	111	101	113
New Zealand	m	m	m	101	107	108	m	m	m
Norway	105	104	109	100	112	113	105	93	97
Poland	109	102	111	106	108	115	102	94	97
Portugal	114	91	103	99	93	92	115	97	112
Slovak Republic	118	105	123	99	106	105	119	99	117
Slovenia	100	92	92	93	97	90	107	95	102
Spain	103	84	86	96	95	91	107	89	95
Sweden	103	102	105	100	104	104	102	99	101
Switzerland	108	108	116	101	105	106	107	103	110
Turkey	122	142	174	104	116	120	118	123	145
United Kingdom	m	m	m	97	104	102	m	m	m
United States	99	94	94	100	103	103	100	92	91
OECD average	105	102	108	98	104	103	107	97	104
EU22 average	104	97	101	96	102	98	107	96	102
Partners									
Argentina	m	m	m	110	112	123	m	m	m
Brazil	115	m	m	107	m	m	107	m	m
China	m	m	m	121	127	154	m	m	m
Colombia	m	m	m	106	116	123	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	111	119	132	m	m	m
Lithuania	m	m	m	87	114	99	m	m	m
Russian Federation	96	117	113	96	109	105	100	107	107
Saudi Arabia	m	m	m	109	119	130	m	m	m
South Africa	m	m	m	101	108	109	m	m	m
G20 average	m	m	m	103	108	112	m	m	m

1. Excluding subsidies attributable to payments to educational institutions received from public sources.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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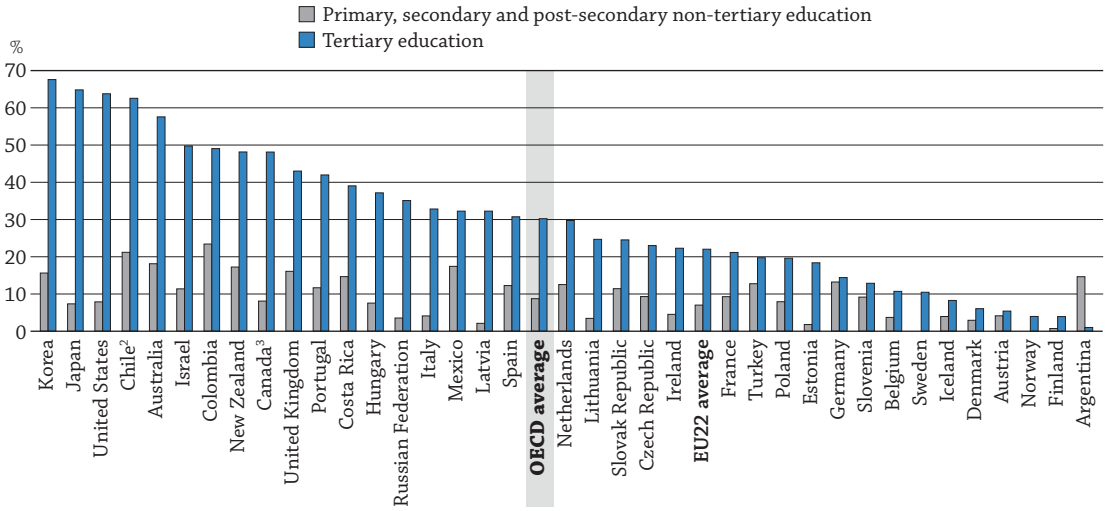
HOW MUCH PUBLIC AND PRIVATE INVESTMENT IN EDUCATION IS THERE?

- On average, across OECD countries, public funding accounts for 84% of all funds on educational institutions from primary to tertiary education.
- Nearly 91% of the funds for primary, secondary and post-secondary non-tertiary educational institutions come from public sources, on average across OECD countries; only in Chile is this share less than 80%.
- Between 2008 and 2013, private sources of expenditure on primary, secondary and post-secondary non-tertiary educational institutions increased by 15%, while public sources increased by only 6%, on average across OECD countries.

Figure B3.1. Share of private expenditure[1] on educational institutions (2013)



How to read this figure

The figure shows private spending on educational institutions as a percentage of total spending on educational institutions. This includes all money transferred to educational institutions from private sources, including public funding via subsidies to households, private fees for educational services or other private spending (e.g. on accommodation) which goes through the institution.

1. Including subsidies attributable to payments to educational institutions received from public sources.
2. Year of reference 2014.
3. Year of reference 2012.

Countries are ranked in descending order of the share of private expenditure on educational institutions for tertiary education.

Source: OECD. Table B3.1b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

More people are participating in a wider range of educational programmes offered by increasing numbers of providers than ever before. As a result, the question of who should support an individual's efforts to acquire more education – governments or the individuals themselves – is becoming increasingly important. In the current economic environment, many governments are finding it difficult to provide the necessary resources to support the increased demand for education through public funds alone. In addition, some policy makers assert that those who benefit the most from education, the individuals who receive it, should bear at least some of the costs. While public funding still represents a large part of countries' investment in education, the role of private sources of funding is becoming increasingly prominent in some educational levels.

Public sources dominate much of the funding of primary and secondary education, which are usually the compulsory levels in most countries. At the pre-primary (see Indicator C2) and tertiary levels of education, the balance between public and private financing of education varies more across

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OECD countries, as full or nearly full public funding is less common. At these levels, private funding comes mainly from households, raising concerns about equity of access to education. The debate is particularly intense with respect to funding for tertiary education. Some stakeholders are concerned that the balance between public and private funding should not become so tilted as to discourage potential students from entering tertiary education. Others believe that countries should significantly increase public support to students, while still others support efforts to increase the amount of funding to tertiary education provided by private enterprises.

Other findings

- In most countries, the share of public sources in expenditure on educational institutions is higher on primary level than on lower secondary level. Conversely, upper secondary education is less publicly funded than lower secondary education in all countries except Denmark. Also, tertiary education receives a higher share of private funding than lower educational levels in all countries.
- In primary, secondary and post-secondary non-tertiary education, public sources fund over 80% of expenditure in all countries except Chile (79%) and are the only source of expenditure in Norway and Sweden. However, there is great variation in the share of public sources at tertiary level. While it corresponds to less than 40% in Chile, Japan, Korea and the United States, it is over 95% in Finland and Norway.
- In all countries, except Lithuania and the Netherlands, household expenditure corresponds to the largest share of private sources in education at primary, secondary and post-secondary non-tertiary levels. In tertiary education, households also contribute most of private expenditure in all but seven countries (Austria, Belgium, the Czech Republic, Denmark, Finland, Sweden and the United Kingdom).
- At primary level, public expenditure per student is much higher in public institutions (USD 8 316) than in private institutions (USD 4 212) However, at tertiary level, government expenditure stands at USD 12 222 for public institutions and only USD 4 136 for private institutions.

Trends

On average, public funding of primary, secondary and post-secondary non-tertiary education increased by 8% in the three years before the 2008 crisis, and by 6% after the crisis (between 2008 and 2013). In contrast, private sources saw a similar rise before the crisis (8% between 2005 and 2008), but a much higher surge in the five years following it, totalling 15%. Over the five-year period between 2008 and 2013, private expenditure on those levels of education increased by 93% in Ireland and by 112% in Israel. Despite some variation in absolute public and private expenditure, the share of public expenditure on primary, secondary and post-secondary non-tertiary remained largely unchanged, varying from 92% to 91 % between 2005 and 2013. Chile is the country showing the strongest increase in public funding, going from 70% to 79% of the total between 2005 and 2013.

Given that an increasingly high number of students have access to university, both public and private expenditure have increased faster at tertiary level than at lower levels across the OECD. Yet, unlike in primary, secondary and post-secondary education, the increase was stronger in public sources (24%) than in private sources (14%). However, between 2005 and 2013, the average share of public funding for tertiary institutions remained stable at around 70% (Table B3.2b). This trend masks strong variations between countries: in Chile it increased from 16% in 2005 to 38% in 2013, while in Hungary it decreased from 78% to 63% over the same period. In the case of Chile, the increase in public funding at tertiary level is the result of public expenditure in the country being almost four times larger in 2013 than in 2008, while private expenditure rose by less than 10% over the same period. In contrast to most OECD countries, Chile had a countercyclical macroeconomic policy after the financial crisis by increasing public expenditure. In addition, the passing of the SEP law in Chile (*Subvención Escolar Preferencial*) in 2008 increased public resources to primary and secondary levels significantly, according to school performance and concentration of vulnerable pupils in the school.

Analysis

Public and private expenditure on educational institutions

Educational institutions in OECD countries are mainly publicly funded, although there is a substantial level of private funding at the tertiary level. On average across OECD countries, 84% of all funds for primary to tertiary educational institutions comes directly from public sources (Figure B3.1 and Table B3.1b).

However, the share of public and private funding varies widely among countries. Comparing expenditure on primary to tertiary levels of education combined, the share of private funds exceeds 30% in Chile, Colombia, Korea and the United States. By contrast, in Austria, Belgium, Denmark, Finland, Iceland, Norway and Sweden, 5% or less of expenditure on education comes from private sources (Table B3.1b).

Public and private expenditure on primary, secondary and post-secondary non-tertiary educational institutions

Public funding dominates primary and secondary education in all countries. On average, 93% of expenditure on primary educational institutions comes from public sources. In Finland, Norway and Sweden, all educational funding for this level is public. On the contrary, funding in primary education from private sources is 22% in Chile and 23% in Colombia, the highest of all countries for which data are available.

In the lower secondary level, public funding corresponds to 93% of total educational expenditure. In 24 of the 31 OECD countries for which data are available, public expenditure accounts for over 90% of the total. However, Australia, Chile and Colombia rely on over one-fifth of private expenditure at this level.

In upper secondary education, there is a slightly stronger presence of private sources of expenditure on vocational programmes than on general programmes. Vocational education at this level receives 14% of private sources on average, while general education only receives 11%. In Germany, the Netherlands, New Zealand and Switzerland, vocational upper secondary education has at least 20 percentage points more private funding than the general track. It is unsurprising that Germany and Switzerland have some of the highest shares of students enrolled in combined school- and work-based programmes, 41% in Germany and 59% in Switzerland (see Indicator C1). For New Zealand this is influenced by a relatively larger post-compulsory school vocational sector at upper secondary and post-secondary non-tertiary levels. Compared with compulsory schooling, a much higher proportion of institutional expenditure in the country comes from private household sources via tuition fees, much of which is paid on the student's behalf directly to institutions from public sources via subsidised student loans. On the other hand, in Chile and Mexico the share of public funding in vocational programmes exceeds that of general programmes by 20 or more percentage points. Overall, upper secondary education relies on more private funding than primary and lower secondary levels.

The level of public funding also decreases in post-secondary non-tertiary education, where it stands at only 78% on average. Unlike the three lower levels presented, in post-secondary non-tertiary education, two countries (Germany and New Zealand) rely more on private than public sources of funding.

Across the years, the share of public funding in primary, secondary and post-secondary non-tertiary remained constant at around 91%-92%. Although there was an increase of 15% in private funding between 2008 and 2013, while public funding expanded by only 6%, this is translated in a decrease of just 1 percentage point in the share of public expenditure, given that private funding still remains very small, despite its growth.

The pre-crisis growth in public sources was much larger than that in the aftermath of the crisis. But private sources saw a larger increase in the years following the crisis (2008-13) than those preceding it (2005-08). However, most countries spent more public money on primary, secondary and post-secondary non-tertiary education in 2013 than they did in 2005.

Public and private expenditure on tertiary educational institutions

High private returns to tertiary education (see Indicator A7) suggest that a greater contribution to the costs of education by individuals and other private entities may be justified, as long as there are ways to ensure that funding is available to students regardless of their economic backgrounds (see Indicator B5). In all countries, the proportion of private expenditure on education is far higher for tertiary education – an average of nearly 30% of total expenditure at this level – than it is for primary, secondary and post-secondary non-tertiary education (Figure B3.1 and Table B3.1).

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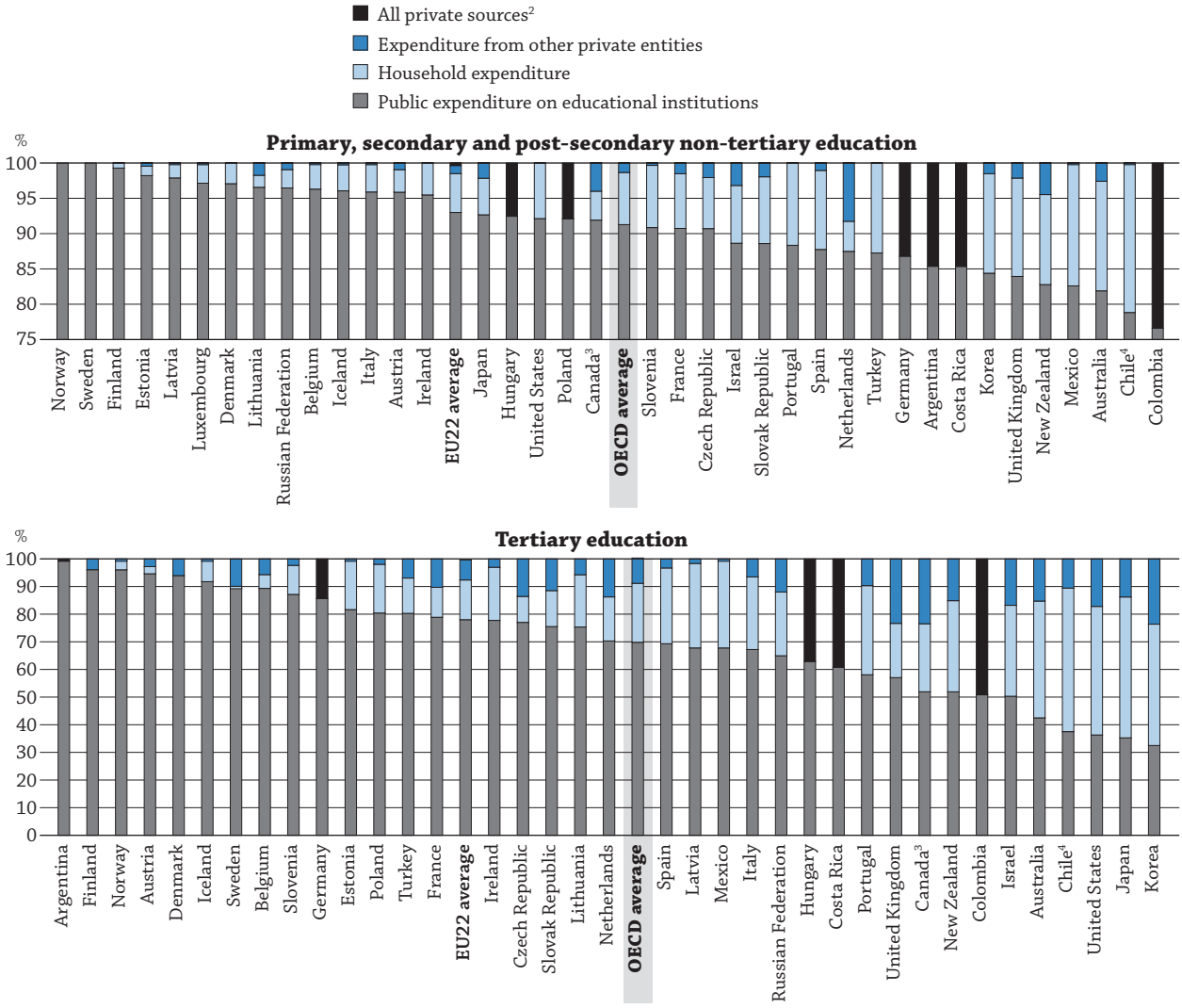
The proportion of expenditure on tertiary institutions covered by individuals, businesses and other private sources, including subsidised private payments, ranges from less than 10% in Austria, Denmark, Finland, Iceland and Norway (tuition fees charged by tertiary institutions are low or negligible in these countries) to more than 60% in Chile, Japan, Korea and the United States. These proportions may be related to the level of tuition fees charged by tertiary institutions (Figure B3.2 and Table B3.1, and see Indicator B5). In Korea, for example, 80% of students are enrolled in private institutions, and more than 40% of the education budget come from tuition fees (see Indicator B5 and OECD, 2014).

On average across the OECD, household expenditure accounts for two-thirds of expenditure from private sources. In the majority of countries, household expenditure is the biggest source of private funds, but in Denmark, Finland and Sweden, almost all private funding come from other private entities, and the share of household expenditure is either null or very low.

Figure B3.2. Distribution of public and private expenditure on educational institutions (2013)

By level of education[1]



1. Excluding international funds.
2. Including subsidies attributable to payments to educational institutions received from public sources.
3. Year of reference 2012.
4. Year of reference 2014.

Countries are ranked in descending order of the proportion of public expenditure on educational institutions by level of education.

Source: OECD. Table B3.1b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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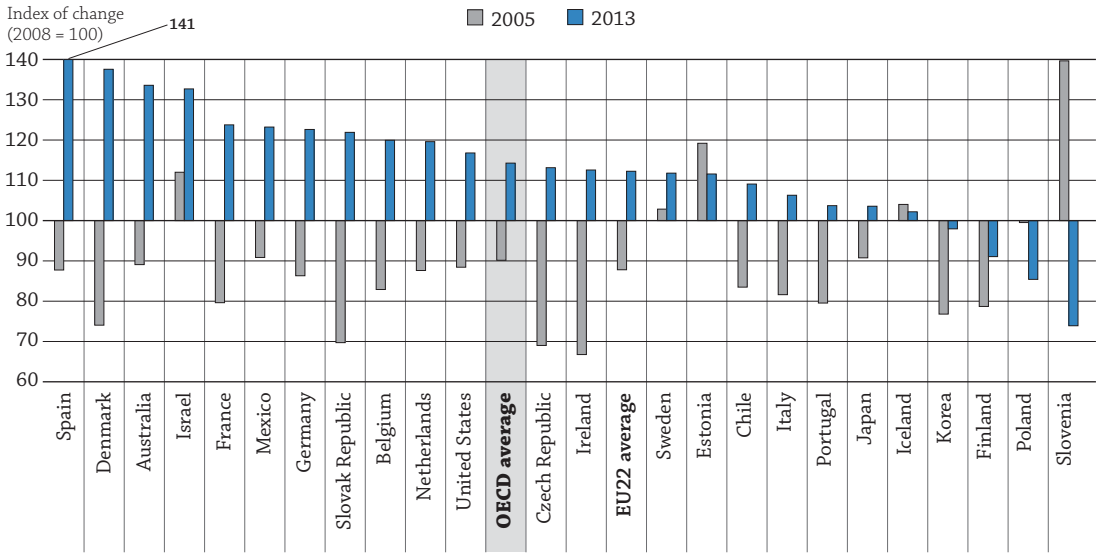
In many OECD countries, greater participation in tertiary education (see Indicator C1) reflects strong individual and social demand. The increases in enrolment have been accompanied by increases in investment from both public and private sources and changes in the proportions of public and private expenditure. This resulted in a 24% increase in public funds and a 14% increase in private funds, on average, across the OECD between 2008 and 2013.

Despite the faster increase of public funding in comparison to private funding, a change of only 1 percentage point is seen between 2008 and 2013 in the share of public expenditure on educational institutions. These figures, however, are strongly influenced by outliers like Chile, where public funds nearly multiplied by four between 2008 and 2013 and the share of public expenditure on educational institutions rose from 16% in 2008 to 38% in 2013.

Although public funding for tertiary education increased in most countries, some are still behind their 2008 peak. This is the case, for example, of Italy where in 2013, despite some growth, public expenditure was still lower than in 2005 and 2008. As for private sources, Estonia, Iceland, Poland and Slovenia also have less spending in 2013 than they did in the pre-crisis period.

Figure B3.3. Change in private expenditure[1] on tertiary educational institutions, 2008 = 100 (2005 and 2013)



1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

Countries are ranked in descending order of the share of private expenditure on tertiary educational institutions in 2013.

Source: OECD. Table B3.2b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397833

Public expenditure on educational institutions per student, by type of institution

The level of public expenditure partly shows the degree to which governments value education (see Indicators B2 and B4). Naturally, most public funds go to public institutions, but in some cases a significant part of the public budget may be devoted to private educational institutions (government-dependent private institutions and independent private institutions).

Table B3.3 shows public investment in educational institutions relative to the size of the education system. The data focus on public expenditure per student on public and private educational institutions. This measure complements data on public expenditure relative to national income (see Indicator B2).

On average across OECD countries, at primary to tertiary levels of education combined, public expenditure per student on public institutions (USD 9 552) is 59% higher than public expenditure per student on private institutions (USD 5 992). However, the difference varies according to the level of education. At the primary level of education, public expenditure per student on public institutions (USD 8 316) is around 97% larger than that on private institutions (USD 4 212), while at the lower secondary level, public expenditure per student on public institutions (USD 9 707) is 61% higher than on private institutions (USD 6 011).

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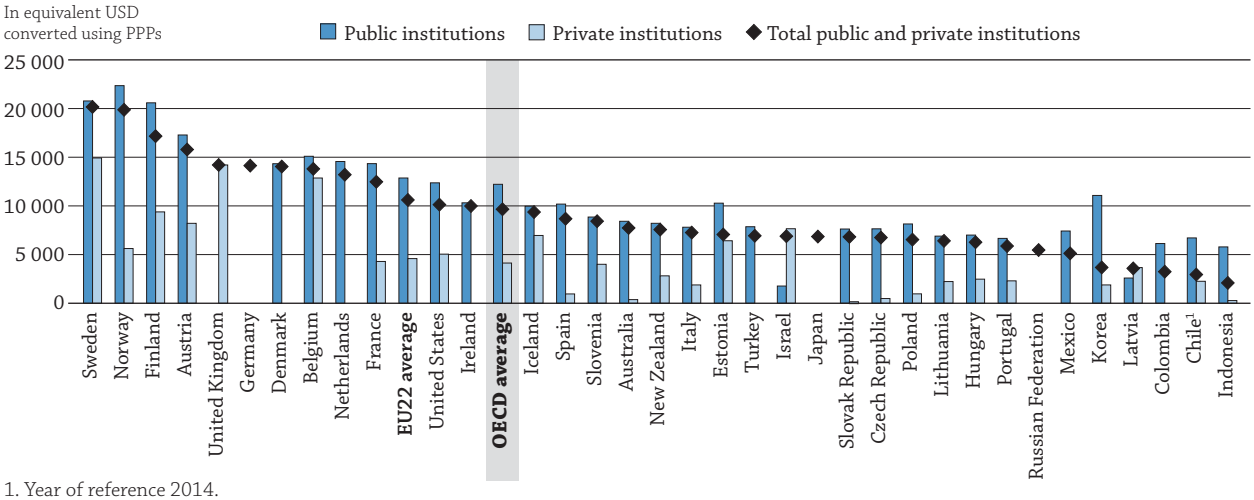
The gap in public funds received by private and public institutions remains stable at the upper secondary level, where public institutions receive 61% more money from the government, but the largest difference is in tertiary level. The public expenditure per student in tertiary level is three times higher for public institutions (on average USD 12 222) than for private institutions (USD 4 136).

At primary level, public expenditure per student in public institutions varies widely, from USD 18 386 in Luxembourg to USD 521 in India. However, there is even greater variation in private institutions, as countries like Ireland, the Netherlands and Turkey do not spend any public money on private institutions at primary level, while in Denmark, Luxembourg, Sweden and the United Kingdom, the expenditure per primary student in private institutions is over USD 10 000.

In lower and upper secondary levels, the picture is similar to the primary level, although the difference in funding to public and private institutions becomes larger. All countries, except Finland, Hungary, Israel and Norway spend much more per student on public institutions than on private institutions in upper secondary education.

The highest public expenditure per student is in tertiary education, where countries spend on average USD 9 660 per year. The funding gap between types of institution widens at this level, as private institutions receive, on average about one-third of the sum transferred to public institutions. The only countries where government funds are larger for private institutions are Israel and Latvia.

Figure B3.4. Annual public expenditure on educational institutions per student in tertiary education, by type of institution (2013)



1. Year of reference 2014.

Countries are ranked in descending order of public expenditure on public and private educational institutions per student.

Source: OECD. Table B3.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397847

Definitions

Other private entities includes private businesses and non-profit organisations (e.g. religious organisations, charitable organisations, and business and labour associations).

Private institutions includes independent private institutions and government-dependant private institutions.

Private spending includes all direct expenditure on educational institutions, whether partially covered by public subsidies or not. Expenditure by private companies on the work-based element of school- and work-based training of apprentices and students is also taken into account. Public subsidies attributable to households, included in private spending, are shown separately.

The **public and private proportions of expenditure on educational institutions** are the percentages of total spending originating in, or generated by, the public and private sectors.

Public expenditure is related to all students at public and private institutions, whether these institutions receive public funding or not.

Methodology

Data refer to the financial year 2013 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Not all spending on instructional goods and services occurs within educational institutions. For example, families may purchase commercial textbooks and materials, or seek private tutoring for their children outside educational institutions. At the tertiary level, students' living expenses and foregone earnings can also account for a significant proportion of the costs of education. All expenditure outside educational institutions, even if publicly subsidised, is excluded from this indicator. Public subsidies for educational expenditure outside institutions are discussed in Indicators B4 and B5.

A portion of the budgets of educational institutions is related to ancillary services offered to students, including student welfare services (student meals, housing and transport). Part of the cost of these services is covered by fees collected from students and is included in the indicator.

Expenditure on educational institutions is calculated on a cash-accounting basis and, as such, represents a snapshot of expenditure in the reference year. Many countries operate a loan payment/repayment system at the tertiary level. While public loan payments are taken into account, loan repayments from private individuals are not, and so the private contribution to education costs may be under-represented.

The data on expenditure for 2005, 2008, 2010 and 2013 were updated based on a survey in 2015-16, and expenditure for 2005 to 2013 were adjusted to the methods and definitions used in the current UOE data collection.

Note regarding data from Israel

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

References

OECD (2014), "Indicator C7: In what ways do public and private schools/institutions differ?", in *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2014-28-en.

Indicator B3 Tables

StatLink http://dx.doi.org/10.1787/888933397754

Table B3.1a	**Relative proportions of public and private expenditure on educational institutions, by level of education (2013)**
Table B3.1b	**Relative proportions of disaggregated public and private expenditure on educational institutions, by level of education (2013)**
Table B3.2a	**Trends in the relative proportion of public expenditure1 on educational institutions and index of change in public and private expenditure, at primary, secondary, post-secondary non-tertiary level (2005, 2008, 2010 to 2013)**
Table B3.2b	**Trends in the relative proportion of public expenditure1 on tertiary educational institutions and index of change in public and private expenditure (2005, 2008, 2010 to 2013)**
Table B3.3	**Annual public expenditure on educational institutions per student, by type of institution (2013)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table B3.1a. Relative proportions of public and private expenditure on educational institutions, by level of education (2013)

Distribution of public and private sources of funds for educational institutions after transfers from public sources[1]

	Primary		Lower secondary		Upper secondary						Post-secondary non-tertiary education	
					General programmes		Vocational programmes		All programmes			
	Public sources	Private sources[2]	Public sources	Private sources[2]	Public sources	Private sources[2]	Public sources	Private sources[2]	Public sources	Private sources[2]	Public sources	Private sources[2]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	88	12	77	23	74	26	82	18	77	23	82	18
Austria	97	3	97	3	94	6	96	4	95	5	54	46
Belgium	97	3	96	4	96[d]	4[d]	96[d]	4[d]	96[d]	4[d]	x(10)	x(11)
Canada[3]	92[d]	8[d]	x(1)	x(2)	x(10)	x(11)	x(10)	x(11)	92	8	m	m
Chile[4]	78	22	80	20	73	27	93	7	79	21	a	a
Czech Republic	93	7	92	8	88	12	88	12	88	12	68	32
Denmark	98	2	93	7	x(10)	x(11)	x(10)	x(11)	100	0	a	a
Estonia	98	2	98	2	97	3	99	1	98	2	97	3
Finland	100	0	100	0	100	0	99[d]	1[d]	99[d]	1[d]	x(7)	x(8)
France	93	7	91	9	91	9	84	16	88	12	81	19
Germany	98	2	97	3	96	4	60	40	75	25	49	51
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	94	6	92	8	92	8	90	10	91	9	90	10
Iceland	99	1	99	1	89	11	89	11	89	11	90	10
Ireland	97	3	93	7	92	8	a	a	92	8	99	1
Israel	95	5	x(10)	x(11)	85[d]	15[d]	73[d]	27[d]	80[d]	20[d]	a	a
Italy	96	4	97	3	x(10)	x(11)	x(10)	x(11)	95	5	100	0
Japan	99	1	94	6	x(10)	x(11)	x(10)	x(11)	82[d]	18[d]	x(10)	x(11)
Korea	91	9	93	7	x(10)	x(11)	x(10)	x(11)	71	29	m	m
Latvia	99	1	98	2	99	1	93	7	97	3	93	7
Luxembourg	97	3	97	3	94	6	99	1	97	3	a	a
Mexico	86	14	85	15	65	35	90	10	73	27	a	a
Netherlands	99	1	94	6	92	8	59	41	68	32	55	45
New Zealand	92	8	86	14	83	17	56	44	75	25	44	56
Norway	100	0	100	0	x(10)	x(11)	x(10)	x(11)	100[d]	0[d]	x(10)	x(11)
Poland	93	7	93	7	91	9	94[d]	6[d]	93[d]	7[d]	51	49
Portugal	88	12	93	7	x(10)	x(11)	x(10)	x(11)	85[d]	15[d]	x(10)	x(11)
Slovak Republic	88	12	89	11	84	16	90	10	88	12	90	10
Slovenia	91	9	91	9	89	11	91	9	90	10	a	a
Spain	84	16	91	9	87	13	95[d]	5[d]	90[d]	10[d]	x(7)	x(8)
Sweden	100	0	100	0	100	0	100	0	100	0	100	0
Switzerland	m	m	m	m	100[d]	0[d]	55[d]	45[d]	67[d]	33[d]	x(10)	x(11)
Turkey	86	14	88	12	82	18	91	9	87	13	a	a
United Kingdom	88	12	84	16	76	24	90	10	80	20	a	a
United States	93	7	92	8	x(10)	x(11)	x(10)	x(11)	91	9	m	m
OECD average	93	7	93	7	89	11	86	14	87	13	78	23
EU22 average	95	5	94	6	92	8	90	10	91	9	79	21
Partners												
Argentina	83	17	88	12	m	m	m	m	86	14	a	a
Brazil	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
Colombia	77	23	78	22	m	m	m	m	71	29	a	a
Costa Rica	85	15	87	13	m	m	m	m	85	15	a	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
Lithuania	97	3	97	3	97	3	94	6	96	4	94	6
Russian Federation	x(10)	x(11)	x(10)	x(11)	97[d]	3[d]	88[d]	12[d]	96[d]	4[d]	x(10)	x(11)
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

1. Excluding international funds.
2. Including subsidies attributable to payments to educational institutions received from public sources.
3. Year of reference 2012.
4. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397766

B3

Table B3.1b. Relative proportions of disaggregated public and private expenditure on educational institutions, by level of education (2013)

Distribution of disaggregated public and private sources of funds for educational institutions after transfers from public sources[1]

	Primary, secondary and post-secondary non-tertiary education				Tertiary education				Primary to tertiary education			
		Private sources				Private sources				Private sources		
	Public sources	Household expenditure	Expenditure of other private entities	All private sources[2]	Public sources	Household expenditure	Expenditure of other private entities	All private sources[2]	Public sources	Household expenditure	Expenditure of other private entities	All private sources[2]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	82	16	3	18	42	42	15	58	70	23	6	30
Austria	96	3	1	4	95	3	3	5	95	3	2	5
Belgium	96	4	0	4	89	5	6	11	95	4	1	5
Canada[3]	92	4	4	8	52	25	23	48	76	12	12	24
Chile[4]	79	21	0	21	38	52	11	62	61	34	5	39
Czech Republic	91	7	2	9	77	9	14	23	87	8	5	13
Denmark	97	3	0	3	94	0	6	6	96	2	2	4
Estonia	98	1	0	2	82	18	1	18	93	7	0	7
Finland	99	1	0	1	96	0	4	4	98	0	1	2
France	91	8	2	9	79	11	10	21	87	9	4	13
Germany	87	x(4)	x(4)	13	86	x(9)	x(9)	14	86	x(14)	x(14)	14
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	92	x(4)	x(4)	8	63	x(9)	x(9)	37	83	x(14)	x(14)	17
Iceland	96	4	0	4	92	8	1	8	95	5	0	5
Ireland	95	5	a	5	78	19	3	22	91	8	1	9
Israel	89	8	3	11	50	33	17	50	78	15	7	22
Italy	96	4	0	4	67	26	7	33	89	9	2	11
Japan	93	5	2	7	35[d]	51[d]	14[d]	65[d]	72	21	6	28
Korea	84	14	2	16	32	44	24	68	64	26	10	36
Latvia	98	2	0	2	68	31	2	32	89	10	1	11
Luxembourg	97	3	0	3	m	m	m	m	m	m	m	m
Mexico	83	17	0	17	68	32	0	32	79	21	0	21
Netherlands	87	4	8	13	70	16	14	30	82	8	10	18
New Zealand	83	13	4	17	52	33	15	48	74	18	7	26
Norway	100	0	0	0	96	3	1	4	99	1	0	1
Poland	92	x(4)	x(4)	8	80	18	2	20	89	x(14)	x(14)	11
Portugal	88	12	0	12	58	32	10	42	81	16	2	19
Slovak Republic	89	9	2	11	76	13	11	24	85	10	5	15
Slovenia	91	9	0	9	87	11	2	13	90	9	1	10
Spain	88	11	1	12	69	27	3	31	82	16	2	18
Sweden	100	0	0	0	90	1	10	10	97	0	3	3
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Turkey	87	13	0	13	80	13	7	20	85	13	2	15
United Kingdom	84	14	2	16	57	20	23	43	77	15	8	23
United States	92	8	0	8	36	47	17	64	68	24	7	32
OECD average	91	7	1	9	70	21	9	30	84	12	4	16
EU22 average	93	6	1	7	78	14	7	22	89	8	3	11
Partners												
Argentina	85	x(4)	x(4)	15	99	x(9)	x(9)	1	88	x(14)	x(14)	12
Brazil	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
Colombia	77	x(4)	x(4)	23	51	x(9)	x(9)	49	68	x(14)	x(14)	32
Costa Rica	85	x(4)	x(4)	15	61	x(9)	x(9)	39	78	x(14)	x(14)	22
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
Lithuania	97	2	2	3	75	19	6	25	89	8	3	11
Russian Federation	96	3	1	4	65	23	12	35	85	10	5	15
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

1. Excluding international funds.
2. Including subsidies attributable to payments to educational institutions received from public sources.
3. Year of reference 2012.
4. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B3.2a. Trends in the relative proportion of public expenditure[1] on educational institutions and index of change in public and private expenditure, at primary, secondary, post-secondary non-tertiary level (2005, 2008, 2010 to 2013)

Index of change of public sources of funds for educational institutions after transfers from public and private sources, by year

		Share of public expenditure[1] on educational institutions (%)						Index of change between 2005 and 2013 in expenditure on educational institutions (2008 = 100, constant prices)									
								Public sources					Private sources[2]				
		2005	2008	2010	2011	2012	2013	2005	2010	2011	2012	2013	2005	2010	2011	2012	2013
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia	84	83	85	84	82	82	92	124	120	118	119	86	106	111	119	124
	Austria	m	m	m	m	96	96	m	m	m	m	m	m	m	m	m	m
	Belgium	95	95	96	96	96	96	88	100	102	104	104	94	83	79	79	79
	Canada	90	89	90	90	92	m	91	110	106	111	m	84	104	100	80	m
	Chile	70	78	79	78	78	79	75	97	112	106	104	118	96	112	108	102
	Czech Republic	90	90	91	91	91	91	94	105	108	108	105	99	100	102	102	102
	Denmark	98	98	98	97	97	97	101	109	100	110	108	89	111	120	132	135
	Estonia	99	99	99	99	99	98	81	88	81	83	83	84	109	88	73	143
	Finland	99	99	99	99	99	99	93	104	105	105	104	79	83	77	78	75
	France	91	91	91	91	91	91	98	103	102	101	100	96	102	103	104	106
	Germany	86	86	87	87	87	87	98	107	107	105	105	98	97	96	99	97
	Greece	93	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Hungary	95	m	m	m	94	92	105	88	83	79	76	m	m	m	m	m
	Iceland	96	96	96	96	96	96	92	88	91	90	88	97	92	93	101	96
	Ireland	97	98	96	96	96	95	74	106	103	104	97	101	187	189	195	193
	Israel	93	93	92	89	89	89	84	107	115	123	124	84	119	181	204	212
	Italy	96	97	97	96	95	96	96	93	89	85	85	123	109	118	134	121
	Japan	90	90	93	93	93	93	98	106	106	107	106	97	71	72	74	76
	Korea	77	78	79	81	84	84	86	110	114	117	118	90	106	96	79	76
	Latvia	m	m	m	m	98	98	m	m	m	m	m	m	m	m	m	m
	Luxembourg	m	m	98	98	98	97	m	m	m	m	m	m	98	89	96	116
	Mexico	83	83	83	83	83	83	97	108	112	115	118	97	109	114	115	120
	Netherlands	87	87	87	87	87	87	96	108	107	107	109	91	105	107	106	100
	New Zealand	m	m	m	m	83	83	m	m	m	m	m	m	m	m	m	m
	Norway	100	100	100	100	100	100	94	106	105	105	109	a	a	a	a	a
	Poland	98	94	94	94	92	92	91	105	103	103	103	26	106	103	137	136
	Portugal	100	100	100	100	85	88	105	113	106	101	106	112	97	99	m	m
	Slovak Republic	86	85	88	89	88	89	89	122	115	114	119	79	93	83	85	86
	Slovenia	92	92	91	91	91	91	96	99	96	93	91	94	103	104	101	101
	Spain	93	93	92	91	89	88	87	102	99	91	87	82	123	130	158	164
	Sweden	100	100	100	100	100	100	97	99	99	100	101	112	74	m	m	m
	Switzerland	87	86	88	88	m	m	98	106	108	110	113	93	90	91	m	m
	Turkey	m	m	m	87	85	87	82	121	123	136	163	m	m	m	m	m
	United Kingdom	m	m	m	86	84	84	107	109	120	121	134	m	m	m	m	m
	United States	92	92	92	92	92	92	90	99	96	94	94	90	92	95	91	89
	OECD average	92	92	92	92	91	91	92	105	104	105	106	92	102	106	110	115
	EU22 average	94	94	94	94	93	93	94	103	101	101	101	91	105	105	112	117
Partners	Argentina	m	m	m	m	92	85	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	70	114	118	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	71	77	m	m	m	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	85	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	91	m	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	97	97	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	97	97	96	97	96	76	96	98	114	118	m	92	127	119	132
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Excluding international funds.
2. Including subsidies attributable to payments to educational institutions received from public sources.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B3.2b. Trends in the relative proportion of public expenditure[1] on tertiary educational institutions and index of change in public and private expenditure (2005, 2008, 2010 to 2013)

Index of change of public sources of funds for educational institutions after transfers from public and private sources, by year

	Share of public expenditure[1] on educational institutions (%)						Index of change between 2005 and 2013 in expenditure on educational institutions (2008 = 100, constant prices)									
							Public sources					Private sources[2]				
	2005	2008	2010	2011	2012	2013	2005	2010	2011	2012	2013	2005	2010	2011	2012	2013
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	45	45	46	46	45	42	91	117	118	119	121	89	110	115	119	134
Austria	m	m	m	m	95	95	m	m	m	m	m	m	m	m	m	m
Belgium	91	90	90	90	90	89	91	107	109	109	114	83	109	109	113	120
Canada	55	63	57	57	52	m	82	103	100	92	m	114	129	125	144	m
Chile	16	15	22	24	35	38	92	200	233	339	382	83	121	125	110	109
Czech Republic	81	79	79	81	79	77	79	103	128	114	100	69	105	113	113	113
Denmark	97	96	95	95	m	94	102	108	110	95	100	74	122	135	m	138
Estonia	70	79	75	80	78	82	74	98	115	98	133	119	119	105	102	112
Finland	96	95	96	96	96	96	94	108	112	110	107	79	96	101	91	91
France	84	82	82	81	80	79	91	105	104	102	104	80	103	110	115	124
Germany	87	87	86	87	86	86	88	108	114	114	114	86	110	113	120	123
Greece	97	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	78	m	m	m	54	63	95	91	106	74	88	m	m	m	m	m
Iceland	91	92	91	91	91	92	85	89	85	90	97	104	101	104	110	102
Ireland	84	83	81	80	84	78	74	101	95	101	83	67	110	109	94	113
Israel	46	51	54	49	52	50	92	114	115	121	127	112	102	126	116	133
Italy	73	71	68	66	66	67	92	95	94	88	90	82	109	114	110	106
Japan	34	33	34	34	34	35	92	104	108	107	113	91	99	103	103	104
Korea	24	22	27	27	29	32	86	132	138	147	164	77	101	107	102	98
Latvia	m	m	m	m	64	68	m	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	95	m	m	m	m	m	m	m	m	m	m	m
Mexico	69	70	70	67	70	68	86	112	104	117	110	91	113	120	120	123
Netherlands	73	71	72	71	71	70	95	109	112	112	113	88	108	115	118	120
New Zealand	m	m	m	m	52	52	m	m	m	m	m	m	m	m	m	m
Norway	m	97	96	96	96	96	98	104	104	106	110	m	135	139	134	142
Poland	74	71	71	76	78	80	114	125	124	129	141	100	123	100	92	85
Portugal	68	62	69	69	54	58	104	116	107	81	88	80	85	80	111	104
Slovak Republic	77	73	70	77	74	76	88	102	123	127	139	70	117	100	122	122
Slovenia	77	84	85	85	86	87	88	105	106	102	97	140	98	95	84	74
Spain	78	79	78	77	73	69	83	105	102	90	85	88	109	111	123	141
Sweden	88	89	91	90	89	90	95	113	114	115	118	103	95	108	113	112
Switzerland	m	m	m	m	m	m	109	112	117	122	124	m	m	m	m	m
Turkey	m	m	m	87	85	87	88	127	147	170	206	m	m	m	m	m
United Kingdom	m	m	m	m	57	57	m	m	m	m	m	m	m	m	m	m
United States	42	41	40	39	38	36	91	101	101	102	94	88	107	112	118	117
OECD average	70	70	70	71	70	71	91	111	115	117	124	90	109	111	112	114
EU22 average	82	81	80	81	77	78	91	106	110	104	107	88	107	107	108	112
Partners																
Argentina	m	m	m	m	m	99	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	85	121	128	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	43	51	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	61	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	71	m	m	m	m	m	m	m	m	m	m	m
Lithuania	m	m	m	m	75	75	m	m	m	m	m	m	m	m	m	m
Russian Federation	m	64	62	63	64	65	68	98	92	96	101	m	107	98	100	98
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Excluding international funds.
2. Including subsidies attributable to payments to educational institutions received from public sources.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B3.3. Annual public expenditure on educational institutions per student, by type of institution (2013)

In equivalent USD converted using PPPs for GDP, by level of education and type of institution

	Primary			Lower secondary			Upper secondary			Tertiary			Primary to tertiary		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	8 418	7 402	**8 102**	10 764	6 871	**9 239**	10 552	5 021	**8 470**	8 426	382	**7 740**	9 178	6 199	**8 299**
Austria	10 735	5 326	**10 413**	14 993	8 394	**14 372**	15 309	9 688	**14 511**	17 288	8 215	**15 794**	14 480	7 990	**13 704**
Belgium	11 011	8 497	**9 656**	12 464	11 316	**11 754**	13 682[d]	11 803[d]	**12 495[d]**	15 101	12 869	**13 808**	12 759	10 890	**11 660**
Canada[1]	8 841[d]	2 228[d]	**8 392[d]**	x(1)	x(2)	**x(3)**	11 715	2 913	**11 109**	12 145	m	**m**	10 449	m	**m**
Chile[2]	4 649	2 373	**3 249**	4 670	2 416	**3 388**	4 506	2 696	**3 365**	6 716	2 264	**2 955**	5 027	2 880	**3 596**
Czech Republic	4 384	4 010	**4 377**	7 493	5 255	**7 424**	7 168	4 439	**6 775**	7 651	493	**6 753**	6 425	2 917	**6 153**
Denmark	11 996	10 354	**11 745**	11 572	13 834	**12 190**	10 158	8 422	**10 118**	14 338	0	**14 047**	12 019	11 398	**11 947**
Estonia	7 086	4 440	**6 999**	6 960	4 442	**6 890**	5 832	4 153	**5 787**	10 287	6 427	**7 068**	6 957	6 194	**6 765**
Finland	8 463	9 717	**8 485**	13 342	11 590	**13 258**	8 567[d]	9 163[d]	**8 678[d]**	20 591	9 390	**17 168**	11 281	9 420	**11 027**
France	7 144	3 966	**6 708**	10 114	5 460	**9 120**	13 750	7 526	**12 044**	14 347	4 299	**12 479**	10 468	5 439	**9 492**
Germany	x(3)	x(3)	**7 913**	x(6)	x(6)	**9 647**	x(9)	x(9)	**9 866**	x(12)	x(12)	**14 140**	x(15)	x(15)	**9 920**
Greece	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
Hungary	5 411	3 307	**5 111**	3 779	3 167	**3 687**	3 487	5 836	**4 049**	7 008	2 481	**6 275**	4 729	4 157	**4 621**
Iceland	10 043	4 659	**9 872**	10 637	15 447	**10 683**	6 866	5 708	**6 633**	9 975	6 969	**9 374**	9 405	3 165	**7 154**
Ireland	7 845	0	**7 807**	10 064	a	**10 064**	10 216	0	**10 054**	10 321	0	**9 994**	9 201	0	**9 106**
Israel	8 044	4 727	**7 285**	x(7)	x(8)	**x(9)**	3 663[d]	13 994[d]	**5 152[d]**	1 775	7 660	**6 892**	5 722	7 701	**6 330**
Italy	8 062	579	**7 562**	8 455	901	**8 157**	8 522	4 348	**8 212**	7 815	1 888	**7 264**	8 408	2 413	**7 994**
Japan	x(3)	x(3)	**8 664**	x(6)	x(6)	**9 571**	x(9)	x(9)	**8 888**	x(12)	x(12)	**6 855**	x(15)	x(15)	**8 510**
Korea	7 974	1 496	**7 871**	7 443	7 043	**7 371**	8 344	6 432	**7 510**	11 079	1 889	**3 684**	8 245	3 298	**6 298**
Latvia	4 088	3 859	**4 084**	4 105	4 439	**4 109**	4 111	1 336	**4 029**	2 597	3 671	**3 587**	4 062	3 615	**3 956**
Luxembourg	18 386	2 860	**16 838**	21 281	9 017	**18 909**	20 406	9 355	**18 435**	40 369	m	**m**	21 273	m	**m**
Mexico	2 560	8	**2 340**	2 338	16	**2 092**	3 676	0	**3 006**	7 426	0	**5 129**	3 073	6	**2 676**
Netherlands	8 475	0	**8 450**	12 247	0	**11 983**	9 116	0	**8 557**	14 565	0	**13 209**	10 652	0	**10 246**
New Zealand	6 841	1 606	**6 746**	8 213	1 750	**7 898**	8 963	5 728	**8 522**	8 218	2 823	**7 570**	7 763	3 759	**7 464**
Norway	13 542	5 229	**13 274**	14 452	4 906	**14 103**	15 939[d]	17 845[d]	**16 153[d]**	22 355	5 628	**19 873**	20 471	15 416	**20 155**
Poland	6 364	5 293	**6 315**	6 364	4 686	**6 269**	5 609	5 235	**5 574**	8 149	972	**6 544**	6 590	2 531	**6 122**
Portugal	7 212	1 309	**6 503**	9 758	3 128	**8 920**	9 874[d]	2 036[d]	**8 274[d]**	6 668[d]	2 308[d]	**5 883[d]**	8 182	2 081	**7 263**
Slovak Republic	5 136	6 320	**5 215**	5 113	5 612	**5 145**	5 395	3 856	**5 162**	7 630	165	**6 824**	5 696	3 790	**5 514**
Slovenia	8 261	5 168	**8 240**	9 100	12 279	**9 110**	6 971	6 494	**6 958**	8 861	4 008	**8 434**	8 190	4 877	**8 092**
Spain	7 107	3 324	**5 889**	9 001	4 496	**7 373**	9 195[d]	3 761[d]	**7 825[d]**	10 190	964	**8 685**	8 694	3 396	**7 204**
Sweden	10 668	10 627	**10 664**	11 445	10 558	**11 306**	11 739	10 040	**11 389**	20 782	14 928	**20 167**	12 873	10 528	**12 537**
Switzerland	14 707	m	**m**	18 206	m	**m**	11 563[d]	m	**m**	25 974	m	**m**	16 666	31 950	**17 424**
Turkey	2 531	0	**2 452**	2 947	0	**2 849**	3 565	0	**3 409**	7 867	0	**6 935**	3 675	0	**3 497**
United Kingdom	9 114	10 991	**9 350**	12 037	10 129	**11 003**	12 428	8 109	**9 260**	a	14 209	**14 209**	10 200	10 489	**10 437**
United States	11 010	898	**10 176**	11 857	1 159	**11 000**	13 324	1 529	**12 360**	12 374	5 051	**10 134**	11 897	3 253	**10 724**
OECD average	8 316	4 212	**7 780**	9 707	6 011	**8 996**	9 194	5 722	**8 564**	12 222	4 136	**9 660**	9 522	5 992	**8 619**
EU22 average	8 347	4 997	**8 015**	9 984	6 774	**9 557**	9 577	5 776	**8 955**	12 872	4 594	**10 617**	9 657	5 375	**8 683**
Partners															
Argentina	3 648	1 499	**3 104**	5 425	2 043	**4 612**	5 913	2 253	**4 829**	m	m	**m**	m	m	**m**
Brazil	3 826	m	**m**	3 802	m	**m**	3 852[d]	m	**m**	14 768	m	**m**	4 381	m	**m**
China	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
Colombia	2 441	404	**2 068**	2 530	395	**2 120**	2 596	281	**2 006**	6 140	58	**3 248**	2 946	267	**2286**
Costa Rica	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
India	521	m	**m**	568	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
Indonesia	1 319	570	**1 184**	1 263	291	**918**	1 991	135	**1 070**	5 794	284	**2 094**	1 628	330	**1 209**
Lithuania	4 982	4 396	**4 974**	x(6)	x(6)	**4 462**	x(9)	x(9)	**5 116**	6 901	2 236	**6 414**	2 685	1 877	**5 301**
Russian Federation	x(9)	x(9)	**x(9)**	x(9)	x(9)	**x(9)**	x(9)	x(9)	**4 920**	x(15)	x(15)	**5 472**	x(15)	x(15)	**5 067**
Saudi Arabia	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**
South Africa	2 350	389	**2 275**	m	m	**m**	m	m	**m**	4 545	m	**m**	m	m	**m**
G20 average	5 628	m	**m**	6 616	m	**m**	m	m	**m**	m	m	**m**	m	m	**m**

1. Year of reference 2012.
2. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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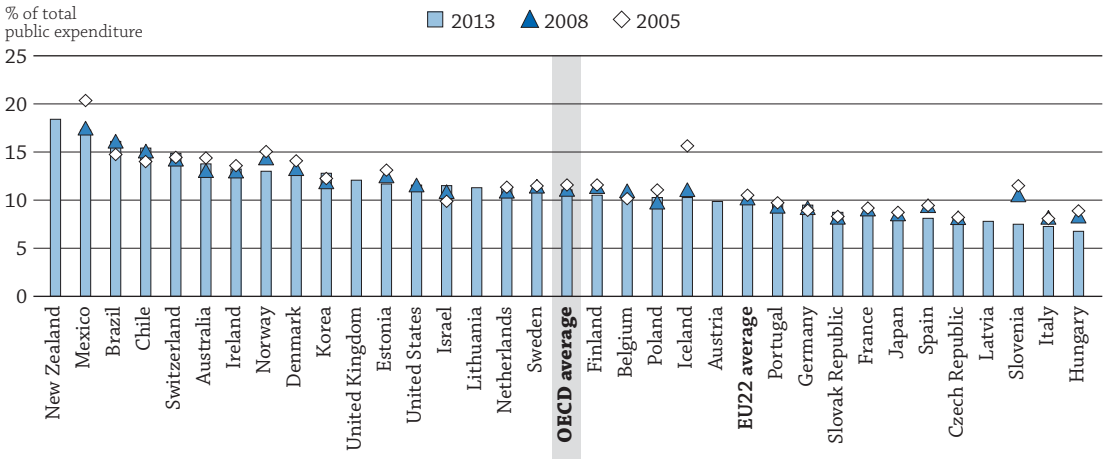
WHAT IS THE TOTAL PUBLIC SPENDING ON EDUCATION?

- Primary to tertiary education accounts for 11.2% of total public spending on average across OECD countries, ranging from less than 8% in Hungary, Italy, Latvia and Slovenia to more than 16% in Brazil, Mexico and New Zealand.
- The proportion of public expenditure devoted to primary to tertiary education decreased between 2005 and 2013 in more than two-thirds of the countries with available data for both years. It remained stable for most others, except, most notably, in Brazil and Israel, where it increased by 1 percentage point or more.
- In tertiary education, on average, 86% of final public funds come from the central government. In primary, secondary and post-secondary non-tertiary education, spending is much more decentralised, and 59% of final funds are managed by regional and local governments.

Figure B4.1. Total public expenditure on education as a percentage of total public expenditure (2005, 2008 and 2013)



Countries are ranked in descending order of public expenditure on education at all levels of education as a percentage of total public expenditure in 2013.

Source: OECD. Table B4.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

Decisions concerning budget allocations to various sectors, including education, health care, social security and defence, depend on countries' priorities and on the possibility of private provision of those services. Government funding is necessary in situations where the public benefit is high, but private costs are greater than private benefits.

In the years following the economic crisis, various OECD countries adopted austerity measures, which led to sharp budget cuts, including in the education sector. As a result, expenditure per student decreased after the crisis in many countries (see Indicator B1). Although cuts can be the result of better allocation of government funds, gains in efficiency and economic dynamism, they can also affect the quality of government-provided education, particularly at a time when investment in education is important to resume economic growth. For example, during the crisis, there may be an increasing demand to provide education and training for young and unemployed people who find it harder to compete in a more restricted labour market.

This indicator presents total public spending on education relative to total public spending by countries and relative to their gross domestic product (GDP) (to take into account the relative size of public budgets). In addition, it includes data on the different sources of public funding invested in education (central, regional and local governments) and on the transfers of funds between these levels of government.

Other findings

- Public expenditure on education as a percentage of total public expenditure on all services decreased by 0.7 percentage points, on average, across OECD countries between 2005 and 2013.
- Most OECD and partner countries (32 out of 36 countries with available data) spend more than twice as much on primary, secondary and post-secondary non-tertiary education combined as on tertiary education.
- At the primary, secondary and post-secondary non-tertiary levels of education, 6 of 37 countries with available data have 90% or more of initial funds coming from the central government. But in tertiary education, only 12 countries have less than 90% of initial funds coming from the central government.

Trends

Between 2005 and 2013, the percentage of total public expenditure devoted to primary to tertiary education decreased in 19 of the 27 countries with available data. The decrease was especially substantial (3 percentage points or more) in Iceland, Mexico and Slovenia. However, the share increased by more than 1 percentage point in Brazil and Israel (Table B4.2).

There is no clear pattern regarding public expenditure on education as a percentage of GDP between 2005 and 2013, as it remained largely stable on average across the OECD. In 10 of the 28 countries with available data there was an increase in the share of public expenditure on education as a percentage of GDP between 2005 and 2008, which was the case in 17 countries between 2008 and 2013.

Between 2008 and 2013, in 19 of the 26 countries with available data, public expenditure on education increased, while in 26 of the 35 countries with available data, total public expenditure was higher in 2008 than in 2013. On average, the increase in public expenditure on education was 5%, compared to an increase of 7% in total public expenditure for all services. This results in an overall decline of 3% in the total public expenditure on education as a percentage of total public expenditure (Table B4.2).

Analysis

Overall level of public resources invested in education

In 2013, total public expenditure on primary to tertiary education as a percentage of total public expenditure for all services averaged 11.2% in OECD countries, ranging from 7.5% or less in Hungary (6.8%), Italy (7.3%) and Slovenia (7.5%) to 16% or more in Brazil (16.1%), Mexico (17.3%) and New Zealand (18.4%) (Figure B4.1 and Table B4.1).

In most countries, and on average across OECD countries, roughly one-third of total public expenditure on primary to tertiary education was devoted to primary education. This is largely explained by the near-universal enrolment rates at this level of education (see Indicator C1) and the demographic structure of the population. Public expenditure on secondary education takes up 4.5% of total public expenditure, evenly split between lower and upper secondary education.

On average across OECD countries, public expenditure devoted to tertiary education amounts to 27.5% of public expenditure from primary to tertiary education. The percentages range from about 20% or less in Israel (19.4%) and Portugal (18.8%) to 30% or more in Chile (31.9%), Denmark (31.9%), Estonia (30.4%), Finland (33.2%), Germany (31.0%), Lithuania (33.1%), the Netherlands (31.1%), Norway (33.4%), Sweden (33.4%) and the United States (33.0%), and exceeded 35% in Austria (35.9%) (Table B4.1).

When public expenditure on education is considered as a proportion of total public spending, the relative size of public budgets must be taken into account. Indeed, public expenditure on education relative to GDP presents a very different picture from public expenditure on education relative to total public expenditure. In 2013, public expenditure on primary to tertiary education as a proportion of GDP was 3.5% or less in the Czech Republic (3.4%), Hungary (3.3%), Japan (3.5%) and Latvia (2.9%). At the other end of the spectrum, only Denmark (7.2%) and Norway (7.3%) spent more than 7% of their GDP on primary to tertiary education, well above the OECD average of 4.8% (Table B4.1).

Contrary to expectations, the five countries with the highest total public expenditure on primary to tertiary education as a percentage of total public expenditure in 2013, (Brazil, Chile, Mexico, New Zealand and Switzerland) (Figure B4.1) are at the bottom end of the spectrum in total public expenditure on all services as a percentage of GDP. This is explained by the fact that these countries have a relatively lower share of total public expenditure as a percentage of GDP.

Total public expenditure on all services (including education, health, social security and the environment) as a proportion of GDP varies greatly among countries. In 2013, one in four countries with available data reported that total public expenditure on all services was more than 50% of GDP, including Slovenia at 60.3%. At the other extreme, total public expenditure on all services accounted for about 30% of GDP or less in Chile (25.8%) and Mexico (26.2%).

Box B4.1 Student loan systems across OECD countries

Growing participation in higher education presents governments with the combined challenges of how to best fund institutions, support students and promote equity of access to post-compulsory school study.

For some countries, student loans have become an important element of student support. The variety of loan systems across the world also presents some challenges for international reporting.

At the tertiary level, student loans generally fall into the following three categories:

- fully publicly-funded student loans – expenditure is entirely from government sources, but delivery may be managed by government or non-government entities
- publicly-supported private loans – expenditure comes mainly from private sources, with the government's expenditure taking a more indirect form, such as loan guarantees or subsidies
- fully private or commercial loans – loans specifically for students are provided by commercial financial institutions, where the government has no financial involvement but may have a regulatory or policy-setting role.

Within these broad categories there is great diversity in systems that countries have developed to deliver loans to students. More than one type of loan – and loan system – may exist within the same country. There is a great deal of complexity in student loan systems across OECD and partner countries (Table B.4.1a).

...

Table B4.a. Student loan systems in a sample of OECD and partner countries

Description of loan systems across the OECD and partner countries

			Australia	Canada	Chile	Estonia	Finland	France	Hungary	Iceland	Israel	Japan	Korea	Luxembourg	Netherlands	New Zealand	Norway	Poland	Portugal	Scotland	Sweden	Switzerland	United Kingdom	United States	Brazil	Lithuania
			OECD																						Partners	
Public student loans[1]	Interest rates	During studies																								
		After studies																								
	Loan style	Income contingent																								
		Mortgage style																								
	Forgiveness/ remission	Death or disability																								
		Financial situation																								
		Other conditions																								
Fully publicly-funded student loans	Allowed spending	Tuition fees																								
		Other																								
	ISCED level	Below bachelor's																								
		Bachelor's																								
		Postgraduate and research																								
	Eligibility criteria	Education-related																								
		Other																								
	Discounts or incentives																									
Publicly-supported private loans	Allowed spending	Tuition fees																								
		Other																								
	ISCED level	Below bachelor's																								
		Bachelor's																								
		Postgraduate and research																								
	Eligibility criteria	Education-related																								
		Other																								
	Discounts or incentives																									
Fully private or commercial loans	Allowed spending	Tuition fees																								
		Other																								
	ISCED level	Below bachelor's																								
		Bachelor's																								
		Postgraduate and research																								
	Eligibility criteria	Education-related																								
		Other																								
	Discounts or incentives																									
Other types of loans[2]	Allowed spending	Tuition fees																								
		Other																								
	ISCED level	Below bachelor's																								
		Bachelor																								
		Postgraduate and Research																								
	Eligibility criteria	Education-related																								
		Other																								
	Discounts or incentives																									

Notes: Blank cells represent the range of responses other than "Yes", including where the information was unavailable or the loan characteristics were not applicable.

Countries reporting they have no student loans: Belgium (Flemish Community), Spain and Slovenia.

1. Data in this section come from *Education at a Glance 2015*, Tables B5.4 and B5.5. Dark gray cells indicate the countries that did not appear in those tables.

2. Loan types that do not easily fit within the three definitions above.

This table shows where countries have reported that a particular student loan characteristic exists in their system, to illustrate the level of diversity even at the broadest of categorisations. There are underlying complexities within these broad categories, such as whether the loan characteristics apply in all cases, as well as in other aspects not shown in the table, such as the practical administration of loans.

...

The finance data in *Education at a Glance* (EAG) use a cash-accounting system to underpin the methodology, specifically looking only at outlay in the reference year. Data are not collected on the proportion of this outlay that is expected to be recovered over the lifetime of a loan, or loan repayments received in the reference year.

Current reporting of student loan expenditure:

Direct expenditure on educational institutions (see Indicators B2 and B3)

- The private expenditure direct to institutions reported here relates to the within-institution costs incurred by students and makes no differentiation by whether it is financed by a loan.
- The public expenditure reported here relates only to direct support to institutions.

Public investment in education (Tables B4.1 and B4.2)

- This is a gross measure showing direct public support to institutions *plus* the outlay on public student loans and other support, such as subsidies and grants to households and other private entities.

Costs currently not accounted for include:

- Loan remission / loans written off
- Debt not expected to be repaid
- Concessional interest rates / interest rate subsidy.

The indicators in *Education at a Glance* provide a useful overview of expenditure in the reference year, but do not capture the full cost of student loans to governments and individuals over the lifetime of a loan. Depending on a country's student loan system and method of reporting, the indicators can overstate or understate public expenditure on student loans.

This particularly affects countries where student loans form a significant part of the student support system, such as Australia, New Zealand, Norway, the United Kingdom and the United States.

Work is currently underway to better capture and report in *Education at a Glance* the true cost to governments in providing student loans.

Changes in total public expenditure on education as a percentage of total public expenditure between 2005 and 2013

Public expenditure on education as a percentage of total public expenditure decreased slightly (by 0.5 percentage point) between 2005 and 2008 on average across the OECD. In Iceland, a country which was severely hit at the beginning of the financial crisis, the share of public expenditure on education in total public expenditure decreased by 4.5 percentage points.

Between 2008 and 2013, public expenditure on education remained stable, at around 11% of total government expenditure on average, but the picture varies strongly between countries. Although the share decreased in 16 countries, in others, such as Israel and the Slovak Republic, the increase was more than 5% over the five-year period.

When comparing public expenditure on education as a percentage of GDP, there is much less variation: the OECD average is between 4.7% and 5.0% from 2005 to 2013. Again, this relative stability in the average masks sizeable differences between countries. In Belgium, Brazil, Chile, Ireland and Korea, the share of public expenditure on education as a percentage of GDP was at least 0.5% higher in 2013 than in 2005. Over the same period, Hungary and Iceland saw their share of educational public expenditure fall by one-fifth or more over the same period.

Following the crisis, in the years between 2008 and 2013, 17 of the 27 countries with available data increased their public expenditure on education. In Australia, Korea and the Slovak Republic, it rose by over one-quarter in the five-year period. On the other hand, in Hungary, public expenditure on education was 21% lower in 2013 than in 2008.

With the exception of Slovenia and Spain, all countries that decreased their level of public expenditure on education also decreased their level of overall public expenditure. In most countries, however, overall public expenditure increased, with an average increase of 7% across the OECD.

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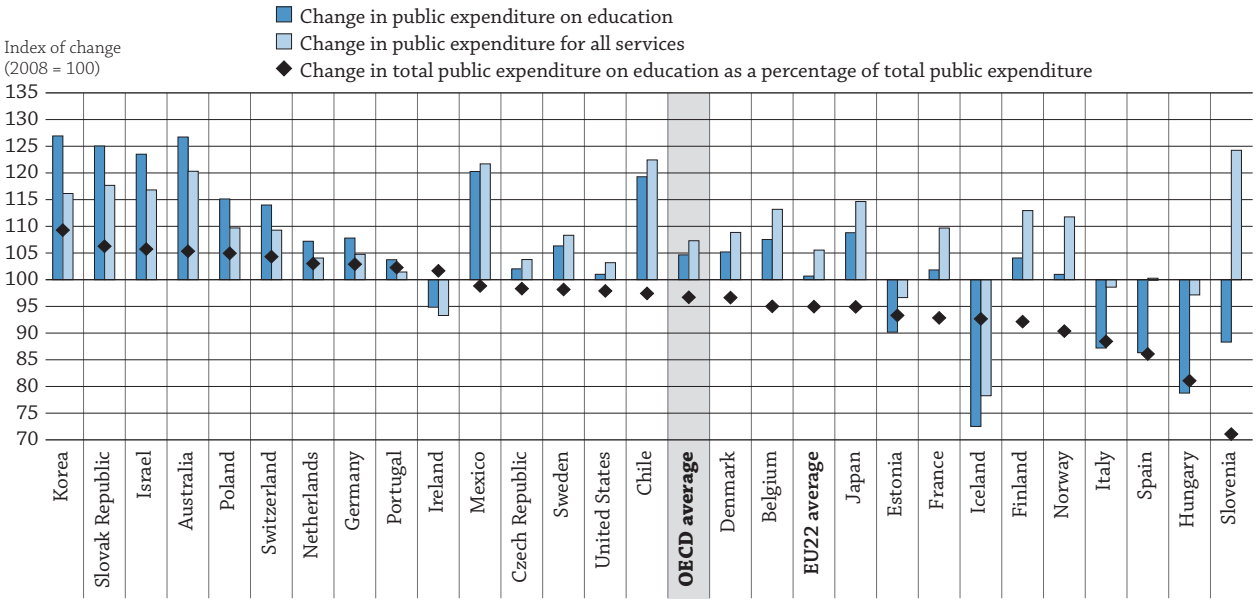
Figure B4.2. Change in public expenditure on education as a percentage of total public expenditure (2008 and 2013)

Primary to tertiary education (2008 = 100, 2013 constant prices)



Countries are ranked in descending order of the change in total public expenditure on primary to tertiary education as a percentage of total public expenditure.

Source: OECD. Table B4.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397909

Sources of public funding invested in education

All government sources of expenditure on education (apart from international sources) are classified in three different levels of government: central, regional and local. In some countries, the funding of education is centralised, while in others, funding can be decentralised after transfers among the different levels of government.

In recent years, many schools have become more autonomous and decentralised organisations. They have also become more accountable to students, parents and the public at large for their outcomes. The results of the OECD Programme for International Student Assessment (PISA) suggest that when autonomy and accountability are intelligently combined, they tend to be associated with better student performance (OECD, 2013).

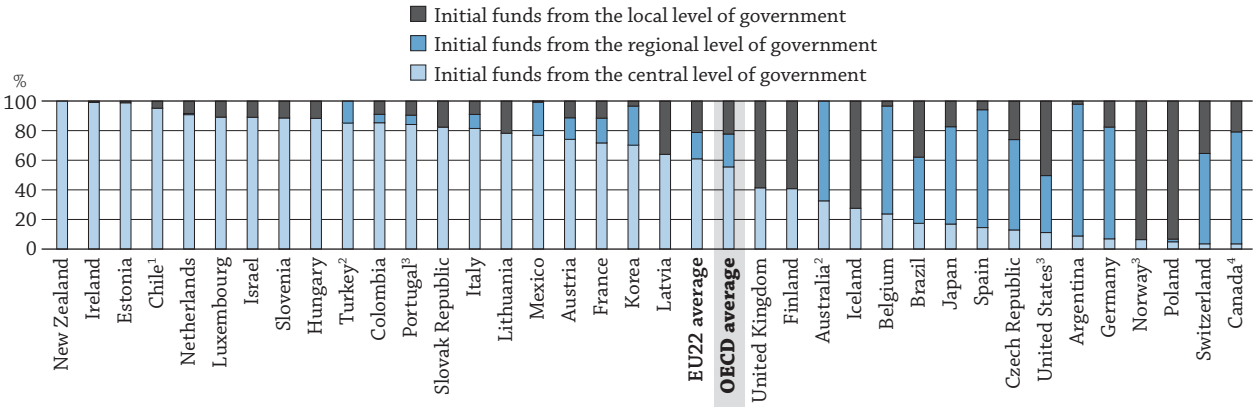
Public funding is more centralised at the tertiary level than at lower levels of education (Table B4.3). In 2013, on average across OECD countries, 56% of public funds for primary, secondary and post-secondary non-tertiary education combined came from the central government, before transfers. After transfers, this share drops to 41%, and the share of regional funds (23%) and local funds (36%) rises.

There is great variation among countries, particularly in terms of the share of funds managed by regional governments. Although 15 countries do not have regional governments, in countries that do, such as Germany and Spain, over three-quarters of initial funds in primary, secondary and post-secondary non-tertiary education comes from regional governments. Local government is the source of over 90% of funds in Finland, Norway, Poland and the United States, after transfers.

Tertiary education, however, is much more centralised than earlier levels, and across the OECD, on average, 87% of funds before transfers and 86% of funds after transfers are managed by the central government. In 12 countries, the central government is the only source of initial funding of tertiary education, and in all those countries (except Ireland and the Slovak Republic), there are no transfers to regional or local governments at the tertiary level.

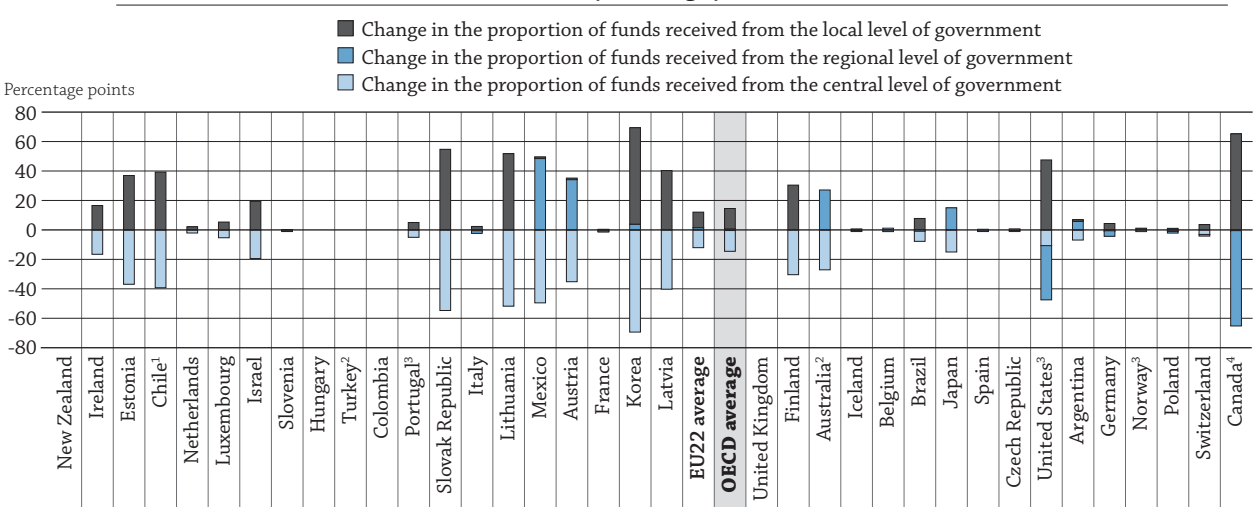
In contrast, in four countries (Belgium, Germany, Spain and Switzerland), over half of tertiary-level funding has its source in regional governments, and very little is transferred to central or local governments. Local government, however, does not account for much of the funding at tertiary level, unlike in primary, secondary and post-secondary non-tertiary education. The only exceptions are Finland and Ireland, where local governments fund over 10% of tertiary education after transfers.

Figure B4.3. Distribution of initial sources of public funds for education by level of government in primary, secondary and post-secondary non-tertiary education (2013)



Change in the proportion of educational funds received from the different levels of government between initial and final purchasers of educational resources (2013)

In percentage points



1. Year of reference 2014.
2. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
3. Funds from the local level included in funds from the regional level of government.
4. Year of reference 2012.

Countries are ranked in descending order of the share of initial sources of funds from the central level of government.

Source: OECD. Table B4.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933397912

Definitions

Public expenditure on education covers expenditure on educational institutions and support for students' living costs and for other private expenditure outside institutions. It includes expenditure by all public entities, including ministries other than ministries of education, local and regional governments, and other public agencies. OECD countries differ in the ways in which they use public money for education. Public funds may flow directly to institutions or may be channelled to institutions via government programmes or via households. They may also be restricted to the purchase of educational services or be used to support students' living costs.

All government sources of expenditure on education, apart from international sources, can be classified in three levels: central (national) government, regional government (province, state, *Bundesland*, etc.), and local government (municipality, district, commune, etc.). The terms "regional" and "local" apply to governments whose responsibilities are exercised within certain geographical subdivisions of a country. They do not apply to government bodies whose roles are not geographically circumscribed but are defined in terms of responsibility for particular services, functions or categories of students.

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Total public expenditure, also referred to as total public spending, corresponds to the non-repayable current and capital expenditure of all levels of government: central, regional and local. It includes direct public expenditure on educational institutions as well as public support to households (e.g. scholarships and loans to students for tuition fees and student living costs) and to other private entities for education (e.g. subsidies to companies or labour organisations that operate apprenticeship programmes).

Methodology

Data refer to the financial year 2013 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Figures for total public expenditure and GDP have been taken from the OECD National Accounts Database (see Annex 2).

Educational expenditure is expressed as a percentage of a country's total public sector expenditure and as a percentage of GDP.

Although expenditure on debt servicing (e.g. interest payments) is included in total public expenditure, it is excluded from public expenditure on education. The reason is that some countries cannot separate interest payments for education from those for other services. This means that public expenditure on education as a percentage of total public expenditure may be underestimated in countries in which interest payments represent a large proportion of total public expenditure on all services.

Note regarding data from Israel

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

References

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

Indicator B4 Tables

StatLink http://dx.doi.org/10.1787/888933397855

Table B4.1	**Total public expenditure on education (2013)**
Table B4.2	**Trends in total public expenditure on primary to tertiary education (2005, 2008, 2010 and 2013)**
Table B4.3	**Share of sources of public funds by level of government (2013)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

B4

Table B4.1. Total public expenditure on education (2013)

Direct public expenditure on educational institutions plus public subsidies to households[1] and other private entities, as a percentage of total public expenditure and as a percentage of GDP, by level of education

	Public expenditure[1] on education as a percentage of total public expenditure										Public expenditure[1] on education as a percentage of GDP			Share of total public expenditure as a percentage of GDP
		Secondary				Tertiary education (including R&D activities)								
	Primary	Lower secondary	Upper secondary	All secondary	Post-secondary non-tertiary	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary excluding R&D activities	Primary to tertiary (including R&D activities)	Primary, secondary and post-secondary non-tertiary	All tertiary	Primary to tertiary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD														
Australia	4.8	3.0	1.9	4.9	0.3	0.5	3.3	3.8	2.1	**13.8**	3.4	1.3	**4.7**	**34.5**
Austria	1.8	2.4	2.1	4.5	0.0	0.6	3.0	3.5	2.7	**9.9**	3.2	1.8	**5.0**	**50.9**
Belgium	2.8	1.6	3.4[d]	5.0[d]	x(4)	0.1	2.6	2.6	1.9	**10.4**	4.3	1.4	**5.8**	**55.6**
Canada[2]	5.2[d]	x(1)	x(3)	3.6	m	1.1	2.4	3.5	2.3	**12.4**	3.3	1.3	**4.6**	**37.0**
Chile[3]	4.9	1.9	3.7	5.6	a	0.7	4.2	4.9	4.7	**15.4**	2.7	1.3	**4.0**	**25.8**
Czech Republic	1.7	2.1	2.2	4.2	0.0	0.0	2.1	2.1	m	**8.0**	2.5	0.9	**3.4**	**42.6**
Denmark	3.8	2.0	2.9	4.9	a	x(8)	x(8)	4.1	m	**12.8**	4.9	2.3	**7.2**	**56.5**
Estonia	3.9	1.9	1.9	3.7	0.6	a	3.6	3.6	2.0	**11.7**	3.1	1.4	**4.5**	**38.3**
Finland	2.3	1.9	2.8[d]	4.7[d]	x(3.4)	a	3.5	3.5	2.5	**10.5**	4.0	2.0	**6.0**	**57.5**
France	2.0	2.2	2.0	4.2	0.0	0.5	1.7	2.2	1.5	**8.4**	3.6	1.2	**4.8**	**57.0**
Germany	1.4	2.8	1.9	4.7	0.4	0.0	2.9	2.9	2.0	**9.5**	2.9	1.3	**4.2**	**44.5**
Greece	m	m	m	m	m	m	m	m	m	**m**	m	m	**m**	**m**
Hungary	1.8	1.3	1.7	3.0	0.2	0.2	1.7	1.8	1.5	**6.8**	2.4	0.9	**3.3**	**49.4**
Iceland	4.8	2.2	2.5	4.7	0.1	0.0	3.2	3.3	m	**12.9**	4.3	1.4	**5.7**	**44.2**
Ireland	4.9	2.3	2.3	4.5	0.9	x(8)	x(8)	2.9	2.3	**13.2**	4.1	1.1	**5.2**	**39.5**
Israel	5.6	x(4)	x(4)	3.6	0.0	0.6	1.6	2.2	m	**11.5**	3.8	0.9	**4.8**	**41.5**
Italy	2.0	1.4	2.1	3.5	0.2	0.0	1.6	1.6	1.0	**7.3**	2.9	0.8	**3.7**	**51.1**
Japan	2.9	1.7	1.6[d]	3.4[d]	x(3.8)	0.2[d]	1.7[d]	1.8[d]	m	**8.1**	2.7	0.8[d]	**3.5**	**42.7**
Korea	4.3	2.6	2.8	5.4	m	0.3	2.7	3.1	2.2	**12.8**	3.1	1.0	**4.1**	**31.8**
Latvia	2.8	1.3	1.7	3.1	0.1	0.3	1.6	1.8	1.4	**7.8**	2.2	0.7	**2.9**	**36.9**
Luxembourg	2.7	1.8	2.0	3.8	0.0	m	m	m	m	**m**	2.9	m	**m**	**m**
Mexico	6.9	3.4	3.0	6.4	a	x(8)	x(8)	4.0	3.0	**17.3**	3.5	1.0	**4.5**	**26.2**
Netherlands	2.8	2.7	2.3	4.9	0.0	0.0	3.5	3.5	2.5	**11.3**	3.6	1.6	**5.2**	**46.4**
New Zealand	4.8	3.8	4.1	7.9	0.5	0.7	4.5	5.2	4.5	**18.4**	4.1	1.6	**5.7**	**31.1**
Norway	3.8	1.8	3.1[d]	4.9[d]	x(3)	x(3)	4.3	4.3	3.3	**13.0**	4.8	2.4	**7.3**	**55.9**
Poland	3.5	1.9	1.9[d]	3.8	0.1	0.0	2.8	2.9	2.4	**10.3**	3.1	1.2	**4.4**	**42.4**
Portugal	3.1	2.5	2.2[d]	4.6[d]	x(3)	a	1.8[d]	1.8[d]	0.8	**9.6**	3.9	0.9	**4.8**	**49.9**
Slovak Republic	2.0	2.2	2.1	4.3	0.1	0.0	2.3	2.4	1.6	**8.7**	2.6	1.0	**3.6**	**41.0**
Slovenia	2.5	1.4	1.7	3.1	a	0.1	1.8	1.9	1.6	**7.5**	3.4	1.1	**4.5**	**60.3**
Spain	2.5	1.6	1.9[d]	3.5[d]	x(3)	0.4	1.8	2.1	1.5	**8.1**	2.7	1.0	**3.7**	**45.1**
Sweden	3.3	1.6	2.5	4.1	0.1	0.2	3.6	3.7	2.4	**11.2**	3.9	2.0	**5.9**	**52.4**
Switzerland	4.7	3.2	2.9[d]	6.1[d]	x(3)	x(3)	4.1	4.1	2.4	**14.9**	3.5	1.3	**4.8**	**32.3**
Turkey	m	m	m	m	m	m	m	m	m	**m**	3.0	1.6	**4.6**	**m**
United Kingdom	3.7	2.3	3.0	5.3	a	0.1	3.0	3.1	2.5	**12.1**	4.1	1.4	**5.5**	**45.4**
United States	3.9	2.1	2.2	4.3	x(8)	x(8)	x(8)	4.0[d]	m	**12.2**	3.2	1.6[d]	**4.8**	**39.7**
OECD average	3.5	2.2	2.4	4.5	0.2	0.3	2.7	3.1	2.2	**11.2**	3.4	1.3	**4.8**	**42.6**
EU22 average	2.7	2.0	2.2	4.2	0.2	0.1	2.5	2.7	1.9	**9.8**	3.4	1.3	**4.7**	**48.1**
Partners														
Argentina	m	m	m	m	m	m	m	m	m	**m**	3.8	1.1	**4.9**	**m**
Brazil	4.9	4.6	3.3	7.9	x(8)	x(8)	x(8)	3.3[d]	3.1	**16.1**	4.4	1.1	**5.5**	**34.4**
China	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**
Costa Rica	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**
Indonesia	m	m	m	m	m	m	m	m	m	**m**	m	m	**m**	**m**
Lithuania	2.0	3.3	1.7	5.0	0.5	a	3.7	3.7	3.2	**11.3**	2.7	1.3	**4.0**	**35.3**
Russian Federation	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**
South Africa	m	m	m	m	m	m	m	m	m	**m**	m	0.7	**m**	**m**
G20 average	m	m	m	m	m	m	m	m	m	**m**	m	m	**m**	**m**

1. Public expenditure presented in this table includes public subsidies to households for living costs, which are not spent in educational institutions. Therefore, the figures presented here exceed those on public spending on institutions found in Table B2.3.

2. Year of reference 2012.

3. Year of reference 2014.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397862

Table B4.2. Trends in total public expenditure on primary to tertiary education (2005, 2008, 2010 and 2013)

Direct public expenditure on educational institutions plus public subsidies to households[1] and other private entities, as a percentage of total public expenditure and as a percentage of GDP, for primary to tertiary levels of education combined by year

		Public expenditure[1] on education as a percentage of total public expenditure				Public expenditure[1] on education as a percentage of GDP				Index of change between 2008 and 2013 in: (2008 = 100, 2013 constant prices)		
		2005	2008	2010	2013	2005	2008	2010	2013	Public expenditure on education	Public expenditure for all services	Total public expenditure on education as a percentage of total public expenditure
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	14.4	13.1	14.9	13.8	4.5	4.3	5.0	4.7	127	120	105
	Austria	m	m	m	9.9	m	m	m	5.0	m	104	m
	Belgium	10.2	11.0	10.5	10.4	5.2	5.5	5.6	5.8	108	113	95
	Canada	m	13.7	13.7	m	4.5	4.9	5.3	m	m	111	m
	Chile	14.5	14.8	15.4	15.4	3.2	3.8	3.9	4.0	119	122	97
	Czech Republic	8.2	8.2	8.1	8.0	3.4	3.3	3.5	3.4	102	104	98
	Denmark	14.1	13.3	13.1	12.8	7.2	6.7	7.5	7.2	105	109	97
	Estonia	13.1	12.5	12.5	11.7	4.5	5.0	5.1	4.5	90	97	93
	Finland	11.6	11.4	11.3	10.5	5.7	5.5	6.2	6.0	104	113	92
	France	9.2	9.1	8.9	8.4	4.9	4.8	5.0	4.8	102	110	93
	Germany	8.9	9.2	9.4	9.5	4.1	4.0	4.5	4.2	108	105	103
	Greece	m	m	m	m	4.0	m	m	m	m	m	m
	Hungary	8.9	8.3	7.8	6.8	4.4	4.1	3.9	3.3	79	97	81
	Iceland	15.6	11.1	12.4	10.3	6.5	6.2	6.1	4.5	73	78	93
	Ireland	13.6	13.0	9.2	13.2	4.5	5.4	6.0	5.2	95	93	102
	Israel	9.9	10.9	11.2	11.5	4.5	4.6	4.7	4.8	124	117	106
	Italy	8.1	8.2	7.9	7.3	3.8	3.9	3.9	3.7	87	99	88
	Japan	8.7	8.6	8.5	8.1	3.2	3.2	3.5	3.5	109	115	95
	Korea	12.0	11.7	12.4	12.8	3.5	3.7	3.9	4.1	127	116	109
	Latvia	m	m	m	7.8	m	m	m	2.9	m	93	m
	Luxembourg	m	m	m	m	m	m	m	m	m	116	m
	Mexico	20.4	17.5	17.7	17.3	4.3	4.1	4.5	4.5	120	122	99
	Netherlands	11.3	10.9	10.7	11.3	4.8	4.8	5.2	5.2	107	104	103
	New Zealand	m	m	m	18.4	m	m	m	5.7	m	99	m
	Norway	15.0	14.4	13.8	13.0	8.6	8.1	8.1	7.3	101	112	90
	Poland	11.1	9.8	10.0	10.3	4.9	4.3	4.6	4.4	115	110	105
	Portugal	9.7	9.4	9.5	9.6	4.5	4.2	4.9	4.8	104	101	102
	Slovak Republic	8.3	8.2	8.6	8.7	3.3	3.0	3.6	3.6	125	118	106
	Slovenia	11.5	10.5	10.1	7.5	5.2	4.6	5.0	4.5	88	124	71
	Spain	9.4	9.4	9.1	8.1	3.6	3.9	4.1	3.7	86	100	86
	Sweden	11.5	11.4	11.6	11.2	6.0	5.8	5.9	5.9	106	108	98
	Switzerland	14.4	14.3	14.2	14.9	4.9	4.4	4.7	4.8	114	109	104
	Turkey	m	8.1	8.6	m	m	m	m	4.6	m	m	m
	United Kingdom	m	m	m	12.1	m	m	m	5.5	m	99	m
	United States	m	12.3	11.6	11.6	m	4.9	5.0	4.8	101	103	98
	OECD average	11.7	11.2	11.0	11.1	4.7	4.7	5.0	4.7	105	107	97
	EU22 average	10.5	10.2	9.9	9.8	4.7	4.6	5.0	4.7	101	106	95
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m
	Brazil	14.7	16.1	16.8	16.1	4.1	4.9	5.2	5.5	m	m	m
	China	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	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
	Lithuania	m	m	m	11.3	m	m	m	4.0	m	92	m
	Russian Federation	m	m	m	m	m	m	m	m	m	119	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m

1. Public expenditure presented in this table includes public subsidies to households for living costs, which are not spent in educational institutions. Therefore, the figures presented here exceed those on public spending on institutions found in Table B2.3.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933397878

B4

Table B4.3. Share of sources of public funds by level of government (2013)

Before and after transfers

	Primary, secondary and post-secondary non-tertiary education						Tertiary					
	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
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	33	67[d]	x(2)	5	95[d]	x(5)	94	6[d]	x(8)	92	8[d]	x(11)
Austria	74	15	11	39	49	12	97	3	0	97	3	0
Belgium	24	73	3	25	72	3	29	70	1	28	70	1
Canada[1]	4	76	21	3	11	86	m	m	m	m	m	m
Chile[2]	95	a	5	56	a	44	100	a	0	100	a	0
Czech Republic	13	61	26	12	62	26	97	1	2	97	1	2
Denmark	m	m	m	m	m	m	100	0	0	100	0	0
Estonia	99	a	1	62	a	38	100	a	0	100	a	0
Finland	41	a	59	10	a	90	88	a	12	84	a	16
France	72	17	12	71	17	12	87	10	3	87	10	3
Germany	7	75	18	6	72	22	26	72	2	20	78	2
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	88	a	12	88	a	12	100	a	0	100	a	0
Iceland	28	a	72	27	a	73	100	a	0	100	a	0
Ireland	99	a	1	83	a	17	100	a	0	87	a	13
Israel	89	a	11	70	a	30	97	a	3	97	a	3
Italy	81	9	9	81	8	11	88	12	0	87	13	0
Japan	17	66	17	2	81	17	93	6	0	93	7	0
Korea	70	26	3	1	30	69	96	3	1	96	3	1
Latvia	64	a	36	24	a	76	100	a	0	100	a	0
Luxembourg	89	a	11	84	a	16	100	a	0	100	a	0
Mexico	77	23	0	27	73	0	82	18	0	79	21	0
Netherlands	91	0	8	89	0	11	100	0	0	100	0	0
New Zealand	100	a	0	100	a	0	100	a	0	100	a	0
Norway[3]	6	a	94	5	a	95	100	a	0	100	a	0
Poland	5	2	93	4	2	94	99	1	0	99	1	0
Portugal[3]	84	6	10	79	6	15	99	0	0	99	0	0
Slovak Republic	82	a	18	28	a	72	100	a	0	99	a	1
Slovenia	89	a	11	88	a	12	99	a	1	99	a	1
Spain	15	80	6	14	80	6	18	81	1	18	81	1
Sweden	m	m	m	m	m	m	98	2	0	98	2	0
Switzerland	4	61	35	0	60	39	34	66	0	18	81	0
Turkey	85	15[d]	x(2)	85	15[d]	x(5)	95	5[d]	x(8)	95	5[d]	x(11)
United Kingdom	41	a	59	41	a	59	99	a	1	99	a	1
United States[3]	11	38	50	0	2	98	62	30	8	62	30	8
OECD average	56	22	22	41	23	36	87	12	1	86	13	2
EU22 average	61	18	21	49	19	32	87	12	1	86	12	2
Partners												
Argentina	9	89	2	2	96	2	79	21	0	76	24	0
Brazil	17	45	38	10	45	45	74	25	1	74	25	1
China	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	85	6	9	85	6	9	96	4	0	96	4	0
Costa Rica	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
Lithuania	78	a	22	26	a	74	99	a	1	99	a	1
Russian Federation	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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2012.
2. Year of reference 2014.
3. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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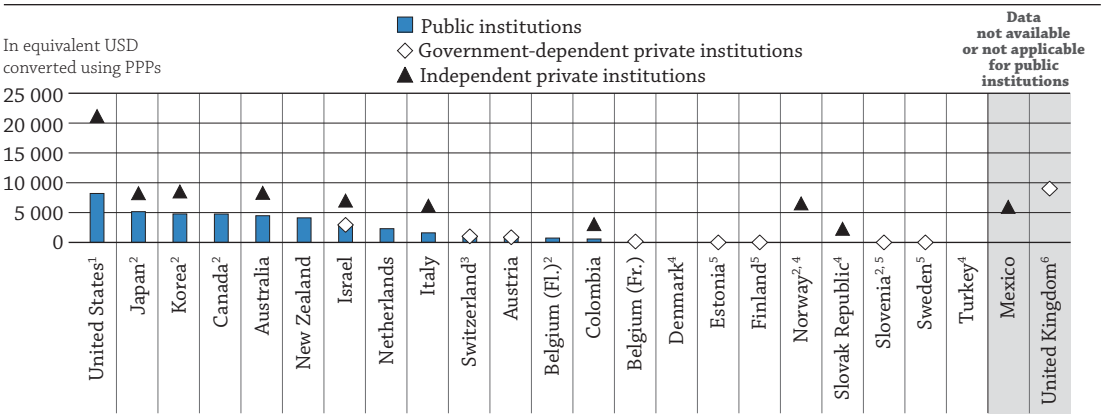
HOW MUCH DO TERTIARY STUDENTS PAY AND WHAT PUBLIC SUPPORT DO THEY RECEIVE?

- Independent private institutions charge higher annual tuition fees than public institutions for bachelor's or equivalent programmes in all OECD and partner countries with available data. In 2013/14, independent private institutions in some countries charged on average more than twice as much as public institutions.
- Countries with a low level of tuition fees do not appear to achieve better access to tertiary education than those with higher fees. Australia, Denmark, New Zealand and Slovenia all have first-time entry rates to tertiary education above 70% for national students, but Denmark and Slovenia have no tuition fees, while public institutions in Australia and New Zealand charge average annual tuition fees of over USD 4 000.
- Countries in which a large proportion of students benefit from public loans at the bachelor's, master's and doctoral or equivalent levels tend to offer the highest average annual loan per student, more than USD 4 000 in 2013/14 (or a close academic year) in all countries where the majority of students benefit from public loans.

Figure B5.1. Tuition fees charged by public and private institutions at bachelor's or equivalent level (2013/14)

Average annual tuition fees charged to full-time national students, converted in USD using PPPs for GDP, academic year 2013/14



Note: This figure does not take into account grants, subsidies or loans that partially or fully offset the student's tuition fees. Tuition fees should be interpreted with caution as they result from the weighted average of the main tertiary programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students.

1. Reference year 2011/12 for tuition fees.
2. Reference year 2014/15 for tuition fees (2014 in Korea).
3. Financial reference year 2013 and academic reference year 2012/13.
4. No tuition fees are charged by public institutions.
5. No tuition fees are charged by public and government-dependent private institutions.
6. Data refer to England only.

Countries and economies are ranked in descending order of tuition fees charged by public institutions and in alphabetical order if tuition fees are the same, except for Mexico and the United Kingdom, which do not have data for public institutions and are presented separately (in alphabetical order).

Source: OECD. Table B5.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

OECD and partner countries have different approaches to sharing spending on tertiary education among governments, students and their families, and other private entities, and to providing financial support to students. All countries want students to be able to afford the costs of tertiary education, but some prefer to invest the resources they dedicate to this goal in lower tuition fees, while others decide to offer student loans and grants to cover tuition fees and/or living costs.

Tuition fees bridge the gap between the costs incurred by tertiary educational institutions and the revenues they receive from sources other than students and their families. Among the many

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factors influencing the level of costs: salaries of teachers and researchers (especially for institutions competing to hire the best in a global academic market); development of digital learning and non-teaching services (e.g. employment services, relations with companies); investments to support internationalisation; and the amount and type of research activities undertaken by faculty and staff. Tertiary educational institutions partly cover their costs through internal resources (endowments) or revenue from private sources other than students and their families (see Indicator B3). The remainder of the costs is covered by student tuition fees or by public sources.

Hence, policy decisions relating to tuition fees can affect not only the cost to students of tertiary education, but also the resources available to tertiary institutions. Some countries therefore prefer to let tertiary educational institutions charge higher tuition fees, while providing financial support to students in other ways, particularly through grants and public loans. Public loans are often available to students at better conditions than they could find on the market, typically with lower interest rates and/or conditions under which the loan is remitted or forgiven.

Public support to students and their families enables governments to encourage participation in education, while also indirectly funding tertiary institutions. Channelling funding to institutions through students may also help increase competition among institutions and better respond to student needs. Students' support comes in many forms, including means-based subsidies, family allowances for students, tax allowances for students or their parents, or other household transfers. The trade-offs between different ways to fund tertiary education have been widely discussed in the literature, from different points of view (e.g. Barr, 2004; Borck and Wimbersky, 2014). Governments strive to strike the right balance among these different subsidies, especially in periods of financial crisis. Based on a given amount of subsidies, public support, such as tax reductions or family allowances, may provide less support for low-income students than means-tested subsidies, as tax reductions or family allowances are not targeted specifically to low-income students. However, they may still help to reduce financial disparities among households with and without children in education.

Other findings

- The difference between public institutions and government-dependent private institutions in average annual tuition fees at the bachelor's or equivalent level is minimal for all countries with available data.
- Annual tuition fees for foreign students are, on average, more than USD 10 000 higher than national students' fees in Australia, Canada, Denmark, Estonia, New Zealand and Sweden, and around USD 8 000 higher than national students' fees in the United States.
- Governments use a variety of strategies related to interest rates to reduce the financial burden on students, reducing interest rates and sometimes applying different interest rates before and after the end of studies.
- Among countries with available information, the proportion of students benefitting from remission and/or forgiveness of their loans ranges from less than 2% to 10%, across countries with available data.

Trends

From 2010 to 2014, reforms in the levels of tuition fees in tertiary education have been implemented in 10 countries out of 25 which provided data. Of these ten countries, seven combined these reforms in tuition fee systems with a change in the level of public subsidies available to students. The United Kingdom, for example, substantially increased both the maximum tuition fees cap and the tuition fee loans available to students. Hungary decreased the number of fully-financed places in tertiary institutions, increased the number of students receiving partial support and introduced a new loan system (Table B5.2).

The number of students at the bachelor's, master's and doctoral or equivalent levels who benefitted from a student loan increased in 11 out of 16 countries with available data in the decade between 2004/05 and 2014/15. Over this time period, the number tripled in Colombia and it increased more than five-fold in Brazil and Italy. In Brazil, almost 2 million students benefitted from a student loan in 2014/15. Large proportional increases were also registered in Australia, Japan, the Netherlands and Turkey. This confirms the long-term trend of greater cost sharing between the government and other stakeholders in tertiary education, including students and their families (Sanyal and Johnstone, 2011). However, the number of students benefitting from a student loan decreased by around one-half in the Slovak Republic, two-thirds in Hungary and four-fifths in Estonia (Table B5.4).

Analysis

Tuition fees and access to tertiary education

The level of tuition fees charged by tertiary educational institutions is one of the most hotly debated public policy issues in education today, both in civil society and among policy makers, with many countries implementing reforms in the last few years (Table B5.2).

National and local governments can affect tuition fees either by regulating the tertiary education sector (for example, by not allowing tuition fees or introducing a cap on the level of fees) or by subsidising tertiary institutions – or both. Governments may wish to reduce the level of tuition fees to boost access to tertiary education or to reduce disparities in access between different parts of the population, making the tertiary education system more equitable. In fact, the level of tuition fees is only one of the tools available to governments to achieve these goals. Different methods of combining tuition fees and other tools, particularly financial support to students, can greatly influence access to and equity in tertiary education.

In addition, even without considering how levels of tuition fees interact with various forms of student support, it is not straightforward to determine their relationship to access and equity. Governments must strike a difficult balance between providing sufficient financial support to institutions through tuition fees and allowing all potential students to study at an affordable cost.

On the one hand, higher tuition fees increase the resources available to educational institutions, support their efforts to maintain quality academic programmes and develop new ones, and can help accommodate increases in student enrolment. These additional resources seem especially important in light of the massive expansion of tertiary education in all OECD countries in recent decades and budgetary pressures on governments stemming from the prolonged economic crisis in many countries.

On the other hand, lower tuition fees can help to promote access to tertiary education, particularly for students from low-income backgrounds in the absence of a strong system of public support to help them pay or reimburse the cost of their studies. In addition, lower tuition fees may encourage some students to enrol in fields that require extended periods of study but offer uncertain labour-market opportunities.

In light of these arguments, it is not surprising that countries with a low level of tuition fees for national students do not appear to achieve better access to tertiary education than other countries. In Figure B5.2, average annual tuition fees charged by public institutions at the bachelor's or equivalent level (vertical axis) are plotted against first-time entry rates to tertiary education for 17 countries with available data. First-time entry rates can be interpreted as the proportion of young adults that will enter tertiary education during their lifetime (see Indicator C3). Among the four countries with first-time entry rates above 70%, two (Australia and New Zealand) have tuition fees higher than USD 4 000 (among the highest in the sample), and two (Denmark and Slovenia) have no tuition fees for national and European Economic Area (EEA) students. The United Kingdom has the highest level of tuition fees, but it is close to the median for first-time entry rates, while Austria, the median country with respect to the level of tuition fees, ranks almost at the bottom (before Italy) in terms of first-time entry rates.

Differentiation of tuition fees across tertiary educational institutions, programmes and levels

The need for financial resources and the goal of guaranteeing an affordable education for all lead to different levels of tuition fees for different institutions and at different levels of education. Independent private institutions are often less affected by government regulation and less reliant on public funds than public institutions. In some cases, they are also more pressed by competition to provide the best possible services to students. As a result, they charge on average higher annual tuition fees than public institutions for bachelor's or equivalent programmes in all OECD and partner countries with available data (Figure B5.1 and Table B5.1).

The difference in fees between private and public institutions tends to be very large in all countries with available data. In the United States, the average annual tuition fee charged by independent private institutions for bachelor's or equivalent level is USD 21 189, more than two-and-a-half times the average annual tuition fee in public institutions (USD 8 202). In Japan and Korea, the average annual tuition fee at this level of education is above USD 8 000 in private institutions, while it is closer to USD 5 000 for public institutions. Tuition fees are about five times higher in private institutions than in public institutions in Colombia, four times higher in Italy and about twice as high in Australia and Israel. In Norway, the average annual tuition fee is USD 6 552, and in the Slovak Republic, it is USD 2 300, with no tuition fees in public institutions in either country.

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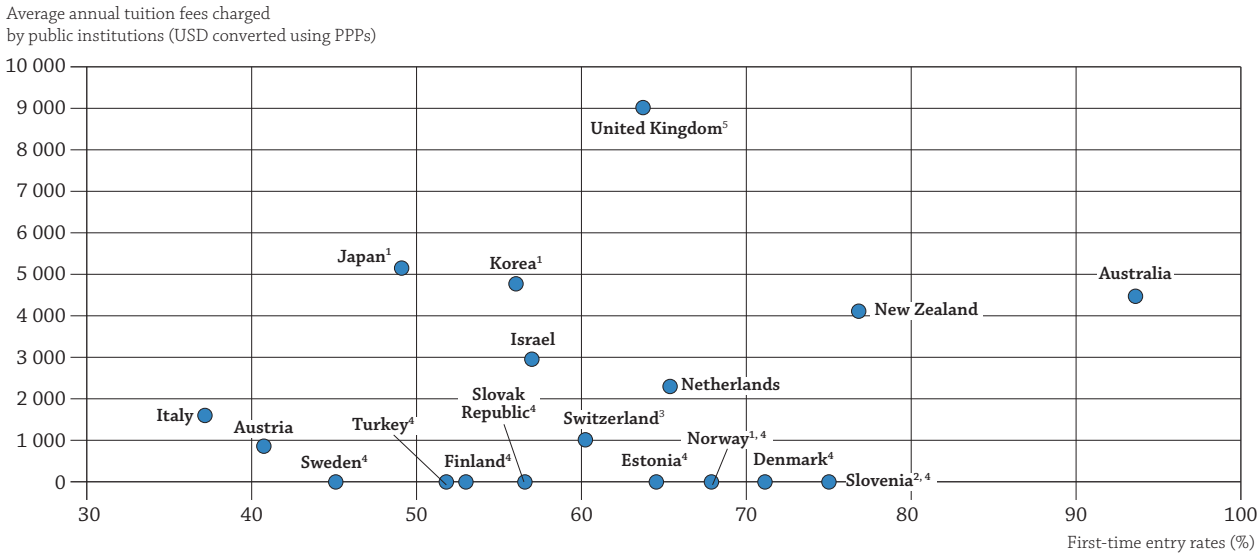
Figure B5.2. Tuition fees charged by public institutions and first-time entry rates at bachelor's or equivalent level (2013/14)

Vertical axis: average annual tuition fees charged to full-time national students, converted in USD using PPPs for GDP, academic year 2013/14; horizontal axis: sum of age-specific entry rates to bachelor's or equivalent programmes



Note: Data on first-time entry rates include international students. For some countries with a large proportion of international students, such as Australia, Austria and New Zealand, this implies that the entry rates shown in this figure are substantially larger than first-time entry rates for domestic students (see Indicator C3). Tuition fees should be interpreted with caution as they result from the weighted average of the main tertiary programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students.

1. Reference year 2014/15 for tuition fees (2014 in Korea).
2. Reference year 2011/12 for tuition fees.
3. Financial reference year 2013 and academic reference year 2012/13.
4. No tuition fees are charged by public institutions.
5. Data on tuition fees refer to government-dependent instead of public institutions, for England only.

Source: OECD. Tables B5.1 and C3.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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In contrast, the difference between public institutions and government-dependent private institutions in average annual tuition fee at the bachelor's or equivalent level is minimal for all countries with available data. There is no fee in either type of institution in Estonia, Finland, Slovenia and Sweden, and private and public institutions charge very similar average tuition fees in Austria, Belgium (Flemish and French Communities), Israel and Switzerland.

Differences in the annual educational expenditure per student by educational institution for short-cycle tertiary education, compared to the bachelor's and master's or equivalent level (see Indicator B1), could be one reason for lower student tuition fees in several countries. For example, in the United States, the difference in the average annual tuition fee between a short-cycle and a bachelor's or equivalent programme is about USD 6 000, while it is around USD 2 000 in Korea and USD 1 400 in Japan. In Belgium (French Community), there is no tuition fee for short-cycle tertiary programmes, but there is a moderate tuition fee for bachelor's and master's or equivalent programmes. In Colombia, annual tuition fees in short-cycle tertiary programmes offered by public institutions are USD 553 on average, similar to the tuition fee at the bachelor's or equivalent level, but lower than at the master's or equivalent level. In no country with available data is the average tuition fee for short-cycle tertiary education programmes higher than for more advanced levels of education, although it is the same in the Netherlands and in countries with no tuition fees (Denmark, Finland, Norway, Slovenia, Sweden and Turkey).

Tuition fees for non-national students

National policies regarding tuition fees and financial aid to students generally cover all students studying in the country's educational institutions. Countries' policies also take into account non-national students (those coming from abroad, either international or foreign, as defined in Indicator C4). Differences between national and non-national

students in fees they are charged or financial support they may receive from the country in which they study can have an impact on the international flows of students, as can other factors, such as public support from their home countries. These differences can attract students to study in some countries and discourage them from studying in others (see Indicator C4), especially in a context where an increasing number of OECD countries are charging higher tuition fees for mobile students.

In the majority of countries with available data (20 out of 38), the tuition fees charged by public educational institutions may differ for national and non-national students enrolled in the same programme (Table B5.3), although countries in the European Union (EU) and the European Economic Area (EEA) charge the same tuition fees for nationals and students from other EU and EEA countries. In Austria, for example, the average tuition fees charged by public institutions for students who are not citizens of EU or EEA countries are twice the fees charged for citizens of these countries (for bachelor's, master's and doctoral or equivalent programmes in public institutions). Foreign students pay on average over USD 10 000 per year more than national students in Australia, Canada, Denmark, New Zealand and Sweden, and around USD 8 000 more than national students in the United States. In contrast, national and foreign students pay on average the same tuition fees in Colombia, Italy, Israel, Japan, Korea and Switzerland, and in countries that charge no tuition fees to foreign or international students (Finland, Iceland, Norway, the Slovak Republic and Slovenia) (see Tables B5.1 and B5.3).

Country approaches to funding tertiary education

The approaches countries choose to provide financial support to tertiary education students are not static. Governments frequently implement reforms to change the level of tuition fees and the availability of grants and loans, often in combination (see the section on *Trends*).

Despite the policy changes within countries and the policy differences across OECD countries, some patterns can be identified to draw a classification of approaches to funding tertiary education. Countries can be roughly divided into four groups, according to two factors: level of tuition fees and financial support available through the country's student financial aid system for tertiary education (see OECD, 2015, for a detailed description of these groups).

The first group is composed of the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden), where students pay no tuition fee and benefit from generous public support for higher education. In these countries, more than 55% of students benefit from public grants, public loans or a combination of the two (OECD, 2015, Table B5.3), and the average entry rate into bachelor's programmes is 62%, above the OECD average of 59% (see Indicator C3, Table C3.1). However, over the past decade, Denmark and Sweden (as of 2011) decided to introduce tuition fees for students coming from outside the EEA, and Finland will follow soon. Such a change may discourage international students from studying in these countries (see Box C4.2).

The second group includes Australia, Canada, New Zealand, the United Kingdom and the United States. On the one hand, tuition fees charged by public institutions for bachelor's programmes (government-dependent private institutions in the United Kingdom) are substantial: they exceed USD 4 000 in all these countries. On the other hand, at least 85% of tertiary students receive support from public loans or scholarships/grants in Australia, New Zealand, the United Kingdom and the United States, the four countries with available data (OECD, 2015, Tables B5.1a and B5.3). Entry rates to bachelor's or equivalent programmes are above the OECD average for the countries within this group of countries for which data are available (although the data for Australia and New Zealand are heavily influenced by the high proportion of international students). Since 1995, the United Kingdom has moved to this group from the group of countries with lower tuition fees and less-developed student-support systems. The Netherlands can be considered as moving to this group from the first group (Nordic countries) as tuition fees increased and the student-support system developed (see Figure B5.1 in OECD, 2014).

In the third group of countries, including Chile, Japan and Korea, most students are charged high tuition fees (more than USD 4 700 for bachelor's programmes in public institutions in Japan and Korea in 2013/14 and more than USD 5 800 in Chile, as based on data from OECD, 2014), but student-support systems are somewhat less developed than those in groups 1 and 2. Entry rates into bachelor's programmes are close to the OECD average of 59% (55% in Chile, 49% in Japan and 56% in Korea). However, Japan and Korea have recently implemented reforms to improve their student-support systems.

Countries in the fourth group, including Austria, Belgium, France, Italy and Switzerland, charge moderate tuition fees compared to other countries (except the Nordic countries), combined with relatively low levels of support for students, which is mainly targeted to specific groups. The average tuition fees charged by public institutions

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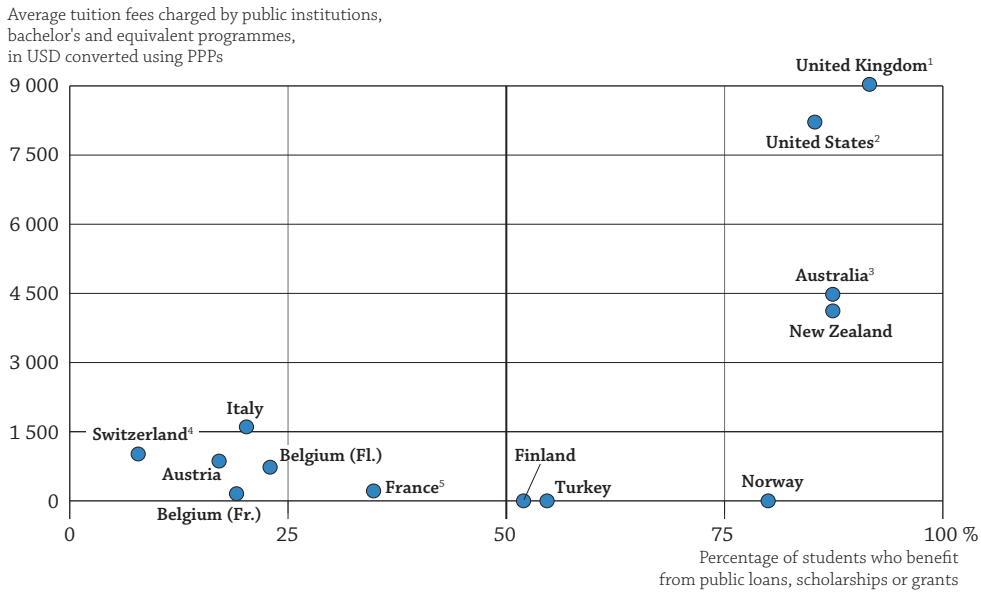
in this group of countries is lower than USD 1 600, and in countries for which data are available, most students do not benefit from public support (OECD, 2015, Tables B5.1 and B5.3). In these countries, the average entry rate into bachelor's programmes (52%) is relatively low, but in some countries, such as Austria and Spain this is complemented by above-average entry rates into short-cycle tertiary programmes. Turkey, where no tuition fees are charged for most students in public institutions as of academic year 2012/13, is moving from group 4 to group 1. Since 1995, reforms were implemented in some of these countries, particularly Austria and Italy, to increase tuition fees in public institutions (Figure B5.1 and Box B5.1 in OECD, 2012).

Figure B5.3. Tuition fees charged by public institutions related to the proportion of students who benefit from public loans, scholarships or grants at bachelor's or equivalent level (2013/14)

For full-time national students, in USD converted using PPPs for GDP, academic year 2013/14.



Note: Tuition fees should be interpreted with caution as they result from the weighted average of the main tertiary programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students.

1. Tuition fees refer to England only.
2. Reference year 2011/12.
3. Only includes the major Australian Government scholarships programmes. It excludes all scholarships provided by educational institutions and the private sector.
4. Financial reference year 2013 and academic reference year 2012/13.
5.Tuition fees range from USD 215 to USD 715 for university programmes depending on the Ministry of Higher Education.

Sources: OECD. Table B5.1 and OECD (2015, Table B5.3). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Support to students through loans

Public loans to students are meant to provide financial support while shifting some of the cost of education to those who benefit most from higher education, namely individual students, reflecting the high private returns of completing tertiary education (see Indicator A7). Opponents of loans argue that student loans are less effective than other support tools (particularly grants) in encouraging low-income students to pursue their education, and that loans may be costly because of the various types of support provided to borrowers or lenders and the costs of administration and servicing.

The general trend is towards more students taking loans. In most OECD and partner countries with available data, the number of students at the bachelor's, master's and doctoral or equivalent levels who benefit from a student loan increased by 40% or more between 2004/05 and 2014/15. However, this trend masks very important differences across countries. The number of students benefitting from a loan increased by more than five times in Brazil and

Italy, tripled in Colombia and increased by 50% or more in Australia, Japan, the Netherlands, Switzerland and Turkey. But it decreased by one-half in the Slovak Republic, two-thirds in Hungary and four-fifths in Estonia. Sometimes these large proportional changes reflect the fact that the absolute number of students benefitting from them is still very limited. For example, despite the five-fold increase in Italy, only 4 614 students (0.3% of the total) benefitted from a state-guaranteed loan in 2014/15. In other cases, there are massive increases in terms of absolute numbers of loans, as in Brazil, where almost 2 million students benefitted from a public loan in 2014/15 (Table B5.4).

The same trend is visible among short-cycle tertiary students, although data are scarcer for this level of education. The number of students with a public loan increased in six out of eight countries with available data, most notably in Australia, Colombia and Turkey, where it more than doubled between 2004/05 and 2014/15.

Amount of public loans and debt at graduation

Across the OECD and partner countries with available data, countries with a larger proportion of students benefitting from a public loan at the bachelor's, master's and doctoral or equivalent levels (in public and private institutions combined) also tend to be those in which the average annual amount of student loans is largest. Among the countries with available data, the average annual gross amount of public loan available per student exceeds USD 4 000 in all countries where the majority of students benefit from a public loan: Australia, Norway, Sweden, the United Kingdom and the United States. In contrast, in Belgium (French Community), Estonia and Finland, where a smaller proportion of students (9% to 22%) benefit from a loan, the average annual gross amount of loan per student is no more than USD 3 500 (Table B5.4). However, there are also countries in which the proportion of students taking a loan is not very large, such as Korea (18.5%) and Japan (38%), where the average amount available per student exceeds USD 5 000.

As a result of taking loans, most students are in debt at graduation. The extent to which this can be a problem mostly depends on the amount of debt, the uncertainty of graduates' earnings and employment prospects, and the conditions for repayment of the loans. Countries whose tertiary institutions charge high tuition fees are also those whose students have the highest levels of debt at graduation from public loans or loans guaranteed by the state. In countries with a relatively small proportion of students taking public loans, the debt burden also tends to be lighter. For example, in Finland, where about 22% of students benefit from a public loan, the average debt at graduation is USD 8 300. In contrast, in the United Kingdom (England only), where nine out of ten students have debt from loans, the debt at graduation is on average USD 30 000 (Table B5.4).

Financial support through interest rates

Students often benefit from special conditions on their public or state-guaranteed loans, for example in interest rates, repayment system or remission/forgiveness mechanisms (Table B5.5). Governments often introduce these special conditions to reduce the cost of loans and, in some cases, to protect students from uncertainty in the labour market after they graduate. By doing so, governments take a considerable part of the cost on themselves, as a generous policy of public or state-guaranteed loans can be expensive (Barr, 2004).

The structure of interest rates, for both public and private loans, differs across countries, so the comparison between the interest rates offered on public loans in different countries must be treated with caution. However, the available data show that governments use a variety of strategies to reduce the financial burden on students, including reducing interest rates, and sometimes applying different interest rates before and after the end of studies. Some countries charge no nominal interest rate at all on loans, while others link the interest rate to indexes lower than market rates, usually the cost of government borrowing or an inflation index (Table B5.4).

In Canada, Japan, New Zealand and the Slovak Republic, there is no nominal interest rate on a public loan during the period of studies, but after this period, students/graduates may incur an interest charge related to the cost of government borrowing or even higher. For example, New Zealand, which made loans interest-free for borrowers while they reside in New Zealand, charges an interest rate on loans to borrowers who are overseas.

In the Netherlands and Sweden, and in Denmark after the end of their studies, students pay a rate which is equal to or lower than the cost of government borrowing and is not higher than 1%. The interest rate in Norway (2.52%, but only after the end of studies) and the United States (4.66% to 7.21%) is linked to – but exceeds – the cost of government borrowing.

In Australia, interest on student debt is set at the rate of the Consumer Price Index, so that the real interest rate is zero. The same happens in Hungary for the *Diákhitel2* loans, aiming to cover costs directly related to education,

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such as tuition fees. In Turkey there is no payment at all until after graduation, when the interest rate is equal to the Producer Price Index, while in the United Kingdom and Colombia, the interest rate is equal to an inflation index with a surcharge (3% in the United Kingdom and 8% in Colombia).

Estonia is the only country with available data where interest rates are based on a financial index not related to the cost of government borrowing or inflation. The interest rate paid by students is capped at 5%, which was the actual average rate paid by students in 2013/14. The relatively high interest rate may be partly responsible for the sharp decline of student loans in Estonia in the last decade (Table B5.4)

Repayment of loans

The current reporting of household expenditure on education as part of private expenditure (see Indicator B3) does not take into account the repayment of public loans by previous recipients. The repayment period varies among countries, ranging from 10 years or less in Australia, Canada, Estonia, New Zealand, the Slovak Republic and Turkey to 20 years or more in Norway, Sweden and the United States (for income-based repayments).

Among the 16 countries with available data on repayment systems, 7 countries make repayment of loans dependent on graduates' level of income: Australia, Hungary, the Netherlands, New Zealand and the United Kingdom; and Korea and the United States for part of the student's loans. Among countries with income-contingent repayment systems, the minimum annual income threshold above which borrowers have to reimburse the loan ranges from USD 13 000 in New Zealand to more than USD 30 000 in Australia and the United Kingdom (Table B5.5).

Besides repayment, schemes for remission and/or forgiveness of student loans exist in nearly all countries with student-loan systems. These systems may benefit significant proportions of students who take a loan during their studies. Among countries with available information, the proportion of students benefitting from remission and/or forgiveness varies from 2% or less in Finland, Hungary, Japan, New Zealand and Sweden, to 10% in the Netherlands. This can translate into significant proportions of loans that are not repaid. In Australia, Canada and the Netherlands, it is estimated that 10% of loans or more will not be repaid (Table B5.5).

The conditions to benefit from such mechanisms vary between countries. Death, disability or poor financial situation of the graduate who took the loan are commonly accepted reasons for obtaining remission or forgiveness. Furthermore, conditions for remission and/or forgiveness are linked in some countries to the labour market situation or to students' results. For example, in the United States, teachers and individuals in public service may apply to loan-forgiveness programmes, and in Australia, graduates of specific fields (and employed in a related occupation) and graduates who take up related occupations or work in specified locations benefit from remission through a reduction of their repayments. In Colombia and Japan, some graduates with particularly outstanding results may also expect forgiveness of all or part of their student loan.

Definitions

In this chapter, **national students** are defined as the citizens of a country who are studying within the same country. Foreign and international students are defined according to the definitions specified in Indicator C4. For countries that are EU members, citizens from other EU countries have usually to pay the same fees as national students. In these cases, foreign students refer to students that are citizens from countries outside the EU.

Average tuition fees charged in public and private tertiary institutions distinguishes tuition fees between short-cycle, bachelor's, master's, and doctoral or equivalent programmes. This indicator gives an overview of tuition fees at each level by type of institution and shows the proportions of students who do or do not receive scholarships/grants that fully or partially cover tuition fees. Levels of tuition fees and associated proportions of students should be interpreted with caution, as they are derived from the weighted average of the main programmes.

Student loans refers to the full range of student loans 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 expenditures on education.

OECD indicators take the full amount of scholarships and loans (gross) into account when discussing financial aid to current students. Some OECD countries also have difficulty quantifying the amount of loans to students. Therefore, data on student loans should also be treated with caution.

B5

Methodology

Data refer to the financial year 2013 or school year 2013/14 and are based on a special survey administered by the OECD and undertaken in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Amounts of tuition fees and amounts of loans in national currency are converted into equivalent USD by dividing the national currency by the purchasing power parity (PPP) index for GDP. Amounts of tuition fees and associated proportions of students should be interpreted with caution as they represent the weighted average of the main tertiary programmes and do not cover all educational institutions.

Note regarding data from Israel

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

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Indicator B5 Tables

StatLink http://dx.doi.org/10.1787/888933397928

Table B5.1	Estimated annual average tuition fees charged by educational institutions (short-cycle tertiary, bachelor's and master's or equivalent levels) (2013/14)
Table B5.2	Estimated index of changes in the tuition fees charged by educational institutions (ISCED levels 5 to 7) and reforms related to tuition fees implemented in recent years on tertiary education (2013/14)
Table B5.3	Estimated annual average tuition fees charged, by educational institutions for foreign students (2013/14)
Table B5.4	Public loans to students in tertiary education (2013/14) and trends in the number of beneficiaries (2004/05 and 2014/15)
Table B5.5	Repayment and remission of public loans to students in bachelor's, master's, doctoral or equivalent programmes (academic year 2013/14)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table B5.1. [1/2] Estimated annual average tuition fees charged by educational institutions (short-cycle tertiary, bachelor's and master's or equivalent levels)[1] (2013/14)

National students, in equivalent USD converted using PPPs, by type of institutions and degree structure, based on full-time students, academic year 2013/14

Note: Tuition fees should be interpreted with caution as they result from the weighted average of the main tertiary programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students. Proportions of students reported in Columns 1, 2 and 3 are based on the data collection used for other indicators (UOE data collection), and refer to school year 2013/14.

	Percentage of full-time students enrolled in:			Annual average tuition fees *in USD charged by institutions (for full-time students)*								
	Short-cycle tertiary programmes, bachelor's and master's or equivalent level			Public institutions			Government-dependent private institutions			Independent private institutions		
	Public institutions	Government-dependent private institutions	Independent private institutions	Short-cycle tertiary programmes	Bachelor's or equivalent level	Master's or equivalent level	Short-cycle tertiary programmes	Bachelor's or equivalent level	Master's or equivalent level	Short-cycle tertiary programmes	Bachelor's or equivalent level	Master's or equivalent level
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	92	2	6	m	4 473	7 334	a	a	a	m	8 322	7 537
Austria	83	m	m	m	861	861	m	861	861	m	m	m
Belgium (Fl.)[2]	41	59	1	0 to 676	729	729	x(4)	x(5)	x(6)	m	m	m
Belgium (Fr.)	m	m	m	0	155	710	0	151	721	a	a	a
Canada[2]	m	m	m	m	4 761	4 961	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m	m	m
Czech Republic	87	2	11	m	m	m	m	m	m	m	m	m
Denmark	98	2	0	No tuition fees	No tuition fees	No tuition fees	m	m	m	m	m	m
Estonia	19	73	8	a	No tuition fees	No tuition fees	a	No tuition fees	No tuition fees	a	m	m
Finland	65	35	a	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	a	a	a
France	m	m	m	0 to 1.019	0 to 8 313	300 to 2 166	x(12)	x(10)	x(11)	3.009 to 10.245	1 808 to 7 598	1 098 to 12 994
Germany	93	m	m	m	m	m	m	m	m	m	m	m
Greece				m	m	m	m	m	m	m	m	m
Hungary	88	6	7	m	m	m	m	m	m	m	m	m
Iceland				m	m	m	m	m	m	m	m	m
Ireland	98	2	0	m	m	m	m	m	m	m	m	m
Israel	17	66	17	m	2 957	m	m	2 934	m	m	7 028	m
Italy	90	a	10	m	1 602	x(5)	a	a	a	m	6 168	x(11)
Japan[2]	21	a	79	3 728	5 152	5 150	a	a	a	6 690	8 263	6 926
Korea	19	a	81	2 747	4 773	6 281	a	a	a	6 948	8 554	11 510
Latvia	9	71	21	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	69	a	31	m	m	m	a	a	a	m	5 970	m
Netherlands	m	m	m	2 300	2 300	2 300	m	m	m	m	m	m
New Zealand	88	9	3	m	4 113	m	m	m	m	m	m	m
Norway[2]	84	6	10	No tuition fees	No tuition fees	No tuition fees	m	m	m	6 552	6 552	8 263
Poland	87	a	13	m	m	m	m	m	m	m	m	m
Portugal	82	0	18	m	m	m	m	m	m	m	m	m
Slovak Republic	93	a	6	m	No tuition fees	No tuition fees	a	a	a	m	2 300	1 700
Slovenia[2]	94	5	a	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	a	a	a
Spain	83	3	14	m	m	m	m	m	m	m	m	m
Sweden	87	13	a	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	a	a	a
Switzerland[3]	91	5	4	m	1 015	1 015	m	1 015	1 015	m	m	m
Turkey	93	a	7	No tuition fees	No tuition fees	No tuition fees	a	a	a	m	m	m
United Kingdom[2]	a	100	a	a	a	a	m	9 019	9 019	m	m	m
United States[4]	68	a	32	2 276	8 202	10 818	a	a	a	10 612	21 189	16 932
Partners												
Argentina				m	m	m	m	m	m	m	m	m
Brazil	26	a	74	m	m	m	a	a	a	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	553	574	3 212	a	a	a	1 294	3 082	7 097
Costa Rica	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
Russian Federation	94	a	6	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

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 for tuition fees (in Japan, for public institutions only; for Korea, 2014).
3. Financial reference year 2013 and academic reference year 2012/13.
4. Reference year 2011/12 for tuition fees.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B5

Table B5.1. [2/2] Estimated annual average tuition fees charged by educational institutions (short-cycle tertiary, bachelor's and master's or equivalent levels)[1] (2013/14)

National students, in equivalent USD converted using PPPs, by type of institutions and degree structure, based on full-time students, academic year 2013/14

Note: Tuition fees should be interpreted with caution as they result from the weighted average of the main tertiary programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students. Proportions of students reported in Columns 1, 2 and 3 are based on the data collection used for other indicators (UOE data collection), and refer to school year 2013/14.

		Comment
		(13)
OECD	Australia	
	Austria	Since the summer term 2009, only national students as well as EU/EEA students who exceed the theoretical duration of study plus a range of tolerance are not exempted from paying tuition fees (other reasons for exemption exist). Tuition fees do not include mandatory membership in the official body of university students (about USD 43).
	Belgium (Fl.)[2]	Bachelor's or master's or equivalent programmes: data refer to students without a scholarship. Tuitions fees are USD 122 for students receiving a scholarship and USD 482 for students receiving almost a scholarship (*bijna beursstudenten*). Short-cycle tertiary programmes: maximal tuition fee is for associate degree - higher educational adult education, while minimal fee refer to nursing programmes. In adult education a tuition fee of EUR 1.50 per teaching period is charged since 1 January 2015.
	Belgium (Fr.)	Tuition fees charged for programmes are the same for public and private institutions but the distribution of students differs between public and private institutions, so the weighted average is not the same.
	Canada[2]	
	Chile	
	Czech Republic	
	Denmark	
	Estonia	Starting from academic year 2013/14, all degree programmes taught in Estonian are free of charge for full-time students. Fees can be charged to students who do not succeed in studying full time.
	Finland	Excluding membership fees to student unions.
	France	In public institutions, tuitions fees in most bachelor's or equivalent programmes are less than USD 750; fees may exceed this amount for some paramedical training. Data on the registration fees other than those charged by public institutions depending on the Ministry of Higher Education or the Ministry of Agriculture are rough estimates.
	Germany	
	Greece	
	Hungary	Students are either fully financed through a state scholarship, partially financed through a state scholarship (50% of the cost of studies), or pay the full cost of studies.
	Iceland	
	Ireland	
	Israel	
	Italy	Each institution fixes scales for tuition fees depending on the economic circumstances of the student's family, according to equity and solidarity criteria that respect the general rules determined at national level. The annual average tuition fees are calculated on the basis of the actual tuition fee paid by each student (net amount); students totally exempted from fees are not included in the calculation. Students partially exempted are considered on the basis of their actual payment. Programmes at equivalent levels are excluded.
	Japan[2]	Average amount of annual tuition fees charged by independent private institutions refers to fees in private universities for the first academic year.
	Korea	
	Latvia	
	Luxembourg	
	Mexico	
	Netherlands	Tuition fees in public institutions refer to the mandatory fee and apply to all students from the European Economic Area.
	New Zealand	Average tuition fees for all tertiary levels in universities only.
	Norway[2]	Tuition fees for independent private institutions refer to the largest private institution, mainly providing courses in business administration (economics, marketing and management). Candidates for the doctorate degree are formally not students, but employed as research fellows. The contract period at the universities is normally four years, to allow for teaching activities in addition to the three years of research.
	Poland	
	Portugal	
	Slovak Republic	Generally full-time students do not pay tuition fees, but students who are simultaneously enrolled in two or more study programmes offered by a public university in the same level in one academic year are required to pay annual tuition fees for the second and any other study programmes in the academic year. In addition, students studying longer than the standard duration of study are required to pay annual tuition for each additional year of study.
	Slovenia[2]	Full-time students do not pay tuition fees. In independent private institutions, students are enrolled on a part-time basis only.
	Spain	
	Sweden	Proportion of full-time students includes students in master's or equivalent level (ISCED 7) and short-cycle tertiary programmes (ISCED 5).
	Switzerland[3]	
	Turkey	As of the academic year 2012/13, in public institutions students in first education (regular morning programmes) and open education programmes are not charged tuition fees over the course of the theoretical duration of the programmes. Tuition fees are charged only for students in public institutions who are enrolled in evening programmes and those who have not graduated from a programme within the theoretical duration.
	United Kingdom[2]	Average tuition fees for all tertiary levels.
	United States[4]	
Partners	Argentina	
	Brazil	
	China	
	Colombia	
	Costa Rica	
	India	
	Indonesia	
	Russian Federation	
	Saudi Arabia	
	South Africa	

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 for tuition fees (in Japan, for public institutions only; for Korea, 2014).
3. Financial reference year 2013 and academic reference year 2012/13.
4. Reference year 2011/12 for tuition fees.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.2. [1/2] Estimated index of changes in the tuition fees charged by educational institutions (ISCED levels 5 to 7) and reforms related to tuition fees implemented in recent years on tertiary education[1] (2013/14)

National students, rate of change computed after converting tuition fees in equivalent USD at constant prices converted using PPPs, by ISCED level, based on full-time students, academic year 2013/14

Note: The data in Columns 1-3 can be considered as good proxies of the tuition fees trends, although they are based on the weighted average of the main tertiary programmes and do not cover all educational institutions. For Columns 1-3, year 2004 refers to academic year 2003/04 and year 2014 to 2013/14.

	Index of change in the amount of tuition fees for students in short-cycle tertiary programmes between 2004 and 2014 (public institutions, 2004 = 100)	Index of change in the amount of tuition fees for students in bachelor's or equivalent level programmes between 2004 and 2014 (public institutions, 2004 = 100)	Index of change in the amount of tuition fees for students in master's or equivalent level programmes between 2004 and 2014 (public institutions, 2004 = 100)	Reforms implemented since 2010 on tertiary education (ISCED levels 5 to 8)	
				On levels of tuition fees	Of which, at least some combined with a change in the level of public subsidies available to students
	(1)	(2)	(3)	(4)	(5)
OECD					
Australia	m	120	185	Yes	Yes
Austria	m	m	m	No	No
Belgium (Fl.)[2]	m	m	m	No	No
Belgium (Fr.)	m	m	m	Yes	No
Canada[2]	m	115	m	No	No
Chile	m	m	m	m	m
Czech Republic	m	m	m	m	m
Denmark	a	a	a	No	No
Estonia	a	a	a	Yes	Yes
Finland	a	a	a	No	No
France	m	m	m	No	No
Germany	m	m	m	m	m
Greece	m	m	m	m	m
Hungary	m	m	m	Yes	Yes
Iceland	m	m	m	m	m
Ireland	m	m	m	m	m
Israel	m	m	m	No	No
Italy	m	m	m	Yes	Yes
Japan[2]	117	116	116	No	No
Korea[2]	m	m	m	Yes	Yes
Latvia	m	m	m	m	m
Luxembourg	m	m	m	m	m
Mexico	m	m	m	m	m
Netherlands	m	m	m	No	No
New Zealand	m	113	113	Yes	No
Norway[2]	a	a	a	m	m
Poland	m	m	m	m	m
Portugal	m	m	m	m	m
Slovak Republic	m	m	m	No	No
Slovenia[2]	m	m	m	No	No
Spain	m	m	m	m	m
Sweden[3]	a	a	a	Yes	Yes
Switzerland[4]	m	m	m	No	No
Turkey	a	a	a	Yes	No
United Kingdom[2]	a	a	a	Yes	Yes
United States[5]	110	138	126	No	No
Partners					
Argentina	m	m	m		
Brazil		m	m	No	No
China	m	m	m	m	m
Colombia		m	m	No	No
Costa Rica	m	m	m	m	m
India	m	m	m	m	m
Indonesia	m	m	m	m	m
Russian Federation	m	m	m	m	m
Saudi Arabia	m	m	m	m	m
South Africa	m	m	m	m	m

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 for tuition fees (in Japan, for public institutions only; for Korea, 2014).
3. Reforms at bachelor's, master's or equivalent levels only.
4. Financial reference year 2013 and academic reference year 2012/13.
5. Reference year 2011/12 for tuition fees.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B5

Table B5.2. [2/2] Estimated index of changes in the tuition fees charged by educational institutions (ISCED levels 5 to 7) and reforms related to tuition fees implemented in recent years on tertiary education[1] (2013/14)

National students, rate of change computed after converting tuition fees in equivalent USD at constant prices converted using PPPs, by ISCED level, based on full-time students, academic year 2013/14

Note: The data in Columns 1-3 can be considered as good proxies of the tuition fees trends, although they are based on the weighted average of the main tertiary programmes and do not cover all educational institutions. For Columns 1-3, year 2004 refers to academic year 2003/04 and year 2014 to 2013/14.

		Reforms implemented since 2010 on tertiary education (ISCED levels 5 to 8)
		Comments
		(6)
OECD	Australia	From 2012, the government has provided a subsidy for students enrolled in public university bachelor's level courses (excluding medicine) and amended indexation of higher education to better reflect the costs.
	Austria	
	Belgium (Fl.)[2]	
	Belgium (Fr.)	Since 2010/11, abolition of school fees (minerval) for students who receive a scholarship from the Ministry of the Wallonia-Brussels Federation and a decrease in fees for those from a low socio-economic background.
	Canada[2]	
	Chile	
	Czech Republic	
	Denmark	The state education grant for students living with their parents has been reduced (around 6% of tertiary students live with their parents). Furthermore, the yearly regulation of the state education grant will in the future be the same as transfer payments such as unemployment benefit and social security.
	Estonia	From 2013/14, students from less privileged families studying full time and in the Estonian language can apply for study allowance. From 2015, a needs-based special allowance is proposed for students without a study allowance if the economic situation of their family has since changed.
	Finland	From academic year 2017/18, introduction of tuition fees for students coming from outside the European Union and European Economic Area to study in Finland
	France	Changes in 2013 and 2014 to increase the financial support to tertiary students (increase in the amount of scholarships, in the number of scholarships to students and extension of the conditions to benefit from scholarships).
	Germany	
	Greece	
	Hungary	From 2012/13, private financing increased mainly in law and economics, less in science and technology, and a new student loan form was launched for all students who pay the cost of studies ("cost-refunding" or "tuition fee").
	Iceland	
	Ireland	
	Israel	
	Italy	From 2010, reform aimed at guaranteeing support to all students coming from a low socio-economic background. In 2013, the creation of an Observatory on Students' Welfare helped to monitor and report on students' support services, and to advise the Ministry on standards for the student support system.
	Japan[2]	
	Korea[2]	Reforms in 2012 to increase the level of public support for higher education, with the goal of expanding access to and improving equity in tertiary education. National scholarships for students were created in 2012 by combining and expanding the existing scholarships for low-income students.
	Latvia	
	Luxembourg	
	Mexico	
	Netherlands	No reform, but tuition fees are corrected each year for inflation.
	New Zealand	Control over increases in tuition fees : Limits on how much a provider may increase all fees and course costs are defined by the Ministry. This level is set each year and since 2011 has been 4%. A level of 3% is proposed for the 2016 calendar year.
	Norway[2]	
	Poland	
	Portugal	
	Slovak Republic	The conditions for determining the maximum amount of tuition fees have been amended; specific charges are determined by each school separately in its internal regulation.
	Slovenia[2]	
	Spain	
	Sweden[3]	Tuition fees were introduced for non-European Economic Area students 2011 in higher educational institutions, except at doctoral level, and at the same time public stipend programmes were introduced.
	Switzerland[4]	
	Turkey	As of the academic year 2012/13, students in first education (regular morning programmes) and open education programmes are not charged tuition fees over the course of the theoretical duration of the programmes. Tuition fees are paid only by students in public institutions who are enrolled in evening programmes and those who have not graduated from a programme within the theoretical duration.
	United Kingdom[2]	In England from 2012/13, tuition fee loans available to students increased, with changing repayment conditions (earnings threshold at which repayments start increased; a real interest rate to be charged when income is above the earnings threshold; earnings thresholds will be increased annually in line with earnings; the length of time before all debts are written off is extended from 25 to 30 years; extension of free loans to part-time students).
	United States[5]	Prior to 2010 the federal government guaranteed student loans provided by banks and non-profit lenders. In 2010, the guaranteed loan programme was eliminated and all US federal student loans became direct loans (originated and funded directly by the US Department of Education).
Partners	Argentina	
	Brazil	The Ministry of Education created in 2005 the "University for all" programme (PROUNI, Law 11096/95), granting full and partial scholarships for low-income students in private higher educational institutions in order to pay their tuition fees. In 2014, 205 000 full scholarships and 101 000 partial scholarships were granted.
	China	
	Colombia	
	Costa Rica	
	India	
	Indonesia	
	Russian Federation	
	Saudi Arabia	
	South Africa	

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 for tuition fees (in Japan, for public institutions only; for Korea, 2014).
3. Reforms at bachelor's, master's or equivalent levels only.
4. Financial reference year 2013 and academic reference year 2012/13.
5. Reference year 2011/12 for tuition fees.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.3. [1/2] Estimated annual average tuition fees charged by educational institutions for foreign students (2013/14)

Tuition fees in equivalent USD converted using PPPs, for bachelor's, master's, doctoral or equivalent level,[1] based on full-time students, academic year 2013/14.

Note: Tuition fees and associated proportions of students should be interpreted with caution as they result from the weighted average of the main programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students.

		Differentiation in tuition fees between domestic and foreign students (bachelor's, master's, doctoral or equivalent level)	Level of tuition fees for foreign students (in equivalent USD converted using PPPs, tuition fees charged by institutions for full-time students;)								
			Public institutions			Government-dependent private institutions			Independent private institutions		
			Bachelor's or equivalent level	Master's or equivalent level	Doctoral or equivalent level	Bachelor's or equivalent level	Master's or equivalent level	Doctoral or equivalent level	Bachelor's or equivalent level	Master's or equivalent level	Doctoral or equivalent level
		(1)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	Yes	14 546	13 270	12 914	a	a	a	9 615	11 013	8 679
	Austria	Yes	1 722	1 722	1 722	1 722	1 722	a	m	m	m
	Belgium (Fl.)[2]	Yes	m	m	m	m	m	m	m	m	m
	Belgium (Fr.)	Yes	m	m	m	m	m	m	m	m	m
	Canada[2]	Yes	16 336	12 459	m	m	m	m	m	m	m
	Chile	Yes	m	m	m	m	m	m	m	m	m
	Czech Republic	Yes	m	m	m	m	m	m	m	m	m
	Denmark	Yes	11 077	9 644	m	m	m	m	m	m	m
	Estonia[2]	Yes	908 to 19 979	908 to 19 979	m	m	m	m	m	m	m
	Finland	No	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	a	a	a
	France	No	0 to 8.313	300 to 2166	458	x(20)	x(21)	m	1.808 to 7.598	1.098 to 12.994	m
	Germany	No	m	m	m	m	m	m	m	m	m
	Greece	Yes	m	m	m	m	m	m	m	m	m
	Hungary[2]	No	m	m	m	m	m	m	m	m	m
	Iceland	No	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees	No tuition fees
	Ireland	Yes	m	m	m	m	m	m	m	m	m
	Israel	No	2 957	m	m	2 934	m	m	7 028	m	m
	Italy	No	1 602	m	1 235	a	a	a	6 168	m	2 542
	Japan[2]	m	5 152	5 150	5 149	a	a	a	m	m	m
	Korea[2]	No	4 773	6 281	7 137	a	a	a	8 554	11 510	12 270
	Latvia	m	m	m	m	m	m	m	m	m	m
	Luxembourg	Yes	m	m	m	m	m	m	m	m	m
	Mexico	Yes	m	m	m	m	m	m	m	m	m
	Netherlands	Yes	m	m	a	m	m	a	m	m	a
	New Zealand	Yes	16 957	m	m	m	m	m	m	m	m
	Norway[2]	No	No tuition fees	No tuition fees	No tuition fees	m	m	m	6 552	8 263	m
	Poland	Yes	m	m	m	m	m	m	m	m	m
	Portugal	No	m	m	m	m	m	m	m	m	m
	Slovak Republic	No	No tuition fees	No tuition fees	No tuition fees	a	a	a	2 300	3 313	5 847
	Slovenia[2]	No	No tuition fees	No tuition fees	5 839	No tuition fees	No tuition fees	m	a	a	m
	Spain	No	m	m	m	m	m	m	m	m	m
	Sweden	Yes	13 171	13 171	a	15 555	15 555	a	a	a	a
	Switzerland[3]	No	1015	1015	457	1015	1015	a	m	m	m
	Turkey	Yes	m	m	m	a	a	a	m	m	m
	United Kingdom[2]	a	a	a	a	12 884	x(5)	x(5)	m	m	m
	United States[4]	Yes	16 066	16 205	20 168	a	a	a	29 234	24 015	30 205
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	No	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	No	574	3 212	3 667	a	a	a	3 082	7 097	9 885
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Russian Federation	Yes	m	m	m	m	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

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 (2014 for Korea).
3. Data refer to the financial year 2013 and the academic year 2012/13.
4. Reference year 2011/12.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.3. [2/2] Estimated annual average tuition fees charged by educational institutions for foreign students (2013/14)

Tuition fees in equivalent USD converted using PPPs, for bachelor's, master's, doctoral or equivalent level,[1] based on full-time students, academic year 2013/14.

Note: Tuition fees and associated proportions of students should be interpreted with caution as they result from the weighted average of the main programmes and do not cover all educational institutions. However, the figures reported can be considered as good proxies and show the difference among countries in tuition fees charged by main educational institutions and for the majority of students.

		Comment
		(13)
OECD	Australia	
	Austria	
	Belgium (Fl.)[2]	Tuition fees for students from outside the European Union or the European Economic Area may differ from those for other students.
	Belgium (Fr.)	Tuition fees for students from outside the European Union or the European Economic Area may differ from those for other students.
	Canada[2]	
	Chile	
	Czech Republic	
	Denmark	Average tuition for bachelor's refers to fee for professional bachelor's (ISCED 6.2) only.
	Estonia[2]	Tuition fees only for students from non-European Union or non-European Economic Area.
	Finland	Between 2010 and 2014, there was a tuition fee trial period when it was possible for higher educational institutions to charge fees to foreign students coming from outside the European Union or the European Economic Area and studying in university and polytechnic programmes at master's level given in a foreign language.
	France	
	Germany	
	Greece	
	Hungary[2]	In the academic year 2012/13, a new student loan form (namely *Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
	Iceland	
	Ireland	
	Israel	
	Italy	
	Japan[2]	
	Korea[2]	
	Latvia	
	Luxembourg	
	Mexico	
	Netherlands	Tuition fees differ between institutions and by field of study.
	New Zealand	
	Norway[2]	
	Poland	
	Portugal	
	Slovak Republic	
	Slovenia[2]	No tuition fees for students from European Union countries or whose parents are residents of the Republic of Slovenia in bachelor and master's programmes, and for citizens of other countries with which Slovenia has specific agreements; others pay the same tuition as part-time students. International doctoral students pay similar tuition fees as other students.
	Spain	
	Sweden	The majority of the students in the governement-dependent private institutions are studying technology, thus the average fee is higher than in public institutions.
	Switzerland[3]	
	Turkey	
	United Kingdom[2]	
	United States[4]	The average tutition fees for foreign students are higher than for national students because all foreign students pay an out-of-state tuition fee. National students who attend an in-state institution pay a lower fee than national students who attend an out-of-state public institution.
Partners	Argentina	
	Brazil	
	China	
	Colombia	
	Costa Rica	
	India	
	Indonesia	
	Russian Federation	
	Saudi Arabia	
	South Africa	

1. Scholarships/grants that the student may receive are not taken into account.
2. Reference year 2014/15 (2014 for Korea).
3. Data refer to the financial year 2013 and the academic year 2012/13.
4. Reference years 2011/12.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.4. [1/3] Public loans to students in tertiary education (2013/14) and trends in the number of beneficiaries (2004/05 and 2014/15)

National students, in USD converted using PPPs

		Proportion of students who have a loan (in %), ISCED levels 6-8	Average annual gross amount of loan borrowed by each student, ISCED levels 6-8 (USD)	Subsidy through reduced interest rate		Average debt at graduation (in USD)
				Interest rate during studies	Interest rate after studies	
		(1)	(2)	(3)	(4)	(5)
OECD	Australia	79	4 017	2%	2%	m
	Belgium (Fl.)	a	a	a	a	a
	Belgium (Fr.)[1]	9	1 458	m	m	m
	Canada[2, 3]	m	4 277 (bachelor's), 5 899 (master's), 6 489 (doctoral)	No nominal interest rate	5.4%	12 422
	Denmark[4]	about 35	4 723	4%	1%	14 856
	Estonia[2]	11	3 487	5.0%	5.0%	m
	Finland[2]	22	2 714	1.0%	Full interest rate agreed with the private bank.	8 291
	France[2]	0.1	1 600	m	m	m
	Hungary[1, 2, 5]	m	2 790	*Diákhitel1*: 6.5% to 7.5%; *Diákhitel2*: 2%	*Diákhitel1*: 6.5% to 7.5%; *Diákhitel2*: 2%	m
	Italy[2]	0.3	4 959	m	m	m
	Japan[4]	38	6 483 (interest-free loans); 8 430 (interest-bearing loans)	No nominal interest rate	Maximum of 3%, rest paid by government	29 942
	Korea[6]	18,5	5 623	2.9%	2.9%	m
	Mexico	m	m	m	m	m
	Netherlands	m	6 878	0.12%	0.12%	18 100
	New Zealand	m	5 897	No nominal interest rate	No nominal interest rate if New Zealand based, 5.9% otherwise	13 437 (2014 average for both graduates and non-graduate borrowers who have left study)
	Norway[4]	68	10 083	a (repayment of the loan starts after graduation)	2.52% (cost of government borrowing +1.25% to cover defaulting costs)	26 826
	Poland	m	m	m	m	m
	Portugal	m	m	m	m	m
	Slovak Republic[6]	m	4 510	No nominal interest rate	3.19%	3 247
	Slovenia	a	a	a	a	a
	Sweden[4]	52	6 829	1%	1%	22 789
	Switzerland[3]	m	3 987	m	m	m
	Turkey	32	3 561 (bachelor's), 7 122 (master's), 10 683 (doctoral)	Repayment of the loan starts after graduation	Based on the Domestic Producer Price Index	m
	United Kingdom[4]	92	5 612 (maintenance loan) and 10 824 (tuition fee loan)	Retail price index, plus 3% (5.5% for 2 014-15)	From retail price index (2.5% for 2 014/15) to retail price index plus 3% (5.5% for 2 014/15), based on earnings	30 349
	United States[7]	62 (bachelor's), 67 (master's), 32 (doctoral)	4 330 (bachelor's), 16 363 (master's), 5 984 (doctoral)	0% to 7.21%	4.66% to 7.21%	m
Partners	Brazil	m	m	3.4%	3.4%	m
	Colombia	m	3 003	Consumer price index to consumer price index plus 8%	Consumer price index to consumer price index plus 8%	7 298

1. All students in bachelor's, master's, doctoral or equivalent programmes.
2. Private loan guaranteed by the state rather than public loan (in Italy, for the majority of student loans).
3. Reference year 2012/13.
4. Reference year 2014/15 (for Japan, 2013/14 reference year for debt at graduation).
5. Data refer to *Diákhitel1* only. In the academic year 2012/13 a new student loan form (*Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
6. Includes short-cycle tertiary programmes.
7. Reference year 2011/12 for the proportion of students with student loans; reference year 2014/15 for information on interest rates.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.4. [2/3] Public loans to students in tertiary education (2013/14) and trends in the number of beneficiaries (2004/05 and 2014/15)

National students, in USD converted using PPPs

		Number of national students who benefit from a student loan (short-cycle tertiary level)			Number of national students who benefit from a student loan (bachelor's, master's, doctoral or equivalent levels)		
		2004/05	2014/15	Rate of growth, % (2004/05-2014/15)	2004/05	2014/15	Rate of growth, % (2004/05-2014/15)
		(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	7 288	21 538	196	473 225	742 217	57
	Belgium (Fl.)	a	a	a	a	a	a
	Belgium (Fr.)[1]	m	0	m	m	9	m
	Canada[2, 3]	m	149 000	m	m	280 000	m
	Denmark[4]	(37% of all students at ISCED level 5)	9 300	m	(35% of all students at ISCED levels 6-8)	86 300	m
	Estonia[2]	3 312	656	-80	23 719	4 613	-81
	Finland[2]	a	a	a	46 522	66 984	44
	France[2]	m	m	m	m	m	m
	Hungary[1, 2, 5]	3 536	2 459	-30	102 486	35 359	-65
	Italy[2]	m	m	m	716	4 614	544
	Japan[4]	157 864	281 347	78	668 439	1053 142	58
	Korea[6]	m	d (10)	m	m	679 404	m
	Mexico	m	m	m	m	m	m
	Netherlands	d (9)	d (10)	m	118 365	193 765	64
	New Zealand	21 264	23 304	10	80 748	114 132	41
	Norway[4]	m	m	m	131 300	159 400	21
	Poland	m	m	m	m	m	m
	Portugal	m	m	m	m	m	m
	Slovak Republic[6]	m	m	m	3 983	1 902	-52
	Slovenia	m	m	m	m	m	m
	Sweden[4]	23 152	27 795	20	213 086	203 567	-4
	Switzerland[3]	d (9)	d (10)		4 400	2 748	-38
	Turkey	83 583	245 768	194	472 899	756 657	60
	United Kingdom[4]	m	m	m	856 000	943 900	10
	United States[7]	(28% of all students at ISCED level 5)	(37% of all students at ISCED level 5)	m	(56%, 65% and 39% of all students at ISCED level 6, 7 and 8, respectively)	(62%, 67% and 32% of all students at ISCED level 6, 7 and 8, respectively)	m
Partners	Brazil	m	m	m	312 027	1900 343	509
	Colombia	3 863	9 391	143	18 998	57 315	202

1. All students in bachelor's, master's, doctoral or equivalent programmes.
2. Private loan guaranteed by the state rather than public loan (in Italy, for the majority of student loans).
3. Reference year 2012/13.
4. Reference year 2014/15 (for Japan, 2013/14 reference year for debt at graduation).
5. Data refer to *Diákhitel1* only. In the academic year 2012/13 a new student loan form (*Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
6. Includes short-cycle tertiary programmes.
7. Reference year 2011/12 for the proportion of students with student loans; reference year 2014/15 for information on interest rates.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.4. [3/3] Public loans to students in tertiary education (2013/14) and trends in the number of beneficiaries (2004/05 and 2014/15)

National students, in USD converted using PPPs

		Notes on data on number of students who benefit from a student loan
		(12)
OECD	Australia	There is no real interest rate on public loans.
	Belgium (Fl.)	In the Flemish Community there is no system of public loans.
	Belgium (Fr.)[1]	Includes foreign students.
	Canada[2, 3]	These data substantially underestimate the number of students benefitting from a public student loan. The data include information on the federal portion of student financial assistance only, which provides 60% of student loans in the nine provinces and one territory that participate in the Canada Student Loan Program. The governments of the Northwest Territories, Nunavut and Quebec do not participate in the Canada Student Loans Program but offer their own financial assistance programs for students.
	Denmark[4]	The data include Danish students stuyding abroad (full-degree) and exclude doctoral students. The interest rate after studies is lower than the cost of government borrowing.
	Estonia[2]	
	Finland[2]	There are no public student loans in Finland. The numbers in the table cover government guaranteed private study loans.
	France[2]	Information of public loans is not available. 0.1% of tertiary students (ISCED 5 to 8) benefit from a private loan guaranteed by the state.
	Hungary[1, 2, 5]	370 students in the ISCED 5 category took *Diákhitel2* in the academic year 2013/14, and 9 260 in the ISCED 6-8 categories (see note 5 for more details). The data include foreign students.
	Italy[2]	The majority of the loans are provided by lending institutions; educational institutions provide guarantees for students.
	Japan[4]	
	Korea[6]	Data for ISCED 5 included in ISCED 6-8. Figures in Columns 6-11 include every student loan programme operated by the government, while other columns include only loans from the Korea Student Aid Foundation programme, directly governed by the Ministry of Education.
	Mexico	
	Netherlands	Data for ISCED 5 included in ISCED 6-8. The interest rate is equal to the cost of government borrowing.
	New Zealand	Reference years for New Zealand are the 2013 and the 2003 academic years (January to December). National students include New Zealand permanent residents with non-New Zealand citizenship who have lived in the country for 3 years.
	Norway[4]	There are 4 400 beneficiaries of student loans in programmes at unknown ISCED level for 2014/15.
	Poland	
	Portugal	
	Slovak Republic[6]	Data provided refer to the whole of tertiary level education (ISCED levels 5, 6 and 7).
	Slovenia	
	Sweden[4]	The interest rate is equal to 70 % of the government's cost for borrowing.
	Switzerland[3]	Data for ISCED 5 included in ISCED 6-8. Includes foreign students. Data refer to financial year 2004 and financial year 2013.
	Turkey	
	United Kingdom[4]	Data for ISCED 5 included in ISCED 6-8.
	United States[7]	The interest rate is equal to the cost of government borrowing.
Partners	Brazil	Data only for ISCED 6. The values refer to the number of loan contracts active in December.
	Colombia	

1. All students in bachelor's, master's, doctoral or equivalent programmes.
2. Private loan guaranteed by the state rather than public loan (in Italy, for the majority of student loans).
3. Reference year 2012/13.
4. Reference year 2014/15 (for Japan, 2013/14 reference year for debt at graduation).
5. Data refer to *Diákhitel1* only. In the academic year 2012/13 a new student loan form (*Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
6. Includes short-cycle tertiary programmes.
7. Reference year 2011/12 for the proportion of students with student loans; reference year 2014/15 for information on interest rates.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table B5.5. [1/2] Repayment and remission of public loans to students in bachelor's, master's, doctoral or equivalent programmes (academic year 2013/14)

National students, in USD converted using PPPs

		Repayment				
		Repayment system	Annual minimum income threshold (in USD)	Duration of typical amortisation period (in years)	Estimated annual income of recent graduates (in USD)	Average annual amount of repayment (in USD)
		(1)	(2)	(3)	(4)	(5)
OECD	Australia	Income contingent	33 709	8,5	34 492	2 424
	Belgium (Fl.)	a	a	a	m	a
	Belgium (Fr.)	m	m	m	m	m
	Canada[1, 2, 3]	m	m	9,5	ISCED 5: 33 235, ISCED 6: 42 343, ISCED 7: 55 925, ISCED 8: 59 919	m
	Denmark[4]	Mortgage style	a	7 to 15	m	m
	Estonia	Mortgage style	a	8 to 10	21 556 (gross salary in 2012)	m
	Finland	Mortgage style	a	5 to 15	37 574	1 530
	France	m	m	m	m	m
	Hungary[5]	Income contingent	None	10 to 15	m	1 259 (*Diákhitel1*); 664 ((*Diákhitel2*)
	Japan[4]	Mortgage style	a	15	m	2 178 (from 1 064 to 10 024)
	Korea[6]	Income contingent and mortgage style	About 21 755 (income contingent loan); a (mortgage style loan)	m (income contingent loan); up to 10 years (mortgage style loan)	m	m
	Netherlands	Income contingent	19 516	15	m	1 086
	New Zealand	Income contingent	12 996	7	m	1 907 (12% of income amount above income threshold, plus any voluntary repayments)
	Norway	Mortgage style	a	20	m	1 609
	Slovak Republic[7]	Mortgage style	a	7.1 (from 5 to 10)	m	780 (from 86 to 2 300)
	Slovenia	a	a	a	a	a
	Sweden[4]	Mortgage style	a	25	m	Typically 756
	Switzerland	m	m	m	m	m
	Turkey	Mortgage style	a	2 to 6	m	m
	United Kingdom[4]	Income contingent	30 062	m	30 778	616 (1st year of repayment for 2012 cohort) to 1 560 (8th year of repayment for 2005 cohort)
	United States	Mortgage style and income contingent	a	10 (mortgage style repayment); 20 to 25 (income based repayment; predicted period).	24 448	m
Partners	Brazil	m	m	m	m	m
	Colombia	Mortgage style	a	From same to twice the time of the study period.	18 982	m

1. Private loan guaranteed by the state rather than public loan.
2. Reference year 2012/13.
3. Only includes information on the federal portion of student financial assistance, that is to say 60% of student loans provided in the provinces participating in the Canada Student Loans Program (CSLP). Excludes the province of Quebec (about 25% of the Canadian population), which does not participate in the CSLP.
4. Reference year 2014/15.
5. In the academic year 2012/13 a new student loan form (namely *Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
6. Eligibility rule: Income Contingent Student Loans, if 35 years old or younger, 7th income decile or below, took 12 credits or more and gained 70 points or higher (maximum 100 points). General Installment Student Loans, if 55 years old or younger, 8th income decile or above, undergraduate and graduate students, took 12 credits or more and gained 70 points or higher (maximum 100 points).
7. Includes short-cycle tertiary programmes.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B5.5. [2/2] Repayment and remission of public loans to students in bachelor's, master's, doctoral or equivalent programmes (academic year 2013/14)

National students, in USD converted using PPPs

		Remission					
			Conditions for remission/forgiveness				
		Existence of remission/ forgiveness	Death or disability of the graduate	Financial situation of the graduate	Other conditions	Proportion of students that benefit of the remission/ forgiveness	Proportion of loans that are not repaid
		(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	Yes	Death	Bankruptcy (forgiveness)	Remission : decrease of the compulsory Higher Education Loan Program (HELP) repayments for graduates of specific fields (and employed in a related occupation) and graduates who take up related occupations or work in specified locations.	Forgiveness: m Remission: 0.56%	Forgiveness: 17% Remission: 0.06%
	Belgium (Fl.)	a	a	a	a	a	a
	Belgium (Fr.)	m	m	m	m	m	m
	Canada[1, 2, 3]	Yes	a	Graduates who have difficulty to pay the monthly Canada Student Loan payments (based on income and family size)		m	13%
	Denmark[4]	Yes	a	Based on financial situation, if the graduate does not have a huge debt to private creditors. If the debtor has a huge debt to both the government (e.g. public loans) and private creditors, it is possible to apply for a general debt relief.		A very few	About 1%
	Estonia	Yes	Death; graduates who lost the ability to work at 80-100%		Graduates with a child with profound disability	6%	m
	Finland	No	a	a	a	a	1.5%
	France	m	m	m	m	m	m
	Hungary[5]	Yes	Death; 100% disability of the graduate		Pensioner status	0.035% (*Diákhitel1*)	0.063% (*Diákhitel1*)
	Japan[4]	Yes	Death; physical or mental disabilities of the graduate		Graduate school recipients of Category 1 Loans with particularly outstanding results	0.63%	m
	Korea[6]	Yes	a	65-year-old or older people with no other income than a national pension, and whose income is below a threshold (the foundation's standard)	Interest relief while serving in the army (General Installment Student Loans, Income Contingent Student Loans)	m	m
	Netherlands	Yes	a	Income level condition is not applied to graduate students		10%	10%
	New Zealand	Yes	Death	Bankruptcy		Less than 0.2%	m
	Norway	Yes	Death or illness	People with low income, or in unemployment	In case of childbirth or care of small children	5%	m
	Slovak Republic[7]	m	m	m	m	m	1.08%
	Slovenia	a	a	a	a	a	a
	Sweden[4]	Yes	Death; not time-limited sickness compensation with low income		People of high age (65/68 years)	2%	7.3%
	Switzerland	m	m	m	m	m	m
	Turkey	Yes	Death; unability to work due to disability			m	m
	United Kingdom[4]	Yes	Death		Loans are written off 30 years after graduation	m	m
	United States	Yes	Death or disability	Graduates whose federal student loan debt is higher than their annual discretionary income or represents a significant portion of their annual income	Graduates who enter and remain in the teaching profession or in public services for a certain number of years may have a portion of their loans forgiven	m	m
Partners	Brazil	m	m	m	m	m	m
	Colombia	Yes			On graduation from the programme for which loans were approved and on obtaining the best results in Saber Pro tests	n	m

1. Private loan guaranteed by the state rather than public loan.
2. Reference year 2012/13.
3. Only includes information on the federal portion of student financial assistance, that is to say 60% of student loans provided in the provinces participating in the Canada Student Loans Program (CSLP). Excludes the province of Quebec (about 25% of the Canadian population), which does not participate in the CSLP.
4. Reference year 2014/15.
5. In the academic year 2012/13 a new student loan form (namely *Diákhitel2*) was launched, besides *Diákhitel1*. *Diákhitel2* can be used only for the cost of studies ("cost-refunding" or "tuition fee"), while *Diákhitel1* can be used for any purpose (e.g. student living expenses).
6. Eligibility rule: Income Contingent Student Loans, if 35 years old or younger, 7th income decile or below, took 12 credits or more and gained 70 points or higher (maximum 100 points). General Installment Student Loans, if 55 years old or younger, 8th income decile or above, undergraduate and graduate students, took 12 credits or more and gained 70 points or higher (maximum 100 points).
7. Includes short-cycle tertiary programmes.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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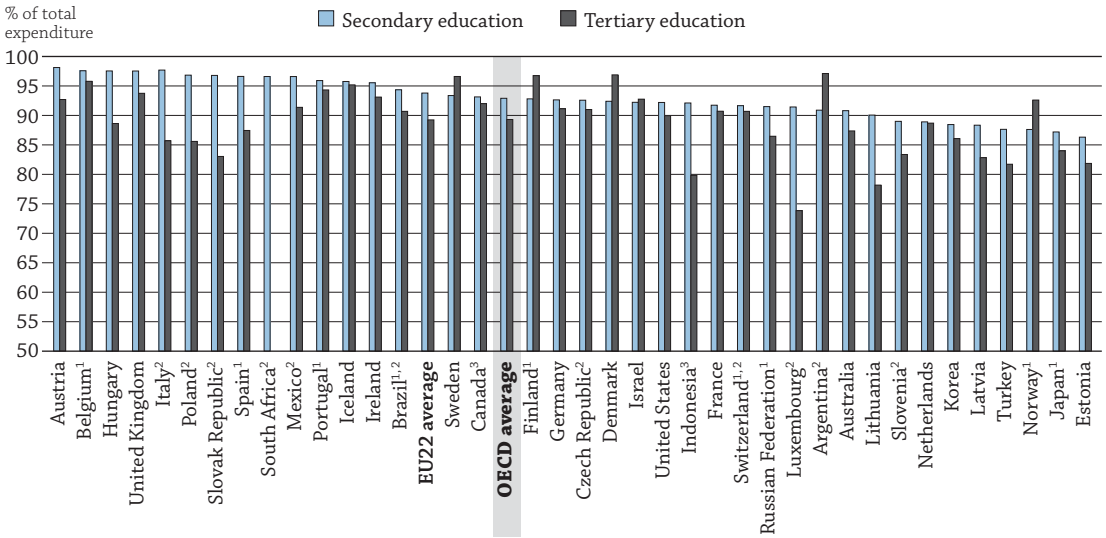
ON WHAT RESOURCES AND SERVICES IS EDUCATION FUNDING SPENT?

- About 92% or more of total expenditure on primary to tertiary education is devoted to current expenditure, on average across OECD countries, ranging from 93% in secondary education to 89% in tertiary.
- On average across OECD countries, about 77% of current expenditure goes to compensating education staff (teachers and others) in primary and secondary education. This share tends to decrease at the tertiary level, averaging 67%.
- Private institutions at the primary and secondary levels tend to spend a lower share of current expenditure on compensation of staff than public institutions, on average across OECD countries. Possible explanations are that private institutions may be more likely to contract services from outside providers (as opposed to using services produced by education authorities or their own personnel) or may more often have to pay rent for school buildings and other facilities.

Figure B6.1. Current expenditure as a share of total expenditure on educational institutions, by level of education (2013)



Note: The remaning percentage (100 – current expenditure) corresponds to capital expenditure.
1. Secondary includes some or all post-secondary non-tertiary programmes.
2. Public institutions only. For the Czech Republic, Italy, Luxembourg and the Slovak Republic, in tertiary education only.
3. Year of reference 2012.

Countries are ranked in descending order of the share of current expenditure on secondary education.

Source: OECD. Table B6.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398057

Context

Decisions about how resources are allocated affect the material conditions under which instruction takes place and can also influence the nature of instruction.

Savings can be made by cutting capital expenditure (such as by not building new schools) and some current expenditure (not purchasing certain teaching materials), but when pressures on education budgets increase, changes in spending on staff have the greatest impact on overall spending. Still, saving money by reducing salaries and benefits or cutting the number of teachers and other staff is unpopular politically and possibly counterproductive, in that it discourages good teachers from wanting to enter or remain in the profession. In fact, in addition to managing material resources more efficiently, human resources must also be well-managed to improve the quality of education systems. Deferring expenditures, such as hiring new teachers or increasing salaries, are temporary measures in response to pressures on public budgets.

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This indicator describes the resources and services on which money for education is spent. It shows the difference between current and capital expenditure. Capital expenditure can be affected by expanding enrolments, which often require construction of new buildings. The indicator also presents details on where current expenditure is spent, either on compensation of education staff or elsewhere. Current expenditure is mainly affected by teachers' salaries (see Indicator D3), but also by the age distribution of teachers and the size of the non-teaching staff employed in education. In addition, educational institutions offer not only instruction but also other services, such as meals, transport, housing and/or research activities. All these expenditures are addressed in this indicator.

Other findings

- Most current expenditure is related to compensation of staff in nearly all countries except at the tertiary level in the Czech Republic and Indonesia. At the primary and secondary levels, the share of current expenditure devoted to compensation of staff in public institutions is about 6 percentage points higher than in private institutions.
- At the primary and secondary levels of education, OECD countries spend an average of about 23% of current expenditure for purposes other than compensating education personnel (i.e. maintenance of school buildings, students' meals or the rental of school buildings and other facilities). In most countries, there is little difference between primary and secondary education in the proportion of current expenditure used for purposes other than compensation.
- Current expenditure devoted to purposes other than compensating staff is largest at the tertiary level in all countries except Brazil and Poland; and it reaches 33% of all current expenditure, on average across OECD countries. In six countries (the Czech Republic, Hungary, Indonesia, Japan, Korea and the Slovak Republic), this proportion is 40% or larger. These large proportions could be explained by the higher costs of facilities and equipment in tertiary education compared to other levels of education.

Analysis

Current and capital expenditure by educational institutions

Education expenditure includes both current and capital expenditure. Current expenditure by educational institutions takes account of the spending on school resources used each year to operate schools. It includes, for instance, compensation of teachers and other staff, maintenance of school buildings, students' meals, or the rental of school buildings and other facilities. Capital expenditure by educational institutions refers to spending on assets that last longer than one year. It includes, for instance, spending on the construction, renovation and major repair of school buildings.

The largest share of expenditure is current expenditure, given the labour-intensive nature of instruction. In 2013, 92% of total expenditure was devoted to current expenditure on all levels of education from primary to tertiary, on average across OECD countries. Current expenditure amounts to over 74% of total expenditure at each level of education in every OECD country and nearly all partner countries as well. The share varies from 85% (Japan) to 98% (Hungary) in primary education, from 86% (Estonia) to 98% (Austria, Belgium, Hungary, Italy and the United Kingdom, in secondary education and from 74% (Luxembourg) to 97% (Argentina, Denmark, Finland and Sweden) in tertiary education (Table B6.1 and Figure B6.1).

The OECD average share of current expenditure does not differ by more than 4 percentage points between educational levels. However, differences among countries between the share of current expenditure on primary and secondary education and the share in tertiary education can be relatively large. In most countries, the share of current expenditure at primary and secondary levels is larger than at the tertiary level. The main exceptions are Denmark and Norway, where the share of current expenditure on tertiary education exceeds the share in both primary and secondary education by 4 percentage points or more. In contrast, in Italy, Lithuania, Luxembourg and the Slovak Republic, the share of current expenditure on both primary and secondary education exceeds the share in tertiary education by over 10 percentage points.

The differences among countries are likely to reflect how the different levels of education are organised in each country, as well as the degree to which expansion in enrolments requires the construction of new buildings, especially at the tertiary level. Capital expenditure on tertiary education equals or exceeds 20% in Indonesia (20%), Luxembourg (26%) and Lithuania (22%). The ways countries report expenditure related to university buildings may also explain differences in the share of current and capital expenditure at the tertiary level. For example, the buildings and lands used for education can be owned, used free of charge or rented by the institutions, and the amount of current and capital expenditure partly depends on the type of real estate management used in the country (see Box B6.1 in OECD, 2012).

Distribution of current expenditure

Current expenditure by educational institutions can be further subdivided into three broad functional categories: compensation of teachers, compensation of other staff and other current expenditures. Other current expenditures include, for example, teaching materials and supplies, maintenance of school buildings, students' meals and rental of school facilities. The amount allocated to each of these categories depends partly on current and projected changes in enrolments, on the salaries of education personnel, and on the costs of maintenance and construction of education facilities. Despite the fact that the shares of these categories do not change much from year to year, countries' decisions might affect not only the amounts allocated, but also the shares allotted to each category.

At the primary and secondary levels, about 61% of current expenditure is devoted to compensating teachers, about 16% to compensating other staff and about 23% to expenditure other than compensation, on average across OECD countries. For tertiary education, 42% of current expenditure is devoted to the compensation of teachers, on average across OECD countries, as larger shares are devoted to compensating other staff (25%) and other current expenditure (33%).

There are relatively large differences in how current expenditure is allocated between primary, secondary and tertiary education. For instance, in all countries (expect Brazil and Poland), the share devoted to compensation of staff is larger at the earlier levels of education than at the tertiary level (Figure B6.2).

The share of other current expenditure on secondary education is equal to or higher than 35% in only four countries: the Czech Republic (43%), Estonia (35%), Finland (36%) and Sweden (35%). In contrast, at the tertiary level, the share of other current expenditure is higher than 35% in 12 of the 32 OECD countries with available data.

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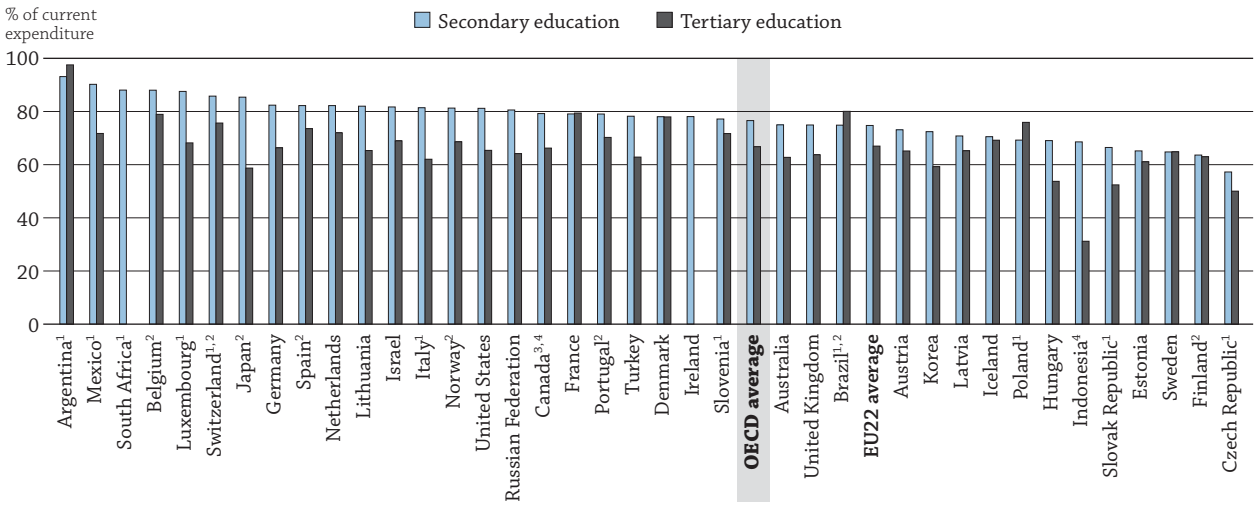
Figure B6.2. Compensation of staff as a share of current expenditure on educational institutions, by level of education (2013)



1. Public institutions only. For the Czech Republic, Italy, Luxembourg and the Slovak Republic in tertiary education only.
2. Secondary includes some or all post-secondary non-tertiary programmes.
3. Secondary includes only upper secondary.
4. Year of reference 2012.

Countries are ranked in descending order of share of current expenditure devoted to compensation of all staff in secondary education.

Source: OECD. Table B6.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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The variation in current expenditure not devoted to compensation of staff between levels of education partially reflects differences in the size of administrative systems (for instance, the number of employees or the equipment available to the administrative staff across these levels). The cost of facilities and equipment is expected to be higher in tertiary education than in other levels of education. Additionally, in some countries tertiary educational institutions may be more likely to rent premises, which could account for a substantial share of current expenditure. The differences among countries in compensation of other staff likely reflect the degree to which education personnel, such as principals, guidance counsellors, bus drivers, school nurses, janitors and maintenance workers are included in the category "non-teaching staff". Compensation of staff involved in research and development at the tertiary level may also explain part of the differences between countries and between levels of education in the share of current expenditure devoted to compensation of other staff.

Distribution of current expenditure by type of institution

The average share of current expenditure across OECD countries is higher in private institutions than in public institutions at the primary level by 2 percentage points. This might reflect the need in some countries for the state to invest in new buildings to accommodate a growing population or enrolment rate at this level. In secondary education, public and private institutions spend, on average, equal shares of total expenditure on current expenditure. However, in a few countries, public institutions devote a substantially larger share of total expenditure to current expenditure (Table B6.3).

Public and private institutions also differ in the way current expenditure is distributed. On average across OECD countries, the share of current expenditure devoted to staff compensation at the primary and secondary levels is about 6 percentage points higher in public institutions than in private institutions. The difference, at the primary level, is 22 percentage points in Portugal and 31 percentage points in Luxembourg. The fact that private institutions devote a lower share of current expenditure to compensation of staff could be explained by a variety of factors inherent to each country's education system. A few possible explanations, however, are that private institutions may be more likely to contract services from outside providers (as opposed to using services produced by the education authorities or by their own personnel), may more often have to pay rent for school buildings and other facilities (as opposed to functioning in state-owned properties), and may be at a disadvantage when purchasing teaching materials, given the lower economies of scale compared to purchases by the state.

Definitions

Capital expenditure refers to spending on assets that last longer than one year, including construction, renovation or major repair of buildings, and new or replacement equipment. The capital expenditure reported here represents the value of educational capital acquired or created during the year in question – that is, the amount of capital formation – regardless of whether the capital expenditure was financed from current revenue or through borrowing. Neither current nor capital expenditure includes debt servicing.

Current expenditure refers to spending on goods and services consumed within the current year and requiring recurrent production in order to sustain educational services. Current expenditure by educational institutions other than on compensation of personnel includes expenditure on subcontracted services such as support services (e.g. maintenance of school buildings), ancillary services (e.g. preparation of meals for students), and rental of school buildings and other facilities. These services are obtained from outside providers, unlike the services provided by education authorities or by educational institutions using their own personnel.

Methodology

Data refer to the financial year 2013 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Calculations cover expenditure by public institutions or, where available, by both public and private institutions.

Note regarding data from Israel

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

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OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2012-en.

Indicator B6 Tables

StatLink http://dx.doi.org/10.1787/888933398014

Table B6.1	Share of current and capital expenditure by education level (2013)
Table B6.2	Distribution of current expenditure by resource category (2013)
Table B6.3	Share of current expenditure by resource category and type of institution (2013)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table B6.1. Share of current and capital expenditure by education level (2013)

Distribution of capital and current expenditure by educational institutions from public and private sources

		Primary education		Lower secondary		Upper secondary		Post-secondary non-tertiary		Tertiary		From primary to tertiary	
		Current	Capital	Current	Capital	Current	Capital	Current	Capital	Current	Capital	Current	Capital
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	91	9	90	10	91	9	96	4	87	13	90	10
	Austria	97	3	98	2	98	2	95	5	93	7	96	4
	Belgium	94	6	98	2	98[d]	2[d]	x(5)	x(6)	96	4	96	4
	Canada[1]	93[d]	7[d]	x(1)	x(2)	93	7	m	m	92	8	m	m
	Chile	m	m	m	m	m	m	a	a	m	m	m	m
	Czech Republic[2]	89	11	89	11	96	4	m	m	91	9	m	m
	Denmark	91	9	93	7	92	8	a	a	97	3	93	7
	Estonia	86	14	86	14	86	14	86	14	82	18	85	15
	Finland	94	6	94	6	92[d]	8[d]	x(5)	x(6)	97	3	94	6
	France	91	9	92	8	91	9	90	10	91	9	91	9
	Germany	94	6	95	5	90	10	92	8	91	9	92	8
	Greece	m	m	m	m	m	m	m	m	m	m	m	m
	Hungary	98	2	98	2	97	3	97	3	89	11	95	5
	Iceland	93	7	93	7	98	2	97	3	95	5	95	5
	Ireland	93	7	96	4	96	4	97	3	93	7	94	6
	Israel	89	11	x(5)	x(6)	92[d]	8[d]	92	8	93	7	91	9
	Italy[2]	97	3	97	3	98	2	83	17	86	14	94	6
	Japan	85	15	85	15	89[d]	11[d]	x(5, 9)	x(6, 10)	84[d]	16[d]	86	14
	Korea	87	13	88	12	89	11	m	m	86	14	87	13
	Latvia	87	13	87	13	89	11	94	6	83	17	86	14
	Luxembourg[2]	90	10	92	8	92	8	100	a	74	26	88	12
	Mexico[2]	97	3	97	3	97	3	a	a	91	9	96	4
	Netherlands	88	12	87	13	91	9	93	7	89	11	89	11
	New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
	Norway	88	12	88	12	87[d]	13[d]	x(5)	x(6)	93	7	89	11
	Poland[2, 3]	95	5	98	2	96[d]	4[d]	97	3	86	14	93	7
	Portugal	97	3	96	4	95[d]	5[d]	x(5, 9)	x(5, 9)	94[d]	6[d]	96	4
	Slovak Republic[2]	97	3	97	3	97	3	98	2	83	17	93	7
	Slovenia[2]	91	9	91	9	87	13	a	a	83	17	88	12
	Spain	96	4	97	3	96[d]	4[d]	x(5)	x(6)	87	13	94	6
	Sweden	94	6	94	6	93	7	94	6	97	3	95	5
	Switzerland[2]	89	11	91	9	93[d]	7[d]	x(5)	x(6)	91	9	91	9
	Turkey	93	7	93	7	82	13	a	a	82	18	87	12
	United Kingdom	97	3	97	3	98	2	a	a	94	6	96	4
	United States	92	8	92	8	92	8	x(9)	x(10)	90[d]	10[d]	91	9
	OECD average	92	8	93	7	93	7	m	m	89	11	92	8
	EU22 average	93	7	94	6	94	6	m	m	89	11	92	8
Partners	Argentina[2]	96	4	91	9	91	9	a	a	97	3	m	m
	Brazil[2]	95	5	95	5	93[d]	7[d]	x(5)	x(6)	91	9	94	6
	China	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
	Costa Rica	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[1]	86	14	93	7	91	9	a	a	80	20	87	13
	Lithuania	95	5	93	7	84	16	67	33	78	22	85	15
	Russian Federation	x(5)	x(6)	x(5)	x(6)	91[d]	9[d]	x(5)	x(6)	86	14	90	10
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
	South Africa[2]	96	4	97[d]	3[d]	x(3)	x(4)	100	0	m	m	m	m
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2012.
2. Public institutions only. For the Czech Republic, Italy, Luxembourg and the Slovak Republic in tertiary education only.
3. Upper secondary includes lower secondary vocational.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B6

Table B6.2. Distribution of current expenditure by resource category (2013)

Distribution of current expenditure by educational institutions from public and private sources as a percentage of total current expenditure

	Primary				All secondary				Tertiary			
	Compensation of all staff				Compensation of all staff				Compensation of all staff			
	Compensation of teachers	Compensation of other staff	Total	Other current expenditure	Compensation of teachers	Compensation of other staff	Total	Other current expenditure	Compensation of teachers	Compensation of other staff	Total	Other current expenditure
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	63	16	**78**	22	59	16	**75**	25	34	29	**63**	37
Austria	62	13	**75**	25	67	6	**73**	27	60	5	**65**	35
Belgium[1]	67	21	**89**	11	70[d]	18[d]	**88[d]**	12[d]	50	29	**79**	21
Canada[2, 3]	64[d]	15[d]	**79[d]**	21[d]	64	15	**79**	21	38	28	**66**	34
Chile	m	m	**m**	m	m	m	**m**	m	m	m	**m**	m
Czech Republic[4]	45	19	**64**	36	44	13	**57**	43	29	21	**50**	50
Denmark	60	18	**78**	22	61	17	**78**	22	x(11)	x(11)	**78**	22
Estonia	42	26	**68**	32	38	27	**65**	35	44	17	**61**	39
Finland[1]	54	10	**64**	36	50[d]	13[d]	**64[d]**	36[d]	34	29	**63**	37
France	59	21	**79**	21	58	21	**79**	21	40	39	**79**	21
Germany	x(3)	x(3)	**82**	18	x(7)	x(7)	**82**	18	x(11)	x(11)	**66**	34
Greece	m	m	**m**	m	m	m	**m**	m	m	m	**m**	m
Hungary	x(3)	x(3)	**73**	27	x(7)	x(7)	**69**	31	x(11)	x(11)	**54**	46
Iceland	54	22	**76**	24	52	18	**71**	29	42	27	**69**	31
Ireland	75	11	**87**	13	69	9	**78**	22	44	26	**72**	28
Israel	x(3)	x(3)	**82**	18	x(7)	x(7)	**82**	18	x(11)	x(11)	**69**	31
Italy[4]	62	20	**81**	19	63	19	**81**	19	39	23	**62**	38
Japan[1, 5]	x(3)	x(3)	**85**	15	x(7)	x(7)	**85[d]**	15[d]	x(11)	x(11)	**59[d]**	41[d]
Korea	57	15	**72**	28	58	15	**72**	28	38	21	**59**	41
Latvia	x(3)	x(3)	**73**	27	x(7)	x(7)	**71**	29	x(11)	x(11)	**65**	35
Luxembourg[4]	71	7	**77**	23	81	7	**88**	12	18	50	**68**	32
Mexico[4]	85	8	**93**	7	76	14	**90**	10	57	15	**72**	28
Netherlands	x(3)	x(3)	**83**	17	x(7)	x(7)	**82**	18	x(11)	x(11)	**72**	28
New Zealand	m	m	**m**	m	m	m	**m**	m	m	m	**m**	m
Norway[1]	x(3)	x(3)	**81**	19	x(7)	x(7)	**81[d]**	19[d]	x(11)	x(11)	**69**	31
Poland[4]	x(3)	x(3)	**71**	29	x(7)	x(7)	**69**	31	x(11)	x(11)	**76**	24
Portugal[1, 5]	61	16	**77**	23	63[d]	16[d]	**79[d]**	21[d]	70[d]	0[d]	**70[d]**	30[d]
Slovak Republic[4]	52	14	**66**	34	53	13	**66**	34	30	22	**52**	48
Slovenia[4]	x(3)	x(3)	**80**	20	x(7)	x(7)	**77**	23	x(11)	x(11)	**72**	28
Spain[1]	68	10	**78**	22	74	8	**82**	18	53	20	**74**	26
Sweden	53	16	**69**	31	51	14	**65**	35	x(11)	x(11)	**65**	35
Switzerland[1, 4]	66	17	**83**	17	73[d]	12[d]	**86[d]**	14[d]	49	27	**76**	24
Turkey	x(3)	x(3)	**75**	25	x(7)	x(7)	**78**	22	x(11)	x(11)	**63**	37
United Kingdom	68	10	**77**	23	64	11	**75**	25	36	28	**64**	36
United States[5]	54	27	**81**	19	54	27	**81**	19	30[d]	36[d]	**65[d]**	35[d]
OECD average	61	16	**77**	23	61	15	**77**	23	42	25	**67**	33
EU22 average	60	15	**76**	24	60	14	**75**	25	42	24	**67**	33
Partners												
Argentina[4]	71	21	**92**	8	68	25	**93**	7	66	31	**98**	2
Brazil[1, 4]	x(3)	x(3)	**73**	27	x(7)	x(7)	**75[d]**	25[d]	x(11)	x(11)	**80**	20
China	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
Costa Rica	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[3]	x(3)	x(3)	**85**	15	x(7)	x(7)	**69**	31	x(11)	x(11)	**31**	69
Lithuania	65	20	**85**	15	62	20	**82**	18	33	32	**65**	35
Russian Federation	x(7)	x(7)	**x(7)**	x(8)	x(7)	x(7)	**81[d]**	19[d]	x(11)	x(11)	**64**	36
Saudi Arabia	m	m	**m**	m	m	m	**m**	m	m	m	**m**	m
South Africa[4]	77	5	**82**	18	83	5	**88**	12	m	m	**m**	m
G20 average	m	m	**m**	m	m	m	**m**	m	m	m	**m**	m

1. All secondary includes some or all post-secondary non-tertiary programmes.
2. Primary includes lower secondary and all secondary includes only upper secondary.
3. Year of reference 2012.
4. Public institutions only. For the Czech Republic, Italy, Luxembourg and the Slovak Republic in tertiary education only.
5. Tertiary includes post-secondary non-tertiary education.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B6.3. Share of current expenditure by resource category and type of institution (2013)

Distribution of current expenditure by educational institutions

		Primary								Secondary							
		Share of current expenditure in total expenditure		Percentage of current expenditure devoted to compensation of all staff						Share of current expenditure in total expenditure		Percentage of current expenditure devoted to compensation of all staff					
				Compensation of teachers		Compensation of other staff		Total				Compensation of teachers		Compensation of other staff		Total	
		Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia	92	89	63	61	15	17	**78**	**78**	94	m	60	m	14	m	**75**	**m**
	Austria	97	99	62	60	13	3	**75**	**63**	98	99	67	73	6	3	**73**	**75**
	Belgium[1]	92	97	66	69	22	20	**88**	**89**	97[d]	98	68[d]	72	21[d]	16	**88[d]**	**88**
	Canada[2, 3]	93[d]	94[d]	65[d]	52[d]	15[d]	20[d]	**80[d]**	**71[d]**	93	94	65	52	15	20	**80**	**71**
	Chile	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**
	Czech Republic	88	100	45	45	19	26	**64**	**71**	92	100	44	42	13	14	**57**	**56**
	Denmark	89	100	60	60	18	18	**78**	**78**	91	100	61	60	17	18	**78**	**78**
	Estonia	86	96	42	47	27	12	**69**	**59**	86	96	38	47	27	13	**65**	**60**
	Finland[1]	94	94	54	56	10	14	**64**	**70**	92[d]	96[d]	51[d]	47[d]	12[d]	19[d]	**63[d]**	**66[d]**
	France	92	90	59	57	21	21	**80**	**78**	91	93	60	52	21	20	**81**	**72**
	Germany	94	94	x(7)	x(8)	x(7)	x(8)	**82**	**78**	95	86	x(15)	x(16)	x(15)	x(16)	**84**	**77**
	Greece	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**
	Hungary	98	96	x(7)	x(8)	x(7)	x(8)	**74**	**59**	98	96	x(15)	x(16)	x(15)	x(16)	**73**	**58**
	Iceland	93	100	54	54	22	22	**76**	**76**	95	100	52	54	19	17	**71**	**70**
	Ireland	93	100	76	m	11	m	**87**	**m**	96	100	70	m	9	m	**79**	**m**
	Israel	88	97	x(7)	x(8)	x(7)	x(8)	**83**	**76**	89	96	x(15)	x(16)	x(15)	x(16)	**90**	**72**
	Italy	97	100	62	m	20	m	**81**	**m**	98	71	63	m	19	m	**81**	**m**
	Japan[1]	85	87	x(7)	x(8)	x(7)	x(8)	**85**	**74**	87[d]	87[d]	x(15)	x(16)	x(15)	x(16)	**88[d]**	**74[d]**
	Korea	86	91	57	36	15	23	**72**	**58**	86	93	60	54	13	17	**73**	**71**
	Latvia	87	87	x(7)	x(8)	x(7)	x(8)	**73**	**73**	88	87	x(15)	x(16)	x(15)	x(16)	**71**	**72**
	Luxembourg	89	98	75	40	6	10	**81**	**51**	91	97	83	71	6	12	**88**	**83**
	Mexico	97	m	85	m	8	m	**93**	**m**	97	m	76	m	14	m	**90**	**m**
	Netherlands	88	88	x(7)	x(8)	x(7)	x(8)	**83**	**83**	87	98	x(15)	x(16)	x(15)	x(16)	**81[d]**	**86[d]**
	New Zealand	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**
	Norway[1]	88	100	x(7)	x(8)	x(7)	x(8)	**80**	**100**	87[d]	100[d]	x(15)	x(16)	x(15)	x(16)	**79[d]**	**100[d]**
	Poland	95	m	x(7)	m	x(7)	m	**71**	**m**	97	m	x(15)	m	x(15)	m	**69**	**m**
	Portugal[1]	97	92	63	50	17	8	**80**	**58**	97[d]	92[d]	66[d]	49[d]	18[d]	9[d]	**84[d]**	**58**
	Slovak Republic	97	100	52	52	14	10	**66**	**62**	97	100	53	58	13	13	**66**	**70**
	Slovenia	91	m	x(7)	m	x(7)	m	**80**	**m**	89	m	x(15)	m	x(15)	m	**77**	**m**
	Spain[1]	97	94	69	66	10	9	**79**	**75**	97[d]	95[d]	75[d]	71[d]	9[d]	7[d]	**83[d]**	**79[d]**
	Sweden	94	94	53	54	16	14	**69**	**68**	93	93	51	52	14	11	**65**	**63**
	Switzerland[1]	89	m	66	m	17	m	**83**	**m**	92[d]	m	73[d]	m	12[d]	m	**86[d]**	**m**
	Turkey	95	76	x(7)	x(8)	x(7)	x(8)	**77**	**56**	91	50	x(15)	x(16)	x(15)	x(16)	**79**	**56**
	United Kingdom	97	97	68	68	10	10	**77**	**77**	97	98	67	62	10	12	**77**	**74**
	United States	92	92	54	55	27	26	**81**	**81**	92	92	54	55	27	26	**81**	**81**
	OECD average	92	94	61	m	16	m	**78**	**72**	93	93	62	m	15	m	**77**	**72**
	EU22 average	93	96	60	m	16	m	**76**	**70**	94	94	61	m	14	m	**75**	**71**
Partners	Argentina	96	m	71	m	21	m	**92**	**m**	91	m	68	m	25	m	**93**	**m**
	Brazil[1]	95	m	x(7)	m	x(7)	m	**73**	**m**	94[d]	m	x(15)	m	x(15)	m	**75[d]**	**m**
	China	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	95	m	74	m	4	m	**79**	**m**	97	m	81	m	3	m	**84**	**m**
	India	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**
	Indonesia[3]	87	79	x(7)	x(8)	x(7)	x(8)	**89**	**30**	92	90	x(15)	x(16)	x(15)	x(16)	**73**	**21**
	Lithuania	95	88	65	57	20	17	**85**	**74**	m	m	m	m	m	m	**m**	**m**
	Russian Federation[1]	x(9)	x(10)	x(15)	x(16)	x(15)	x(16)	**x(15)**	**x(16)**	91[d]	95[d]	x(15)	x(16)	x(15)	x(16)	**81[d]**	**62[d]**
	Saudi Arabia	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**
	South Africa	96	m	77	m	5	m	**82**	**m**	97	m	83	m	5	m	**88**	**m**
	G20 average	m	m	m	m	m	m	**m**	**m**	m	m	m	m	m	m	**m**	**m**

1. All secondary includes some or all post-secondary non-tertiary programmes.
2. Primary includes pre-primary and lower secondary. All secondary includes only upper secondary.
3. Year of reference 2012.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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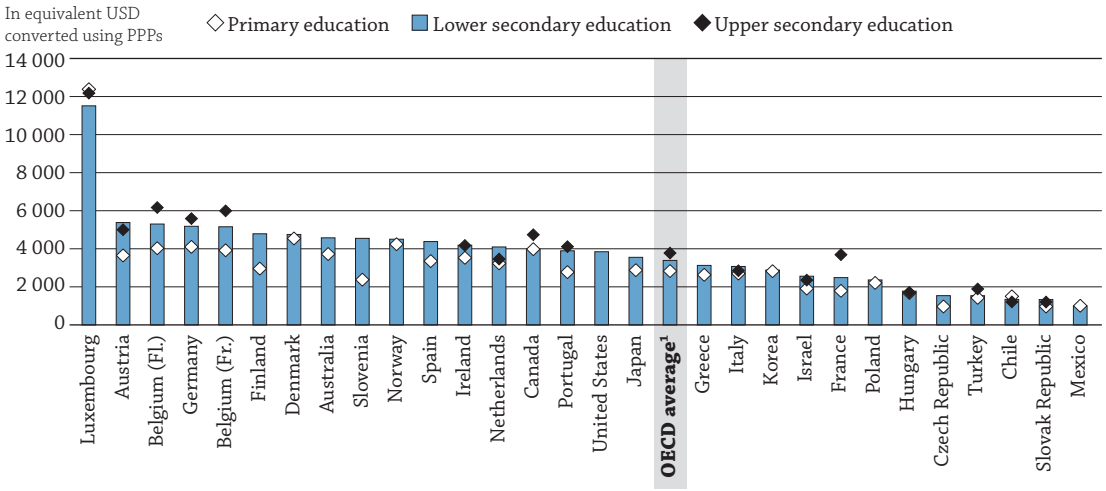
WHICH FACTORS INFLUENCE THE LEVEL OF EXPENDITURE ON EDUCATION?

- Four main factors influence the salary cost of teachers per student: instruction time of students, teaching time of teachers, teachers' salaries and estimated class size. Specific levels of the salary cost of teachers per student may result from different combinations of these four factors.
- On average across OECD countries, the salary cost of teachers per student increases with the level of education. This general increase is partly due to increases in teachers' salaries and to increased instruction time of students at higher educational levels.
- Between 2010 and 2014, the salary cost of teachers per student increased in a majority of countries at both primary and lower secondary levels of education.

Figure B7.1. Teachers' salary cost per student, by level of education (2014)

In public institutions, in equivalent USD converted using PPPs



1. The OECD average for salary costs is calculated as the average salary for OECD countries divided by the average student-teacher ratio. It only includes countries with data on salary and student-teacher ratio for 2014.

Countries are ranked in descending order of the salary cost of teachers per student in lower secondary education.

Source: OECD. Table B7.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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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 population while, at the same time, ensuring that public funding is used efficiently, particularly when public budgets are tight. Teachers' compensation is usually the largest part of expenditure on education and thus of expenditure per student (see Indicator B6). The salary cost of teachers is a function of the instruction time of students, the teaching time of teachers, teachers' salaries and the number of teachers needed to teach students (which depends on estimated class size) (Box B7.1).

Differences among countries in these four factors may explain differences in the level of expenditure per student. Similarly, a given level of expenditure may be associated with different combinations of these factors. This indicator examines the choices countries make when investing their resources in primary and secondary education and explores how changes in policy choices between 2010 and 2014 related to these four factors affected the salary cost of teachers. Some of these choices do not reflect policy decisions, but rather demographic changes that led to a change in the number of students. For example, in countries where enrolments have been declining in recent years, class size would also shrink (assuming all other factors remain constant), unless there was a simultaneous drop in the number of teachers as well.

Other findings

- Similar levels of expenditure among countries can mask a variety of contrasting policy choices. This helps to explain why there is no simple relationship between overall spending on education and the level of student performance. For example, at the upper secondary level of education, Ireland and Portugal had similar levels of salary cost of teachers per student in 2014, above the OECD average. In Ireland, this was the result of the combination of above-average teachers' salaries, instruction time and teaching time, and below-average estimated class size. In Portugal, teachers' salaries and instruction time are below average, but the salary cost per student is pushed up by the small estimated class size and the below-average teaching time.
- The ranking of countries regarding the salary cost of teachers per student changes considerably when comparing the value in USD to the value as a percentage of GDP per capita. While Luxembourg has by far the highest salary cost in lower secondary education (at USD 11 506, it is over double that of the second highest), when differences in countries' wealth are taken into account, it is only the seventh highest (11.5%).
- In terms of the value in USD, teachers' salaries are most often the primary factor influencing the difference in the average salary cost of teachers per student at each level of education, and estimated class size is the second factor. However, when taking into account countries' GDP, teachers' salaries are less often the primary factor.

Trends

Between 2010 and 2014, the salary cost of teachers per student in primary and lower secondary education increased in the majority of OECD countries. On average across countries with data for both years, it increased by 5.1% (from USD 2 686 to USD 2 822) at the primary level and by 3.7% (from USD 3 313 to USD 3 436) at the lower secondary level. The most notable exception is Portugal, where the salary cost of teachers per student decreased by about 30% at both the primary and lower secondary levels. This decrease is the result of a considerable increase in the estimated class size combined with a decrease in teachers' salaries at both educational levels between 2010 and 2014. A similar pattern occurred in lower secondary education in Spain during the same period: a 13% decrease in teachers' salary and a 26% increase in estimated class size led to a 30% decrease in the salary cost of teachers per student.

The increase in the salary cost of teachers per student between 2010 and 2014 was mostly influenced by changes in two factors: teachers' salaries and estimated class size. During this period, among countries with available data for both years, teachers' salaries increased by 0.8% at the primary level and 0.6% at the lower secondary level, while estimated class size decreased by 1.8% at the primary level and by 2.3% at the lower secondary level. Variations in the other two factors, instruction time and teaching time, are usually smaller in most countries, but the average is influenced by large variations in some countries.

Analysis

Variation in the salary cost of teachers per student, by level of education

Per-student expenditure reflects the structural and institutional factors that relate to the organisation of schools and curricula. Current expenditure on educational institutions can be broken down into compensation of staff and other expenditures (i.e. maintenance of school buildings, students' meals or the rental of school buildings and other facilities). Teacher compensation usually constitutes the largest part of current expenditure, and therefore of expenditure on education (see Indicator B6). As a result, the level of teacher compensation divided by the number of students (referred to here as "salary cost of teachers per student") is the largest share of expenditure per student.

Box B7.1. Relationship between salary cost of teachers per student and instruction time of students, teaching time of teachers, teachers' salaries and class size

One way to analyse the factors that have an impact on expenditure per student and to measure the extent of their effects is to compare the differences between national figures and the OECD average. This analysis computes the differences in expenditure per student among countries and the OECD average, and then calculates the contribution of these different factors to the variation from the OECD average.

This exercise is based on a mathematical relationship between the different factors and follows the method presented in the Canadian publication *Education Statistics Bulletin* (Quebec Ministry of Education, Recreation and Sports, 2003) (see explanations in Annex 3). Educational expenditure is mathematically linked to factors related to a country's school context (number of hours of instruction time for students, number of teaching hours for teachers, estimated class size) and one factor relating to teachers (statutory salary).

Expenditure is broken down into compensation of teachers and other expenditure (defined as all expenditure other than compensation of teachers). Compensation of teachers divided by the number of students, or "the salary cost of teachers per student" (CCS), is estimated through the following calculation:

$$CCS = SAL \times instT \times \frac{1}{teachT} \times \frac{1}{ClassSize} = \frac{SAL}{Ratiostud/teacher}$$

SAL: teachers' salaries (estimated by statutory salary after 15 years of experience)
instT: instruction time of students (estimated as the annual intended instruction time, in hours, for students)
teachT: teaching time of teachers (estimated as the annual number of teaching hours for teachers)
ClassSize: a proxy for class size
Ratiostud/teacher: the ratio of students to teaching staff

With the exception of estimated class size, values for the different variables can be obtained from the indicators published in *Education at a Glance* (Chapter D). For the purpose of the analysis in this indicator, an "estimated" class size or proxy class size is computed based on the ratio of students to teaching staff and the number of teaching hours and instruction hours (see Box D2.1). As a proxy, this estimated class size should be interpreted with caution.

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 (for more details, see Annex 3). For example, in the case where only two factors interact, if a worker receives a 10% increase in the hourly wage and increases the number of hours of work by 20%, his/her earnings will increase by 32% as a result of the direct contribution of each of these variations (0.1 + 0.2) and the indirect contribution of these variations due to the combination of the two factors (0.1 * 0.2). To account for differences in countries' level of wealth, salary cost per student, as well as teachers' salaries, can be divided by GDP per capita (on the assumption that GDP per capita is an estimate of countries' level of wealth). This makes it possible to compare countries' "relative" salary cost per student (Table B7.1 and Figure B7.2).

The salary cost of teachers per student is estimated based on theoretical values: statutory salaries of teachers after 15 years of experience, theoretical instruction time of students, statutory teaching time of teachers and estimated class size. As a consequence, this measure may differ from the actual salary cost of teachers resulting from the combination of actual average values for these four factors. This also explains part of the differences between this indicator and Indicators B1, B2, B3 and B6, which are based on actual expenditure and student population at each level of education.

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The salary cost of teachers per student is based on the instruction time of students, the teaching time of teachers, teachers' salaries and the number of teachers needed to teach students (which depends on estimated class size) (Box B7.1). As a consequence, differences in these four factors among countries and educational levels may explain differences in expenditure.

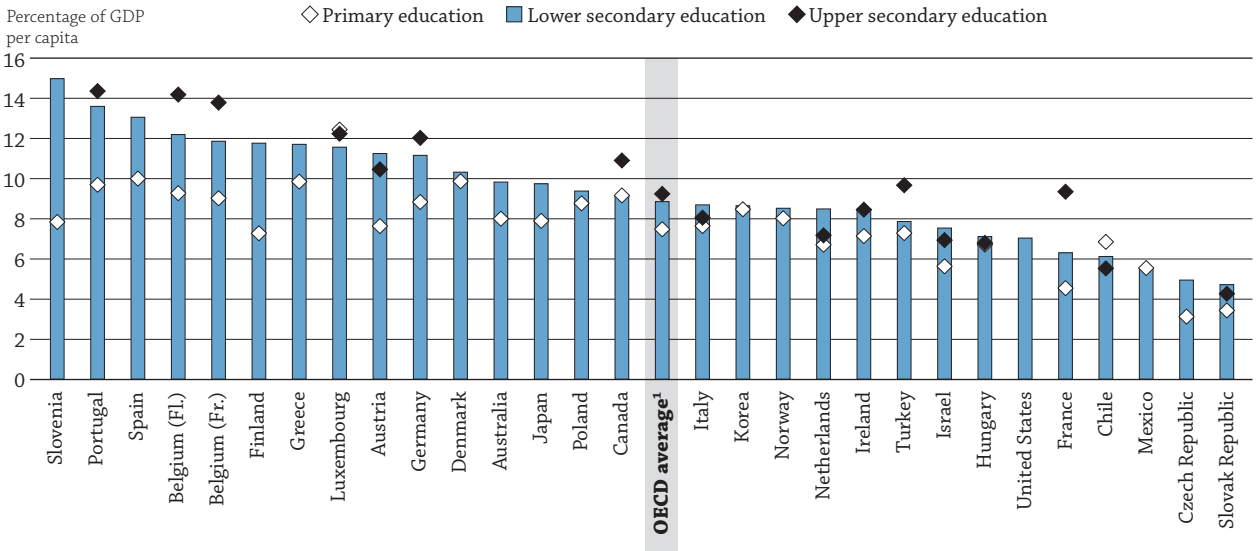
Salary costs of teachers per student show a common pattern across OECD countries: they usually rise between primary and lower secondary education (Figure B7.1). The only exceptions are Chile, Luxembourg and Mexico, where the higher salary cost per student at the primary level is at least in part due to smaller estimated class sizes at that level. On average across OECD countries, the salary cost increases from USD 2 832 per primary student to USD 3 389 per lower secondary student. Although the average salary cost per student also increases in upper secondary education, to USD 3 776, this is only true in half of the countries with available data.

The general increase in the salary cost of teachers per student with the level of education is partly the result of increases in teachers' salaries and in the instruction time of students at higher educational levels. In 2014, the OECD average salary varied from USD 42 675 at the primary level to USD 44 407 at the lower secondary level and USD 46 379 at the upper secondary level. Meanwhile, the OECD average annual instruction time varied from 788 hours at the primary level to 902 hours at the lower secondary level and 929 hours at the upper secondary level. The increase is also related to the fact that teaching time generally decreases as the level of education increases, implying that more teachers are necessary to teach a given number of pupils (the OECD average annual teaching time in 2014 decreases from 771 hours at the primary level to 692 hours at the lower secondary level and 641 hours at the upper secondary level). Higher levels of education also tend to have larger classes, which reduces the salary cost per student (the OECD average estimated class size increases from 15 students at primary level to 17 students at lower secondary and 19 students at upper secondary), but this decrease is generally offset by the increase caused by the other three factors (Tables B7.2a, B7.2b and B7.2c).

In some countries there is only a minimal variation in the salary cost of teachers per student between levels of education. In 2014, for example, there was a difference of less than USD 100 in Canada, Hungary, Korea and Mexico between primary and lower secondary education. The difference between those levels was over USD 1 800 in Finland and Slovenia (Table B7.1).

Figure B7.2. Teachers' salary cost per student as a percentage of GDP per capita, by level of education (2014)

In public institutions



1. The OECD average for salary costs is calculated as the average salary for OECD countries divided by the average student-teacher ratio. It only includes countries with data on salary and student-teacher ratio for 2014.

Countries are ranked in descending order of the salary cost of teachers per student as a percentage of GDP per capita in lower secondary education.

Source: OECD. Table B7.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398163

Variation in the salary cost of teachers per student after accounting for countries' wealth

The level of teachers' salaries and, in turn, the level of the salary cost of teachers per student depend on a country's relative wealth. To control for differences in wealth among countries, the levels of teachers' salaries (and salary cost per student) relative to GDP per capita were analysed. On average across countries with available information, the salary cost of teachers per student represents 7.5% of GDP per capita at the primary level, 8.8% at the lower secondary level and 9.2% at the upper secondary level.

Comparing the relative salary cost of teachers per student using this analysis affects the ranking of a few countries when compared to measuring in USD. For example, because of Luxembourg's high USD salaries, it has by far the highest salary cost in lower secondary education: at USD 11 506, it is over double that of the second highest. However, when differences in countries' wealth are taken into account, Luxembourg only has the seventh highest salary cost, at 11.5% of GDP per capita.

Variations in salary costs of teachers per student between 2010 and 2014

The salary cost of teachers per student also varies over time in a given level of education. These changes are only analysed at the primary and lower secondary levels of education because trend data are not available at the upper secondary level. This analysis is also limited to countries with all data available for both 2010 and 2014, (23 in primary education and 22 in lower secondary education).

Between 2010 and 2014, the salary cost of teachers per student increased by 5% at the primary level (from USD 2 686 to USD 2 822) and by 4% at the lower secondary level (from USD 3 331 to USD 3 436), on average across the countries with available data for both years (Tables B7.2a and b). Indeed, the salary cost of teachers per student at both levels of education increased in most countries in that period. The increase exceeded 35% in Israel at the primary level and 30% in Poland at the lower secondary level (Figure B7.3).

However, the salary cost of teachers per student also fell between 2010 and 2014 in a considerable number of countries, most notably in Portugal (by about 30% at both levels) and Spain (by around 16% at the primary level and 30% at the lower secondary level). Decreases of more than 10% in the salary cost of teachers per student were also observed at the primary level in Italy, and at the lower secondary level in Belgium (French and Flemish Communities) and Slovenia.

Variations in the factors influencing the salary cost of teachers between 2010 and 2014

Of the four factors that determine the level of the salary cost of teachers, two are largely responsible for the wide variations in this cost: teachers' salaries and class size. These two factors have opposing effects: an increase in salaries and a decrease in class size both push up the salary cost of teachers. Between 2010 and 2014, among countries with available data for this period, average teachers' salaries (expressed in constant prices) increased by less than 1% at the primary and lower secondary levels, while estimated class size decreased by about 2% at the primary and lower secondary levels (Figure B7.3). Combined, these two effects contributed to an increase in the average salary cost of teachers per student at both levels during that period.

Teachers' salaries decreased most notably (by 10% or more) in Greece, Portugal, Slovenia and Spain at both the primary and lower secondary levels. During the same period, Portugal also experienced an increase in the estimated class size at both levels, which together with the lower salaries, led to a considerable decrease in the salary cost of teachers per student (Figure B7.3).

Among countries with data for both 2010 and 2014, the decrease in average estimated class size at the primary and lower secondary levels also resulted from decreases and increases in a similar number of countries. At the primary and lower secondary levels, the largest reductions were observed in countries that had relatively large estimated classes in 2010 (Chile and Israel at the primary level, and Chile and Estonia at the lower secondary level). The smaller classes led to an increase in the salary cost of teachers in both Chile and Israel, despite the decrease in primary teachers' salary in Israel.

Changes in instruction time and teaching time, the two other factors influencing the salary cost of teachers, tend to be smaller, with teaching time varying the least of all factors. In the majority of countries, teaching time varied by less than 1% between 2010 and 2014 at both levels of education. The fact that these factors tend to vary less over time may reflect the political sensitivity of implementing reforms in these areas (see Table B7.5 in OECD, 2012).

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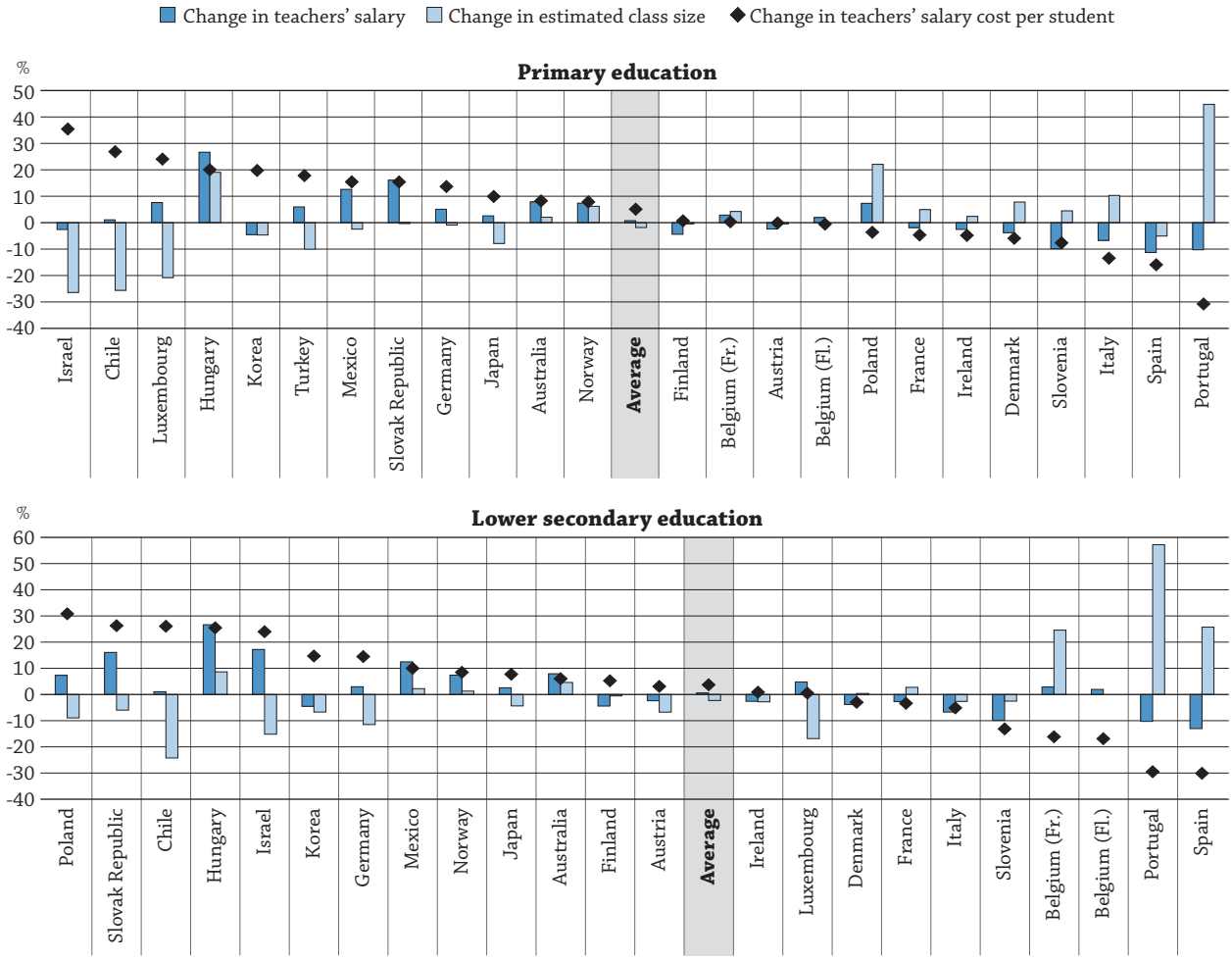
Figure B7.3. Change in teachers' salary cost per student, teachers' salaries and estimated class size (2010 and 2014)

Change in percentage, between 2010 and 2014, in public institutions, primary and lower secondary education



Countries are ranked in descending order of the change in the salary cost of teachers per student between 2010 and 2014.

Sources: OECD. Tables B7.2a and B7.2b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Nevertheless, in a small number of countries, instruction time and/or teaching time did change significantly. For example in Norway, Poland and Portugal, reforms have been introduced to increase instruction time in reading and mathematics. Between 2010 and 2014, instruction time in those three countries increased by 6%-7% at the primary level and continued to increase by above-average rates at the lower secondary level. During the same period, teaching time changed most significantly in Korea with a decrease from 807 to 656 hours at the primary level, and in Luxembourg with an increase from 634 to 739 hours at the lower secondary level.

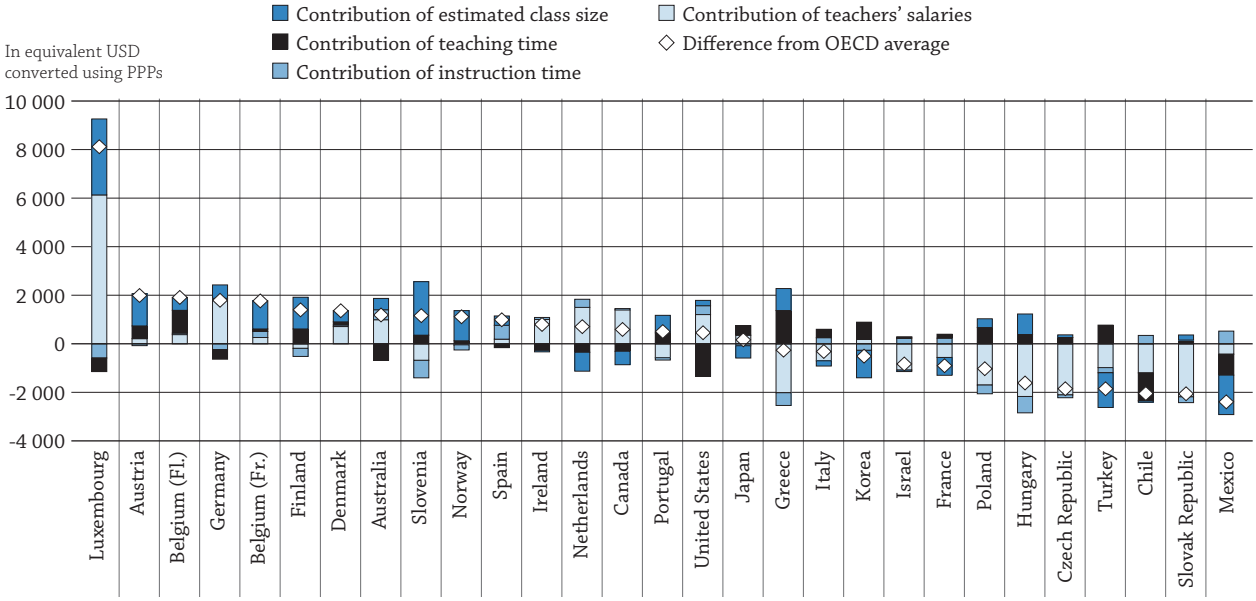
Relationship between expenditure on education and policy choices

Higher levels of expenditure on education cannot automatically be equated with better performance by education systems. This is not surprising, as countries spending similar amounts on education do not necessarily have similar education policies and practices. For example, at the upper secondary level, Ireland and Portugal had very similar levels of salary costs of teachers per student in 2014, both above the OECD average. In Ireland, this was the result of the combination of teachers' salaries, instruction time and teaching time that were above the OECD average and estimated class size that was below the OECD average. In Portugal, below-average teachers' salaries and instruction time are more than offset by a small estimated class size and below-average teaching time.

In addition, even though countries may make similar policy choices, those choices can result in different levels of salary cost of teachers per student. For example, in lower secondary education, both Finland and Hungary have above-average teaching time and estimated class sizes and below-average teachers' salaries and instruction time. However, the salary cost of teachers per student resulting from this combination is very different for those countries: USD 1 399 above the OECD average in Finland and USD 1 613 below the OECD average in Hungary (Table B7.4 and Figure B7.4).

Figure B7.4. Contribution of various factors to salary cost of teachers per student in public institutions, lower secondary education (2014)

In USD



How to read this figure

This figure shows the contribution (in USD) of the factors influencing the difference between salary cost of teachers per student in the country and the OECD average. For example, in Hungary, the salary cost of teachers per student is USD 1 613 lower than the OECD average. This is because Hungary has lower teachers' salaries (- USD 2 168) than the OECD average, below-average instruction time for students (- USD 674), above-average teaching time for teachers (+ USD 384), and above-average estimated class size (+ USD 845).

Countries are ranked in descending order of the difference between the salary cost of teachers per student and the OECD average.

Source: OECD. Table B7.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398187

Main factors influencing the salary cost of teachers per student, by level of education

Comparing the salary cost of teachers per student to the OECD average and how the four factors contribute to this difference allows for an analysis of the extent of each factor's impact on the differences in salary cost of teachers per student. At each level of education, teachers' salaries are most often the primary factor (i.e. the factor with the largest impact) influencing the difference (from the OECD average) of the average salary cost of teachers per student. Among countries with available data in 2014, teachers' salaries were the primary factor in 21 of 28 countries at the primary level, in 15 of 28 countries at the lower secondary level, and in 12 of 16 countries at the upper secondary level.

Estimated class size is the second most influential factor responsible for the difference in salary cost of teachers per student at each level of education (for 4 of 28 countries at the primary level, 11 of 29 countries at the lower secondary level, and 2 of 16 countries at the upper secondary level).

When taking into account differences in countries' wealth (i.e. analysing salaries over GDP per capita), teachers' salaries are less often the primary factor influencing the difference from the average salary cost of teachers per student. Nevertheless, teachers' salaries and estimated class size continue to be the main factors influencing variations from the average salary cost of teachers per student at each level of education (Box B7.2 continued, available on line).

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Box B7.2. Main factors influencing salary cost of teacher per student, by level of education (2014)

	Primary education	Lower secondary education	Upper secondary education
Salary	**21 countries** AUS (+), BFL (+), BFR (+), CAN (+), CHL (-), CZE (-), DNK (+), FRA (-), DEU (+), GRC (-), HUN (-), IRL (+), ISR (-), ITA (-), JPN (+), LUX (+), NLD (+), POL (-), PRT (-), SVK (-), TUR (-)	**15 countries** AUS (+), CAN (+), CHL (-), CZE (-), DNK (+), DEU (+), GRC (-), HUN (-), IRL (+), ISR (-), ITA (-), LUX (+), NLD (+), POL (-), SVK (-)	**12 countries** CAN (+), CHL (-), FRA (-), DEU (+), HUN (-), IRL (+), ISR (-), ITA (-), LUX (+), NLD (+), SVK (-), TUR (-)
Instruction time	**2 countries** FIN (-), KOR (-)	**1 country** ESP (+)	**0 country**
Teaching time	**1 country** SVN (+)	**2 countries** BEL (+), USA (-)	**2 countries** AUT (+), BFL (+)
Estimated class size	**4 countries** AUT (+), MEX (-), NOR (+), ESP (+)	**11 countries** AUT (+), BFR (+), FIN (+), FRA (-), JPN (-), KOR (-), MEX (-), NOR (+), PRT (+), SVN (+), TUR (-),	**2 countries** BFR (+) PRT (+)

Note: For each level of education, countries are included in the cell corresponding to the factor which has the largest impact (measured in equivalent USD converted using PPPs) on the salary cost of teachers' per student. The positive or negative signs show whether the factor increases or decreases the salary cost of teacher per student.
Sources: OECD. Tables B7.3, B7.4 and B7.5. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for the list of country codes used in this table.
StatLink http://dx.doi.org/10.1787/888933399940

Methodology

Data referring to the 2014 school year, as well as 2010 data relating to salaries of teachers and teaching time are based on the UOE data collection on education statistics and on the Survey on Teachers and the Curriculum, which were both administered by the OECD in 2014. Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption. Other data referring to 2010 school year are based on the UOE data collection on education statistics, and on the Survey on Teachers and the Curriculum, which were both administered by the OECD and published in the 2007 and 2012 editions of *Education at a Glance* (data on ratio of student to teaching staff and instruction time). Data for 2014 instruction time refer to 2014 data from the 2014 edition of *Education at a Glance*. The consistency of 2010 and 2014 data has been validated (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

Salary cost of teachers per student is calculated based on teachers' salaries, the number of hours of instruction for students, the number of hours of teaching for teachers, and the estimated class size (a proxy of the class size; see Box D2.2). In most cases, the values for these variables are derived from *Education at a Glance* (see above). At upper secondary level, teachers' salaries and teaching time refer to general programmes. Teachers' salaries in national currencies are converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for private consumption, following the methodology used in Indicator D3 on teachers' salaries, which results in the salary cost per student expressed in equivalent USD. Further details on the analysis of these factors are available in Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm.

Note regarding data from Israel

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

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Indicator B7 Tables

StatLink http://dx.doi.org/10.1787/888933398071

Table B7.1	**Salary cost of teachers per student, by level of education (2014)**
Table B7.2a	**Factors used to compute the salary cost of teachers per student in public institutions, in primary education (2010 and 2014)**
Table B7.2b	**Factors used to compute the salary cost of teachers per student in public institutions, in lower secondary education (2010 and 2014)**
Table B7.2c	**Factors used to compute the salary cost of teachers per student in public institutions, in upper secondary education (2014)**
Table B7.3	**Contribution of various factors to salary cost of teachers per student in primary education (2014)**
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Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table B7.1. Salary cost of teachers per student, by level of education (2014)

Salary cost of teachers per student in public institutions, in equivalent USD, converted using PPPs for private consumption, and in percentage of per capita GDP

	Salary cost of teachers per student (in USD)			Salary cost of teachers per student (in percentage of GDP per capita)		
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary
	(1)	(2)	(3)	(4)	(5)	(6)
OECD Australia	3 725	4 576	m	8.0	9.8	m
Austria	3 650	5 379	5 002	7.6	11.2	10.4
Belgium (Fl.)	4 030	5 300	6 166	9.3	12.2	14.2
Belgium (Fr.)	3 920	5 156	5 993	9.0	11.8	13.8
Canada	3 981	3 981	4 739	9.1	9.1	10.9
Chile	1 503	1 343	1 212	6.8	6.1	5.5
Czech Republic	973	1 540	m	3.1	4.9	m
Denmark	4 542	4 752	m	9.8	10.3	m
England (UK)	m	m	m	m	m	m
Estonia	m	m	m	m	m	m
Finland	2 960	4 788	m	7.3	11.7	m
France	1 792	2 487	3 690	4.5	6.3	9.3
Germany	4 101	5 181	5 586	8.8	11.1	12.0
Greece	2 632	3 128	m	9.8	11.7	m
Hungary	1 677	1 776	1 697	6.7	7.1	6.8
Iceland	m	m	m	m	m	m
Ireland	3 526	4 186	4 175	7.1	8.5	8.4
Israel	1 912	2 560	2 355	5.6	7.5	6.9
Italy	2 700	3 073	2 847	7.6	8.7	8.0
Japan	2 878	3 552	m	7.9	9.7	m
Korea	2 824	2 882	m	8.5	8.6	m
Latvia	m	m	m	m	m	m
Luxembourg	12 377	11 506	12 172	12.4	11.5	12.2
Mexico	1 009	1 000	m	5.5	5.5	m
Netherlands	3 235	4 097	3 461	6.7	8.5	7.2
New Zealand	m	m	m	m	m	m
Norway	4 240	4 504	m	8.0	8.5	m
Poland	2 210	2 365	m	8.7	9.4	m
Portugal	2 775	3 894	4 112	9.7	13.6	14.3
Scotland (UK)	m	m	m	m	m	m
Slovak Republic	969	1 333	1 205	3.4	4.7	4.3
Slovenia	2 379	4 548	m	7.8	15.0	m
Spain	3 354	4 380	m	10.0	13.0	m
Sweden	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m
Turkey	1 424	1 538	1 892	7.3	7.8	9.7
United States	m	3 846	m	m	7.0	m
OECD average[1]	2 832	3 389	3 776	7.5	8.8	9.2

1. The OECD average for salary costs is calculated as the average teachers' salary for OECD countries divided by the average student-teacher ratio. It only includes countries with information for all factors used to calculate salary cost and does not correspond to the average of the salary costs presented in the table.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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B7

Table B7.2a. [1/2] Factors used to compute the salary cost of teachers per student in public institutions, in primary education (2010 and 2014)

	Teachers' salary (annual, in USD, 2014 constant prices)			Instruction time (for students, hours per year)			Teaching time (for teachers, hours per year)		
	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD Australia	53 076	57 246	**7.9**	982	1 010	**2.9**	868	872	**0.4**
Austria	44 344	43 276	**-2.4**	690	705	**2.2**	779	779	**0.0**
Belgium (Fl.)	47 821	48 757	**2.0**	m	821	**m**	752	744	**-1.1**
Belgium (Fr.)	46 111	47 435	**2.9**	840	849	**1.1**	732	728	**-0.5**
Canada	m	65 543	**m**	917	919	**0.3**	799	796	**-0.4**
Chile	25 771	26 048	**1.1**	1 083	1 049	**-3.2**	1 105	1 146	**3.7**
Czech Republic[2]	m	18 324	**m**	588	676	**15.0**	862	823	**-4.6**
Denmark	54 558	52 481	**-3.8**	701	754	**7.6**	650	663	**2.0**
England (UK)	50 317	46 390	**-7.8**	893	861	**-3.5**	684	722	**5.6**
Estonia	13 857	m	**m**	595	661	**11.0**	630	619	**-1.7**
Finland	41 276	39 456	**-4.4**	608	632	**3.9**	680	673	**-1.1**
France	34 804	34 149	**-1.9**	847	864	**2.0**	924	924	**0.0**
Germany	60 865	63 961	**5.1**	641	683	**6.5**	805	800	**-0.6**
Greece	35 333	24 712	**-30.1**	720	783	**8.8**	589	569	**-3.4**
Hungary	15 143	19 181	**26.7**	555	616	**11.0**	604	594	**-1.6**
Iceland[3]	33 350	m	**m**	800	729	**-8.9**	624	624	**0.0**
Ireland	59 108	57 597	**-2.6**	915	915	**0.0**	915	915	**0.0**
Israel	29 035	28 281	**-2.6**	914	957	**4.7**	820	838	**2.3**
Italy	35 367	32 995	**-6.7**	891	891	**0.0**	770	752	**-2.3**
Japan	48 139	49 378	**2.6**	735	762	**3.7**	707	742	**5.0**
Korea	49 598	47 352	**-4.5**	667	648	**-2.9**	807	656	**-18.8**
Latvia	m	m	**m**	m	592	**m**	882	m	**m**
Luxembourg	100 460	108 110	**7.6**	924	924	**0.0**	739	810	**9.5**
Mexico	25 097	28 262	**12.6**	800	800	**0.0**	800	800	**0.0**
Netherlands	m	53 544	**m**	940	940	**0.0**	930	930	**0.0**
New Zealand	m	42 765	**m**	m	m	**m**	m	922	**m**
Norway	41 099	44 136	**7.4**	701	748	**6.7**	741	741	**0.0**
Poland	23 132	24 828	**7.3**	600	635	**5.8**	644	621	**-3.5**
Portugal	42 528	38 166	**-10.3**	757	806	**6.5**	779	743	**-4.6**
Scotland (UK)	47 148	43 163	**-8.5**	a	a	**m**	855	855	**0.0**
Slovak Republic	14 354	16 663	**16.1**	695	680	**-2.0**	841	828	**-1.6**
Slovenia	41 882	37 751	**-9.9**	621	664	**7.0**	627	627	**0.0**
Spain	47 288	41 940	**-11.3**	875	787	**-10.0**	880	880	**0.0**
Sweden[4]	m	37 391	**m**	741	754	**1.8**	m	a	**m**
Switzerland	61 677	m	**m**	m	m	**m**	m	m	**m**
Turkey	27 122	28 740	**6.0**	720	720	**0.0**	720	720	**0.0**
United States	55 802	60 266	**8.0**	m	967	**m**	m	m	**m**
OECD average	42 112	42 675	**1.3**	773	788	**2.0**	774	771	**-0.3**
Average for countries with all data available for 2010 and 2014	41 746	42 062	**0.8**	772	787	**1.9**	780	776	**-0.5**

Note: Data on teachers' salaries, teaching time and ratio of students to teaching staff come from *Education at a Glance 2016* for 2014 data and from *Education at a Glance 2012* for 2010 data. Data for instruction time come from *Education at a Glance 2014* for 2014 data and *Education at a Glance 2010* for 2010 data. Please see notes on these data in those tables.

Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

1. Unlike previous editions of *Education at a Glance,* the student-teacher ratio presented in this table is for public institutions only. Therefore, figures for 2010 may slightly vary when compared to previous editions which used data related to all institutions.

2. Minimum instruction time for 2014.

3. Reference year for teaching time 2013 instead of 2014.

4. Estimated number of hours of minimum instruction time by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398093

Table B7.2a. [2/2] **Factors used to compute the salary cost of teachers per student in public institutions, in primary education (2010 and 2014)**

	Ratio of students to teaching staff[1] (number of students per teacher)			Estimated class size (average size of classes taking into account instruction and teaching time)			Salary cost of teacher per student (in USD)		
	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)
	(10)	(11)	(12)	(13) = (4)*(10) / (7)	(14) = (5)*(11) / (8)	(15)	(16)	(17)	(18)
OECD									
Australia	15	15	**-0.4**	17	18	**2.1**	3 441	3 725	**8.2**
Austria	12	12	**-2.3**	11	11	**-0.2**	3 654	3 650	**-0.1**
Belgium (Fl.)	12	12	**2.5**	m	13	**m**	4 052	4 030	**-0.6**
Belgium (Fr.)	12	12	**2.5**	14	14	**4.2**	3 907	3 920	**0.3**
Canada	18	16	**-7.7**	20	19	**-7.1**	m	3 981	**m**
Chile	22	17	**-20.3**	21	16	**-25.6**	1 185	1 503	**26.9**
Czech Republic[2]	19	19	**0.2**	13	15	**20.7**	m	973	**m**
Denmark	11	12	**2.2**	12	13	**7.8**	4 828	4 542	**-5.9**
England (UK)	m	m	**m**	m	m	**m**	m	m	**m**
Estonia	16	13	**-20.4**	15	14	**-10.1**	847	m	**m**
Finland	14	13	**-5.1**	13	13	**-0.3**	2 939	2 960	**0.7**
France	19	19	**2.9**	17	18	**4.9**	1 879	1 792	**-4.7**
Germany	17	16	**-7.6**	13	13	**-0.9**	3 608	4 101	**13.7**
Greece	m	9	**m**	m	13	**m**	m	2 632	**m**
Hungary	11	11	**5.5**	10	12	**19.1**	1 397	1 677	**20.0**
Iceland[3]	10	m	**m**	13	m	**m**	3 238	m	**m**
Ireland	16	16	**2.4**	16	16	**2.4**	3 704	3 526	**-4.8**
Israel	21	15	**-28.1**	23	17	**-26.4**	1 412	1 912	**35.4**
Italy	11	12	**7.8**	13	14	**10.3**	3 120	2 700	**-13.4**
Japan	18	17	**-6.7**	19	18	**-7.9**	2 618	2 878	**9.9**
Korea	21	17	**-20.3**	17	17	**-4.7**	2 358	2 824	**19.8**
Latvia	m	11	**m**	m	m	**m**	m	m	**m**
Luxembourg	10	9	**-13.3**	13	10	**-20.8**	9 977	12 377	**24.1**
Mexico	29	28	**-2.5**	29	28	**-2.5**	874	1 009	**15.4**
Netherlands	16	17	**5.1**	16	17	**5.1**	m	3 235	**m**
New Zealand	16	16	**0.7**	m	m	**m**	m	m	**m**
Norway	10	10	**-0.4**	10	11	**6.2**	3 931	4 240	**7.9**
Poland	10	11	**11.4**	9	11	**22.1**	2 293	2 210	**-3.6**
Portugal	11	14	**29.6**	10	15	**44.8**	4 009	2 775	**-30.8**
Scotland (UK)	m	m	**m**	m	m	**m**	m	m	**m**
Slovak Republic	17	17	**0.6**	14	14	**0.1**	840	969	**15.4**
Slovenia	16	16	**-2.4**	16	17	**4.5**	2 576	2 379	**-7.6**
Spain	12	13	**5.5**	12	11	**-5.1**	3 990	3 354	**-15.9**
Sweden[4]	12	13	**13.1**	m	m	**m**	m	m	**m**
Switzerland	15	15	**-0.9**	m	m	**m**	4 129	m	**m**
Turkey	22	20	**-10.1**	22	20	**-10.1**	1 209	1 424	**17.8**
United States	15	16	**6.7**	m	m	**m**	m	m	**m**
OECD average	15	15	**-4.0**	15	15	**-1.8**	2 622	2 832	**8.0**
Average for countries with all data available for 2010 and 2014	16	15	**-4.1**	15	15	**-1.8**	2 686	2 822	**5.1**

Note: Data on teachers' salaries, teaching time and ratio of students to teaching staff come from *Education at a Glance 2016* for 2014 data and from *Education at a Glance 2012* for 2010 data. Data for instruction time come from *Education at a Glance 2014* for 2014 data and *Education at a Glance 2010* for 2010 data. Please see notes on these data in those tables.

Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

1. Unlike previous editions of *Education at a Glance*, the student-teacher ratio presented in this table is for public institutions only. Therefore, figures for 2010 may slightly vary when compared to previous editions which used data related to all institutions.

2. Minimum instruction time for 2014.

3. Reference year for teaching time 2013 instead of 2014.

4. Estimated number of hours of minimum instruction time by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.2b. [1/2] Factors used to compute the salary cost of teachers per student in public institutions, in lower secondary education (2010 and 2014)

	Teachers' salary (annual, in USD, 2014 constant prices)			Instruction time (for students, hours per year)			Teaching time (for teachers, hours per year)		
	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD Australia	53 076	57 293	**7.9**	997	1 015	**1.8**	819	812	**-0.9**
Austria	47 996	46 852	**-2.4**	914	900	**-1.5**	607	607	**0.0**
Belgium (Fl.)	47 821	48 757	**2.0**	m	928	**m**	669	549	**-17.9**
Belgium (Fr.)	46 111	47 435	**2.9**	960	971	**1.1**	671	668	**-0.5**
Canada	m	65 543	**m**	922	921	**-0.1**	740	743	**0.4**
Chile	25 771	26 048	**1.1**	1 083	1 062	**-2.0**	1 105	1 146	**3.7**
Czech Republic[2]	m	18 324	**m**	862	874	**1.3**	647	617	**-4.6**
Denmark	55 344	53 226	**-3.8**	900	930	**3.3**	650	663	**2.0**
England (UK)	50 317	46 390	**-7.8**	925	911	**-1.5**	703	745	**5.9**
Estonia	13 857	m	**m**	802	823	**2.5**	630	619	**-1.7**
Finland	44 578	42 613	**-4.4**	777	844	**8.7**	595	589	**-1.1**
France	37 834	36 814	**-2.7**	971	991	**2.1**	648	648	**0.0**
Germany	67 426	69 431	**3.0**	887	866	**-2.3**	756	750	**-0.8**
Greece	35 333	24 712	**-30.1**	796	785	**-1.3**	415	459	**10.6**
Hungary	15 143	19 181	**26.7**	671	710	**5.9**	604	594	**-1.6**
Iceland[3]	33 350	m	**m**	969	839	**-13.4**	624	624	**0.0**
Ireland	59 749	58 190	**-2.6**	929	935	**0.7**	735	735	**0.0**
Israel	26 428	30 977	**17.2**	981	1 004	**2.3**	598	682	**14.0**
Italy	38 534	35 951	**-6.7**	1 023	990	**-3.2**	630	616	**-2.3**
Japan	48 139	49 378	**2.6**	877	895	**2.1**	602	611	**1.6**
Korea	49 485	47 257	**-4.5**	859	842	**-2.0**	627	548	**-12.5**
Latvia	m	m	**m**	m	794	**m**	882	m	**m**
Luxembourg	107 575	112 760	**4.8**	908	845	**-6.9**	634	739	**16.7**
Mexico	32 257	36 288	**12.5**	1 167	1 167	**0.0**	1 047	1 047	**0.0**
Netherlands	m	66 366	**m**	1 000	1 000	**0.0**	750	750	**0.0**
New Zealand	m	44 424	**m**	m	m	**m**	m	840	**m**
Norway	41 099	44 136	**7.4**	836	868	**3.8**	654	663	**1.5**
Poland	23 132	24 828	**7.3**	765	810	**5.9**	572	546	**-4.6**
Portugal	42 528	38 166	**-10.3**	757	892	**17.8**	634	605	**-4.6**
Scotland (UK)	47 148	43 163	**-8.5**	a	a	**m**	855	855	**0.0**
Slovak Republic	14 354	16 663	**16.1**	822	828	**0.7**	652	642	**-1.6**
Slovenia	41 882	37 751	**-9.9**	817	767	**-6.1**	627	627	**0.0**
Spain	53 880	46 865	**-13.0**	1 050	1 061	**1.1**	713	713	**0.0**
Sweden[4]	m	38 054	**m**	741	754	**1.8**	m	a	**m**
Switzerland	70 052	m	**m**	m	m	**m**	m	m	**m**
Turkey	28 279	29 680	**5.0**	768	840	**9.4**	504	504	**0.0**
United States	59 163	61 918	**4.7**	m	1 011	**m**	m	981	**m**
OECD average	43 795	44 407	**1.4**	895	902	**0.8**	685	692	**1.1**
Average for countries with all data available for 2010 and 2014	44 197	44 459	**0.6**	907	918	**1.2**	690	693	**0.5**

Note: Data on teachers' salaries, teaching time and ratio of students to teaching staff come from *Education at a Glance 2016* for 2014 data and from *Education at a Glance 2012* for 2010 data. Data for instruction time come from *Education at a Glance 2014* for 2014 data and *Education at a Glance 2010* for 2010 data. Please see notes on these data in those tables.

Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

1. Unlike previous editions of *Education at a Glance*, the student-teacher ratio presented in this table is for public institutions only. Therefore, figures for 2010 may slightly vary when compared to previous editions which used data related to all institutions.

2. Minimum instruction time for 2013.

3. Reference year for teaching time 2013 instead of 2014.

4. Estimated number of hours of minimum instruction time by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.2b. [2/2] **Factors used to compute the salary cost of teachers per student in public institutions, in lower secondary education (2010 and 2014)**

	Ratio of students to teaching staff[1] (number of students per teacher)			Estimated class size (average size of classes taking into account instruction and teaching time)			Salary cost of teacher per student (in USD)		
	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)	2010	2014	Variation 2010-2014 (%)
	(10)	(11)	(12)	(13) = (4)*(10) / (7)	(14) = (5)*(11) / (8)	(15)	(16)	(17)	(18)
OECD									
Australia	12	13	**1.8**	15	16	**4.6**	4 315	4 576	**6.0**
Austria	9	9	**-5.3**	14	13	**-6.7**	5 217	5 379	**3.1**
Belgium (Fl.)	8	9	**22.7**	m	16	**m**	6 376	5 300	**-16.9**
Belgium (Fr.)	8	9	**22.7**	11	13	**24.6**	6 148	5 156	**-16.1**
Canada	18	16	**-7.5**	22	20	**-7.9**	m	3 981	**m**
Chile	24	19	**-19.8**	24	18	**-24.2**	1 065	1 343	**26.1**
Czech Republic[2]	11	12	**5.3**	15	17	**11.8**	m	1 540	**m**
Denmark	11	11	**-0.9**	16	16	**0.4**	4 898	4 752	**-3.0**
England (UK)	m	m	**m**	m	m	**m**	m	m	**m**
Estonia	15	10	**-33.3**	19	13	**-30.4**	924	m	**m**
Finland	10	9	**-9.2**	13	13	**-0.2**	4 549	4 788	**5.3**
France	15	15	**0.7**	22	23	**2.8**	2 574	2 487	**-3.4**
Germany	15	13	**-10.1**	17	15	**-11.5**	4 525	5 181	**14.5**
Greece	m	8	**m**	m	14	**m**	m	3 128	**m**
Hungary	11	11	**0.9**	12	13	**8.7**	1 415	1 776	**25.5**
Iceland[3]	10	m	**m**	16	m	**m**	3 238	m	**m**
Ireland	14	14	**-3.5**	18	18	**-2.8**	4 149	4 186	**0.9**
Israel	13	12	**-5.5**	21	18	**-15.2**	2 065	2 560	**24.0**
Italy	12	12	**-1.7**	19	19	**-2.6**	3 238	3 073	**-5.1**
Japan	15	14	**-4.8**	21	20	**-4.3**	3 297	3 552	**7.7**
Korea	20	16	**-16.8**	27	25	**-6.7**	2 512	2 882	**14.7**
Latvia	m	8	**m**	m	m	**m**	m	m	**m**
Luxembourg	9	10	**4.3**	13	11	**-16.8**	11 444	11 506	**0.5**
Mexico	36	36	**2.3**	40	40	**2.3**	909	1 000	**10.0**
Netherlands	17	16	**-1.8**	22	22	**-1.8**	m	4 097	**m**
New Zealand	17	16	**-0.6**	m	m	**m**	m	m	**m**
Norway	10	10	**-1.0**	13	13	**1.3**	4 151	4 504	**8.5**
Poland	13	11	**-18.0**	17	16	**-8.9**	1 807	2 365	**30.8**
Portugal	8	10	**27.3**	9	14	**57.2**	5 523	3 894	**-29.5**
Scotland (UK)	m	m	**m**	m	m	**m**	m	m	**m**
Slovak Republic	14	13	**-8.1**	17	16	**-6.0**	1 055	1 333	**26.3**
Slovenia	8	8	**3.8**	10	10	**-2.5**	5 235	4 548	**-13.1**
Spain	9	11	**24.4**	13	16	**25.7**	6 265	4 380	**-30.1**
Sweden[4]	11	12	**5.4**	m	m	**m**	m	m	**m**
Switzerland	12	12	**0.0**	m	m	**m**	5 937	m	**m**
Turkey	m	19	**m**	m	32	**m**	m	1 538	**m**
United States	14	16	**11.8**	m	17	**m**	m	3 846	**m**
OECD average	13	13	**-2.9**	17	17	**-3.1**	3 198	3389	**6.0**
Average for countries with all data available for 2010 and 2014	13	13	**-3.0**	18	17	**-2.3**	3 313	3 436	**3.7**

Note: Data on teachers' salaries, teaching time and ratio of students to teaching staff come from *Education at a Glance 2016* for 2014 data and from *Education at a Glance 2012* for 2010 data. Data for instruction time come from *Education at a Glance 2014* for 2014 data and *Education at a Glance 2010* for 2010 data. Please see notes on these data in those tables.

Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

1. Unlike previous editions of *Education at a Glance*, the student-teacher ratio presented in this table is for public institutions only. Therefore, figures for 2010 may slightly vary when compared to previous editions which used data related to all institutions.

2. Minimum instruction time for 2013.

3. Reference year for teaching time 2013 instead of 2014.

4. Estimated number of hours of minimum instruction time by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.2c. Factors used to compute the salary cost of teachers per student in public institutions, in upper secondary education (2014)

	Teachers' salary (annual, in USD, 2014 constant prices)	Instruction time (for students, hours per year)	Teaching time (for teachers, hours per year)	Ratio of student to teaching staff (number of students per teacher)	Estimated class size (average size of classes taking into account instruction and teaching time)
	(1)	(2)	(3)	(4)	(5) = (4)*(2) /(3)
OECD					
Australia	56 427	m	804	13	m
Austria	50 508	936	589	10	16
Belgium (Fl.)	62 699	928	513	10	18
Belgium (Fr.)	60 934	849	606	10	14
Canada	65 833	908	744	14	17
Chile	27 495	1 165	1 146	23	23
Czech Republic	18 324	a	589	11	m
Denmark	58 317	a	386	13	m
England (UK)	46 390	950	745	m	m
Estonia	m	a	568	15	m
Finland	45 999	a	547	16	m
France	37 103	1 036	648	10	16
Germany[1]	73 632	933	714	13	17
Greece	24 712	a	459	m	m
Hungary	21 016	832	590	12	17
Iceland[2]	m	a	544	m	m
Ireland	58 190	935	735	14	18
Israel	24 853	1 011	543	11	20
Italy	36 958	904	616	13	19
Japan	49 378	a	513	11	m
Korea	47 257	a	550	14	m
Latvia	m	m	m	10	m
Luxembourg	112 760	845	739	9	11
Mexico	51 527	a	848	23	m
Netherlands	66 366	925	750	19	24
New Zealand	46 082	m	760	13	m
Norway	49 842	a	523	10	m
Poland	24 828	a	545	11	m
Portugal	38 166	805	605	9	12
Scotland (UK)	43 163	a	855	m	m
Slovak Republic	16 663	879	614	14	20
Slovenia	37 751	a	570	14	m
Spain	46 865	a	693	11	m
Sweden	39 896	a	a	14	m
Switzerland	m	m	m	m	m
Turkey	29 680	838	504	16	26
United States	60 884	1 038	m	16	m
OECD average	46 379	929	641	13	19

Note: Data in this table come from *Education at a Glance 2016* or *Education at a Glance 2014* (for instruction time). Teachers' salary refers to the statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

1. Intended instruction hours in 2012 rather than instruction hours in 2013.
2. Reference year for teaching time 2013 instead of 2014.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.3. Contribution of various factors to salary cost of teachers per student in primary education (2014)

In equivalent USD, converted using PPPs for private consumption

	Salary cost of teachers per student (2014)	Difference (in USD) from the 2014 OECD average of **USD 2 832**	Contribution of the underlying factors to the difference from the OECD average: Effect (in USD) of teachers' salary below/above the 2014 OECD average of **USD 42 083**	Effect (in USD) of instruction time (for students) below/above the 2014 OECD average of **794 hours**	Effect (in USD) of teaching time (for teachers) below/above the 2014 OECD average of **775 hours**	Effect (in USD) of estimated class size below/above the 2014 OECD average of **15 students per class**
	(1)	(2)= (3)+(4)+(5)+(6)	(3)	(4)	(5)	(6)
OECD Australia	3 725	**893**	1 011	791	- 389	- 520
Austria	3 650	**818**	91	- 390	- 16	1 133
Belgium (Fl.)	4 030	**1 198**	499	114	142	442
Belgium (Fr.)	3 920	**1 089**	400	224	212	252
Canada	3 981	**1 149**	1 509	502	- 90	- 772
Chile	1 503	**-1 328**	-1 020	614	- 834	- 89
Czech Republic	973	**-1 859**	-1 427	- 293	- 109	- 31
Denmark	4 542	**1 711**	799	- 189	568	533
England (UK)	m	**m**	m	m	m	m
Estonia	m	**m**	m	m	m	m
Finland	2 960	**128**	- 188	- 667	413	571
France	1 792	**-1 040**	- 475	193	- 399	- 359
Germany	4 101	**1 270**	1 442	- 529	- 108	464
Greece	2 632	**- 200**	-1 499	- 40	874	465
Hungary	1 677	**-1 155**	-1 791	- 593	635	594
Iceland	m	**m**	m	m	m	m
Ireland	3 526	**694**	1 000	452	- 532	- 227
Israel	1 912	**- 920**	- 935	446	- 185	- 246
Italy	2 700	**- 131**	- 676	320	84	141
Japan	2 878	**46**	458	- 118	125	- 419
Korea	2 824	**- 8**	336	- 582	479	- 241
Latvia	m	**m**	m	m	m	m
Luxembourg	12 377	**9 546**	5 963	1 047	- 305	2 840
Mexico	1 009	**-1 822**	- 710	13	- 57	-1 068
Netherlands	3 235	**403**	735	515	- 557	- 289
New Zealand	m	**m**	m	m	m	m
Norway	4 240	**1 408**	168	- 214	160	1 294
Poland	2 210	**- 622**	-1 360	- 582	581	739
Portugal	2 775	**- 56**	- 274	42	122	54
Scotland (UK)	m	**m**	m	m	m	m
Slovak Republic	969	**-1 863**	-1 596	- 285	- 121	139
Slovenia	2 379	**- 453**	- 284	- 467	559	- 261
Spain	3 354	**523**	- 11	- 27	- 394	955
Sweden	m	**m**	m	m	m	m
Switzerland	m	**m**	m	m	m	m
Turkey	1 424	**-1 407**	- 780	- 204	156	- 579
United States	m	**m**	m	m	m	m

Note: The OECD averages presented in the headings of this table only take into account countries for which all variables used in the calculation of salary cost of teachers per student are available. Therefore, they may not match the OECD averages presented in Tables B7.2a.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.4. Contribution of various factors to salary cost of teachers per student in lower secondary education (2014)

In equivalent USD, converted using PPPs for private consumption

	Salary cost of teachers per student (2014)	Difference (in USD) from the 2014 OECD average of **USD 3 389**	Contribution of the underlying factors to the difference from the OECD average: Effect (in USD) of teachers' salary below/above the 2014 OECD average of **USD 44 600**	Effect (in USD) of instruction time (for students) below/above the 2014 OECD average of **916 hours**	Effect (in USD) of teaching time (for teachers) below/above the 2014 OECD average of **685 hours**	Effect (in USD) of estimated class size below/above the 2014 OECD average of **18 students per class**
	(1)	(2)= (3)+(4)+(5)+(6)	(3)	(4)	(5)	(6)
OECD						
Australia	4 576	**1 188**	993	410	- 682	466
Austria	5 379	**1 990**	214	- 75	523	1 328
Belgium (Fl.)	5 300	**1 911**	382	58	939	532
Belgium (Fr.)	5 156	**1 767**	261	247	104	1 155
Canada	3 981	**592**	1 429	23	- 306	- 554
Chile	1 343	**-2 046**	-1 196	346	-1 148	- 48
Czech Republic	1 540	**-1 849**	-2 103	- 116	261	110
Denmark	4 752	**1 364**	712	63	130	459
England (UK)	m	**m**	m	m	m	m
Estonia	m	**m**	m	m	m	m
Finland	4 788	**1 399**	- 187	- 332	613	1 306
France	2 487	**- 901**	- 562	233	162	- 735
Germany	5 181	**1 793**	1 874	- 239	- 394	552
Greece	3 128	**- 260**	-2 013	- 525	1 371	906
Hungary	1 776	**-1 613**	-2 168	- 674	384	845
Iceland	m	**m**	m	m	m	m
Ireland	4 186	**798**	1 005	80	- 269	- 19
Israel	2 560	**- 829**	-1 081	275	12	- 35
Italy	3 073	**- 316**	- 699	254	345	- 216
Japan	3 552	**164**	354	- 78	394	- 507
Korea	2 882	**- 507**	184	- 268	707	-1 130
Latvia	m	**m**	m	m	m	m
Luxembourg	11 506	**8 118**	6 132	- 584	- 559	3 128
Mexico	1 000	**-2 389**	- 427	524	- 862	-1 624
Netherlands	4 097	**708**	1 501	335	- 347	- 780
New Zealand	m	**m**	m	m	m	m
Norway	4 504	**1 115**	- 41	- 211	126	1 242
Poland	2 365	**-1 024**	-1 697	- 360	671	362
Portugal	3 894	**506**	- 571	- 97	452	722
Scotland (UK)	m	**m**	m	m	m	m
Slovak Republic	1 333	**-2 056**	-2 182	- 238	155	210
Slovenia	4 548	**1 160**	- 680	- 720	356	2 204
Spain	4 380	**991**	192	570	- 157	386
Sweden	m	**m**	m	m	m	m
Switzerland	m	**m**	m	m	m	m
Turkey	1 538	**-1 851**	- 979	- 211	770	-1 431
United States	3 846	**457**	1 206	365	-1 332	218

Note: The OECD averages presented in the headings of this table only take into account countries for which all variables used in the calculation of salary cost of teachers per student are available. Therefore, they may not match the OECD averages presented in Tables B7.2b.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B7.5. **Contribution of various factors to salary cost of teachers per student in upper secondary education (2014)**

In equivalent USD, converted using PPPs for private consumption

	Salary cost of teacher per student (2014)	Difference (in USD) from the 2014 OECD average of **USD 3 776**	Contribution of the underlying factors to the difference from the OECD average: Effect (in USD) of teachers' salary below/above the 2014 OECD average of **USD 48 929**	Effect (in USD) of instruction time (for students) below/above the 2014 OECD average of **921 hours**	Effect (in USD) of teaching time (for teachers) below/above the 2014 OECD average of **666 hours**	Effect (in USD) of estimated class size below/above the 2014 OECD average of **18 students per class**
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD						
Australia	m	**m**	m	m	m	m
Austria	5 002	**1 226**	139	73	538	477
Belgium (Fl.)	6 166	**2 391**	1 210	40	1 275	- 133
Belgium (Fr.)	5 993	**2 217**	1 054	- 392	455	1 099
Canada	4 739	**963**	1 262	- 60	- 475	236
Chile	1 212	**-2 563**	-1 311	576	-1 238	- 591
Czech Republic	m	**m**	m	m	m	m
Denmark	m	**m**	m	m	m	m
England (UK)	m	**m**	m	m	m	m
Estonia	m	**m**	m	m	m	m
Finland	m	**m**	m	m	m	m
France	3 690	**- 85**	-1 041	445	103	408
Germany	5 586	**1 810**	1 891	63	- 327	183
Greece	m	**m**	m	m	m	m
Hungary	1 697	**-2 079**	-2 208	- 278	335	72
Iceland	m	**m**	m	m	m	m
Ireland	4 175	**400**	690	63	- 393	40
Israel	2 355	**-1 421**	-2 073	295	645	- 289
Italy	2 847	**- 929**	- 924	- 59	261	- 207
Japan	m	**m**	m	m	m	m
Korea	m	**m**	m	m	m	m
Latvia	m	**m**	m	m	m	m
Luxembourg	12 172	**8 396**	5 997	- 670	- 818	3 886
Mexico	m	**m**	m	m	m	m
Netherlands	3 461	**- 315**	1 122	19	- 436	-1 019
New Zealand	m	**m**	m	m	m	m
Norway	m	**m**	m	m	m	m
Poland	m	**m**	m	m	m	m
Portugal	4 112	**337**	-1 000	- 541	385	1 492
Scotland (UK)	m	**m**	m	m	m	m
Slovak Republic	1 205	**-2 571**	-2 414	- 114	203	- 246
Slovenia	m	**m**	m	m	m	m
Spain	m	**m**	m	m	m	m
Sweden	m	**m**	m	m	m	m
Switzerland	m	**m**	m	m	m	m
Turkey	1 892	**-1 884**	-1 378	- 265	802	-1 043
United States	m	**m**	m	m	m	m

Note: The OECD averages presented in the headings of this table only take into account countries for which all variables used in the calculation of salary cost of teachers per student are available. Therefore, they may not match the OECD averages presented in Tables B7.2c.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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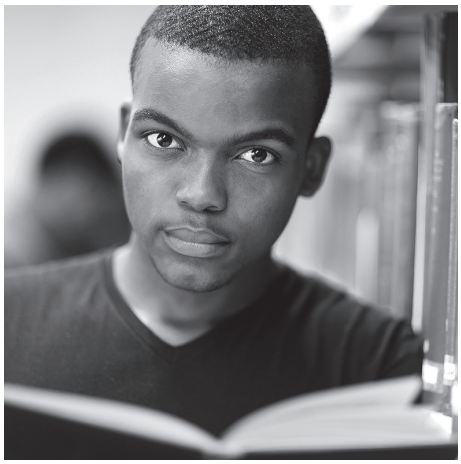
Chapter

C

Access to Education, Participation and Progression



Indicator C1 Who participates in education?
StatLink http://dx.doi.org/10.1787/888933398199

Indicator C2 How do early childhood education systems differ around the world?
StatLink http://dx.doi.org/10.1787/888933398287

Indicator C3 How many students are expected to enter tertiary education?
StatLink http://dx.doi.org/10.1787/888933398399

Indicator C4 Who studies abroad and where?
StatLink http://dx.doi.org/10.1787/888933398477

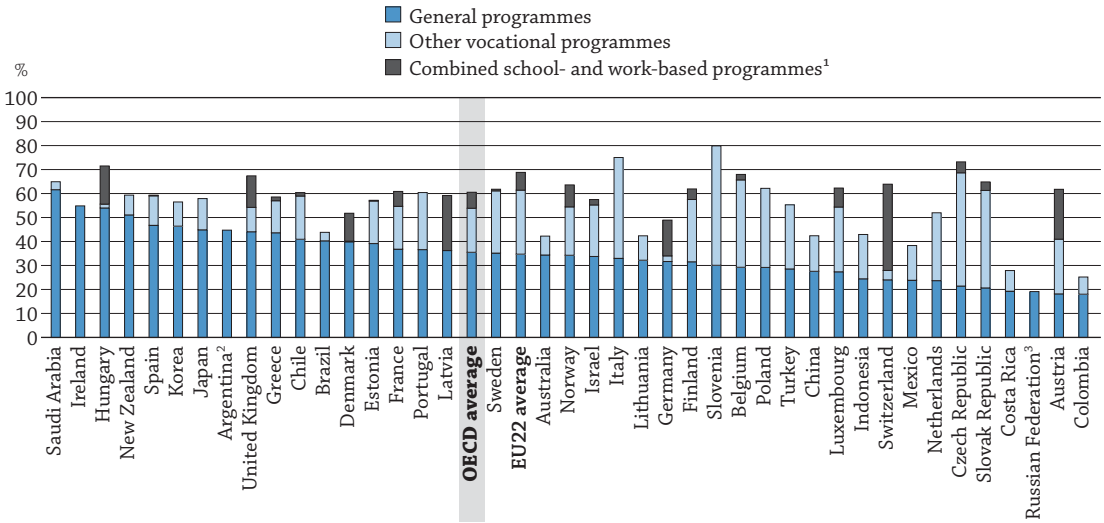
Indicator C5 Transition from school to work: Where are the 15-29 year-olds?
StatLink http://dx.doi.org/10.1787/888933398587

Indicator C6 How many adults participate in education and learning?
StatLink http://dx.doi.org/10.1787/888933398691

WHO PARTICIPATES IN EDUCATION?

- On average, across OECD countries in 2014, 35% of 15-19 year-olds were enrolled in general upper secondary education programmes, and 25% were enrolled in vocational upper secondary education programmes. More than 60% of all upper secondary students in this age group were enrolled in vocational programmes in Austria, the Czech Republic, the Slovak Republic, Slovenia and Switzerland.
- Across OECD countries, between 2005 and 2014, the average enrolment rate of 20-24 year-olds in tertiary education increased from 29% to 33%. Denmark saw the largest increase (10 percentage points), followed by Germany (8 percentage points).
- On average across OECD countries, 40% of upper secondary students older than 25 were enrolled in part-time programmes, compared to 9% for all age groups. In Belgium, Hungary, Poland and Slovenia, virtually all students in this age group enrolled in upper secondary education were in part-time programmes.

Figure C1.1. Upper secondary enrolment rates of 15-19 year-olds, by programme orientation (2014)



1. Estimate based on the enrolment rate to vocational programmes and the share of students in school- and work-based programmes over the total vocational enrolment for all ages. The enrolment rate of 15-19 year-olds to combined school- and work based programmes is likely to be over-estimated, as these programmes often target older students.
2. Year of reference 2013.
3. Enrolments in upper secondary vocational programmes (ISCED 3-Vocational) are partially included in indicators for post-secondary non-tertiary and tertiary education.

Countries are ranked in descending order of the share of students enrolled in general programmes.

Source: OECD. Table C1.3a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398250

Context

Paths through the education system can be diverse both across countries and for different individuals within the same country. The early phases of experience in the education system (excluding early childhood education) are probably the most similar across countries. At this stage, education is usually compulsory and not very differentiated, as pupils progress through primary and lower secondary education. But people have different abilities, needs and preferences, so most education systems try to offer different types of education programmes and modes of participation, especially at the more advanced levels of education (upper secondary and beyond) and for adults.

Ensuring that people have suitable opportunities to attain adequate levels of education is a critical challenge. Successful completion of upper secondary programmes is vital to address equity issues (OECD, 2010a; OECD, 2011), but graduation rates vary widely among OECD countries (see Indicator A2).

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Developing and strengthening both general and vocational education at the upper secondary level can make education more inclusive and appealing to individuals with different preferences and inclinations. In many education systems, vocational education and training (VET) enables some adults to reintegrate into a learning environment and develop skills that will increase their employability. In addition, VET programmes are often chosen by students who found it difficult to progress through earlier levels of education; and these students are thus more at risk than others of not completing upper secondary education. Some countries also make use of combined school- and work-based programmes to offer a valid education option for students who want to integrate practical and theoretical learning.

To help ensure good returns for individuals, education systems must be able to help students acquire the skills they need, both to make them employable in the short term and to enable them to pursue learning throughout their working lives (OECD, 2010b). People leave the education system at different stages for different reasons, and they may want to re-enter it later in life (see also Indicator C6). The deep structural changes that have occurred in the global labour market in recent decades suggest that better-educated individuals will continue to have an advantage as the labour market becomes increasingly knowledge-based.

Other findings

- In the large majority of OECD and partner countries, more than nine out of ten children from 4 to 17 years old were enrolled in education programmes in 2014. This pattern is broadly consistent with regulatory requirements: in most OECD countries, students begin compulsory education at the age of 6 and finish around the age of 16 or 17.
- Based on 2013 enrolment patterns, a 5-year-old in an OECD country can expect to participate in 17 years of full-time and part-time education, on average, before reaching the age of 40. The expected duration of education ranges from less than 15 years in Mexico to 19 years or more in Australia, Denmark, Finland and Sweden.
- Across the OECD countries with available data, only around 1.4% of 15-24 year-olds are enrolled in general or vocational post-secondary non-tertiary education programmes. In Chile, Denmark, Mexico, Slovenia, Turkey and the United Kingdom, these types of programmes are not offered at all, while they play a larger role in Ireland (where 8% of 15-24 year-olds are enrolled at this level), Germany (7%) and Hungary (5%).
- Almost three-quarters (72%) of upper secondary students beyond the typical age of enrolment, i.e. older than 24, are enrolled in vocational programmes, on average across OECD countries. In France, Latvia, the Netherlands and Slovenia, virtually all adults over 24 who are enrolled at this level of education follow vocational programmes.

Trends

The enrolment rate of 20-24 year-olds in tertiary education increased by 3 percentage points in the decade from 2005 to 2014, on average across OECD countries. The increase exceeded 6% in Australia, Belgium, Denmark, Germany and Switzerland, while Finland, Hungary and Norway witnessed a decrease in the enrolment rate in this period (Figure C1.2). The rate of enrolment of 15-19 year-olds in upper secondary education also increased by 4 percentage points on average across OECD countries over the same period.

Enrolment in education beyond the typical age is not the norm, but it increased slightly in tertiary education between 2005 and 2014, on average across OECD countries with available data. The OECD average enrolment rate in tertiary education programmes of 30-64 year-olds increased from 1.8% to 2.1%. In upper secondary education, the OECD average enrolment rate of 25-64 year-olds decreased slightly, from 1.0% to 0.8%.

Analysis

Enrolment in education at early ages

In 20 of the 43 countries with available data in 2014, the enrolment rate exceeds 90% for 3- and 4-year-olds, a situation defined as full enrolment in this chapter. Full enrolment in education begins even earlier (for 2-year-olds) in Denmark and Norway. This is due to the fact that, in these countries, enrolment in either pre-primary or primary programmes is very common (see Indicator C2). In the other 23 countries, full enrolment starts for children between the ages of 5 and 6, except in the Russian Federation (7-year-olds). Full enrolment ends when students are around 17 years old, on average across OECD countries, but it ends substantially earlier in India (12 years old), Mexico (13), Colombia and Costa Rica (14), and Argentina, Brazil, Indonesia and Turkey (15). There is no country in which more than 90% of 19-year-olds are enrolled in education.

To some extent, this pattern follows countries' regulatory requirements, as in most OECD countries in 2014, compulsory education started for children at the age of 6 and ended at the age of 16 or 17. The typical starting age of compulsory education ranged from 4 years old in Brazil, Luxembourg and Mexico to 7 years old in Estonia, Finland, Indonesia, the Russian Federation, South Africa and Sweden. In the United Kingdom, the starting age ranged between 4 and 5 years old, and in the United States between 4 and 6 years old.

Compulsory education comprises primary and lower secondary programmes in all OECD countries and upper secondary education in most of them, according to the theoretical age ranges associated with the different levels of education in each country. Enrolment rates among 5-14 year-olds are higher than 90% (i.e. there is universal coverage of basic education) in nearly all OECD and partner countries with available data. In 2014, enrolment rates in 35 out of the 42 countries with available data for this age range were around 95% or higher (Table C1.1, and Table X1.3 in Annex 1).

Box C1.1. Expected years in education

Expected years in education from age 5 through 39 are estimated as the sum of the age-specific enrolment rates for people of those ages in each country with available data. This means that expected years in education can be interpreted as the expected average number of years in which an individual who is now 5 years old is expected to be enrolled in education if current enrolment rates persist for the next 35 years. It cannot, however, be interpreted as a measure of educational attainment.

Based on 2014 enrolment patterns, a 5-year-old in an OECD country can expect to participate in education for more than 17 years, on average, before reaching the age of 40. Women can expect to be enrolled in education about half a year more than men, on average across OECD countries.

Among countries with available data, the expected number of years in education ranges from 15 or less in Mexico to 19 or more in Australia, Denmark, Finland and Sweden (Table C1.1).

Even beyond the age of 40, enrolment rates can be still considerable. For example, based on 2014 data, in Australia, Finland, New Zealand and Sweden, more than 4% of 40-64 year-olds were enrolled in an education programme (OECD education database). This may be explained by larger part-time enrolments and/or by lifelong learning programmes in these countries. For instance, credit-based systems in Sweden allow adults to study selected parts of a programme in formal education as a way to upgrade their skills in a specific area.

Participation of 15-24 year-olds in upper secondary and post-secondary non-tertiary education

In recent years, countries have increased the diversity of their upper secondary programmes. This diversification is both a response to the growing demand for upper secondary education and a result of changes in curricula. Curricula have gradually evolved from separating general and vocational programmes to offering more comprehensive programmes that include both types of learning, leading to more flexible pathways into further education or the labour market.

Based on 2014 data, enrolment rates among 15-19 year-olds (i.e. those typically in upper secondary programmes or in transition to upper levels of education) reached at least 80% in 29 of the 41 countries with available data. In Belgium, the Czech Republic, Ireland, Latvia, Lithuania, the Netherlands and Slovenia, these rates were higher

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than 90% (Table C1.1). By contrast, the proportion of people of this age group who were not enrolled in education exceeded 20% in Austria, Argentina, Brazil, Canada, Chile, Italy, Indonesia, Luxembourg and Turkey. In Israel, about 35% of those in this age group were not enrolled in education, largely due to conscription, while in Colombia, Costa Rica and Mexico, this proportion exceeded 40% (Table C1.1).

On average across OECD countries, 60% of 15-19 year-olds are enrolled in upper secondary education programmes. In 4 countries, out of 44 with available data, more than 70% of 15-19 year-olds are enrolled in an upper secondary education programme (the Czech Republic, Hungary, Italy and Slovenia) (Table C1.5). As they get older, students typically move on to other types of programmes, and the enrolment rate in upper secondary education (combined general and vocational) decreases. Among 20-24 year-olds, the enrolment rate is 6% on average across OECD countries, although with substantial variation across countries. In Chile, Colombia, Indonesia, Ireland, Israel, Korea, Mexico and the Slovak Republic, less than 2% of young people in this age group are enrolled in upper secondary education. By contrast, in Denmark, Finland, Germany, the Netherlands, Sweden and Switzerland, the rate is more than 10% (Table C1.3a).

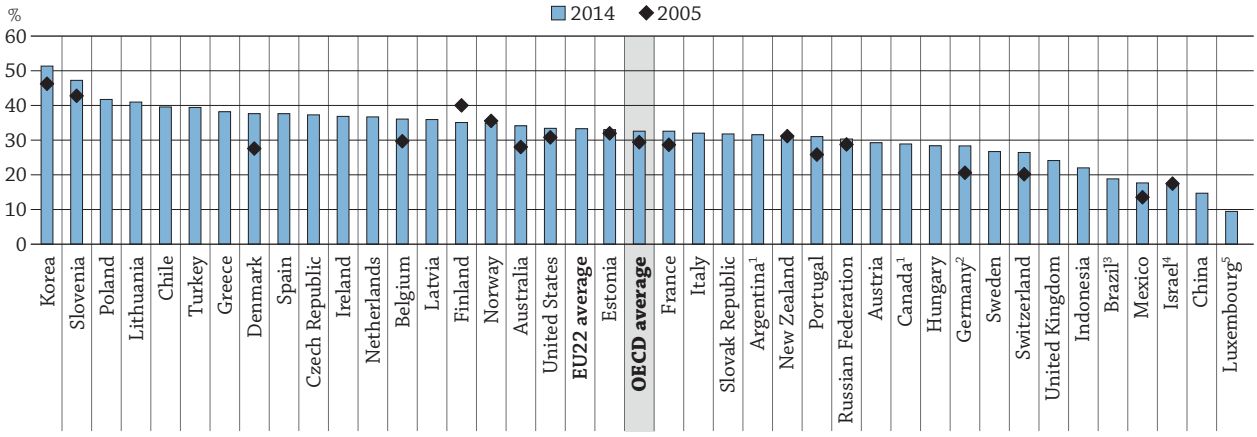
Post-secondary non-tertiary education programmes play a smaller role in most OECD countries. In Chile, Denmark, Mexico, Slovenia and Turkey, these types of programmes are not offered at all (Table C1.5). Across the other OECD countries with available data, around 1.5% of 15-24 year-olds are enrolled in programmes at this level, either general or vocational. However, in some countries, enrolment at this level is more substantial. In Ireland, the proportion of 15-24 year-olds who are enrolled in post-secondary non-tertiary education is almost 8%, while in Germany it is more than 7%, and in Hungary it is more than 5% (Table C1.5).

Participation of 20-29 year-olds in education

In 2014, an average of more than 28% of 20-29 year-olds in OECD countries were enrolled in upper secondary, post-secondary non-tertiary education or tertiary education programmes. The largest proportions of this age group enrolled in education (more than 40%) were found in Denmark and Finland. Meanwhile, in Luxembourg and Mexico, less than 15% of young adults in this age group were enrolled (Table C1.1).

In Denmark and Finland, the high enrolment rate in this age group is partly due to the high enrolment rate in upper secondary or post-secondary non-tertiary education in these two countries (between 13% and 14%). Along with Germany (12%), these are the highest rates among OECD and partner countries, more than twice the OECD average (5%). In all countries, including these three, a much larger proportion of individuals are enrolled in tertiary education programmes: 22% on average. Tertiary education constitutes the typical level of enrolment for individuals in this age group (Table C1.1).

Figure C1.2. Change in tertiary enrolment rates among 20-24 year-olds (2005 and 2014)



1. Latest year of reference 2013.
2. Year of reference 2006 instead of 2005.
3. Underestimated because it excludes enrolments in master's and doctoral or equivalent programmes (ISCED levels 7 and 8).
4. Underestimated because it excludes enrolments in short-cycle tertiary education.
5. Underestimated because many resident students go to school in neighbouring countries.

Countries are ranked in descending order of the enrolment rates to tertiary education of 20-24 year-olds in 2014.

Source: OECD. Table C1.5. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398261

On average across OECD countries, 33% of individuals between 20 and 24 years old are enrolled in tertiary education. The proportion is largest in Korea (51%), followed by Lithuania, Poland and Slovenia (above 40%). In contrast, the proportion is lower than 25% in Brazil, China, Indonesia, Israel, Luxembourg, Mexico and the United Kingdom (Table C1.5 and Figure C1.2).

From 2005 to 2014, the enrolment rate of 20-24 year-olds in tertiary education increased from 29% to 33%, on average across OECD member countries with available data for both years. The largest increase was in Denmark (more than 10 percentage points), followed by Germany (almost 8 percentage points), while three countries witnessed a decrease in the enrolment rate in this ten-year span, Finland (by 5 percentage points), Hungary and Norway (both by 1 percentage point) (Table C1.5).

Vocational education and training programmes

Many countries have recently renewed their interest in vocational education and training programmes, as these programmes are seen as effective in developing skills among those who would otherwise lack qualifications to ensure a smooth and successful transition into the labour market (OECD, 2010a). Countries with well-established VET and apprenticeship programmes have been more effective in holding the line on youth unemployment (see Indicator C5). At the same time, some countries consider vocational education a less-attractive option than academic education, and some research suggests that participation in vocational education increases the risk of unemployment at later ages (Hanushek, Woessmann and Zhang, 2011).

In many countries, a student who successfully completes an apprenticeship programme is awarded an upper secondary or post-secondary qualification. In some countries, it is possible to earn higher qualifications, such as the Advanced Diploma awarded in Australia. Vocational programmes in OECD countries offer different combinations of vocational studies along with apprenticeship programmes. Upper secondary students in many education systems can enrol in vocational programmes, but some OECD countries delay vocational training until students graduate from upper secondary education. For instance, while vocational programmes are offered as upper secondary education in Austria, Hungary and Spain, similar programmes are typically offered as post-secondary education in Canada (see Indicator A2).

On average, across OECD countries, 35% of 15-19 year-olds were enrolled in general upper secondary education programmes in 2014, while 25% were enrolled in vocational upper secondary education programmes (Figure C1.1 and Table C1.3a). In other words, about 40% of the 15-19 year-old students enrolled in upper secondary education programmes were in a vocational programme (Table C1.3a). In more than one-quarter of the countries for which 2014 data are available, more than half of upper secondary students participated in vocational programmes. The share of upper secondary students in this age group enrolled in vocational programmes was 71% in Austria and the Czech Republic, and exceeded 50% in Belgium, Italy, Luxembourg, the Netherlands, Poland, the Slovak Republic, Slovenia and Switzerland. In the other countries, more than 50% of upper secondary students were enrolled in general programmes rather than in VET. This proportion was larger than 80% in Australia, Brazil, Hungary, Korea, New Zealand and Saudi Arabia (Table C1.3a).

In combined school- and work-based programmes, at least 10% and less than 75% of the curriculum is presented in the school environment or through distance education (Box C1.2). Among the 20 OECD countries that offer these types of programmes and for which data are available, on average, a third of the students enrolled in vocational programmes in upper secondary education are in school- and work-based programmes. This proportion exceeds 47% in Austria and the United Kingdom, and 85% in Denmark, Germany, Latvia and Switzerland.

Students beyond the typical enrolment age

Adult education aims to improve the technical or professional qualifications of adults, develop their abilities and enrich their knowledge. Participants in adult education may or may not complete a level of formal education, but they stand to gain from acquiring or updating knowledge, skills and competencies. It is crucial to provide and ensure access to organised learning opportunities for adults beyond initial formal education. For example, this can help adults who need to adapt to changes throughout their working careers, those who want to enter the labour force and feel that they lack the necessary qualifications, or those who feel they need to improve their skills and knowledge to participate more actively in social life. Adult learning takes many forms, including formal and non-formal education, on-the-job training and informal education. This section deals with formal educational programmes (i.e. institutionalised, intentional and planned education which is provided by public organisations and recognised private bodies). A broader view of adult education, including non-formal education, is found in Indicator C6.

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Box C1.2 Combined school- and work-based programmes in a cross-national perspective

National VET systems are the result of country-specific institutional developments. Across countries, they differ in various aspects, such as educational governance, specification of curricula, quality control procedures or the involvement of social partners.

A widespread type of VET in OECD and EU countries are combined school- and work-based programmes, at least at the upper secondary and post-secondary non-tertiary level of education. A combined school- and work-based programme is a vocational education where periods of schooling and periods of work form an integrated formal education or training activity. Between 25% and 90% of the learning activities should take place in the work environment (see the *Definitions* section at the end of this indicator).

The combination of learning in the work environment and in school provides numerous advantages. Learners get an education that combines practical and theoretical learning. Firms benefit because education can be tailored to workplace needs, and students become familiar with firm-specific procedures. Thus combined school- and work-based programmes reduce skill mismatch and provide hiring possibilities for firms.

Combined school- and work-based programmes can be quite different in terms of their practical arrangements. Work and study periods alternate continually over the course of the programmes, with varying proportions of study and work across countries. In Germany, for example, the ratio is 30% school-based time and 70% work-based training time. Belgium has a minimum threshold of 50% of training in the company, (Cedefop, 2014a; Cedefop, 2014c). In other systems, school-based study and work-based study may be consecutive instead of parallel. The Norwegian 2+2 Model, for instance, divides a four-year vocational training course into a two-year school-based learning period and a two-year work-based learning period.

Furthermore, combined school- and work-based programmes can differ in cost models. In some countries, such as the Czech Republic, Iceland or Sweden, students do not receive systematic payment. In other countries, such as Austria, Denmark or Switzerland, paid employment is a part of the VET system (in this case they are also classified as "work-study programs") (see the *Definitions* section at the end of this indicator). The requirement to pay wages has an impact on the design of work-based learning, because employers have to consider the productivity of students. Basically, two cost models are differentiated (Merrilees, 1983). Productivity-oriented VET models regard students as a productive workforce. In this case, VET students ideally begin to provide an overall productive output during their education. In contrast, in investment-oriented models, employers get productive outputs from employees only after their education. Which cost model prevails in firms or countries depends on factors such as institutional regulations or sector-specific particularities. In Germany, it was found that about a third of apprentices generate a productive output during their education (Wenzelmann et al., 2009).

The proportion of 25-64 year-olds enrolled in upper secondary education fell from 1% to 0.8% between 2005 and 2014, on average across the OECD countries with data for both years. For post-secondary non-tertiary education, it rose from 0.2% to 0.3%. However, in some countries, a more substantial proportion of adults was enrolled in upper secondary and post-secondary education combined in 2014. For example, this proportion was equal to or larger than 3% in Australia, Belgium, Finland and New Zealand. This shows that, although enrolment in programmes at this level of education is not common beyond the typical age (15-19 years old), many adults still take advantage of the opportunity that formal education offers to improve their skills and deepen their academic knowledge (Table C1.5).

Almost three-quarters (72%) of 25-64 year-old upper secondary students were enrolled in vocational programmes on average across OECD countries. This share is similar to that of 20-24 year-olds (66%), but much larger than among 15-19 year-olds (40%) (Table C1.3a). In some countries, for example France, Latvia and Slovenia, virtually all adults over 24 years old enrolled in upper secondary education follow vocational programmes. In Australia, the Czech Republic, Finland, Germany, Italy, New Zealand, Portugal, the Slovak Republic and the United Kingdom, nine enrolled adult students out of ten (or more) are in vocational programmes. General programmes account for a majority of the adults over 24 years old in only 10 of the 30 countries with available data (Table C1.3a).

This can be explained by the fact that, in many education systems, VET suits the needs of some adults to reintegrate into a learning environment and develop skills that will increase their employability. For example, the Australian VET system is flexible and able to satisfy different needs at different stages of people's lives, whether they are preparing for a first career, seeking additional skills to assist in their work or catching up on educational attainment. The larger share of older students enrolled in vocational programmes is also partially explained by the fact that VET programmes also tend to cater to students who found earlier levels of education difficult and sometimes graduated from the earlier levels at a later age.

At the level of tertiary education, enrolment of adults between 30 and 64 years old increased from 1.8% to 2.1% between 2005 and 2014, on average across the OECD countries with available data. However, in the Russian Federation, the tertiary enrolment rate among 30-64 year-olds more than tripled in this time period (although it started from a low base of 0.4%), and it increased by 54% in Germany. In contrast, it declined by about one-quarter in Hungary and one-half in Slovenia. As proportion of the population in this age group, the countries with more 30-64 year-olds enrolled in tertiary education are Australia (3.7%), New Zealand (3.6%), and Norway, Sweden, Turkey and the United States (3% or above).

Part-time studies

In some countries, some educational institutions offer formal part-time programmes, accounting for a varying proportion of their students. In other countries, formal part-time programmes do not exist, but students may still study part-time, if their intended study load is lower than 75% of the normal, full-time annual study load. In any case, part-time students are expected to require a longer period of time than full-time students to complete an equivalent programme.

The availability and offer of part-time studies make education systems more flexible, in the sense that they increase the number of options through which students can combine financial, career and family needs. There are many people who would like to study to gain relevant skills and knowledge, but not as their main occupation. For example, across European countries, 11% of 20-24 year-olds who are enrolled in tertiary education see themselves not as students but as workers who study on the side, and this share increases to 70% for those who are 30 or older (Beblavý and Fabo, 2015). Part-time students are heterogeneous in their aims, expectations and attitudes. As found by a large research project conducted in the United Kingdom (Callender, Hopkin and Wilkinson, 2010), they tend to be vocationally-oriented, but they also value intrinsic motivations and they choose to study part-time for both financial and pragmatic reasons.

Hence, it is not surprising that adults beyond the typical enrolment age, who are more likely to have tight time constraints due to work and family life, are more likely to study part-time than younger people. On average across OECD countries, 40% of upper secondary students between 25 and 64 were enrolled in a part-time programme in 2014, compared to 9% for all students. Virtually all upper secondary education students over 25 were enrolled part time in Belgium, Hungary, Poland and Slovenia. For some countries, for example Belgium, this is mostly due to the existence of specific adult education programmes. By contrast, in all countries, more than two-thirds of upper secondary students of all ages are enrolled in full-time programmes (Figure C1.3 and Table C1.4).

The situation is similar for post-secondary non-tertiary education. In general, the incidence of part-time studies is quite high at this level of education, possibly reflecting the vocational nature of many programmes. On average across OECD countries, 25% of post-secondary non-tertiary students were enrolled part time in 2014, but this percentage rose to 32% for students between 25 and 64 years old. Short-cycle tertiary education presented a similar situation, with 22% of its students (all age groups) enrolled in part-time education, which increased to 38% for students between 30 and 64 years old.

Across all age groups, some 18% of students at the bachelor's level and 24% of students at the master's or equivalent level are enrolled part time, on average across OECD countries. The share of part-time students was even higher for students between 30 and 64 years old: 47% at the bachelor's level and 43% at the master's level, on average across OECD countries. In some countries, part-time studies are even more prevalent. For example, in Finland, Hungary, Luxembourg, New Zealand, Poland, the Russian Federation and the United Kingdom, around four out of five (or more) students over 30 were in part-time programmes at the master's or equivalent level. In contrast, formal part-time programmes were not offered at the bachelor's and master's or equivalent level in Austria, Brazil, Italy, Mexico and Turkey.

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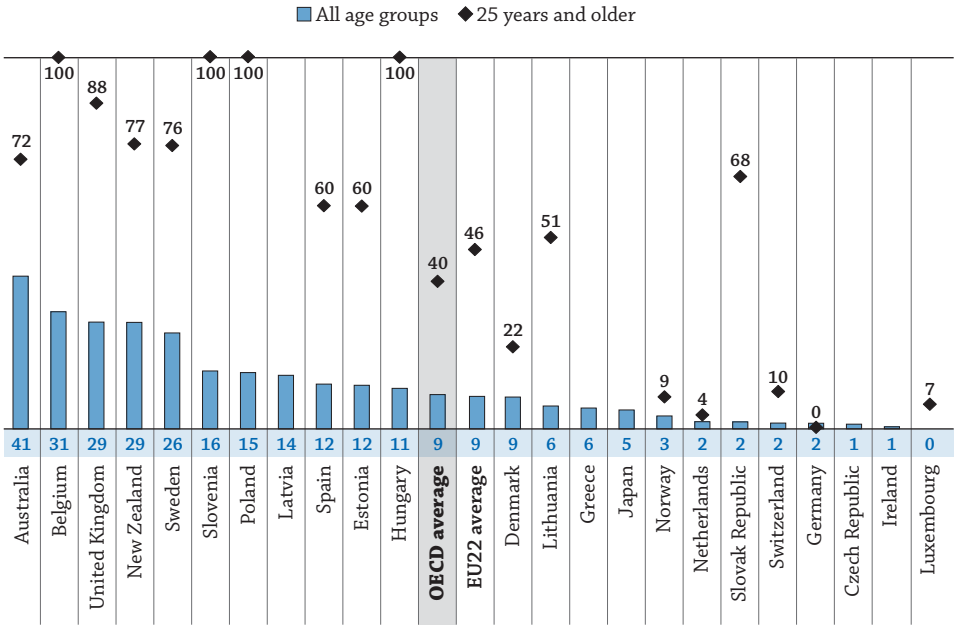
Figure C1.3. Share of students in upper secondary education enrolled in part-time programmes, by age group (2014)



Countries are ranked in descending order of the share of students in upper secondary education of all ages enrolled in part-time programmes.

Source: OECD. Table C1.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398277

Box C1.3 The relative size of the public and private sectors

As the data from the OECD database show, in most OECD and partner countries, most students, from primary through tertiary education, are enrolled in public institutions. On average across OECD countries in 2014, around 89% of primary students and 80% of upper secondary students were enrolled in public schools. Of all OECD and partner countries, in only four (Colombia, India, Indonesia and Japan) were less than 80% of all upper secondary students enrolled in public or government-dependent private institutions.

Based on the new ISCED 2011 classification, 72% of tertiary students were enrolled in public institutions in 2014, on average across OECD countries. At least 90% of students in tertiary education were enrolled in public institutions in Australia, Denmark, Germany, Ireland, Italy, Sweden and Turkey. In contrast, less than 20% of tertiary students were enrolled in public institutions in Chile, Estonia, Israel, Korea, Latvia and the United Kingdom (where 100% of students were enrolled in government-dependent private institutions).

Definitions

The data in this chapter cover formal education programmes that represent at least the equivalent of one semester (or one-half of a school/academic year) of full-time study and take place entirely in educational institutions or are delivered as a combined school- and work-based programme.

In **combined school- and work-based programmes**, at least 10% but less than 75% of the curriculum is presented in the school environment or through distance education. Therefore, the amount of work-based component of a school- and work- based programme would be a minimum of 25% and a maximum of 90%. These programmes can be organised in conjunction with education authorities or institutions. They include apprenticeship programmes that involve concurrent school-based and work-based training, and programmes that involve alternating periods of attendance at educational institutions and participation in work-based training (sometimes referred to as "sandwich" programmes). Combined school- and work-based programmes, which also include work-study programmes, are part of the broader group of VET programmes (see definitions below).

General education programmes are designed to develop learners' general knowledge, skills and competencies, often to prepare participants for other general or vocational education programmes at the same or a higher education level. General education does not prepare for employment in a particular occupation, trade or class of occupations or trades.

The **part-time or full-time status of students**, also referred to as intensity of participation, refers to students' intended study load (including study activities inside and outside the educational institution). A full-time student is a student whose intended study load amounts to at least 75% of the normal full-time annual study load. For a part-time student, the intended study load is smaller. These definitions are clearly dependent on the concept of normal full-time study load, which is the study time or resource commitment during a single school or academic year expected of a full-time student enrolled in a given education programme.

In **school-based programmes**, instruction takes place (either partially or exclusively) in educational institutions. These include special training centres run by public or private authorities, or enterprise-based special training centres if they qualify as educational institutions. These programmes can have an on-the-job training component involving some practical experience in the workplace. Programmes are classified as school-based if at least 75% of the programme curriculum is presented in the school environment. This may include distance education.

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. Vocational programmes are further divided into two categories (school-based programmes and combined school- and work-based programmes), based on the amount of training provided in school as opposed to the workplace. The degree to which a programme has a vocational or general orientation does not necessarily determine whether participants have access to tertiary education. In several OECD countries, vocationally-oriented programmes are designed to prepare students for further study at the tertiary level, and in some countries general programmes do not always provide direct access to further education.

As outlined in the definition in Chapter C5, **work-study programmes** are a form of combined school- and work-based programmes, which require that students receive earnings for at least part of their work periods.

Methodology

Data on enrolments are for the school year 2013/14 (unless otherwise specified) and are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat. Except where otherwise noted, figures are based on head counts, because of the difficulty for some countries to quantify part-time study. In some OECD countries, part-time education is only partially covered in the reported data. Net enrolment rates, expressed as percentages in Table C1.1a, 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.

Expected years in education are calculated as the proportion of the population enrolled at each specific age, from 5 to 39 (Box C1.1). Hence, this estimate represents the number of years in which an individual is expected to be enrolled in an educational programme (either part time or full time) between the ages of 5 and 39. This interpretation assumes that that the current patterns of enrolment will remain unchanged over time. In any case, this estimate does not represent a measure of effective, full-time equivalent years spent in education.

For the computation of the OECD, EU22 and G20 averages in the tables annexed to this chapter the flag "a" (not applicable) has been considered as 0. For example, if in a country there are no post-secondary non-tertiary programmes (ISCED level 4), then this country is treated for the purpose of computing cross-country averages as if no student were enrolled at this level. In tables designed to analyse trends, only countries with data for all years have been considered in computing the averages.

Note regarding data from Israel

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

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Indicator C1 Tables

StatLink http://dx.doi.org/10.1787/888933398199

	Table C1.1	Enrolment rates and expected years in education, by age group (2014)
	Table C1.2	Students enrolled as a percentage of the population between the ages of 15 and 20 (2014)
	Table C1.3a	Enrolment of students in upper secondary education, by programme orientation and age group (2014)
WEB	Table C1.3b	Enrolment in post-secondary non-tertiary education, by programme orientation and age group (2014)
	Table C1.4	Percentage of students enrolled part time, by ISCED level and age group (2014)
	Table C1.5	Change in enrolment rates for selected age groups (2005 and 2014)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

C1

Table C1.1. Enrolment rates and expected years in education, by age group (2014)

Students in full-time and part-time programmes in both public and private institutions

		Number of years at which at least 90% of the population of school age are enrolled	Age range at which at least 90% of the population of school age are enrolled	Students as a percentage of the population of a specific age group				Enrolment rate of total population	Expected years in education ages 5-39		
						Ages 20-29			All levels of education combined		
				Ages 5-14	Ages 15-19	Upper secondary or post-secondary non-tertiary education	Tertiary Education		M + W	Men	Women
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	13	5-17	100	87	9	23	30	19	19	19
	Austria	13	4-16	98	80	3	23	21	17	17	17
	Belgium	15	3-17	98	92	6	22	27	18	18	19
	Canada[1, 2]	12	5-16	91	73	3	19	18	16	16	17
	Chile	13	5-17	97	80	1	27	28	17	17	17
	Czech Republic	12	6-17	98	90	m	23	20	17	17	18
	Denmark	16	2-17	99	87	14	32	29	20	19	20
	Estonia	10	8-17	73	90	6	23	17	16	15	17
	Finland	13	6-18	97	86	13	28	27	20	19	20
	France	15	3-17	99	85	2	19	23	16	16	17
	Germany	15	3-17	99	90	12	23	21	18	19	18
	Greece[3]	13	5-17	96	83	2	26	21	17	17	17
	Hungary	14	4-17	97	86	6	19	20	17	17	17
	Iceland	m	m	m	m	m	m	m	m	m	m
	Ireland	15	4-18	100	95	6	21	27	18	18	18
	Israel	15	3-17	98	65	1	21	33	16	15	16
	Italy[4]	15	3-17	98	77	2	22	18	16	16	17
	Japan	14	4-17	100	94	m	m	16	16	16	16
	Korea	14	4-17	98	87	0	31	23	17	18	17
	Latvia	15	4-18	98	92	5	23	20	18	17	18
	Luxembourg	13	4-16	97	76	6	7	19	15	15	15
	Mexico	9	5-13	100	56	1	11	30	15	15	15
	Netherlands	14	4-17	99	92	8	24	24	18	18	18
	New Zealand	14	4-17	99	82	7	22	30	18	17	18
	Norway	16	2-17	99	87	6	25	28	18	18	19
	Poland	14	5-18	96	89	6	25	21	18	17	18
	Portugal	14	4-17	100	89	4	20	20	17	17	17
	Slovak Republic	10	7-16	94	85	2	19	19	16	16	17
	Slovenia	14	5-18	97	93	4	28	21	18	18	19
	Spain	15	3-17	97	87	5	24	22	18	18	18
	Sweden	16	3-18	98	85	9	21	27	19	18	20
	Switzerland	13	5-17	100	85	7	20	19	17	18	17
	Turkey	10	6-15	96	72	5	29	30	17	18	17
	United Kingdom[5]	14	4-17	99	85	6	15	23	17	17	17
	United States	12	5-16	97	82	1	24	25	17	17	18
	OECD average	14	4-17	97	84	5	22	24	17	17	18
	EU22 average	14	4-17	97	87	6	22	22	17	17	18
Partners	Argentina[1]	11	5-15	100	72	m	m	33	18	17	19
	Brazil[6]	11	5-15	97	69	5	14	28	16	16	16
	China	m	m	m	m	m	m	19	m	m	m
	Colombia	6	m	82	44	1	m	24	m	m	m
	Costa Rica	10	5-14	99	51	3	m	22	m	m	m
	India	7	6-12	87	m	m	m	24	m	m	m
	Indonesia	10	6-15	89	71	m	m	27	m	m	m
	Lithuania	13	6-18	99	93	5	27	23	m	m	m
	Russian Federation	11	7-17	93	83	1	18	20	16	16	16
	Saudi Arabia	12	6-17	m	m	m	m	31	16	17	15
	South Africa[1]	m	m	m	m	m	m	27	m	m	m
	G20 average	12	5-16	96	~	~	~	25	~	~	~

1. Year of reference 2013.
2. Excludes early childhood and post-secondary non-tertiary education.
3. At bachelor's level and for age 29, only students enrolled to the Open University are included.
4. Data on primary and lower secondary enrolment by age refer to 2012.
5. Data for 3-year-olds only include children who have a funded place.
6. Excludes enrolments in master's and doctoral and equivalent programmes (ISCED levels 7 and 8).

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C1.2. Students enrolled as a percentage of the population between the ages of 15 and 20 (2014)

Percentage of the population enrolled by age and level of education

		Age 15	Age 16	Age 17			Age 18			Age 19			Age 20		
		Secondary	Secondary	Secondary	Post-secondary non-tertiary	Tertiary	Secondary	Post-secondary non-tertiary	Tertiary	Secondary	Post-secondary non-tertiary	Tertiary	Secondary	Post-secondary non-tertiary	Tertiary
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD	Australia	100	99	84	1.0	5.8	38	3.3	33	23	3.8	44	19	3.5	45
	Austria	95	91	75	0.6	13.2	44	1.3	29	19	1.6	31	9	1.8	31
	Belgium	98	98	96	0.1	1.1	50	2.2	37	26	4.1	50	12	4.2	53
	Canada[1]	93	91	77	m	2.8	27	m	29	11	m	39	7	m	38
	Chile	95	92	91	a	0.2	34	a	29	11	a	46	4	a	48
	Czech Republic	100	98	96	m	0.1	88	m	1	49	m	24	15	m	42
	Denmark	99	95	91	a	0.0	86	a	1	57	a	8	31	a	23
	Estonia	98	98	95	0.0	0.2	88	0.2	1	34	6.6	29	12	8.8	37
	Finland	98	94	94	0.0	0.1	94	0.0	1	36	0.0	16	20	0.1	28
	France	97	93	87	0.1	2.7	38	0.8	38	15	0.7	48	6	0.4	47
	Germany	99	96	90	3.4	0.3	73	5.2	6	38	16.7	18	23	15.2	27
	Greece	93	94	93	0.0	0.8	19	0.4	47	12	2.9	54	7	2.8	55
	Hungary	98	94	91	0.2	0.4	71	5.9	5	31	16.8	22	13	14.4	32
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	100	100	89	4.7	3.7	45	14.8	31	3	15.4	58	1	10.2	61
	Israel	97	95	90	0.0	0.4	16	0.1	8	2	0.6	13	1	0.8	14
	Italy	98	95	92	0.0	0.0	77	0.0	0	21	0.1	2	8	0.1	31
	Japan	98	97	95	0.0	m	3	1.0	m	1	0.1	m	m	m	m
	Korea	99	99	95	m	1.0	8	m	63	0	m	74	0	m	68
	Latvia	98	97	96	0.0	0.4	89	0.3	3	38	3.0	36	14	3.1	44
	Luxembourg	94	91	80	0.0	0.0	70	0.0	1	44	0.1	3	25	0.3	9
	Mexico	74	67	55	a	2.9	24	a	18	11	a	24	6	a	25
	Netherlands	99	98	89	0.0	7.3	63	0.0	25	42	0.0	37	27	0.0	43
	New Zealand	97	97	85	2.4	2.4	28	6.7	33	11	6.3	42	7	5.1	44
	Norway	100	95	93	0.0	0.0	89	0.0	0	38	0.4	19	20	0.6	34
	Poland[2]	96	96	95	0.0	0.0	92	0.1	0	41	3.9	24	11	7.6	43
	Portugal	98	99	96	0.0	0.5	54	1.3	25	29	2.0	35	15	1.7	40
	Slovak Republic	97	93	89	0.0	0.1	77	3.1	3	33	5.4	24	6	3.6	36
	Slovenia	97	97	96	a	0.0	87	a	4	33	a	52	7	a	57
	Spain	96	97	90	0.0	0.0	44	0.0	35	28	0.0	45	18	0.0	48
	Sweden	99	99	98	0.0	0.2	94	0.0	1	23	1.2	17	14	1.4	24
	Switzerland	98	93	90	0.6	0.3	79	0.9	4	50	1.1	11	25	1.2	21
	Turkey	91	85	71	a	1.5	28	a	24	14	a	41	10	a	46
	United Kingdom	99	100	96	a	1.0	42	a	21	22	a	37	14	a	40
	United States	100	94	83	0.1	1.1	30	1.4	38	6	2.3	52	0	2.2	47
	OECD average	97	95	89	0.4	1.5	56	1.6	18	25	3.1	33	12	3.0	39
	EU22 average	98	96	92	0.4	1.5	68	1.7	14	31	3.8	30	14	3.6	39
Partners	Argentina[1]	94	88	76	a	0.9	36	a	18	18	a	30	9	a	33
	Brazil[3]	89	87	66	1.1	5.0	34	2.7	14	18	2.7	18	12	2.5	22
	China	69	68	65	m	2.5	38	m	17	12	m	30	m	3.1	26
	Colombia	79	67	38	0.3	m	19	0.3	m	9	0.2	m	5	0.1	m
	Costa Rica	75	72	49	a	m	33	a	m	20	a	m	14	a	m
	India	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	91	81	83	a	0.0	47	a	7	15	a	28	6	a	26
	Lithuania	100	99	98	0.0	0.4	87	0.9	7	23	6.1	48	7	7.1	52
	Russian Federation[3]	87	58	39	13.7	39.0	3	12.1	61	0	5.6	60	0	2.4	53
	Saudi Arabia	100	100	100	m	m	37	m	m	20	m	m	18	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	93	88	80	~	4.4	34	~	26	19	~	36	~	2.3	~

1. Year of reference 2013.
2. The enrolment of 18-year-olds in tertiary education includes younger students.
3. Enrolments in upper secondary vocational programmes (ISCED 3-Vocational) are partially included in indicators for post-secondary non-tertiary and tertiary education.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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C1

Table C1.3a. Enrolment of students in upper secondary education, by programme orientation and age group (2014)

Enrolment rate and share of students by programme orientation, for selected age groups

	Share of students by programme orientation, all ages			Enrolment rate among 15-19 year-olds			Enrolment rate among 20-24 year-olds			Share of students in vocational programmes, by age group		
	General	Vocational	Of which, in combined school- and work-based programmes	General	Vocational	Of which, in combined school- and work-based programmes[1]	General	Vocational	Of which, in combined school- and work-based programmes[1]	15-19 year-olds	20-24 year-olds	25-64 year-olds
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	49	51	x(2)	34	8	x(5)	1.5	8.3	x(8)	19	85	95
Austria	30	70	33	18	44	21	0.4	3.4	1.6	71	89	87
Belgium	40	60	4	29	39	2	1.4	3.2	0.2	57	70	61
Canada[2]	95	5	x(2)	m	m	m	m	m	m	m	m	m
Chile	70	30	2	41	19	1	1.5	0.3	0.0	32	18	18
Czech Republic	27	73	6	21	52	5	0.2	5.4	0.5	71	96	98
Denmark	58	42	42	40	12	12	6.3	13.1	13.0	23	68	75
Estonia	65	35	0	39	18	0	1.8	2.6	0.0	32	59	42
Finland	30	70	10	32	30	q	1.2	14.6	q	49	92	98
France	57	43	11	37	24	6	0.1	2.8	0.7	40	95	100
Germany	52	48	41	32	17	15	1.3	9.6	8.3	35	88	97
Greece[3]	69	31	3	44	15	2	0.3	3.0	0.3	25	88	m
Hungary	75	25	23	54	18	16	3.0	2.1	1.9	24	41	23
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	100	a	a	55	a	a	1.0	a	a	a	a	a
Israel[4]	59	41	4	34	24	2	0.2	0.0	0.0	41	8	
Italy	44	56	x(2)	33	42	x(5)	0.3	2.2	x(8)	56	88	93
Japan	77	23	a	45	13	a	m	m	m	22	m	m
Korea[4]	82	18	a	46	10	a	0.0	0.0	a	18	20	
Latvia	60	40	40	36	23	23	5.2	3.2	3.2	39	38	99
Luxembourg	40	60	14	27	35	8	0.9	9.1	2.1	56	91	87
Mexico	62	38	0	24	14	0	0.9	0.7	0.0	38	45	44
Netherlands[5]	m	m	m	24	28	m	0.3	12.7	m	54	98	99
New Zealand	66	34	x(2)	51	8	m	0.4	4.4	m	14	91	94
Norway	49	51	16	34	29	9	2.1	6.4	2.0	46	75	69
Poland	51	49	x(2)	29	33	m	3.1	1.2	m	53	27	7
Portugal	54	46	a	37	24	a	0.9	5.9	a	39	87	90
Slovak Republic	31	69	6	21	44	4	0.2	1.5	0.1	68	91	93
Slovenia	33	67	a	30	50	a	0.4	5.6	a	62	94	99
Spain	66	34	0.4	47	13	0	2.7	5.4	0.1	21	66	88
Sweden	56	44	1	35	27	1	6.3	3.9	0.1	43	39	50
Switzerland	34	66	59	24	40	36	2.4	8.4	7.6	62	78	88
Turkey	54	46	a	29	27	a	4.5	1.7	a	48	27	15
United Kingdom	57	43	24	44	23	13	0.3	8.0	4.5	35	96	97
United States	m	m	m	m	m	m	m	m	m	m	m	m
OECD average	56	44	13	35	25	7	1.6	4.8	1.8	40	66	72
EU22 average	52	48	14	35	28	7	1.8	5.4	2.0	43	73	75
Partners												
Argentina[2]	100	a	a	45	a	a	3.0	a	a	a	a	a
Brazil	92	8	a	40	4	a	4.4	0.4	a	8	9	12
China	56	44	m	28	15	m	0.2	2.1	m	35	91	m
Colombia	74	26	0	18	7	m	1.4	0.1	m	28	7	m
Costa Rica	70	30	0	19	9	m	3.7	1.6	m	31	31	31
India	97	3	m	m	m	m	m	m	m	m	31	m
Indonesia	58	42	m	24	18	m	1.4	0.5	m	43	28	m
Lithuania	73	27	a	32	10	a	1.1	1.5	a	24	59	31
Russian Federation[6]	m	m	m	19	m	m	0.0	m	m	m	m	m
Saudi Arabia	95	5	0	62	3	m	6.1	0.3	m	5	5	m
South Africa[2]	88	12	0	m	m	m	m	m	m	m	m	m
G20 average	71	29	~	36	16	~	1.7	2.8	~	29	51	~

1. Estimate based on the enrolment rate to vocational programmes for a given age group and the share of students in school- and work-based programmes over the total vocational enrolment reported in Column 3. This estimate is likely to over-estimate the enrolment rate to combined school- and work-based programmes for the age group 15-19, because combined school- and work based programmes are often targeted for older students than for those who are in the typical age frame for upper secondary vocational education.

2. Year of reference 2013.

3. 20-22 year-olds instead of 20-24 year-olds.

4. The number of students 25 years and older in upper secondary education is negligible, thus it is not possible to compute the statistic in Column 12.

5. The data refer only to public institutions, which could affect particularly the estimates in Columns 10-12.

6. Upper secondary vocational programmes are partially included in post-secondary non-tertiary and tertiary programmes.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C1.4. Percentage of students enrolled part time, by education level and age group (2014)

Percentage of students enrolled part time over the total number of students enrolled at a given level of education, for all ages and for ages above the typical ages of enrolment.

	Upper secondary education		Post-secondary non-tertiary education		Short-cycle tertiary programmes		Bachelor's or equivalent		Master's or equivalent	
	Part time		Part time		Part time		Part time		Part time	
	All age groups	25-64 year-olds	All age groups	25-64 year-olds	All age groups	30-64 year-olds	All age groups	30-64 year-olds	All age groups	30-64 year-olds
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD										
Australia	41	72	73	76	52	65	26	62	43	70
Austria	a	a	a	a	a	a	a	a	a	a
Belgium	31	100	76	93	70	81	16	35	25	26
Canada[1]	m	m	m	m	12	28	21	64	31	49
Chile	m	m	m	m	m	m	m	m	m	m
Czech Republic	1	m	100	m	a	m	1	m	10	m
Denmark	9	22	a	a	29	67	10	42	5	19
Estonia	12	60	9	10	a	a	15	23	15	26
Finland	a	a	a	a	a	a	33	52	60	80
France	m	m	m	m	m	m	m	m	m	m
Germany	2	0	1	2	51	51	10	33	5	18
Greece	6	m	m	m	m	m	m	m	m	m
Hungary	11	100	36	99	33	93	32	95	26	82
Iceland	m	m	m	m	m	m	m	m	m	m
Ireland	1	m	15	m	58	87	6	35	42	68
Israel	m	m	a	a	a	a	20	43	6	8
Italy	0	m	0	m	a	a	a	a	a	a
Japan	5	m	a	m	3	m	10	m	3	m
Korea	m	m	m	m	m	m	m	m	m	m
Latvia	14	0	13	32	52	73	24	58	15	35
Luxembourg	0	7	a	a	0	0	2	18	61	80
Mexico	a	a	a	a	a	a	a	a	a	a
Netherlands	2	4	a	a	30	73	7	69	12	53
New Zealand	29	77	65	67	60	76	37	68	64	78
Norway	3	9	91	98	41	66	37	66	29	55
Poland	15	100	87	99	a	a	31	39	45	87
Portugal	a	a	1	0	a	a	6	15	4	8
Slovak Republic	2	68	33	71	16	49	28[d]	92[d]	x(7)	x(8)
Slovenia	16	100	a	a	40	92	17	82	10	36
Spain	12	60	m	m	9	30	28	74	38	58
Sweden	26	76	7	10	9	9	54	78	39	72
Switzerland	2	10	52	71	27	46	30	71	14	26
Turkey	a	a	a	a	a	a	a	a	a	a
United Kingdom	29	88	a	a	13	14	13	60	47	79
United States	a	a	42	47	54	63	23	53	45	60
OECD average	9	40	25	32	22	38	18	47	24	43
EU22 average	9	46	20	26	21	38	17	47	24	46
Partners										
Argentina	m	m	m	m	m	m	m	m	m	m
Brazil	a	a	a	a	a	a	a	a	a	a
China	0	m	68	m	44	m	30	m	3	m
Colombia	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m
Lithuania	6	51	a	a	a	a	28	81	21	48
Russian Federation[2]	0	0	0	0	19	78	x(9)	x(10)	50[d]	93[d]
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m
G20 average	7	~	17	~	21	~	12	~	19	~

1. Year of reference 2013.
2. Upper secondary vocational programmes are partially included in post-secondary non-tertiary and tertiary programmes.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C1.5. Change in enrolment rates for selected age groups (2005 and 2014)

		Enrolment rate, selected age ranges						Enrolment rate, above selected age ranges					
		Upper secondary education, 15-19 year-olds		Post-secondary non-tertiary education, 15-24 year-olds		Tertiary education, 20-24 year-olds		Upper secondary education, 25-64 year-olds		Post-secondary non-tertiary education, 25-64 year-olds		Tertiary education, 30-64 year-olds	
		2005	2014	2005	2014	2005	2014	2005	2014	2005	2014	2005	2014
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	42	42	1.8	2.3	28	34	4.3	2.5	1.0	1.5	3.1	3.7
	Austria	m	62	m	1.1	m	29	m	0.2	m	0.2	m	2.3
	Belgium	71	68	1.7	2.1	30	36	3.6	2.3	0.4	0.7	0.7	0.8
	Canada[1]	m	58	m	m	m	29	m	0.5	m	m	m	1.5
	Chile	m	60	a	a	m	40	m	0.3	a	a	m	2.4
	Czech Republic	75	73	m	m	m	37	m	0.4	m	m	m	1.1
	Denmark	48	52	a	a	28	38	1.8	1.9	a	a	2.8	2.9
	Estonia	m	57	m	3.5	32	33	m	0.3	m	0.8	2.3	2.3
	Finland	61	62	0.1	0.2	40	35	3.2	3.8	0.6	0.8	3.3	4.0
	France	61	61	0.3	0.3	29	33	0.1	0.0	0.0	0.0	0.7	0.6
	Germany[2]	42	49	6.8	7.3	21	28	0.2	0.2	0.2	0.3	0.8	1.2
	Greece	57	59	m	m	m	38	m	m	m	0.1	m	0.8
	Hungary	68	72	4.8	5.3	29	28	0.6	0.5	0.2	0.2	1.8	1.3
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	47	55	m	7.7	m	37	m	0.2	m	0.7	m	1.9
	Israel[3]	56	58	0.8	0.9	17	17	0.0	0.0	0.1	0.1	2.3	2.8
	Italy	71	75	0.1	0.1	m	32	m	0.1	m	0.0	m	0.9
	Japan	58	58	m	m	m	m	m	m	m	m	m	m
	Korea	56	57	m	m	46	51	0.0	0.0	m	m	1.1	0.9
	Latvia	55	59	8.8	1.3	m	36	0.0	0.1	0.7	0.1	m	1.7
	Luxembourg[4]	60	62	m	0.3	m	9	m	0.2	m	0.2	m	0.5
	Mexico	31	38	a	a	14	18	0.1	0.2	a	a	0.4	0.5
	Netherlands	47	52	0.2	0.0	m	37	0.6	0.7	0.0	0.0	m	0.7
	New Zealand	56	59	2.5	3.5	31	31	m	2.0	m	1.0	1.1	3.6
	Norway	65	64	0.5	0.3	36	35	0.7	0.5	0.1	0.2	3.4	3.3
	Poland	62	62	3.6	3.7	m	42	0.3	0.3	0.2	0.4	m	1.4
	Portugal	48	60	0.0	0.8	26	31	0.5	0.3	0.0	0.0	1.3	1.4
	Slovak Republic	67	65	2.2	1.5	m	32	m	0.1	m	0.2	m	1.1
	Slovenia	81	80	a	a	43	47	1.0	0.5	a	a	1.8	0.9
	Spain	37	59	m	0.0	m	38	m	0.7	m	0.0	m	1.7
	Sweden	m	62	m	0.8	m	27	m	2.0	m	0.3	m	3.0
	Switzerland	59	64	1.5	0.9	20	26	0.2	0.3	0.2	0.1	1.3	1.6
	Turkey	32	55	a	a	m	39	m	1.1	a	a	m	3.1
	United Kingdom	m	67	m	a	m	24	m	1.7	m	a	m	1.9
	United States	52	55	0.9	1.2	31	33	0.0	0.0	0.3	0.4	3.2	3.4
	OECD average	56	60	1.7	1.4	29	33	1.0	0.8	0.2	0.3	1.8	2.1
	EU22 average	59	63	2.4	1.9	~	33	1.1	1.0	0.2	0.3	~	1.6
Partners	Argentina[1]	m	45	m	a	m	32	m	a	m	0.1	m	3.6
	Brazil[5]	m	44	m	1.6	m	19	m	0.8	m	0.5	m	2.5
	China	m	42	m	m	m	15	m	0.0	m	m	m	0.0
	Colombia	m	25	m	0.1	m	m	m	m	m	m	m	m
	Costa Rica	m	28	m	a	m	m	m	0.3	m	m	m	m
	India	m	29	m	m	m	m	m	0.0	m	m	m	m
	Indonesia	m	43	m	m	m	22	m	0.0	m	m	m	0.0
	Lithuania	m	42	m	2.9	m	41	m	0.3	m	0.4	m	1.3
	Russian Federation	23	19	7.4	4.1	29	30	0.0	0.0	0.0	0.1	0.4	1.3
	Saudi Arabia	m	65	a	m	m	m	m	m	a	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	~	50	~	~	~	29	~	0.4	~	~	~	1.7

1. Year of reference 2013 instead of 2014.
2. Year of reference 2006 instead of 2005.
3. Underestimated because it excludes enrolments in short-cycle tertiary education.
4. Underestimated because many resident students go to school in neighbouring countries.
5. Underestimated because it excludes enrolments in master's and doctoral and equivalent programmes (ISCED levels 7 and 8).

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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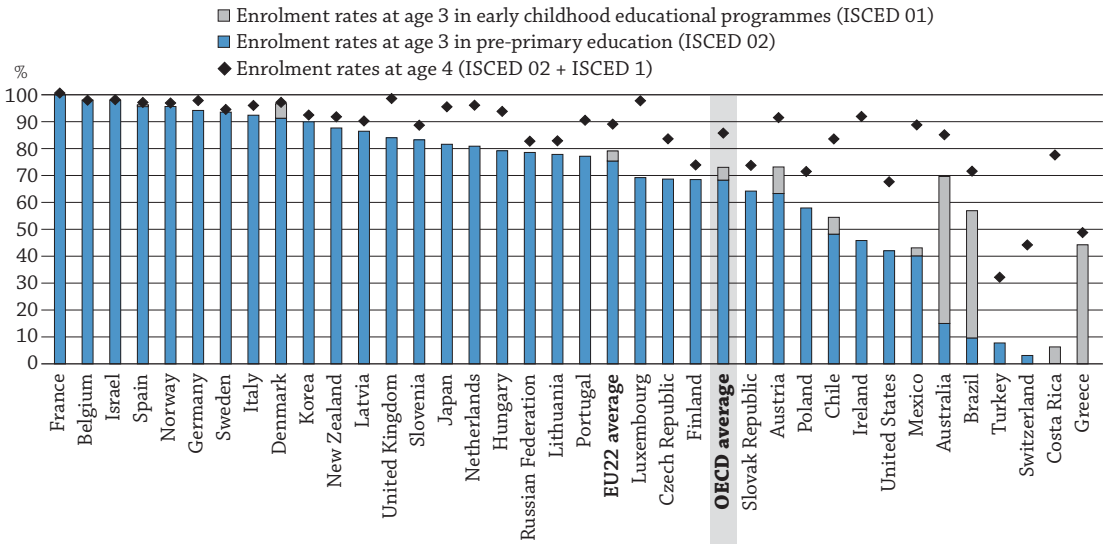
HOW DO EARLY CHILDHOOD EDUCATION SYSTEMS DIFFER AROUND THE WORLD?

- Fifteen-year-old students who attended at least one year of pre-primary education perform better on the OECD Programme for International Student Assessment (PISA) than those who did not, even after accounting for their socio-economic background.
- Early childhood education is particularly beneficial for students with an immigrant background. Immigrant students who reported attending pre-primary education outperformed students of immigrant status who had not participated in such programmes by 49 points in the PISA reading assessment, which roughly corresponds to one additional year of schooling.
- In a majority of OECD countries, education now begins for most children well before they are 5 years old. Some 71% of 3-year-olds are enrolled in early childhood education across OECD countries. In OECD countries that are part of the European Union, 77% of 3-year-olds are enrolled.

Figure C2.1. Enrolment rates at age 3 and 4 in early childhood and primary education (2014)



Countries are ranked in descending order of the enrolment rates of 3-year-olds in pre-primary programmes.

Source: OECD. Table C2.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398347

Context

As parents are more likely to be in the workforce today, there is a growing need for early childhood education. In addition, there is increasing awareness of the key role that early childhood education plays for children's well-being and cognitive and social-emotional development. As a result, ensuring the quality of early childhood education and care (ECEC) has become a policy priority in many countries.

Enrolling children in early childhood education can also mitigate social inequalities and promote better student outcomes overall. Many of the inequalities found in education systems are already evident when children enter formal schooling and persist (or increase) as they progress through the school system. In addition, pre-primary education helps to prepare children to enter and succeed in formal schooling.

There are many different ECEC systems and structures within OECD countries. Consequently, there is also a range of different approaches to identifying the boundary between early childhood education and childcare (see the *Definitions* section at the end of this indicator). These differences should be taken into account when drawing conclusions from international comparisons.

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Other findings

- Almost nine out of ten 4-year-olds (86%) are enrolled in pre-primary (or primary education for few of them) across OECD countries.
- Some 76% of pre-primary children in European OECD countries are enrolled in public institutions, compared to 67% on average across all OECD countries.
- Expenditure on pre-primary education accounts for an average of 0.6% of GDP, while expenditure on early childhood education development accounts for an average of 0.2% of GDP.
- In most countries, the proportion of children enrolled in private early childhood education is considerably larger than the proportion enrolled in private primary and secondary educational institutions. Thus, more than 50% of children enrolled in early childhood development programmes and one-third of those enrolled in pre-primary education attend private institutions, on average.
- The ratio of children to teaching staff is an indicator of the resources devoted to early childhood education. The child-teacher ratio at the pre-primary level, excluding teachers' aides, ranges from more than 20 children per teacher in Chile, China, France and Mexico to fewer than 10 in Australia, New Zealand, Slovenia and Sweden.
- Some countries make extensive use of teachers' aides in pre-primary education, which is shown by smaller ratios of children to contact staff than of children to teaching staff. In Chile, France and the United Kingdom, there is one teachers' aide per each fourteen pupils or less in pre-primary education.

Trends

Over the past decade, many countries have expanded early childhood education. This increased focus has resulted in the extension of compulsory education to lower ages in some countries, free early childhood education, universal provision of early childhood education and the creation of programmes that integrate care with formal pre-primary education.

On average across OECD countries with 2005 and 2014 data, enrolments in pre-primary education rose from 54% of 3-year-olds in 2005 to 69% in 2014, and from 73% of 4-year-olds in 2005 to 85% in 2014. The enrolment rates of 4-year-olds in pre-primary education increased by 30 percentage points or more in Australia, Chile, Korea, Poland and the Russian Federation between 2005 and 2014.

Analysis

In a majority of OECD countries, ECEC policy has paralleled the evolution of women's participation in the labour force. More and more women have become salaried employees since the 1970s, as the service- and knowledge-based economies expanded. Because economic prosperity depends on maintaining a high employment-to-population ratio, encouraging more women to enter the labour market has prompted greater government interest in expanding ECEC services. In the 1970s and 1980s, European governments, in particular, put in place family and childcare policies to encourage couples to have children and ensure that it is feasible for women to combine work and family responsibilities (OECD, 2013a; OECD, 2011a).

There is a growing body of evidence that children who start strong in their development, learning and well-being will have better outcomes when they grow older. Such evidence has prompted policy makers to design early interventions and rethink their education spending patterns to gain "value for money".

Enrolment in early childhood education

While primary and lower secondary enrolment patterns are fairly similar throughout OECD countries, there is significant variation in early childhood education programmes among OECD and other G20 countries. This includes financing, the overall level of participation in programmes, the typical starting age for children and the duration of programmes (Table C2.5).

In most OECD countries, early childhood education now begins for most children well before they are 5 years old. Almost nine out of ten 4-year-olds (86%) are enrolled in pre-primary and primary education across OECD countries. In the OECD countries that are part of the European Union, 89% of 4-year-olds are enrolled. Enrolment rates for pre-primary and primary education at this age vary from 95% or more in Belgium, Denmark, France, Germany, Israel, Italy, Japan, Luxembourg, the Netherlands, Norway, Spain, Sweden and the United Kingdom to less than 60% in Greece, Switzerland and Turkey. Early childhood education can be provided in more school-like settings or in integrated early childhood provision, as is more common, for example, in the Nordic countries and Germany.

Early childhood education programmes for even younger children are not as extensive. In some countries, demand for early childhood education for children aged 3 and under far outstrips supply, even in countries that provide for long parental leave. Almost four out of ten (36%) 2-year-olds are enrolled in early childhood education across all OECD countries, growing to almost three out of four (71%) for 3-year-olds. The highest enrolment rates of 3-year-olds in early childhood education are found in Denmark, France, Israel, Norway and Spain. In countries where public funding for parental leave is limited, many working parents must either look to the private market, where parents' ability to pay significantly influences access to quality services, or else rely on informal arrangements with family, friends and neighbours (Table C2.1, Figure C2.1 and OECD, 2011b).

Enrolment in early childhood education and PISA performance at age 15

On average across OECD countries, 74% of the 15-year-old students assessed by the OECD Programme for International Student Assessment reported that they had attended more than one year of pre-primary education. According to students' responses, enrolment in more than one year of pre-primary education was nearly universal about ten years ago in Belgium, France, Hungary, Iceland, Japan and the Netherlands, where over 90% of 15-year-olds reported that they had attended pre-primary education for more than one year. Pre-primary education is rare in Turkey, where fewer than 30% of 15-year-olds had attended pre-primary education for any period of time. More than one year of pre-primary education is uncommon in Australia, Chile, Ireland and Poland, where fewer than 52% of students reported that they had attended pre-primary education for that length of time (see OECD, 2013b, Table IV.3.33).

PISA analyses find that, in most countries, students who had attended at least one year of pre-primary education tend to perform better than those who had not, even after accounting for students' socio-economic background. PISA research also shows that the relationship between pre-primary attendance and performance tends to be stronger in school systems with longer-duration pre-primary education, smaller child-to-teacher ratios in pre-primary education, and higher public expenditure per child at the pre-primary level (OECD, 2013c, Table II.4.12).

Early childhood education is particularly important for students with an immigrant background. On average, immigrant students who reported attending pre-primary education scored 49 points higher in the PISA reading assessment than immigrant students who reported they had not participated in such programmes (see OECD, 2015, Figure 4.15). The difference in the PISA reading score corresponds to roughly one additional year of schooling. However, the disparity in achievement for immigrant students with and without exposure to pre-primary education should be interpreted carefully. Parental preferences, in addition to availability and accessibility of early childhood education, may have an impact on both the likelihood of attending pre-primary education and the learning outcomes captured by PISA.

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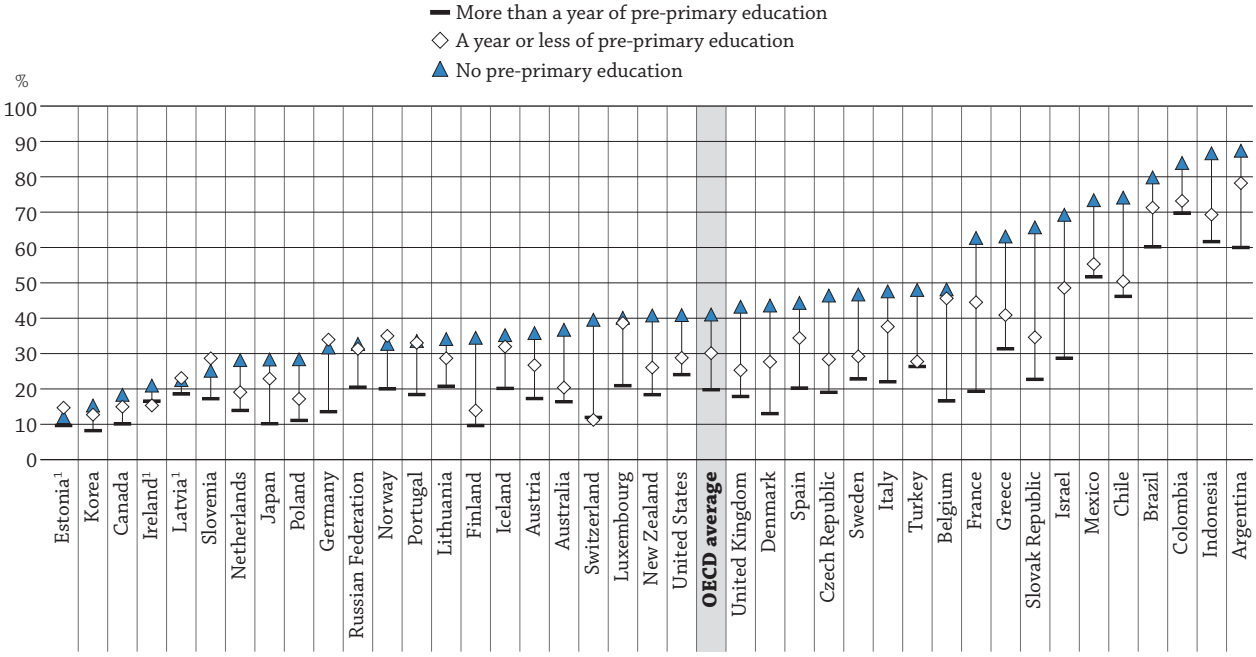
In most countries, students who attended pre-primary education at some point are much less likely to be low performers in mathematics than those who did not (Figure C2.2). Moreover, attending pre-primary education for more than one year also boosts their performance in mathematics, further reducing their chances of being low performers.

Figure C2.2. Percentage of low performers in mathematics, by attendance at pre-primary school (2012)

Share of students who are low performers in mathematics



1. Percentage-point differences between the share of low-performing students who had not attended pre-primary school and those who had attended for at least one year are not statistically significant.

Countries and economies are ranked in ascending order of the percentage of low-performing students who had not attended pre-primary school.

Source: OECD, *Low-Performing Students: Why They Fall Behind and How To Help Them Succeed*, PISA (http://dx.doi.org/10.1787/9789264250246-en), Figure 2.13. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398359

Early childhood education, by type of institutions

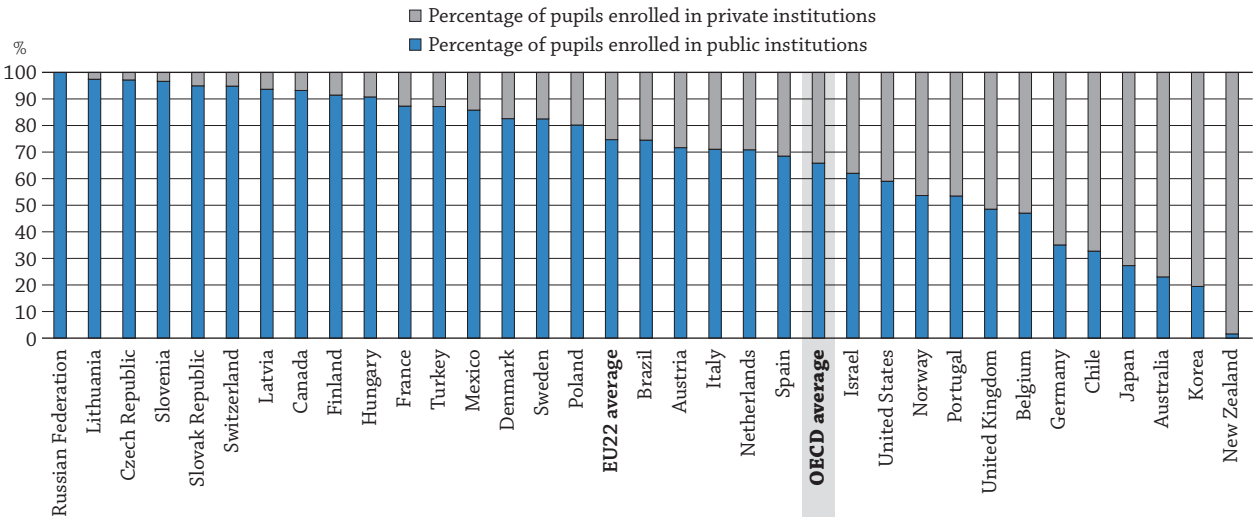
As countries continue to expand their early childhood education programmes, it will be important to consider parents' needs and expectations regarding accessibility, cost, programme and staff quality, and accountability. When parents' needs for quality, accessibility or accountability are not met in public institutions, some parents may be more inclined to send their children to private pre-primary institutions (Shin, Young and Park, 2009).

In most countries, a minority of children attend private schools at primary through upper secondary levels. However, the proportions of children enrolled in private early childhood educational institutions are considerably larger. The private institutions in early childhood education also include publicly funded/government-dependent institutions in some countries. In half of the 17 countries with available data on early childhood development programmes, most pupils are enrolled in private institutions. In New Zealand, for example, almost all early childhood educational institutions are private and government-dependent, and these cover 98% of enrolled children at ISCED 01. On the other hand, in countries such as Finland, Lithuania, the Russian Federation, Slovenia and Sweden, over 80% of pupils at that level are enrolled in public institutions.

At the pre-primary level, some 10% of children in pre-primary education are enrolled in independent private schools, on average across OECD countries. When considering pre-primary independent private and government-dependent private schools together, 33% of children are enrolled in private pre-primary programmes. This proportion exceeds 50% in Australia, Belgium, Chile, Germany, Japan, Korea, New Zealand and the United Kingdom (Table C2.2 and Figure C2.3).

C2

Figure C2.3. Percentage of pupils enrolled in public and private institutions in pre-primary education (2014)



Countries are ranked in descending order of the percentage of pupils enrolled in public institutions in pre-primary education.

Source: OECD. Table C2.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

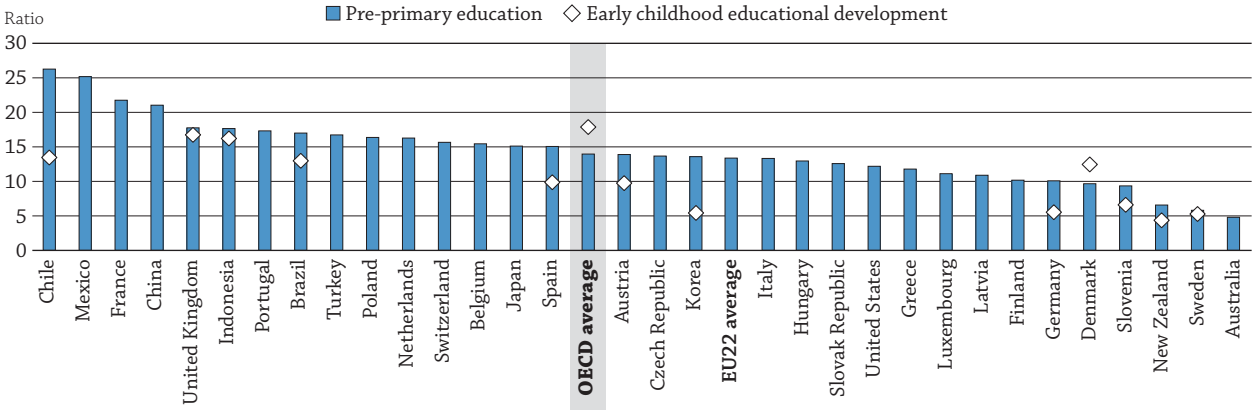
StatLink http://dx.doi.org/10.1787/888933398366

Variation in child-teacher ratios across OECD countries

Research demonstrates that enriched, stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners, and that better-quality staff-child interactions facilitate better learning outcomes. While qualifications are one of the strongest predictors of staff quality, the level of qualification tells only part of the story. Qualifications indicate how much specialised and practical training is included in initial staff education, what types of professional development and education are available and taken up by staff, and how many years of experience staff have accumulated. In addition, working conditions can influence professional satisfaction, which is likely to affect the ability and willingness of professionals to build relationships and interact attentively with children. High turnover disrupts the continuity of care, undermines professional development efforts, lowers overall quality and adversely affects child outcomes.

Figure C2.4. Ratio of pupils to teaching staff in early childhood education (2014)

Public and private institutions, calculation based on full-time equivalents



Note: The figures should be interpreted with some caution because the indicator compares the teacher/pupil ratios in countries with "education-only" and "integrated education and day-care" programmes. In some countries, the staff requirements in these two types of provision are very different.

Countries are ranked in descending order of pupils to teaching staff ratios in pre-primary education.

Source: OECD. Table C2.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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The ratio of children to teaching staff is an important indicator of the resources devoted to education. That ratio is obtained by dividing the number of full-time equivalent children at a given level of education by the number of full-time equivalent teachers at that level and in similar types of institutions. However, it cannot be interpreted in terms of group/class size. The number of children per group/class summarises different factors, but distinguishing between these factors helps to identify differences in the quality of education systems (see Indicator D2).

Table C2.2 shows the ratio of children to teaching staff and also the ratio of children to contact staff (e.g. teachers and teachers' aides) in early childhood education. Some countries make extensive use of teachers' aides at the pre-primary level. In Chile and the United Kingdom, around half of teaching staff is composed of teachers' aides. On average across OECD countries, there are 14 children for every teacher in pre-primary education. The child-teacher ratio, excluding teachers' aides, ranges from more than 20 children per teacher in Chile, China, France and Mexico to fewer than 10 in Australia, New Zealand, Slovenia and Sweden (Table C2.2 and Figure C2.4).

Financing early childhood education

Sustained public funding is critical for supporting the growth and quality of early childhood education programmes. Appropriate funding helps to recruit professional staff who are qualified to support children's cognitive, social and emotional development. Investment in early childhood facilities and materials also helps support the development of child-centred environments for well-being and learning. In countries that do not channel sufficient public funding to cover both quantity and quality, some parents may be more inclined to send their children to private ECEC services, which implies heavy financial burdens (OECD, 2011b). Others may prefer to stay home, which can hinder parents' participation in the labour force (OECD, 2011a).

Public expenditure on pre-primary education is mainly used to support public institutions, but in some countries it also funds private institutions, to varying degrees. At the pre-primary level, annual expenditure per child, from both public and private sources, for both public and private institutions, averages USD 8 004 in OECD countries. However, expenditure varies from USD 4 000 or less in Latvia and Turkey to more than USD 14 000 in Luxembourg and Norway (Table C2.3).

In the majority of countries, expenditure per child is much higher in public than private institutions. Publicly funded pre-primary education tends to be more strongly developed in the European countries of the OECD than in the non-European countries. In Europe, the concept of universal access to education for 3-6 year-olds is generally accepted. Most countries in this region provide all children with at least two years of free, publicly funded pre-primary education in schools before they begin primary education. With the exception of Ireland and the Netherlands, such access is generally a statutory right from the age of 3, and even before then in some countries. In other countries, however, private funding is much stronger than public funding. For example, in the Netherlands, expenditure per pupil in private early childhood education is almost twice that in public institutions, and in New Zealand, expenditure on private institutions is eleven times higher than on public ones, given that the single public early childhood education (ECE) provider is distance-based and virtually all ECE institutions are private. Moreover, in New Zealand, all pre-primary education up to 20 hours per week is paid for by the government and is free to parents.

In early childhood educational development (ISCED 01), public sources account for 69% of total expenditure, while in pre-primary education (ISCED 02), the share of public expenditure is 83% of the total. In countries such as Australia, Colombia and Israel, the share of private expenditure is 75% or higher, while in Finland, Norway and Sweden, over 90% of expenditure comes from public sources. In pre-primary education, there is higher public funding, and in 11 of the 32 countries with available data, 90% or more of expenditure comes from the government. Australia and Japan are the only countries where private sources account for more than 50% of total expenditure at pre-primary level. In the case of Australia, much of the private funding is actually subsidised by the government in form of grants to households. Although these grants are used as private funding for early childhood programmes, their initial source is from government's subsidies.

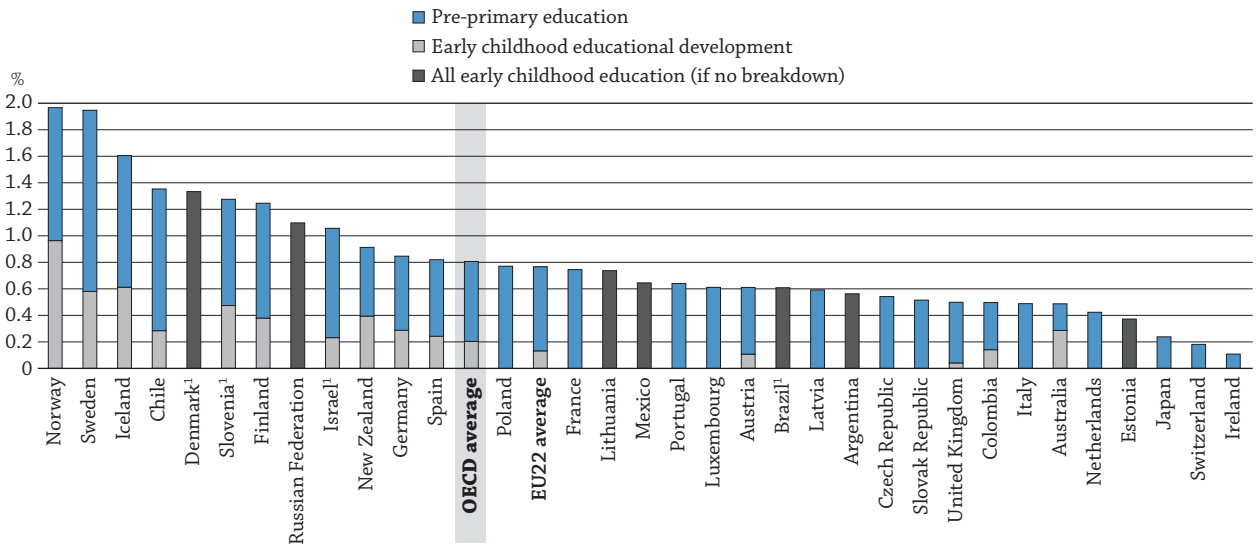
At the level of early childhood educational development, annual expenditure per child, from both public and private sources, for both public and private institutions, averages USD 10 836 in OECD countries with available data. At pre-primary level, the expenditure is lower, at USD 8 004 on average for the OECD. In almost all countries, expenditure per child is much higher in early childhood educational development than in pre-primary education.

Expenditure on all early childhood education accounts for an average of 0.8% of the collective GDP, of which 0.2% goes to early childhood educational development and 0.6% to pre-primary education. Differences between countries are significant. For example, while 0.2% or less of GDP is spent on pre-primary education in Ireland and Switzerland,

1% or more is spent in Chile, Iceland, Norway and Sweden (Table C2.3 and Figure C2.5). These differences are largely explained by enrolment rates, legal entitlements and costs, and the different starting age for primary education. They are also influenced by the extent to which this indicator covers private early childhood education. Differences in expenditure as a percentage of GDP could be influenced by the duration of programmes (Table C2.5), which has an impact on the level of expenditure devoted to early childhood education.

Figure C2.5. Expenditure on early childhood educational institutions (2013)

As a percentage of GDP, by category



1. Includes some expenditure on childcare.

Countries are ranked in descending order of public and private expenditure on educational institutions (2012).

Source: OECD. Table C2.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Definitions

Education-only programmes in early childhood education are those that primarily offer education services for a short period of the day. Working parents usually have to use additional care services in the morning and/or afternoon.

Integrated programmes in early childhood education are those that provide both early childhood education and care in the same programme.

Some variations at the national level cannot be presented, and information on the characteristics of programmes has been simplified in some cases. For example, in some countries, the starting age of early childhood education programmes differs among jurisdictions or regions. In these instances, the information that is the most common or typical is reported.

ISCED level 0 refers to early childhood programmes that have an intentional education component. ISCED level 0 programmes cover early childhood education for all ages and target children below the age of entry into primary education (ISCED level 1).

Programmes at ISCED level 0 are typically designed with a holistic approach to support children's early cognitive, language, physical, social and emotional development and to introduce young children to organised instruction in an institutionalised setting. At this level, programmes are not necessarily highly structured, but they are designed to provide an organised and purposeful set of learning activities in a safe environment. They allow children to learn through interaction with other children under the guidance of staff/educators, typically through creative and play-based activities.

ISCED level 0 refers to those early childhood programmes that have an intentional education component. These programmes aim to develop the socio-emotional skills necessary for participation in school and society, to develop some of the skills needed for academic readiness, and to prepare children for entry into primary education.

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Along with an intentional child-development and education focus, a key defining factor of ISCED level 0 programmes is the sustained intensity and duration of delivery of intentional educational activities. These are what differentiate ISCED level 0 from other programmes, such as childcare and occasional, after-hours or vacation care.

Some countries internally define early childhood education more broadly than others. Thus, the comparability of international statistics on programmes at ISCED level 0 depends on each country's willingness and ability to report data for this level according to a standard international definition, even if that definition diverges from the one that the country uses in compiling its own national statistics. In this regard, the data reported in *Education at a Glance* as ISCED level 0 programmes may differ from national reporting of early childhood education.

Programmes classified at ISCED level 0 may be referred to in many ways in different countries, for example: early childhood education and development, play school, reception, pre-primary, pre-school or *Kindergarten*. For programmes provided in *crèches*, day-care centres, private homes, nurseries, it is important to ensure that they meet the ISCED level 0 classification criteria specified below. For international comparability purposes, the term "early childhood education" (ECE) is used to label ISCED level 0 (see ISCED 2011 operational manual).

To ensure international comparability of data, several criteria need to be met to determine whether or not a programme should be classified as ISCED level 0 and included in reporting. For a programme to be reported as ISCED level 0, it must:

- have adequate intentional educational properties
- be institutionalised
- be targeted at children within the age range (starting from age 0 up to the age of entry into ISCED level 1 education)
- meet the minimum intensity/duration (an intensity of at least 2 hours per day; and a duration of at least 100 days a year).

Programmes should also, wherever possible, have:

- a regulatory framework recognised by the relevant national authorities
- trained or accredited staff as per the appropriate regulatory framework.

Programmes that provide childcare only (i.e. supervision, nutrition and health) are excluded from this indicator. Where both educational and non-educational programmes exist and it is possible to enrol in each independently, only the educational programmes are reported in this indicator. For example, in an institution that offers a daytime educational programme as well as extended afternoon or evening childcare programmes, and where parents may choose to enrol their child in either or both programmes, only the daytime educational programme is reported. Integrated programmes in which the non-educational portion is greater than the educational portion may be included, as long as the educational portion meets certain criteria.

ISCED level 0 also excludes purely family-based arrangements that may be purposeful but do not meet the UOE definition of a "programme" (i.e. informal learning by children from their parents, other relatives or friends is not included under ISCED level 0). Learning activities delivered from private homes or other institutionalised centres that are outside the jurisdiction of an appropriate national early childhood education authority or regulatory body are also excluded, regardless of whether the activities are organised in the style of an approved early childhood education programme. Examples of programmes to be excluded from reporting are:

- programmes where attendance can be ad-hoc or of a drop-in style where individual children will not experience a continuity of structured learning opportunities
- short-duration programmes, such as vacation care, which may have an educational curriculum but not a sustained period of instruction or learning opportunities
- programmes with intentional educational properties but with no minimum level of attendance, such as when parents are free to choose an intensity and duration of their child's attendance that does not meet the ISCED level 0 criteria
- early childhood services that are open for extended hours and provide intentional educational activities during these hours, but do not require a minimum intensity/duration of attendance or enrolment.

Categories of ISCED 0

There are two categories of ISCED level 0 programmes, which are classified depending on age and the level of complexity of the educational content: ISCED 01, early childhood educational development, and ISCED 02, pre-primary education.

ISCED 01 has intentional educational content designed for younger children (typically in the age range of 0 to 2 years), while ISCED 02 is typically designed for children from age 3 to the start of primary education (ISCED level 1). In addition to the above, the educational properties of ISCED level 0 programmes can be further described as follows:

- ISCED 01 – Early childhood educational development

  Typically aimed at very young children, aged 0-2. The learning environment is visually stimulating and language rich, and fosters self-expression with an emphasis on language acquisition and the use of language for meaningful communication. There are opportunities for active play so that children can exercise their co-ordination and motor skills under supervision and in interaction with staff. Early childhood educational development programmes are not reported in Belgium (French Community), the Czech Republic, France, Ireland, Italy, Japan, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Switzerland and the United States. In these countries, other structures exist, but the programmes providing ECEC are outside the scope of ISCED 2011 or outside the scope of the UOE data collection.

- ISCED 02 – Pre-primary education

  Aimed at children in the years immediately prior to starting compulsory schooling, typically aged 3-5. Through interaction with peers and educators, children improve their use of language and their social skills, start to develop logical and reasoning skills, and talk through their thought processes. They are also introduced to alphabetical and mathematical concepts, understanding and use of language, and are encouraged to explore their surrounding world and environment. Supervised gross motor activities (i.e. physical exercise through games and other activities) and play-based activities can be used as learning opportunities to promote social interactions with peers and to develop skills, autonomy and school readiness.

Reporting to ISCED 01 and 02

For UOE data-reporting purposes, countries separate ISCED level 0 data into ISCED 01 and ISCED 02 by age only, as follows: data from age-integrated programmes designed to include children younger and older than 3 are allocated to 01 and 02 according to the age of the children, as described above. This may involve estimation of expenditures and personnel at levels 01 and 02.

Methodology

ISCED level 0 programmes are usually school-based or otherwise institutionalised for a *group* of children. As the institutions authorised to provide ISCED level 0 programmes vary between jurisdictions (e.g. centre-based, community-based, home-based), to be reported in the UOE collection both the *programme* and the *mode or institution of delivery* should be recognised within the country's early childhood education system. Particular care is given to programmes delivered from home-based settings: if the programme meets the criteria as set out above *and* is recognised under the country's regulations, it is included in reporting.

To further ensure international comparability of data, once a programme has been identified as an ISCED level 0 early childhood education programme by meeting the criteria above, the following rules apply when collecting data on the programmes for UOE purposes. These rules are applied to programmes in their entirety (not just to the intentional education component).

Full-time equivalents for enrolments

The concepts used to define full-time and part-time participation at other ISCED levels, such as study load, child participation, and the academic value or progress that the study represents, are not easily applicable to ISCED level 0. In addition, the number of daily or weekly hours that represent a typical full-time enrolment in an education programme at ISCED level 0 varies widely between countries. Because of this, full-time-equivalents (FTE) cannot be calculated for ISCED level 0 programmes in the same way as for other ISCED levels.

A consensus has not been reached on a methodology for calculating FTE for enrolments at ISCED level 0 but it is recommended in UOE reporting to estimate children enrolled in full-time equivalents by ISCED 0 enrolment head count (i.e. all enrolments counted as full time). Head count is not a satisfying criterion for full-time equivalent for indicators such as expenditure per child (even if it is accepted for enrolment comparisons), but most countries are in favour of this solution, as the same guarantee was not offered by other estimation methods.

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Institutions that provide both education programmes and childcare programmes

In some countries, institutions providing early childhood education also provide extended day or evening childcare programmes. Education programmes traditionally provided during the day may now be provided outside these hours to offer further flexibility to parents and carers of children. These are given special consideration in reporting.

Where the childcare components are distinctly separate from early childhood education components (for example, the two components are offered as individual programmes in which children must enrol separately), the childcare components are excluded from reporting. If the programmes are in the form of extended day or evening programmes that meet all of the criteria listed above, they are included in reporting as educational programmes.

Where both education and non-education programmes exist and it is possible to enrol in each independently, only the education programmes are reported. Integrated programmes are included when the non-education portion is greater than the education portion, only when the education portion meets the criteria listed above. For example, in an institution that offers a daytime education programme as well as extended afternoon or evening childcare programmes, and parents may choose to enrol their child in either or both programmes, only the daytime educational programme is reported in the UOE data collection.

Reporting to ISCED 01 and 02

For UOE data-reporting purposes, countries separate ISCED level 0 data into ISCED 01 and ISCED 02 by age only, as follows: data from age-integrated programmes designed to include children younger and older than 3 are allocated to 01 and 02 according to the age of the children, as described above. This may involve estimation of expenditures and personnel at levels 01 and 02.

Note regarding data from Israel

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

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Indicator C2 Tables

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Table C2.1	**Enrolment rates in early childhood and primary education, by age (2005 and 2014)**
Table C2.2	**Profile of early childhood educational development programmes and pre-primary education (2014)**
Table C2.3	**Expenditure on early childhood educational institutions (2013)**
Table C2.4	**Profile of education-only and integrated pre-primary programmes (2014)**
Table C2.5	**Coverage of early childhood education programmes in OECD and partner countries**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

C2

Table C2.1. Enrolment rates in early childhood and primary education, by age (2005 and 2014)

		Enrolment rates (2014)															Enrolment rates (2005)			
		Age 2			Age 3			Age 4			Age 5			Age 6			Age 3	Age 4		
		ISCED 01	ISCED 02	Total	ISCED 01	ISCED 02	Total	ISCED 02	ISCED 1	Total	ISCED 02	ISCED 1	Total	ISCED 02	ISCED 1	Total	ISCED 02	ISCED 02	ISCED 1	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
OECD	Australia	54	0	54	54	15	69	83	2	85	18	83	101	1	103	104	17	51	2	53
	Austria	30	6	36	10	63	73	92	0	92	96	0	96	41	58	99	m	m	m	m
	Belgium	m	52	m	m	98	m	98	0	98	97	1	98	4	94	98	100	100	0	100
	Canada[1]	m	m	m	m	m	m	m	m	m	x(12)	x(12)	93	m	98	m	m	m	m	m
	Chile	29	2	30	6	48	54	84	0	84	94	0	94	15	83	97	23	30	12	42
	Czech Republic	a	12	12	a	68	68	84	0	84	89	0	89	45	49	94	66	91	0	91
	Denmark	92	1	93	5	91	96	97	0	97	96	2	98	8	92	99	m	m	m	m
	Estonia	x(3)	x(3)	58	x(6)	x(6)	86	m	0	m	m	0	m	m	1	m	80	84	0	84
	Finland	52	0	52	0	68	68	74	0	74	79	0	79	97	0	98	62	69	0	69
	France	a	12	12	a	100	100	100	0	101	100	1	101	1	99	101	101	101	0	101
	Germany	65	0	65	0	94	94	98	0	98	99	0	99	35	63	98	80	89	0	89
	Greece	29	0	29	44	0	44	49	0	49	91	0	91	3	95	98	0	56	0	56
	Hungary	m	11	m	m	79	m	94	0	94	96	0	96	62	30	92	73	91	0	91
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	a	0	0	a	46	46	56	36	92	3	98	100	0	100	100	m	m	44	m
	Israel	46	0	46	0	98	98	98	0	98	97	0	98	16	81	97	66	84	0	84
	Italy	a	15	15	a	92	92	96	0	96	88	9	97	1	97	98	99	102	0	102
	Japan	a	0	0	a	81	81	96	0	96	96	0	96	0	102	102	69	95	0	95
	Korea	89	0	89	0	90	90	92	0	92	94	0	94	0	96	96	14	30	0	30
	Latvia	m	0	m	m	86	m	90	0	90	96	0	96	93	4	97	66	73	0	73
	Luxembourg	a	5	5	a	69	69	98	0	98	93	6	99	5	93	98	62	95	0	95
	Mexico	5	0	5	3	40	43	89	0	89	85	28	113	1	103	103	23	69	0	69
	Netherlands	a	0	0	a	81	81	96	0	96	99	0	99	0	99	99	m	98	0	98
	New Zealand	63	0	63	0	87	87	92	0	92	3	95	98	0	99	99	m	m	0	m
	Norway	91	0	91	0	95	95	97	0	97	98	0	98	1	99	100	m	m	0	m
	Poland	a	6	6	a	58	58	72	0	72	95	0	95	80	16	96	28	38	0	38
	Portugal	m	0	m	m	77	m	91	0	91	96	0	96	6	93	99	61	84	3	87
	Slovak Republic	a	12	12	a	64	64	74	0	74	81	0	81	40	50	90	m	m	0	m
	Slovenia	66	0	66	0	83	83	89	0	89	90	0	90	5	93	98	67	76	0	76
	Spain	52	0	52	0	96	96	97	0	97	97	0	97	1	96	97	94	99	0	99
	Sweden	89	0	89	0	93	93	95	0	95	95	0	95	97	1	98	m	m	m	m
	Switzerland	a	0	0	a	3	3	44	0	44	98	0	98	59	41	100	9	39	0	39
	Turkey	0	0	0	0	8	8	32	0	32	43	27	71	0	98	98	2	5	0	5
	United Kingdom	20	0	20	0	84	84	95	3	99	0	99	99	0	98	98	m	m	32	m
	United States	m	0	m	m	42	42	68	0	68	84	6	90	21	80	101	39	68	0	68
	OECD average	34	4	36	4	69	71	85	1	86	81	14	95	23	74	98	54	73	3	76
	EU22 average	31	6	35	3	76	77	87	2	89	85	10	95	30	65	97	69	84	4	84
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	33	1	34	47	10	57	72	0	72	86	8	94	10	87	97	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	1	m	m	21	m	m	78	m	m	m	m	m
	Costa Rica	4	0	4	6	0	6	78	0	78	101	0	102	3	101	103	m	m	m	m
	India	m	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	m
	Lithuania	55	0	55	0	78	78	83	0	83	86	0	86	91	5	96	m	m	m	m
	Russian Federation	47	0	47	0	78	78	83	0	83	82	1	83	76	12	88	42	42	0	42
	Saudi Arabia	m	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	m
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Early childhood education targets children aged below the age of entry into ISCED level 1. There are two categories of ISCED level 0 programmes: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). Enrolment rates at young ages should be interpreted with care: mismatches between the coverage of the population data and the enrolment data mean that the participation rates may be underestimated for countries such as Luxembourg that are net exporters of students and may be overestimated for those that are net importers.

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Indonesia: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.2. Profile of early childhood educational development programmes and pre-primary education (2014)

Early childhood educational development programmes = ISCED 01, pre-primary education = ISCED 02

		Pupils enrolled in pre-primary education (ISCED 02) as a percentage of total enrolment in early childhood education (ISCED 01+ ISCED 02)	Distribution of pupils in ISCED 01, by type of institution				Distribution of pupils in ISCED 02, by type of institution				Ratio of pupils to teaching staff in full-time equivalents					
				Private				Private			ISCED 01		ISCED 02		Total (ISCED 0)	
			Public	Government-dependent private	Independent private	Total	Public	Government-dependent private	Independent private	Total	Pupils to contact staff (teachers and teachers aides)	Pupils to teaching staff	Pupils to contact staff (teachers and teachers aides)	Pupils to teaching staff	Pupils to contact staff (teachers and teachers aides)	Pupils to teaching staff
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	41	m	m	a	m	23	77	a	77	m	m	4	5	m	m
	Austria	85	33	x(5)	x(5)	67	72	x(9)	x(9)	28	7	9	9	14	9	13
	Belgium	100	m	m	m	m	47	53	0	53	m	m	15	15	15	15
	Canada[1]	m	m	m	m	m	93	x(9)	x(9)	7	m	m	m	m	m	m
	Chile	80	69	29	2	31	33	61	7	67	5	13	12	26	12	26
	Czech Republic	100	a	a	a	a	97	3	a	3	a	a	13	14	13	14
	Denmark	64	47	10	43	53	83	17	0	17	4	12	6	10	5	10
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	80	88	12	a	12	91	9	a	9	m	m	m	10	m	m
	France	100	a	a	a	a	87	12	0	13	a	a	15	22	15	22
	Germany	75	27	x(5)	x(5)	73	35	x(9)	x(9)	65	5	5	9	10	7	8
	Greece	m	m	m	m	m	m	m	m	m	m	m	12	12	m	m
	Hungary	m	m	m	m	m	91	6	3	9	m	m	13	13	m	m
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	100	a	a	a	a	m	m	m	m	a	a	m	m	m	m
	Israel	75	a	71	29	100	62	30	8	38	m	m	m	m	m	m
	Italy	100	a	a	a	a	71	0	29	29	a	a	13	13	13	13
	Japan	100	a	a	a	a	27	a	73	73	a	a	14	15	14	15
	Korea	64	8	92	0	92	19	81	0	81	5	5	14	14	9	9
	Latvia	100	a	a	a	a	94	a	6	6	a	a	m	11	m	11
	Luxembourg	100	a	m	m	m	m	m	m	m	a	a	11	11	11	11
	Mexico	95	37	a	63	63	86	a	14	14	24	87	25	25	25	26
	Netherlands	100	a	a	a	a	71	a	29	29	a	a	14	16	14	16
	New Zealand	61	2	98	0	98	2	98	0	98	m	4	m	7	m	5
	Norway	65	49	51	a	51	54	46	a	46	m	m	m	m	5	11
	Poland	100	a	a	a	a	80	2	18	20	a	a	m	16	m	16
	Portugal	100	m	m	m	m	54	31	16	46	m	m	m	17	m	17
	Slovak Republic	100	a	a	a	a	95	5	a	5	a	a	12	13	12	13
	Slovenia	71	95	4	0	5	97	3	0	3	6	6	9	9	8	8
	Spain	76	52	16	33	48	69	28	4	31	m	9	m	15	m	13
	Sweden	74	80	20	0	20	83	17	0	17	5	5	6	6	5	5
	Switzerland	100	a	a	a	a	95	1	4	5	a	a	m	16	m	16
	Turkey	100	a	a	100	100	87	a	13	13	m	m	m	17	m	m
	United Kingdom	90	35	56	8	65	49	46	5	51	12	16	10	18	10	18
	United States	m	m	m	m	m	59	a	41	41	m	m	10	12	m	m
	OECD average	86	41	m	m	59	67	24	10	33	8	16	12	14	11	14
	EU22 average	90	m	m	m	m	76	16	7	24	m	m	11	13	m	13
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	m	63	a	37	37	75	a	25	25	8	12	15	17	11	15
	China	m	m	m	m	m	m	m	m	m	a	a	16	21	16	21
	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
	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	16	16	18	m	17
	Lithuania	84	95	a	5	5	97	a	3	3	m	m	m	m	7	10
	Russian Federation	85	100	a	a	a	100	a	a	a	m	m	m	m	4	10
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Columns listing the characteristics of early childhood education programmes (Columns 16-22) are available for consultation on line (see *StatLink* below).

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.3. Expenditure on early childhood educational institutions (2013)

		Expenditure on educational institutions as a percentage of GDP			Annual expenditure on educational institutions per student (in USD using PPPs)					Proportions of total expenditure from public sources (%)		
		Early childhood educational development	Pre-primary	All early childhood education	Early childhood educational development	Pre-primary	All early childhood education			Early childhood educational development	Pre-primary	All early childhood education
							Public	Private	Total			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	0.3	0.2	0.5	11 852	13 171	x(8)	x(8)	12 364	4	42	20
	Austria	0.1	0.5	0.6	10 307	8 737	8 888	9 142	8 977	73	88	85
	Belgium	m	0.7	m	m	7 576	m	m	m	m	96	m
	Canada[1]	m	m	m	m	m	m	m	m	m	m	m
	Chile	0.3	1.1	1.4	7 250	6 607	5 616	7 475	6 733	86	85	85
	Czech Republic	a	0.5	0.5	a	4 655	4 699	3 124	4 655	a	92	92
	Denmark[2]	x(3)	x(3)	1.3	x(8)	x(8)	16 341	a	16 341	x(13)	x(13)	81
	Estonia	x(3)	x(3)	0.4	x(8)	x(8)	1 940	3 186	1 987	x(13)	x(13)	94
	Finland	0.4	0.9	1.2	18 668	10 477	12 057	13 103	12 092	91	89	89
	France	a	0.7	0.7	a	7 507	7 957	4 267	7 507	a	93	93
	Germany	0.3	0.6	0.8	14 886	9 167	11 923	9 863	10 542	71	79	76
	Greece	m	m	m	m	m	m	m	m	m	m	m
	Hungary[2]	m	0.7	m	m	5 074	m	m	m	m	91	m
	Iceland	0.6	1.0	1.6	14 023	10 152	11 369	11 225	11 347	89	85	86
	Ireland	a	0.1	0.1	a	6 532	16 249	6 352	6 532	a	100	100
	Israel[2]	0.2	0.8	1.1	4 219	4 302	5 983	2 889	4 282	25	90	75
	Italy	a	0.5	0.5	a	6 233	8 183	1 534	6 233	a	92	92
	Japan	a	0.2	0.2	a	6 247	8 129	5 841	6 247	a	44	44
	Korea	m	0.4	m	m	6 227	m	m	m	m	78	m
	Latvia	a	0.6	0.6	a	3 412	3 380	3 885	3 412	a	98	98
	Luxembourg	a	0.6	0.6	a	19 233	19 286	18 753	19 233	a	98	98
	Mexico	x(3)	x(3)	0.6	x(8)	x(8)	2 601	2 440	2 575	x(11)	x(11)	83
	Netherlands	a	0.4	0.4	a	8 305	7 795	14 490	8 305	a	88	88
	New Zealand	0.4	0.5	0.9	13 579	10 252	1 020	11 671	11 465	72	86	80
	Norway	1.0	1.0	2.0	24 329	14 704	22 416	14 153	18 240	93	93	93
	Poland	a	0.8	0.8	a	5 552	x(8)	x(8)	5 552	a	77	77
	Portugal	a	0.6	0.6	a	6 604	6 684	6 511	6 604	a	65	65
	Slovak Republic	a	0.5	0.5	a	4 996	5 049	3 968	4 996	a	85	85
	Slovenia[2]	0.5	0.8	1.3	11 857	8 101	9 337	4 978	9 177	75	76	76
	Spain	0.2	0.6	0.8	8 160	6 021	7 134	5 406	6 523	58	82	75
	Sweden	0.6	1.4	1.9	14 787	12 833	13 448	12 939	13 356	94	94	94
	Switzerland	a	0.2	0.2	a	5 479	5 524	799	5 479	a	m	m
	Turkey	m	0.2	m	m	3 172	m	m	m	m	73	m
	United Kingdom	0.0	0.5	0.5	8 630	8 700	8 539	8 996	8 694	60	66	65
	United States[2]	m	0.4	m	m	10 088	m	m	m	m	75	m
	OECD average	0.2	0.6	0.8	10 836	8 004	8 906	7 480	8 552	69	83	81
	EU22 average	0.1	0.6	0.8	m	7 880	9 383	7 676	8 459	m	87	86
Partners	Argentina	x(3)	x(3)	0.6	m	m	x(8)	x(8)	3 395	x(13)	x(13)	76
	Brazil[2]	x(3)	x(3)	0.6	m	m	3 747	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m	m
	Colombia	0.1	0.4	0.5	m	m	m	m	1 748	10	72	m
	Costa Rica	m	m	m	m	m	m	m	m	m	66	m
	India	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	0.1	m	m	m	m	m	m	m	m	m
	Lithuania	x(3)	x(3)	0.7	x(8)	x(8)	5 043	7 333	5 093	x(13)	x(13)	85
	Russian Federation	x(3)	x(3)	1.1	x(8)	x(8)	x(8)	x(8)	5 588	x(13)	x(13)	90
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2012.
2. Includes some expenditure on childcare.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.4. Profile of education-only and integrated pre-primary programmes (2014)

		Education-only programmes			Integrated programmes (includes education and childcare services)			Relative proportion of enrolments reported in *Education at a Glance* (%)		
		Exist nationally	Delivered by qualified teacher	Have a formal curriculum	Exist nationally	Delivered by qualified teacher	Have a formal curriculum	Education-only programmes	Integrated programmes	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD	Australia	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
	Austria	Yes	Yes	Yes	Yes	Yes	No	3	97	100
	Belgium	Yes	Yes	Yes	No	a	a	100	a	100
	Canada	Yes	Yes	Yes	Yes	Yes	Yes	m	m	m
	Chile	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
	Czech Republic	Yes	Yes	Yes	No	a	a	100	a	100
	Denmark	No	a	a	Yes	Yes	Yes	a	100	100
	Estonia	No	a	a	Yes	Yes	Yes	a	100	100
	Finland	Yes	Yes	Yes	Yes	Yes	Yes	31	69	100
	France	Yes	Yes	Yes	No	a	a	100	a	100
	Germany	Yes	Yes	Yes	No	a	a	100	a	100
	Greece	Yes	Yes	Yes	Yes	m	m	100	m	100
	Hungary	No	a	a	Yes	Yes	Yes	a	100	100
	Iceland	Yes	Yes	Yes	Yes	Yes	Yes	1	99	100
	Ireland	No	a	a	Yes	a	a	a	100	100
	Israel	Yes	Yes	Yes	Yes	Yes	Yes	98	2	100
	Italy	No	a	a	Yes	m	m	a	100	m
	Japan	Yes	Yes	Yes	Yes	Varies	Varies	x(9)	x(9)	100
	Korea	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
	Latvia	m	m	m	m	m	m	m	m	m
	Luxembourg	Yes	Yes	Yes	No	a	a	100	a	100
	Mexico	Yes	Yes	Yes	Yes	Yes	Yes	99	1	100
	Netherlands	Yes	Yes	Yes	Yes	No	Varies	70	30	100
	New Zealand	No	a	a	Yes	Yes	Yes	a	100	100
	Norway	No	a	a	Yes	Yes	Yes	a	100	100
	Poland	Yes	Yes	Yes	No	a	a	100	a	100
	Portugal	No	a	a	Yes	Yes	Yes	a	100	100
	Slovak Republic	Yes	Yes	Yes	No	a	a	100	a	100
	Slovenia	No	a	a	Yes	Yes	Yes	a	100	100
	Spain	Yes	Yes	Yes	No	a	a	100	a	100
	Sweden	Yes	Yes	Yes	Yes	Yes	Yes	17	83	100
	Switzerland	Yes	Yes	Yes	Yes	Yes	m	100	m	100
	Turkey	Yes	Yes	Yes	No	a	a	100	a	100
	United Kingdom	Yes	Yes	Yes	Yes	Varies	Yes	x(9)	x(9)	100
	United States	Yes	Varies	Varies	Yes	Varies	Varies	x(9)	x(9)	100
	OECD average									
	EU22 average									
Partners	Argentina	m	m	m	m	m	m	m	m	m
	Brazil	Yes	Yes	No	Yes	Yes	No	x(9)	x(9)	100
	China	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m
	Costa Rica	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
	Lithuania	No	a	a	Yes	Yes	Yes	a	100	100
	Russian Federation	m	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m

Source: OECD, INES Working Party special data collection on early childhood education programmes. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.5. [1/3] Coverage of early childhood education programmes in OECD and partner countries

ISCED 01 and ISCED 02, based on ISCED 2011 classifications

	ISCED 01 – Early childhood development programmes				ISCED 02 – Pre-primary education			
	Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)	Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)
OECD **Australia**	Early childhood education	Early childhood education	0	2 - 4	Pre-primary, preschool	Preschool programmes delivered in educational institution settings or educational long-day care settings.	4	1
Austria	Kinderkrippe	Crèche	0	3	Kindergarten	Kindergarten	3	3
					Vorschulstufe	Pre-primary stage (of primary school)	6	1
Belgium (Fl.)	Kinderopvang van baby's en peuters	Childcare of babies and toddlers	0	2.5 - 3	Gewoon kleuteronderwijs	Regular nursery education	2.5 - 3	3
					Buitengewoon kleuteronderwijs	Special nursery education	2.5 - 3	3
Belgium (Fr.)	a				Enseignement maternel ordinaire	Regular pre-primary education	2.5 - 3	3
					Enseignement maternel spécialisé	Special pre-primary education	2.5 - 3	3
Canada	Early childhood development or equivalent	Pre-elementary education or equivalent – early childhood development	3 - 4	1 - 2	Kindergarten	Pre-elementary education or equivalent - kindergarten	4 - 5	1
Chile	Educación parvularia (sala cuna y nivel medio menor)	Pre-primary education (day care and lower middle level)	0 - 2	3	Educación parvularia (nivel medio mayor, nivel de transición 1 y nivel de transición 2)	Pre-primary education (upper middle level, 1st transition level and 2nd transition level)	3 - 5	3
Czech Republic	a				Mateřská škola	Kindergarten	3	3
					Přípravné třídy pro děti se sociálním znevýhodněním	Preparatory classes for socially disadvantaged children	6	1
					Přípravný stupeň základní školy speciální	Preparatory stage of special basic school	6	3
Denmark	Vuggestue	Nursery school	0 - 2	3	Børnehave	Kindergarten	3 - 5	2
Estonia	Included with ISCED-02				Alusharidus (alushariduse raamõppekava)	Pre-primary education (general study programme of pre-primary education)	0	6
Finland	0-2-v. lapset päiväkodeissa	Kindergartens (0-2 year-old children), including special education programmes	0 - 2	1 - 3	3-5-v. lapset päiväkodeissa	Kindergartens (3-5 year-old children), including special education programmes	3 - 5	1 - 3
	0-2-v. lapset perhepäivähoidossa	Family day care (0-2 year-old children), including special education programmes	0 - 2	1 - 3	6-v. lasten esiopetus	Pre-primary education for 6-year-old children in kindergartens and comprehensive schools, including special education programmes	6	1
					3-5-v. lapset perhepäivähoidossa	Family day care (3-5 year-old children), including special education programmes	3 - 5	1 - 3
France	a				Enseignement préélémentaire	Pre-elementary education	2 - 3	3
Germany	Krippen	Crèche, Day nursery	0	2 - 3	01 Kindergärten	Kindergarten	3	3
					02 Schulkindergärten	School kindergarten	6	1
					03 Vorklassen	Pre-school classes	5	1
Greece	Vrefonipiakos stathmos	Kindergarten Early childhood	0	1 - 3	Nipiagogio	Pre-primary	4 - 5	1 - 2
Hungary	Gyógypedagógiai tanácsadás, korai fejlesztés, oktatás és gondozás	Special education consulting, early development, education and care	0	5	Óvoda	Kindergarten (of which one year pre-school education)	3	3
	Egységes óvoda-bölcsőde	Integrated kindergarten-infant nurseries	2	1				
	Óvoda (3 év alatt)	Kindergarten (under 3 years)	2 - 5	0 - 5				

Source: ISCED 2011 mappings. For more details see ISCED-2011 classification and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.5. [2/3] Coverage of early childhood education programmes in OECD and partner countries

ISCED 01 and ISCED 02, based on ISCED 2011 classifications

		ISCED 01 – Early childhood development programmes				ISCED 02 – Pre-primary education			
		Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)	Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)
OECD	**Iceland**	Leikskóli I	Pre-primary schools I	0	1 - 3	Leikskóli II	Pre-primary schools II	3	0 to 3 years, variable
						5 ára bekkur	0 grade for 5-year-olds	5	1
	Ireland	a				Early start	Early start	3 - 4	1
						Traveller Pre-School Programmes	Traveller Pre-School Programmes	3 - 4	1
						Privately provided pre-primary education – Early Childhood Care and Education (ECCE) Scheme and the Community Childcare Subvention (CCS) Programme	Privately provided pre-primary education – Early Childhood Care and Education (ECCE) Scheme and the Community Childcare Subvention (CCS) Programme	3 years 2 months to 4 years 6 months	1
	Israel	Hinuh be ganey misrad ha kalkala or harevacha	Early childhood education supervised by Ministry of Economy or by Ministry of Welfare	0	3	Hinuh kdam yesody-ganey yeladim-ziburi (misrad ha kalkala, misrad ha revacha ve misrad ha hinuh)	Pre-primary education-public (supervised by Ministry of Economy, Ministry of Welfare or by Ministry of Education)	3	3
						Hinuh kdam yesody-ganey yeladim-prati	Pre-primary education-independent private	3	3
	Italy	a				Scuola dell'infanzia	Pre-primary school	3	3
	Japan	a				Yohorenkeigata-Nintei-Kodomo-En	Integrated centre for early childhood education and care	3-5	1-3
						Yochien	Kindergarten	3-5	1-3
						Tokubetsu-shien-gakko Yochi-bu	School for special needs education, kindergarten department	3-5	1-3
						Hoikusho	Day nursery	3-5	1-3
	Korea	어린이집 (0 - 2세) (Eorinyijip, age 0 - 2)	Infant course, childcare centre	0 - 2	1 - 3	어린이집 (3 - 5세) (Eorinyijip, age 3 - 5)	Kindergarten course, childcare centre	3 - 5	1 - 3
		특수학교 (Teuksu-hakgyo), 영아과정 (Younga kwajeong)	Infant course, special school	0 - 2	1 - 3	유치원 (Yuchiwon)	Kindergarten	3 - 5	1 - 3
						특수학교 (Teuksu-hakgyo), 유치원과정 (Yuchiwon-kwajeong)	Kindergarten course, special school	3 - 5	1 - 3
	Latvia	Pirmskolas izglitibas programmas (lidz 2 gadu vecumam)	Pre-primary education programmes (part of the programme up until the age of 2 years) (early childhood education)	0	1 - 2	Pirmskolas izglitibas programmas (no 3 gadu vecuma)	Pre-primary education programmes (part of the programme from the age of 3 years on)	3	1 - 4
	Luxembourg	a				Enseignement fondamental/cycle 1 – éducation précoce	Early maturity education	3	1
						Éducation précoce	Early maturity education (independent private institutions)	<4	1
						Enseignement fondamental/cycle 1 – éducation préscolaire (Spillschoul)	Pre-primary education	4	2
						Éducation préscolaire	Pre-primary education (independent private institutions)	4	2
	Mexico	Educación inicial	Early childhood education	0	3	Educación preescolar	Pre-primary education	3	2 - 3
	Netherlands	Early childhood education	Early childhood education	0	<= 3	Voorschools onderwijs	Pre-school education in day care centers and play groups	3	1
		Barnehage, 0 - 2 åringer	Kindergarten	0	2	Basisonderwijs en speciaal basisonderwijs, groep 1 en 2	Pre-primary education in school settings, including pre-primary special needs education group (class) 1 and 2	4	2

Source: ISCED 2011 mappings. For more details see ISCED-2011 classification and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C2.5. [3/3] Coverage of early childhood education programmes in OECD and partner countries

ISCED 01 and ISCED 02, based on ISCED 2011 classifications

		ISCED 01 – Early childhood development programmes				ISCED 02 – Pre-primary education			
		Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)	Name of the programme in national language	Name of the programme in English	Theoretical starting age	Theoretical duration of the programme (years)
OECD	New Zealand	Early childhood education	Early childhood education	0	<= 3	Early childhood education	Early childhood education	3	2
	Norway	Barnehage, 0 - 2 åringer	Kindergarten	0	2	Barnehage, 3 - 5 åringer	Kindergarten	3	3
	Poland	a				Wychowanie przedszkolne	Pre-school education	3	4
						Wychowanie przedszkolne specjalne	Special pre-school education	3	4
	Portugal	a				Educação pré-escolar	Pre-primary education	3 - 5	3
	Slovak Republic	a				Materská škola	Kindergarten	3	3
						Špeciálna materská škola	Special kindergarten	3	3
						Prípravné triedy na základnej škole	Preparatory classes in basic school	6	1
						Prípravné triedy v špeciálnej škole	Preparatory classes in special school	6	1
	Slovenia	Pedšolska vzgoja (1.starostno obdobje)	Pre-school education (1st age period)	1	2	Predšolska vzgoja (2. starostno obdobje)	Pre-school education (2nd age period)	3	3
	Spain	Educación infantil primer ciclo (0-2 años)	Early childhood education	0	3	Educación infantil segundo ciclo (3+ años)	Pre-primary education	3	3
	Sweden	Förskola för barn/elever under 3 år	Pre-school, for children/pupils younger than 3 years	0	0 - 2	Förskola för barn/elever 3 år eller äldre	Pre-school, for children/pupils 3 years of age or older	3	3
						Förskoleklass	Pre-school classes	6	1
	Switzerland	a				Vorschule, préscolarité, prescolarità	Kindergarten	4 - 6	2
						Besonderer Lehrplan, programme d'enseignement spécial, programma scolastico speciale	Special needs education programmes	4 - 6	2
	Turkey	Erken çocukluk dönemi eğitimi (0-2 yaş)	Early childhood care and education (ages 0-2)	0 - 2	1 - 2	Okul öncesi eğitimi (3-5 yaş)	Pre-primary education (ages 3-5)	3 - 5	1 - 3
	United Kingdom	Children's centres (including Sure Start centres)	Children's centres (including Sure Start centres)	0	2	Reception and nursery classes in schools	Reception and nursery classes in schools	3	1-2
		Registered childminders	Registered childminders	0	2	Preschool or pre-kindergarten	Preschool or pre-kindergarten	2 - 4	1 - 2
		Day nurseries	Day nurseries	0	2				
	United States	a				Preschool or pre-kindergarten	Preschool or pre-kindergarten	2 - 4	1 - 2
						Kindergarten	Kindergarten	4 - 6	1
Partners	Brazil	Educação infantil – creche	Nursery schools/ day-care centres	0	3	Educação Infantil – pré-escola	Pre-school	4	2
	Colombia	Atención integral a la primera infnacia	Early childhood educational development	0	3	Pre-jardin (3-year-olds), jardin (4-year-olds) and transicicón (5-year-olds)	Pre-primary education	3 - 5	1 - 3
	Lithuania	Ikimokyklinio ugdymo programos	Early childhood educational development	0	1 - 2	Ikimokyklinio ir priešmokyklinio ugdymo programos	Pre-primary education	3	1 - 4
	Russian Federation	Программы развития детей младшего возраста	Early childhood educational development	0	2	Дошкольное образование	Pre-primary education	3	3

Source: ISCED 2011 mappings. For more details see ISCED-2011 classification and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

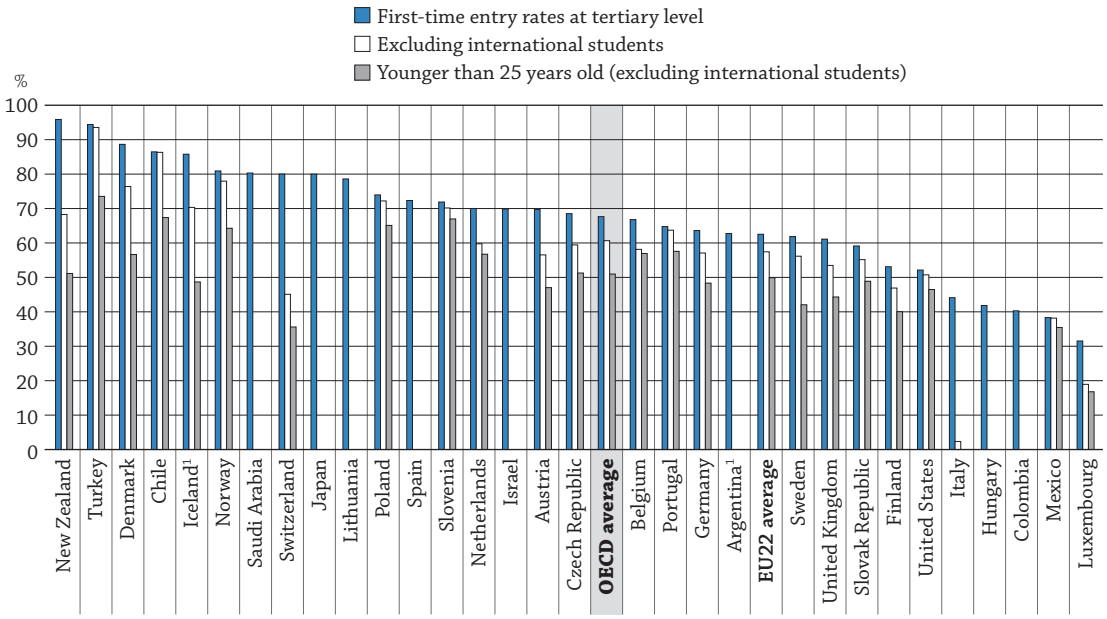
StatLink http://dx.doi.org/10.1787/888933398338

INDICATOR C3

HOW MANY STUDENTS ARE EXPECTED TO ENTER TERTIARY EDUCATION?

- Some 59% of young adults in OECD countries are expected to enter a bachelor's or equivalent programme over their lifetime, and 23% are expected to enter a master's or equivalent programme over their lifetime.
- On average across OECD countries, 82% of new entrants into tertiary education are under the age of 25 and 54% of new entrants are women.
- International students represent 13% of new entrants into tertiary education but only 28% at the doctoral level.

Figure C3.1. First-time tertiary entry rates (2014)



Note: Mismatches between the coverage of the population data and the new-entrants data mean that the entry rates for those countries that are net exporters of students may be underestimated and those that are net importers may be overestimated. The adjusted entry rates seek to compensate for that. Please refer to Annex 3 for further specific information by country.

1. Year of reference 2013.

Countries are ranked in descending order of first-time entry rate at tertiary level.

Source: OECD. Table C3.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398440

Context

Entry rates estimate the proportion of people who are expected to enter a specific type of tertiary education programme during their lifetime. They provide some indication of the accessibility of tertiary education, the perceived value of attending tertiary programmes, and the degree to which a population is acquiring the high-level skills and knowledge that can create and fuel knowledge-based economies. High entry and enrolment rates in tertiary education imply that a highly educated labour force is being developed and maintained.

In OECD countries, the belief that skills acquired through higher education are valued more than those held by people with lower educational attainment stems from the perception, both real and feared, that "routine" jobs can be mechanised or performed in low-wage countries. There is also a common understanding that knowledge and innovation are key to sustaining economic growth. Tertiary institutions not only have to meet growing demand by expanding the number of places they offer, they also have to adapt their programmes and teaching methods to match the diverse needs of a new generation of students.

Other findings

- At least 1 in 25 students in Germany, Switzerland and the United Kingdom are expected to enter a doctoral programme over their lifetime, but fewer than 1 in 200 students in Chile, China, Colombia, Indonesia, Mexico and Saudi Arabia are expected to do so.
- Based on current patterns, it is estimated that an average of 18% of today's young adults in OECD countries will enter a short-cycle tertiary programme over their lifetime, and 23% will enter a master's degree or equivalent programme.
- In Austria, Luxembourg, New Zealand and Switzerland, more than one in five entrants into a bachelor's programme are international students, well above the OECD average of 10%.

Note

Entry rates represent the percentage of an age cohort that is expected to enter a tertiary programme over a lifetime. This estimate is based on the number of new entrants in 2014 and the age distribution of this group. Therefore, the entry rates are based on a "synthetic cohort" assumption, according to which the current pattern of entry constitutes the best estimate of the behaviour of today's young adults over their lifetime.

Entry rates are sensitive to changes in the education system, such as the introduction of new programmes. For example, during the implementation of the Bologna Process, some students in European countries stayed longer than expected in tertiary education, while others postponed their entrance to be given a degree adaptable to the new classification. Entry rates can be very high, and even greater than 100% (thus clearly indicating that the synthetic cohort assumption is implausible), during a period when there is an unexpectedly high number of entrants.

In some countries, high entry rates may reflect a temporary phenomenon – namely the effects of economic cycles and crises, when prospective students align their expectations to the realities of the job market or government incentives. Second-chance programmes, through which the government encourages older students to rejoin education, can also boost entry rates.

A surge in the number of international students can temporarily inflate entry rates. The percentage of expected new entrants into tertiary programmes changes dramatically when international students are excluded from the calculation. Together with older students, international students are a significant share of the total student population in some countries, and their numbers can artificially inflate the proportion of today's young adults who are expected to enter a tertiary programme.

Analysis

Overall access to tertiary education

The transition to ISCED 2011 helps to distinguish between the various levels of tertiary education, including short-cycle tertiary, bachelor's degrees, master's degrees and doctoral programmes.

It is estimated that 68% of young adults in OECD countries will enter tertiary education at least once during their lifetime if current patterns of entry continue. This average drops to 61% when international students are excluded and to 51% if only domestic students younger than 25 are considered (Figure C3.1). Some countries have very high tertiary entry rates largely because of popular short-cycle programmes. In Chile, for example, around 87% of young people are expected to enter tertiary education at least once in their lifetime – with 48% of them entering short-cycle programmes (Tables C3.1 and C3.2).

Some 18% of young adults across OECD countries are expected to enter short-cycle programmes, as are 13% of young adults in the 22 members of the European Union that are also part of the OECD.

In most countries, the largest proportion of tertiary students enter bachelor's degree programmes (ISCED 6). Across OECD countries, 59% of young people will enter this level during their lifetime, although the rate varies widely across countries. In Luxembourg, for example, given the large proportion of its citizens who study abroad, first-time entry rates stand at only 18% at the bachelor's level. Conversely, Australia, which has a large population of international tertiary students, has a first-time entry rate of 94%. When international entrants are excluded from the calculation, Australia's entry rate falls to 79%.

Many OECD countries invest heavily to provide education beyond the bachelor's level. Some countries have entry rates as high as 42% for master's programmes (Poland) and around 5% for doctoral programmes (Germany and Switzerland).

Around 23% of students across OECD countries are expected to enter a master's programme over their lifetime, and 14% of domestic students are expected to enter such programmes before the age of 30. After excluding international students from the calculation, entry rates into master's programmes vary from 35% in Iceland and the Slovak Republic to 3% in China and Luxembourg.

Only 2.5% of young people will enter a doctoral programme over their lifetime, and only 0.9% of all domestic students are expected to do so before the age of 30.

International students

As previously discussed, international students are of great relevance in understanding how entry rates describe a country's education system. Many of those entering a certain level of education may come from abroad or may have attained the previous level of their education in a foreign country, which substantially alters the indicators. For example, when international students are excluded, the entry rates for bachelor's degree programmes decrease by an average of 5 percentage points.

At the master's and doctoral levels, the change in rates is also relevant after accounting for international students. The first-time entry rate for master's programmes, calculated only for domestic students, is 4 percentage points lower than that for all students, on average. First-time entry rates at the doctoral level decrease from 2.5% to 1.7%, which is also a relatively large difference. Indicator C4 discusses in greater detail students' motivation for pursuing higher education in other countries, particularly master's and doctoral programmes.

Students above the typical age

The "typical age" is the age at which most students enter a given education level. After excluding students above the typical age at entry, there are substantial differences in the estimates for first-time tertiary entry rates for domestic students, ranging from 61% to 51%, on average across OECD countries. This means that a little over half of all young people across OECD countries are expected to enter a tertiary-level programme before the age of 25 (Table C3.1). But in some countries, students first entering this level of education are older. In Iceland, Israel and Switzerland, for example, at least 30% of those entering tertiary education are older than 25 (Table C3.2).

Doctoral entry rates are also affected by this adjustment in the calculations. Although 1.7% of all domestic youth are expected to enter a PhD programme, only 0.9% will do so before they turn 30.

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Profile of first-time entrants into tertiary education

By level of education

Knowing the level at which students first enter tertiary education helps to determine the depth and length of the studies in which they engage. Most education systems begin tertiary education at the bachelor's degree level.

Across OECD countries, 74% of new entrants at the tertiary level start at the bachelor's level, and about 9% begin at the master's level or equivalent, essentially corresponding to long first degrees. Some 17% of new entrants, on average, enter short-cycle tertiary programmes, although in Austria, Chile, the Russian Federation, Turkey and the United States, 40% or more of new entrants do so. In Luxembourg, Sweden and Switzerland, more than one out of five new tertiary entrants enter master's programmes (Table C3.2).

Women's participation in tertiary education

Women make up the majority of entrants into tertiary education in all countries except India, Mexico, Saudi Arabia, Switzerland and Turkey. On average across OECD countries, 54% of new entrants are women. The largest shares of female new entrants (58%) are found in the Czech Republic, Iceland and the Slovak Republic. However, equal participation of men and women at a given education level does not imply evenly balanced distribution across fields of study.

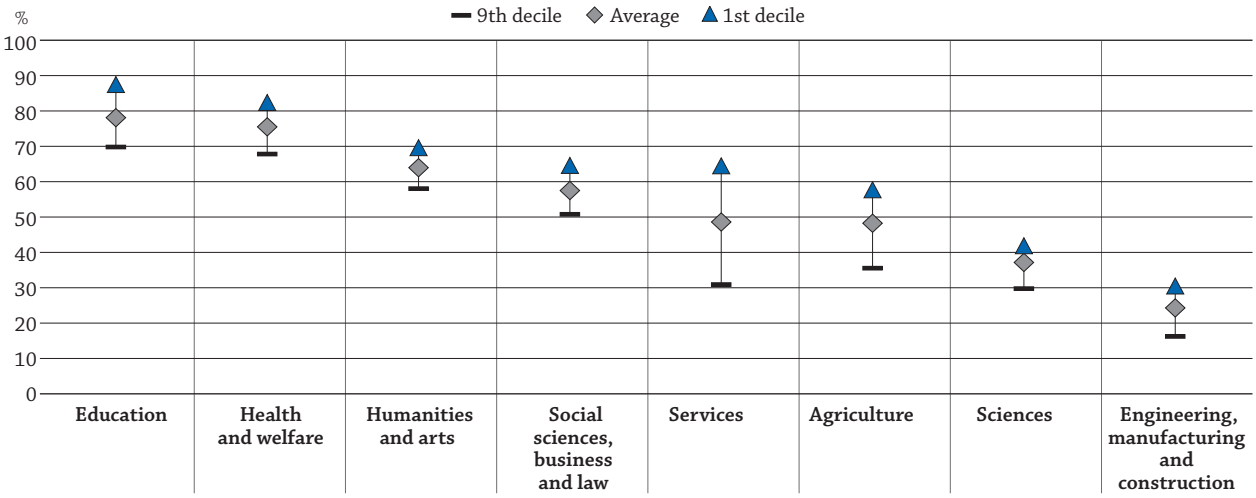
Share of female new entrants, by field of education

Women are over-represented in programmes that will lead to relatively lower-paying jobs, namely teaching and nursing, while men are over-represented in science, technology, engineering and mathematics (STEM) fields.

In all countries with available data, the proportion of female new entrants into the field of education is above two-thirds. In the field of health and welfare, Japan is the only country in which less than two-thirds of new entrants are women. A similar imbalance exists in the field of humanities and arts, in which women make up the majority of new entrants in all countries, averaging 64%. The proportion across most countries is very close to that average. The difference between the upper and lower deciles is of only 12 percentage points (Figure C3.2).

In contrast, less than one out of four new entrants into the field of engineering, manufacturing and construction are women. In more than nine countries out of ten, the share of female new entrants into this field is one-third or less. In the field of sciences, the average share of women among all new entrants is only slightly over one-third and it does not differ by much across countries. In 80% of the countries, the proportion of women in sciences falls between 30% and 42% (Figure C3.2 and Table C3.2).

Figure C3.2. Percentage of female new entrants in tertiary programmes in OECD and partner countries, by field of education (2014)



How to read this figure

On average across countries with available data, 49% of the new entrants into the field of "services" at tertiary level are women (indicated by the diamond). In 10% of the countries, the share of female new entrants into the field of "services" is 65% or more (lower decile, indicated by the triangle). At the other end of the spectrum, in 10% of the countries, the share of female new entrants is 31% or less (indicated by the bar).

Source: OECD. Table C3.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398455

Proportion of new entrants above the typical age

The age of new entrants into tertiary education varies across OECD countries because of differences in the typical age at which students graduate from upper secondary education, the intake capacity of institutions (admissions with *numerus clausus*, one of many methods used to limit the number of students who may study at a tertiary institution), the opportunity cost of entering the labour market before enrolling in tertiary education, and cultural expectations.

During the recent economic crisis, some young people postponed entry into the labour market and remained in education. Some governments have also developed second-chance programmes, aimed at people who left school early, to raise the level of skills available in the workforce and increase opportunities for people to acquire practical education and competencies. However, entering tertiary education at a later stage is more costly from both public and personal perspectives. It means that for a period of time, the productive potential of individuals is untapped. As a result, tax revenues are lower and public expenditures may be higher (see Indicator B7). Older students may face more difficulties combining work and study and thus may be unable to complete the programmes on time. Understanding that delays in completing education are costly to the education system, governments are introducing measures to foster timely completion.

The proportion of older first-time entrants into tertiary programmes may reflect the flexibility of the programmes and their suitability to students outside the typical age group. It may also reveal the higher value placed on work experience before entering higher education, which is a characteristic of countries with small proportions of entrants below the typical age (less than 75%), namely Denmark, Iceland, Israel, Luxembourg, Sweden and Switzerland. Older entrants can also reflect a response to policies aimed at expanding lifelong learning and more flexible access to tertiary education. The reasons differ substantially from one country to another. For instance, in Australia, taking a gap year before entering tertiary education has become a trend. In 2009/10, almost one in four students took a gap year, and 51% of them declared "work" as their main reason for taking the year off from education (Lumsden and Stanwick, 2012).

Share of international students

In most countries, all international students enrolling for the first time in a country are counted as new entrants, regardless of their previous education in other countries. To highlight the impact of international students on entry rates, Figure C3.1 shows both unadjusted and adjusted entry rates (i.e. the entry rate when international students are excluded from consideration).

The total share of international students entering a tertiary programme for the first time ranges from close to zero in Chile, Mexico and Turkey to over 40% in Luxembourg and Switzerland. It is also high (20% or more) in Austria and New Zealand. On average, however, 13% of all new entrants in OECD countries come from abroad (Table C3.2).

Short-cycle programmes

Compared to other education levels, short-cycle tertiary programmes have the most diverse profile of entrants. Although 52% of new entrants into short-cycle tertiary programmes are women, on average, this proportion varies from under 25% in Italy, Norway and Saudi Arabia to 77% in Poland.

On average across OECD countries, 66% of those entering a short-cycle programme (ISCED 5) are younger than 25. The average age of new entrants to this level is 25, ranging from 18 in Japan to 31 in Denmark and the United Kingdom and 33 in Iceland.

A small proportion of international students enter short-cycle tertiary programmes, although around 28% are international students in New Zealand and 30% in Iceland.

Bachelor's programmes

Bachelor's degrees are the most popular of tertiary education programmes in all countries; students are more likely to enter this level of education than any other level of tertiary education. Almost three out of four people who enter tertiary education for the first time will enrol in a bachelor's degree programme (Table C3.2). Some 59% of young people across OECD countries are expected to enter a bachelor's degree programme at some point in their lifetime (Table C3.1).

In 26 of the 32 OECD countries for which data are available, women are more likely than men to enter a bachelor's programme. In Sweden, 60% of all entrants at bachelor's level are women, as are 45% of all entrants into bachelor's programmes in Japan (Table C3.3).

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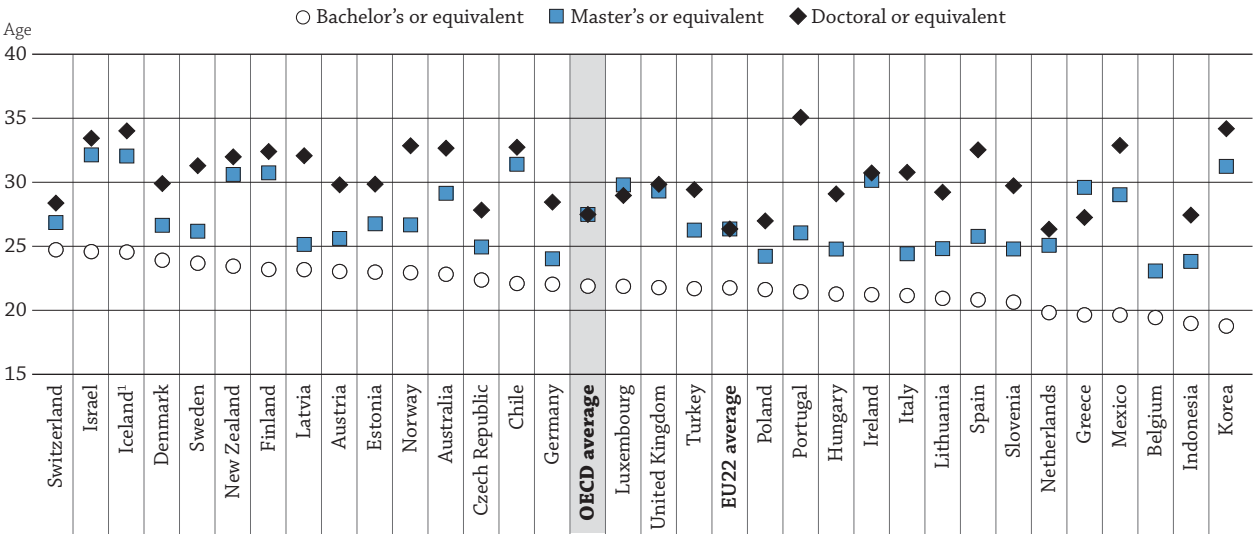
Traditionally, students enter a bachelor's programme immediately after having completed upper secondary education, and this remains true in many countries. On average, 83% of new entrants into a bachelor's programme are younger than 25, averaging 22 years of age. However, in some countries, the transition from upper secondary to tertiary education may occur at a later age because of time spent in the labour force or the military. The fact that some countries require young people to serve in the armed forces postpones their entry into tertiary education. For example, in Israel and Switzerland, which have mandatory conscription, the average age of new entrants to bachelor's programmes is 25 (Figure C3.3).

Figure C3.3. Average age of new entrants at tertiary level, by level of education (2014)



1. Year of reference 2013.

Countries are ranked in descending order of the average age of new entrants to bachelor's or equivalent level.

Source: OECD. Table C3.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398460

The share of international entrants at the bachelor's level varies widely across OECD countries, from 45% in Switzerland to less than 1% in Chile and Mexico (Table C3.3). The countries with the largest shares of international students see a steep drop in their entry rates when international students are excluded from the calculations. In Switzerland, first-time entry rates into bachelor's programmes drop from 60% to 34% when international students are excluded from the calculation (Table C3.1).

Master's programmes

On average across OECD countries, 56% of those entering master's programmes are women. Lower proportions of women entering master's programmes are observed in China (46%), India (47%), Indonesia (48%), Japan (34%), Saudi Arabia (47%) and Turkey (44%).

Among OECD countries, the average age of new entrants into a master's or equivalent programme is 28. In Iceland and Israel, where only slightly more than 50% of new entrants into a master's or equivalent programme are younger than 30, the average age is 32. They are relatively younger in Belgium, averaging 23 years old.

Master's or equivalent programmes attract more international new entrants than lower tertiary levels. On average across OECD countries, almost one out of five new entrants is an international students. This proportion is considerably high in Australia (48%), Switzerland (40%) and the United Kingdom (42%), and it is highest in Luxembourg, where almost three out of four new entrants are international students.

Students entering into master's programmes may have already graduated from a bachelor's programme or may be entering tertiary education through long first degrees. There are several differences in the profile of these entrants, specially as regards their average age and the share of international students among them. For more information about students in each of these programmes at the master's level, please refer to Indicator A3 of this publication.

Doctoral programmes

Graduate-level research, particularly at the doctoral level, plays a crucial role in innovation and economic growth and contributes significantly to the national and international knowledge base. Businesses are attracted to countries that make this level of research readily available (Halse and Mowbray, 2011; Smith et al., 2010), while individuals who attain this level of education benefit from higher wages and higher employment rates (see Indicators A5 and A6).

Several countries are developing doctoral programmes or changing their funding policy to attract international students. Attracting the best students from around the world helps to ensure that a country plays a leading role in research and innovation (Smith, 2010). Not surprisingly, in 6 of the 28 countries for which data are available, more than 40% of students entering doctoral programmes are international students – as are more than 80% of students entering these programmes in Luxembourg.

On average across OECD countries, 59% of entrants at the doctoral level are younger than 30 (Table C3.3). Across OECD countries, the average age of entry at this level is between 26 (in Japan and the Netherlands) and 35 (in Portugal). A larger share of younger entrants may reflect lower dropout rates and greater emphasis on acquiring specialised skills with a first degree in tertiary education. Some countries offer incentives, such as grants, scholarships, international mobility programmes, part-time jobs and distance learning, to encourage students to pursue advanced studies right after completion of their first degree in tertiary education. By contrast, tuition fees, availability of scholarships, and/or cultural expectations (such as being expected to enter the labour force by a certain age or to gain professional experience prior to entering advanced education) may explain why some new entrants are older.

Definitions

Entry rate is the sum of age-specific entry rates, calculated by dividing the number of entrants of a certain age into a certain education level by the total population of that age.

Entry rate adjusted for international students is the entry rate when calculated excluding international students in the numerator of each age-specific entry rate.

Entry rate below typical age is the sum of age-specific entry rates for age groups below the typical age.

International students are those students who left their country of origin and moved to another country for the purpose of study. International students enrolling for the first time in a programme are considered first-time entrants.

New entrants are students who enrol at the relevant level of education for the first time.

Tertiary-level entry rate is an estimated probability, based on current entry patterns, that a young adult will enter tertiary education during his or her lifetime.

Methodology

Data refer to the academic year 2013/14 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm). The fields of education used in the UOE data collection instruments follow the revised ISCED 11 classification by field of education. The same classification is used for all levels of education.

Table C3.1 and Table C3.4 show the sum of net entry rates for all ages. Tables C3.2 and C3.3 present the share of entrants with different profiles.

The net entry rate for a specific age is obtained by dividing the number of first-time entrants of that age for each type of tertiary education by the total population in the corresponding age group. The sum of net entry rates is calculated by adding the rates for each year of age. The result represents an estimate of the probability that a young person will enter tertiary education in his/her lifetime if current age-specific entry rates continue.

Note regarding data from Israel

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

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Indicator C3 Tables

StatLink http://dx.doi.org/10.1787/888933398399

Table C3.1	**First-time entry rates, by tertiary level (2014)**
Table C3.2	**Profile of first-time new entrants into tertiary education (2014)**
Table C3.3	**Profile of a first-time new entrant into tertiary education, by tertiary level (2014)**
Table C3.4	**Trends in entry rates, by tertiary level (2005, 2010 and 2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

C3

Table C3.1. First-time entry rates, by tertiary level (2014)

Sum of age-specific entry rates, by demographic groups

	Short-cycle tertiary (2-3 years)			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent			First-time tertiary		
		Excluding international students			Excluding international students			Excluding international students			Excluding international students			Excluding international students	
	Total	Total	Younger than 25	Total	Total	Younger than 25	Total	Total	Younger than 30	Total	Total	Younger than 30	Total	Total	Younger than 25
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	94	79	62	33	18	9	3.6	2.2	0.9	m	m	m
Austria	35	35	30	41	32	26	28	21	18	3.7	2.5	1.7	70	57	47
Belgium	m	m	m	69	62	61	27	23	23	m	m	m	67	58	57
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	50	50	34	55	55	44	12	12	5	0.5	0.4	0.2	87	86	67
Czech Republic	0	0	0	63	56	48	31	27	24	3.5	2.9	2.4	69	59	51
Denmark	32	28	11	71	66	50	35	28	23	3.7	2.4	1.2	89	76	57
Estonia	a	a	a	65	62	50	25	23	17	2.0	1.7	1.1	m	m	m
Finland	a	a	a	53	49	40	11	8	4	2.5	1.7	0.8	53	47	40
France	m	m	m	m	m	m	m	m	m	2.5	m	m	m	m	m
Germany	0	0	0	52	49	41	28	21	19	5.5	3.9	4.0	64	57	48
Greece	a	a	a	65	m	m	13	m	m	2.1	m	m	m	m	m
Hungary	4	m	m	32	m	m	15	m	m	1.7	m	m	42	m	m
Iceland[1]	6	4	1	80	68	48	39	35	17	2.5	1.8	0.5	86	70	49
Ireland	9	9	5	81	77	68	28	23	14	3.0	2.2	1.3	m	m	m
Israel	20	m	m	57	55	36	21	20	9	1.7	1.6	0.6	70	m	m
Italy	0	m	m	37	m	m	24	m	m	1.6	m	m	44	m	m
Japan	29	m	m	49	m	m	9	m	m	1.2	1.0	0.7	80	m	m
Korea	33	m	m	56	m	m	14	m	m	3.5	m	m	m	m	m
Latvia	28	m	m	70	m	m	21	m	m	1.9	m	m	m	m	m
Luxembourg	4	4	4	18	13	13	11	3	2	1.2	0.2	0.1	32	19	17
Mexico	4	4	3	35	34	32	4	4	2	0.4	0.4	0.2	38	38	35
Netherlands	2	1	1	65	58	56	21	17	15	1.4	0.8	0.7	70	60	57
New Zealand	39	28	13	77	59	43	11	8	4	3.1	1.4	0.6	96	68	51
Norway	5	5	3	68	65	54	30	27	22	2.6	1.9	0.7	81	78	64
Poland	0	0	0	68	m	m	42	m	m	3.1	m	m	74	72	65
Portugal	a	a	a	54	53	47	36	34	28	3.7	2.8	1.3	65	64	58
Slovak Republic	1	1	1	57	53	m	37	35	m	2.7	2.4	1.9	59	55	49
Slovenia	30	30	19	75	73	69	29	28	26	2.1	1.9	1.4	72	70	67
Spain	26	m	m	48	47	43	11	9	8	2.0	1.5	0.9	72	m	m
Sweden	10	10	4	45	43	32	28	24	18	2.6	1.6	0.7	62	56	42
Switzerland	4	m	m	60	34	29	22	13	12	4.8	2.1	1.6	80	45	36
Turkey	41	41	30	52	51	42	6	6	4	0.8	0.7	0.5	94	94	74
United Kingdom	22	20	8	64	54	45	32	19	9	4.1	2.3	1.3	61	54	44
United States	38	38	26	m	m	m	13	11	7	1.2	0.7	0.4	52	51	47
OECD average	18	16	10	59	54	45	23	19	14	2.5	1.7	0.9	68	61	51
EU22 average	13	12	7	57	53	46	26	21	17	2.7	2.1	1.2	63	57	50
Partners															
Argentina[1]	53	m	m	50	m	m	5	m	m	0.6	m	m	63	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	35	35	m	30	30	m	3	3	m	0.3	0.3	m	m	m	m
Colombia	14	m	m	25	m	m	5	m	m	0.1	m	m	40	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India[1]	a	a	a	44	m	m	9	m	m	m	m	m	m	m	m
Indonesia	m	m	m	29	m	m	2	m	m	0.1	m	m	m	m	m
Lithuania	a	a	a	75	m	m	25	m	m	1.5	m	m	79	m	m
Russian Federation	38	38	m	71	67	m	13	13	m	1.7	1.6	m	m	m	m
Saudi Arabia	14	m	m	66	m	m	3	m	m	0.4	m	m	80	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	26	25	m	52	51	m	13	11	m	1.9	1.5	m	m	m	m

Note: Mismatches between the coverage of the population data and the new-entrants data mean that the entry rates for those countries that are net exporters of students may be underestimated and those that are net importers may be overestimated. The adjusted entry rates seek to compensate for that. Please refer to Annex 3 for further specific information by country.

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C3.2. Profile of first-time new entrants into tertiary education (2014)

	Percentage of women new entrants	Percentage of new entrants younger than 25 years old	Average age	Percentage of international new entrants	Share of first-time new entrants by level of education			Percentage of female new entrants							
					Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Education	Humanities and arts	Social sciences, business and law	Sciences	Engineering, manufacturing and construction	Agriculture	Health and welfare	Services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	54	78	23	20	46	35	19	77	68	58	36	22	51	68	77
Belgium	56	95	20	14	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
Chile	52	79	22	1	48	51	1	80	53	58	23	16	49	79	47
Czech Republic	58	84	22	13	1	91	9	83	68	65	40	28	57	82	48
Denmark	54	74	24	14	24	70	7	67	65	53	36	36	56	76	25
Estonia	m	m	m	m	m	m	m	90	70	65	37	31	46	86	46
Finland	55	82	22	12	a	94	6	83	70	62	38	19	52	84	64
France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	50	82	22	11	0	82	18	74	68	56	36	21	43	72	52
Greece	m	m	m	m	m	m	m	79	70	59	40	32	45	68	54
Hungary	56	88	21	m	9	76	14	81	64	63	37	22	48	71	58
Iceland[1]	58	69	25	18	5	89	6	80	66	60	41	29	50	86	66
Ireland	m	m	m	m	m	m	m	68	58	51	34	16	42	75	39
Israel	56	70	24	m	24	76	a	84	61	59	40	27	48	77	27
Italy	55	90	21	m	1	84	15	92	69	57	50	30	49	68	44
Japan	51	87	18	m	36	62	2	71	67	39	26	13	41	62	77
Korea	m	m	m	m	m	m	m	77	64	49	39	23	41	69	45
Latvia	m	m	m	m	m	m	m	88	73	64	31	21	36	82	48
Luxembourg	53	69	25	42	13	55	32	69	61	55	34	14	33	71	a
Mexico	49	94	20	0	10	90	a	73	55	56	42	27	35	65	30
Netherlands	53	92	20	15	1	93	6	76	57	51	27	23	52	74	48
New Zealand	54	75	23	31	31	69	1	83	61	56	41	27	65	78	45
Norway	54	80	23	4	7	82	11	76	60	57	33	21	61	80	31
Poland	55	89	21	3	m	m	m	80	69	64	40	34	52	79	52
Portugal	56	88	21	2	a	80	20	80	61	60	51	30	56	77	45
Slovak Republic	58	85	22	7	2	98[d]	x(6)	77	67	65	40	30	47	77	41
Slovenia	54	94	20	2	16	79	5	87	68	66	40	26	53	78	54
Spain	53	84	21	m	37	54	9	81	58	58	30	23	43	72	46
Sweden	57	74	24	9	14	64	22	76	59	63	38	29	58	80	59
Switzerland	50	64	25	45	5	69	26	72	62	51	33	17	35	74	52
Turkey	47	80	22	1	43	55	2	70	59	45	42	24	43	67	34
United Kingdom	55	83	22	13	13	85	2	74	62	54	44	21	60	79	60
United States	52	92	20	3	45	55	a	m	m	m	m	m	m	m	m
OECD average	54	82	22	13	17	74	9	78	64	57	37	24	48	75	49
EU22 average	55	84	22	13	11	77	12	79	65	59	38	25	49	76	51
Partners															
Argentina[1]	57	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
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	52	m	m	m	36	64	a	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
India[1]	46	m	m	m	a	100	0	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	54	90	21	m	a	95	5	76	69	64	34	20	47	82	43
Russian Federation	50	m	m	m	40	51	9	m	m	m	m	m	m	m	m
Saudi Arabia	46	m	m	m	18	82	1	m	m	m	m	m	m	m	m
South Africa[1]	m	78	22	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	51	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Columns 1 to 7 refer to students entering tertiary education for the first time, while Columns 8 to 14 refer to the sum of all students entering a given tertiary level for the first time.

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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C3

Table C3.3. Profile of a first-time new entrant into tertiary education, by tertiary level (2014)

	Short-cycle tertiary (2-3 years)				Bachelor's or equivalent				Master's or equivalent				Doctoral or equivalent			
	Percentage of women new entrants	Percentage of new entrants younger than 25 years old	Average age	Percentage of international new entrants	Percentage of women new entrants	Percentage of new entrants younger than 25 years old	Average age	Percentage of international new entrants	Percentage of women new entrants	Percentage of new entrants younger than 30 years old	Average age	Percentage of international new entrants	Percentage of women new entrants	Percentage of new entrants younger than 30 years old	Average age	Percentage of international new entrants
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	m	m	m	m	57	77	23	16	53	67	29	48	50	49	33	39
Austria	53	81	22	1	55	78	23	21	54	82	26	25	49	64	30	32
Belgium	m	m	m	m	56	96	19	11	53	95	23	14	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	51	69	24	0	52	80	22	0	57	49	31	5	41	45	33	11
Czech Republic	59	81	22	5	58	83	22	10	59	86	25	13	46	79	28	18
Denmark	52	42	31	11	56	77	24	7	56	84	27	20	49	59	30	36
Estonia	a	a	a	a	57	77	23	4	60	76	27	8	48	63	30	15
Finland	a	a	a	a	56	80	23	7	56	55	31	28	52	47	32	30
France	m	m	m	m	m	m	m	m	m	m	m	m	46	69	29	m
Germany	74	52	26	0	47	81	22	5	52	91	24	25	42	73	28	29
Greece	a	a	a	a	54	89	20	m	57	55	30	m	49	50	27	m
Hungary	64	84	22	1	54	89	21	5	59	84	25	16	52	71	29	9
Iceland[1]	50	24	33	30	59	71	25	14	67	52	32	9	55	34	34	29
Ireland	43	54	27	2	50	85	21	6	54	59	30	16	52	59	31	28
Israel	49	68	24	m	58	68	25	4	60	50	32	5	52	39	33	6
Italy	24	77	23	m	54	89	21	m	58	88	24	m	51	55	31	m
Japan	61	77	18	m	45	95	18	m	34	m	m	m	31	60	26	14
Korea	51	92	20	m	48	98	19	m	51	57	31	m	40	40	34	m
Latvia	62	54	27	m	52	75	23	m	63	86	25	m	57	50	32	m
Luxembourg	57	95	21	12	51	90	22	27	53	63	30	73	40	67	29	82
Mexico	39	94	20	0	50	94	20	0	53	65	29	1	47	42	33	3
Netherlands	46	59	26	2	53	95	20	11	57	90	25	21	48	89	26	41
New Zealand	50	56	27	28	58	75	23	23	57	60	31	29	51	51	32	55
Norway	20	58	26	1	56	80	23	4	56	78	27	8	52	45	33	27
Poland	77	61	24	a	54	87	22	m	65	90	24	m	52	86	27	m
Portugal	a	a	a	a	57	86	21	2	57	76	26	7	52	36	35	23
Slovak Republic	65	75	24	1	57	m	m	6	61	m	m	6	48	72	29	9
Slovenia	48	58	24	1	54	92	21	2	64	88	25	4	51	69	30	7
Spain	48	79	23	m	55	88	21	2	58	78	26	20	50	49	33	26
Sweden	49	47	27	0	60	75	24	4	57	78	26	16	47	55	31	39
Switzerland	61	54	27	m	48	68	25	45	50	81	27	40	46	75	28	57
Turkey	48	74	23	0	46	84	22	1	44	77	26	4	44	65	29	7
United Kingdom	62	40	31	7	55	84	22	16	59	66	29	42	47	62	30	45
United States	53	71	24	2	m	m	m	m	62	66	30	14	52	73	29	45
OECD average	52	66	25	5	54	83	22	10	56	73	28	19	48	59	30	28
EU22 average	55	65	25	4	55	85	22	9	58	79	26	21	49	63	30	29
Partners																
Argentina[1]	40	m	m	m	57	m	m	m	60	m	m	m	54	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	46	m	m	m	55	m	m	m	46	m	m	1	38	m	m	4
Colombia	47	m	m	m	54	m	m	m	56	m	m	m	42	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India[1]	a	a	a	m	46	m	m	m	47	m	m	m	m	m	m	m
Indonesia	m	m	m	m	51	100	19	m	48	100	24	m	41	89	27	m
Lithuania	a	a	a	a	53	89	21	m	64	87	25	m	57	66	29	m
Russian Federation	47	m	m	3	52	m	m	m	52	m	m	20	44	m	m	m
Saudi Arabia	24	m	m	m	50	m	m	m	47	m	m	m	34	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	48	m	m	2	51	m	m	6	52	m	m	19	44	m	m	23

1. Year of reference 2013.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398427

Table C3.4. Trends in entry rates, by tertiary level (2005, 2010 and 2014)

Sum of age-specific entry rates, by year

	Short-cycle tertiary (2-3 years)			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent			First-time tertiary		
	2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014	2005	2010	2014
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	72	85	94	21	26	33	2.5	3.4	3.6	m	m	m
Austria	m	34	35	14	47	41	31	22	28	4.0	7.7	3.7	m	72	70
Belgium	m	m	m	m	m	69	m	m	27	m	m	m	m	m	67
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	50	m	m	55	m	m	12	m	m	0.5	m	m	87
Czech Republic	m	m	0	m	m	63	m	m	31	3.2	3.9	3.5	m	m	69
Denmark	22	25	32	57	63	71	21	28	35	1.9	3.6	3.7	69	77	89
Estonia	a	a	a	m	m	65	m	m	25	m	2.8	2.0	m	m	m
Finland	0	0	a	46	57	53	26	8	11	m	m	2.5	59	55	53
France	m	m	m	m	m	m	m	m	m	m	m	2.5	m	m	m
Germany	0	0	0	23	38	52	23	20	28	m	m	5.5	44	51	64
Greece	a	a	a	m	m	65	m	m	13	m	m	2.1	m	m	m
Hungary	11	16	4	47	49	32	21	5	15	1.7	1.6	1.7	m	m	42
Iceland[1]	m	m	6	m	m	80	m	m	39	m	m	2.5	m	m	86
Ireland	m	m	9	m	m	81	m	m	28	m	m	3.0	m	m	m
Israel	m	26	20	53	58	57	17	21	21	2.0	1.9	1.7	m	m	70
Italy	m	m	0	m	m	37	m	m	24	m	m	1.6	m	m	44
Japan	m	m	29	m	m	49	m	m	9	m	1.0	1.2	m	m	80
Korea	40	35	33	58	56	56	12	14	14	2.1	2.7	3.5	m	m	m
Latvia	m	20	28	m	69	70	m	8	21	m	2.2	1.9	m	m	m
Luxembourg	m	m	4	m	m	18	m	m	11	m	m	1.2	m	m	32
Mexico	2	3	4	27	32	35	3	4	4	0.3	0.4	0.4	29	34	38
Netherlands	a	1	2	54	62	65	8	18	21	m	m	1.4	57	66	70
New Zealand	50	48	39	75	81	77	8	9	11	1.8	2.9	3.1	89	99	96
Norway	m	m	5	m	m	68	m	m	30	2.7	2.9	2.6	m	m	81
Poland	1	1	0	m	m	68	m	m	42	m	m	3.1	76	84	74
Portugal	a	a	a	m	53	54	m	30	36	m	3.3	3.7	m	m	65
Slovak Republic	m	m	1	m	m	57	m	m	37	3.3	4.1	2.7	m	m	59
Slovenia	m	m	30	m	m	75	m	m	29	0.6	5.4	2.1	m	m	72
Spain	m	m	26	m	m	48	m	m	11	4.4	1.8	2.0	m	m	72
Sweden	m	12	10	m	58	45	m	36	28	m	m	2.6	m	74	62
Switzerland	m	m	4	m	m	60	m	m	22	4.4	5.0	4.8	m	m	80
Turkey	19	28	41	24	34	52	3	6	6	0.9	1.4	0.8	43	62	94
United Kingdom	m	m	22	m	m	64	m	m	32	m	m	4.1	m	m	61
United States	m	35	38	m	m	m	m	13	13	m	1.5	1.2	m	51	52
OECD average[2]	16	16	17	46	55	57	16	15	19	2.4	3.2	2.7	m	m	m
EU22 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Partners															
Argentina[1]	m	m	53	m	m	50	m	m	5	m	m	0.6	m	m	63
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	35	m	m	30	m	m	3	m	m	0.3	m	m	m
Colombia	m	m	14	m	m	25	m	m	5	m	m	0.1	m	m	40
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India[1]	a	a	a	m	m	44	m	m	9	m	m	m	m	m	m
Indonesia	m	m	m	m	m	29	m	m	2	m	m	0.1	m	m	m
Lithuania	a	a	a	m	m	75	m	m	25	m	m	1.5	m	m	79
Russian Federation	m	m	38	m	m	71	m	m	13	m	m	1.7	m	m	m
Saudi Arabia	m	m	14	m	m	66	m	m	3	m	m	0.4	m	m	80
South Africa	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

1. Year of reference 2013 instead of 2014.

2. The averages are calculated only from countries with data available for all reference years and so may be different from Table C3.1.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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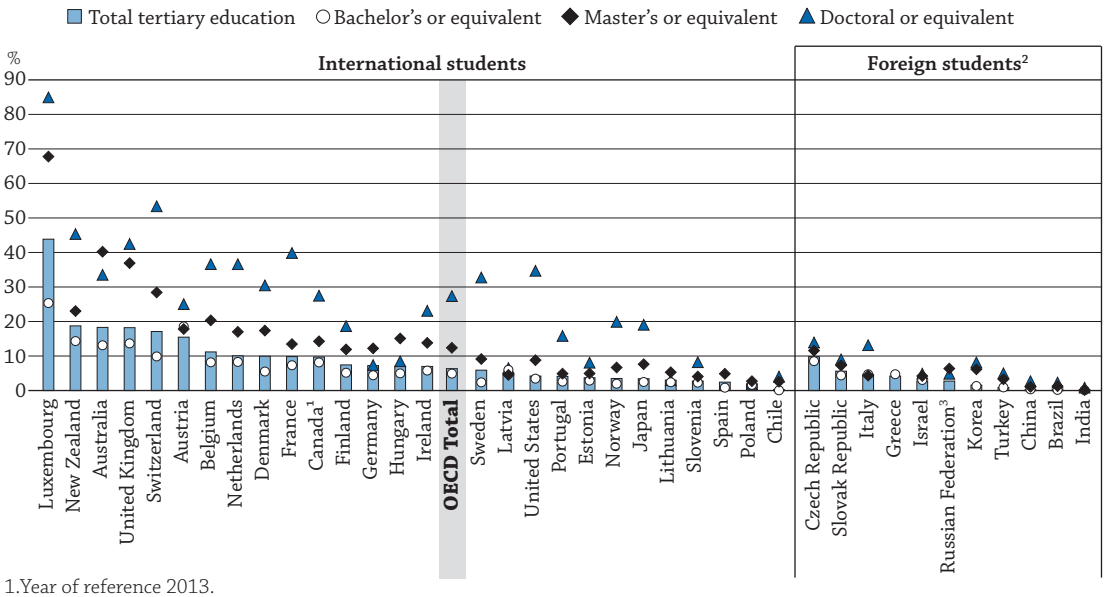
WHO STUDIES ABROAD AND WHERE?

- Within the OECD, 6% of the students enrolled in tertiary education in 2014 were international students. The proportion of international students among the students enrolled in tertiary education is highest in Luxembourg (44%).
- Students from Asia represent more than half (53%) of international students enrolled in OECD countries at the master's and doctoral or equivalent levels. China is the country with the largest numbers of citizens enrolled abroad, followed by India and Germany.
- Among all OECD countries, the United States hosts the largest number of international students at the master's and doctoral or equivalent level (26% of the total), followed by the United Kingdom (15%), France (10%), Germany (10%) and Australia (8%).

Figure C4.1. Student mobility in tertiary education, by ISCED level (2014)

International or foreign student enrolments as a percentage of total tertiary education



1.Year of reference 2013.

2. Foreign students are defined on the basis of their country of citizenship. These data are not comparable with data on international students and are therefore presented separately in the figure.

3. International students at the bachelor's or equivalent level are included in the master's or equivalent level.

Countries are ranked in descending order of the percentage of international or foreign students in tertiary education.

Source: OECD. Table C4.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398531

Context

As national economies become more interconnected and participation in education expands, tertiary education emerges as a means to broaden students' horizons and help them to better understand the world's languages, cultures and business methods. Tertiary education is becoming more international through a number of means, including distance education, international education-related internships and training experiences, cross-border delivery of academic programmes, and offshore satellite campuses. Among the phenomena related to the internationalisation of tertiary education, enrolling in a study programme abroad is receiving considerable attention from students and policy makers. By providing an opportunity to expand knowledge of other societies and languages, studying abroad is an important cultural and personal experience for students, as well as a way to improve their employability in the globalised sectors of the labour market.

Student mobility has increased dramatically over the recent past, due to a number of factors. The exploding demand for tertiary education worldwide and the perceived value of studying at prestigious post-secondary institutions abroad contribute to an increasing and diversified flow of international

students, ranging from those who cannot find a place to study in post-secondary education at home to students of high academic achievement studying at high-quality programmes and institutions. In addition, the educational value associated with a diverse student body, the substantial revenues that can be earned by expanding education for international students, along with other economic and political considerations prompted some governments and institutions to make major efforts to attract students from outside their national borders (Altbach and Knight, 2007; Knight, 2008).

From the point of view of the host countries, attracting international students is appealing for a variety of reasons, including the fees and other living expenses that students pay, and the social and business networks with their home countries that they help to build. In addition, international students, particularly at the master's or doctoral or equivalent level, can contribute to research and development in the host country, initially as students and later on potentially as researchers or highly qualified professionals. Doctoral students, in particular, form an integral part of the research staff of a country.

Countries that "export" students to other countries for the purpose of study risk permanently losing many of their talented citizens (what is commonly known as "brain drain"). But the fact that many developing countries sponsor a number of international students suggests that at least some of these students will return to their home country or establish social and business links between their home and host countries, developing what some authors (e.g. Solimano, 2002) call "brain circulation".

Other findings

- The proportion of international students among total enrolments tends to be much larger at the most advanced levels of tertiary education. Within OECD countries, 27% of students enrolled in doctoral or equivalent programmes and 12% of those enrolled in master's or equivalent programmes are international students.
- Women represent a majority of students across OECD countries (54%), but they account for slightly less than half (48%) of international students.
- Proportions of graduates leaving after study varied noticeably across the eight countries with available data, although master's graduates were consistently more likely to leave their country than bachelor's graduates.
- Denmark, New Zealand and Sweden witnessed substantial variations in the number of international new entrants as a response to their reform in the level of tuition fees charged to international students.

Trends

The increase in global demand for tertiary education, reduced transportation and communication costs, and the internationalisation of labour markets for highly skilled people have given students stronger incentives to study abroad as part of their tertiary education. In addition, many governments and supranational institutions have shown interest in promoting academic, cultural, social and political ties among countries. This is most evident in the European Union, which, in 2011, set the ambitious goal that by 2020, 20% of its graduates from higher education would have experience of tertiary-level study or training abroad (Council of the European Union, 2011). Hence, it is not surprising that more and more students opt for undertaking at least part of their studies abroad.

The number of mobile students in OECD countries grew by 5% between 2013 and 2014, with large variation across countries. The largest increases (around or above 20%) were observed in Belgium, Estonia, Latvia, New Zealand and Poland. In contrast, the rate of growth was negative in other countries (Austria, Japan, Korea, Slovenia and Turkey). Although the data for 2013 and 2014 are not directly comparable to previous trend data, OECD data show that the number of foreign tertiary students enrolled worldwide increased by 50% from 2005 to 2012 (OECD, 2015).

Analysis

Extent of international student mobility in tertiary education

Throughout this indicator, the term "international students" refers to students who have moved from their country of origin for the purpose of study, according to the criterion of country of prior education or the criterion of country of usual residence (see the *Definitions* section at the end of this indicator). The term "foreign students" refers to students who are not citizens of the countries in which they are enrolled, but may be long-term residents or were born in that country. In general, international students are a subset of foreign students (again, see the *Definitions* section at the end of this indicator).

In 2014, OECD countries hosted three international students for every citizen who was studying outside his or her country of origin. At the country level, the balance varies greatly. In Australia, there are more than 20 international students for each Australian student abroad, while the ratio is less than half that in Chile, Estonia, Korea, Luxembourg, Mexico the Slovak Republic and, among countries with data on foreign students, in Argentina and Brazil.

Among countries for which data on international students are available, Luxembourg shows the highest levels of incoming student mobility, measured as the proportion of international students among total tertiary enrolment. In Luxembourg, 44% of students enrolled in tertiary education are from another country. Similarly, international students represent 18% or more of total tertiary enrolments in Australia, New Zealand and the United Kingdom. In contrast, international students account for 2% or less of total tertiary enrolments in Chile, Poland and Spain and, among countries using the definition of international students based on country of citizenship, in Brazil, China, India, Korea and Turkey (Table C4.1 and Figure C4.1).

Proportion of international students at different levels of tertiary education

The proportion of international students is different at different levels of tertiary education. It is highest for the most advanced tertiary education programmes, at the master's or doctoral level, or equivalent. Several factors could account for this: capacity constraints in the countries of origin may be particularly severe at these levels of education; the returns to study abroad and in more prestigious institutions may be higher for master's or doctoral programmes than at lower levels of tertiary education; and students in these programmes may be a particular subgroup of the population that is more likely to travel and live abroad, independent of their educational choices. Attracting international students in doctoral or equivalent programmes is particularly appealing to host countries because of their potential contribution to research and development, either as students or later, as highly qualified immigrants.

Comparing the distribution of international and foreign students across countries by level of tertiary education gives a fair indication of which programmes are relatively more attractive in each country.

In 2014, within OECD countries, the share of international students in short-cycle (typically vocational) tertiary programmes (3%) was smaller than at any other level of tertiary education. However, in some countries, international students were more represented in short-cycle programmes than at the bachelor's or equivalent level. This is the case in Australia, Canada, Denmark, Japan, New Zealand and Spain. On average across these six countries, the proportion of international students in short-cycle tertiary programmes is 12%, much higher than the total for the OECD, 3% (Table C4.1 and Figure C4.2).

International enrolments at the bachelor's level were also relatively low (5%) across OECD countries. Among the countries for which data are available, they slightly exceeded (1 percentage-point difference) enrolments at the master's level in Austria, where international students represented 19% of total enrolments at the bachelor's or equivalent level, and in Latvia, where they represented 6% of enrolments at this level. Among the countries with available data on foreign students, only in Italy was the proportion of international students (5%) higher at the bachelor's than at the master's or equivalent level (Table C4.1).

The proportion of international students was much higher at the most advanced levels of education. Within the OECD, 12% of students in master's programmes or the equivalent were international students, as were 27% of students at the doctoral level. Luxembourg had the largest proportion of international students at the master's or equivalent level (68%), followed by Australia (40%), the United Kingdom (37%) and Switzerland (28%) (Table C4.1 and Figure C4.1).

For all reporting countries, except Australia, Germany, Hungary, Poland and Lithuania, the largest proportion of international students is found in doctoral or equivalent programmes. In Luxembourg and Switzerland, the majority of the students enrolled at this level are international. The proportion of international students enrolled in programmes at the doctoral or equivalent level is also large (exceeding 35%) in Belgium, France, the Netherlands,

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New Zealand and the United Kingdom. In contrast, this proportion is 5% or smaller in Chile, Lithuania, Poland and, among the countries that reported data based on the criteria of citizenship, in Brazil, China, India, Israel and the Russian Federation (Table C4.1 and Figure C4.1).

Proportion of women among international students in different fields of study

Although women represent a majority of students across OECD countries (54%), they account for slightly less than half (48%) of international students, i.e. a difference of 6 percentage points. This difference is particularly marked in New Zealand with a difference of 15 percentage points. The proportion of women among international students is 31% in Turkey, and it is 45% or lower in Canada, Chile, Finland, Latvia, New Zealand and the United States. In all these countries, this is at least 10 percentage points below the overall proportion of women among tertiary education students. In contrast, in Korea, women represent 52% of international students, 12 percentage points above their share in total enrolment in this country (Table C4.2).

Within OECD countries, the proportion of women among international students in sciences, engineering, manufacturing and construction (31%) is slightly higher than their share in overall enrolment in these fields (28%). In Slovenia, women account for close to 40% of international students in sciences, engineering, manufacturing and construction and, among the countries reporting data on foreign students, in Israel, women account for 39%. This is around 8.5 percentage points above their share in total tertiary enrolment in these fields (Table C4.2).

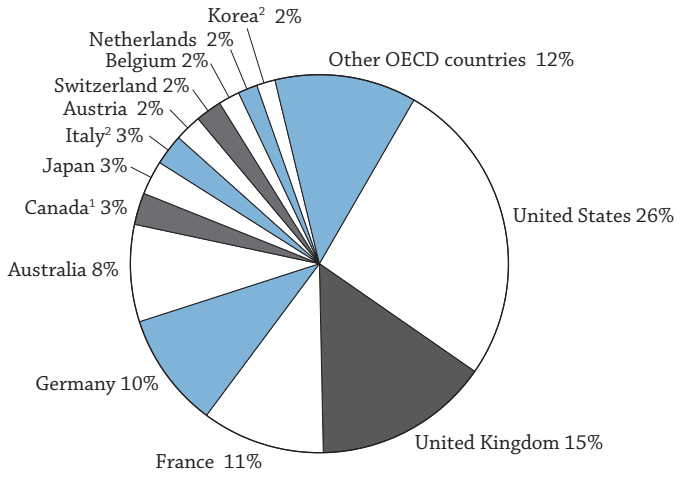
In contrast, women seem much less likely than males to study abroad in the three fields of agriculture, health and welfare, and services combined. Among OECD countries, women account for 68% of total tertiary enrolment in these three fields, but only 59% of international students (Table C4.2). Indicator A3 extends this analysis by showing the number of international students in each field of study relative to the total number of students in that field of study, by level of tertiary education.

Student mobility in master's and doctoral or equivalent programmes

Master's and doctoral or equivalent programmes are the most advanced educational programmes, informed by state-of-the-art research or professional practice. With the emergence of the knowledge economy and of knowledge communities (OECD, 2004), research and the top professional services have become more and more internationalised (OECD, 2009; OECD, 2012). Accordingly, many students are seeking opportunities to study abroad at the master's or doctoral level. International experience is seen as valuable for researchers and professionals. For example, the European University Association (2015) recommends that "doctoral candidates should be able to take part in international research activities". This could come through international collaborations or by studying abroad for all or part of a study programme.

Figure C4.2. Distribution of foreign and international students in OECD countries at the master's and doctoral or equivalent levels, by country of destination (2014)

International tertiary students in each country of destination, as a percentage of the OECD total



1. Data refer to foreign instead of international students.
2. Year of reference 2013.

Source: OECD. Table C4.5. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Major destinations of international students at the master's and doctoral or equivalent level

About 1.3 million international students were enrolled in master's and doctoral or equivalent programmes in OECD countries in 2014 (OECD Education Database). EU22 countries host slightly more than half (53%) of them. Intra-European mobility accounts for a substantial share of EU22 international students: 25% of international students enrolled in EU22 countries come from another EU22 country (Tables C4.4 and C4.5).

North America is also an attractive region for international students, as the United States and Canada combined account for almost 30% of the total. Regional mobility has a smaller role there than for the EU22 group. In Canada, 7% of international students come from North America, while in the United States, the figure is 3%. In both Canada and the United States, around 6% of international students come from Latin America. As a result, other mobility patterns play a larger role. For example, 35% of international students in the United States come from China alone (Table C4.4 and C4.5).

Australia and New Zealand together attract almost 9% of the international students enrolled in the master's and doctoral or equivalent programmes in the OECD. In both countries, students from Asia and Oceania form the vast majority (more than three-quarters) of all international students. Incoming mobility in Japan is even more dependent on the Asian continent, with more than 90% of international students at the master's and doctoral or equivalent level coming from other Asian countries (Tables C4.4 and C4.5).

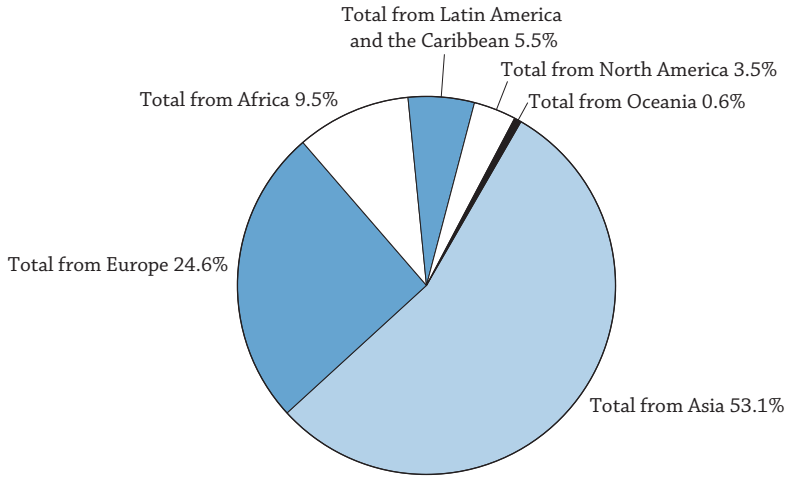
At the level of single countries, the United States hosts 26% of all international students enrolled in programmes at the master's and doctoral or equivalent levels in OECD countries. This is the largest share, followed by the United Kingdom (15%), France (11%), Germany (10%) and Australia (8%). Although these destinations account for more than two-thirds of all students pursuing their master's and doctoral (or equivalent) studies abroad, other countries play a substantial role in the international education market (Figure C4.2). Besides the eight major destinations, significant numbers of students from abroad were enrolled in Austria, Canada, Italy, Japan and Switzerland (2% or more of the OECD total) in 2014 (Table C4.5).

Main regions of origin

Students from Asia form the largest group of international students at the master's and doctoral or equivalent levels enrolled in the OECD: 53% of the total in all reporting destinations (Figure C4.3). In particular, students from China account for 22% of all international students enrolled at the master's and doctoral or equivalent levels in the OECD area, the highest share among all reporting countries (Table C4.4). Some 41% of all Chinese students enrolled at these levels of education in the OECD area are in the United States, while 39% choose either Australia, France, Germany or the United Kingdom (Table C4.5). The second-largest share of international students enrolled abroad at these levels of education within the OECD comes from Germany (3.5%), almost three-quarters of whom go to other EU22 countries.

Figure C4.3. Distribution of internationally mobile students studying in OECD countries at the master's and doctoral or equivalent levels, by region of origin (2014)

Percentage of mobile students enrolled in OECD countries



Source: OECD. Table C4.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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The United States attracts more than half of the students from India, the second country in terms of the number of students studying in the OECD countries (8.6%). Other OECD and partner countries of origin whose students form a share larger than 1.5% of the total number of international students at the master's and doctoral or equivalent levels in the OECD are Canada, France, Italy, Saudi Arabia and the United States.

In some cases, mobility from neighbouring countries reflects local patterns of mobility – students in border regions studying abroad but relatively close to home. For example, although precise data are not available, many Belgian, French and German students in Luxembourg could have family living within a few hundred kilometres from the location where they study. In other cases, mobility from neighbouring countries could reflect historic patterns of mobility developed within a formerly unified country which divided into two or more countries. For example, 57% of foreign students in the Czech Republic come from the Slovak Republic (Table C4.4). Across OECD and partner countries, 60% or more of international or foreign students in the Czech Republic, Japan and Poland came from neighbouring countries.

Underlying factors in students' choice of a country of study

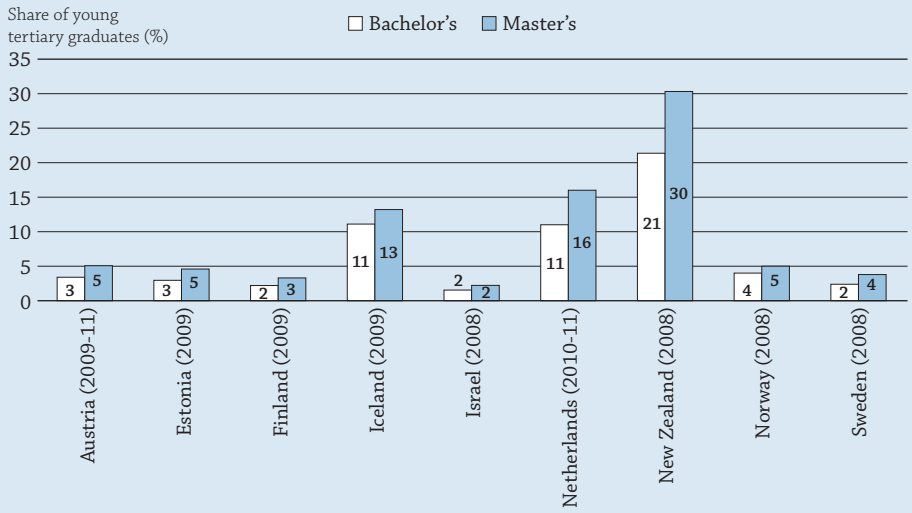
Language of instruction

The language spoken and used in instruction is likely to affect international students' choice of potential destination countries. Countries whose language of instruction is widely spoken and read, such as English, French, German, Russian and Spanish, can be particularly attractive to international students, both in absolute and relative terms. Japan is a notable exception: despite a language of instruction that is not widely used around the world, it enrols large numbers of international students, 91% of whom are from Asia (Table C4.4).

Box C4.1. **Tertiary graduates' mobility in OECD countries**

Many young people will travel to different countries once they complete their studies, some temporarily to holiday and see the world, some to experience living and working in a different country for a bit longer. Many young qualified people who go abroad return at some time in the future, and they often bring back with them valuable skills and experience from their time in other countries.

Figure C4.a. Share of young tertiary graduates who have left their home country three years after graduation



Notes: The year(s) in brackets relate to the year(s) the cohort of tertiary graduates left study. The ranges used for the typical graduating ages of young graduates vary by level and country. All graduates are under 30.
Source: 2015 INES LSO Survey of Employment Outcomes of Recent Graduates. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
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However, some students will leave their home country permanently after completing their qualification. This can be offset by immigration of foreign graduates who bring their qualifications and skills into the country. However, where the permanent loss of qualified graduates is large, or focused in certain important or valuable skills areas, and not offset by immigration of skills in these areas, this can represent a problem for governments. They have often invested significant public funds in the education of their population and want to ensure that they have the right match of skills for their labour market, and that they can retain their best and brightest at home to benefit their country.

A small but growing number of countries now have linked administrative register or survey data that can track graduates over time after their studies. These data can provide valuable insights on how many tertiary graduates leave after study, with which types of qualifications, and can eventually over time monitor how many of these graduates return. This box highlights some results from a 2015 survey of OECD countries with such linked data. It shows how many bachelor's and master's graduates had left their home country three years after graduating.

The proportions of graduates leaving after study varied noticeably across the eight countries with available data, although master's graduates were consistently more likely to leave their country than bachelor's graduates. This is consistent with New Zealand research showing that a graduate's likelihood of leaving after study is positively related to his or her level of qualification. In New Zealand, it is relatively common for students to travel after study. This culture of overseas experience can involve extended periods of living and working in another country. Other New Zealand research suggests that around 26% of master's graduates and 23% of bachelor's graduates who left New Zealand after completing study in 2003 had returned five years later.

All five countries with the highest ratio of incoming international students per national student abroad have English as an official language (either legally or *de facto*): Australia, New Zealand, South Africa, the United Kingdom and the United States (Table C4.3). This may reflect the progressive adoption of English as a global language. Many students intending to study abroad are likely to have learned English in their home country or wish to improve their English-language skills through immersion in a native English-speaking context. An increasing number of institutions in non-English-speaking countries are trying to offer tertiary education programmes taught in English, which are probably more attractive to international students. In Europe, the diffusion of English as a medium of instruction is especially noticeable in the Nordic countries (see Wächter and Maiworm, 2014 and Box C4.1 in OECD, 2015).

Quality of programmes

International students select their study destination based, at least in part, on the quality of education offered, as perceived from a wide array of information on, and rankings of, higher education programmes now available both in print and on line. The large proportion of top-ranked higher educational institutions in the principal destination countries and the growing number of ranked institutions that are based in fast-growing student destinations draw attention to the increasing importance of quality in attracting students. There is a strong relationship between the position of universities in international university rankings and their attractiveness to international students (e.g. Marconi, 2013). Besides rankings, other sources of information and the overall academic reputation of particular institutions or programmes are likely to play a large role.

Tuition fees

Tuition fees make up a substantial part of the cost of studying (see Indicator A7). Evidence related to reforms in the tuition fees applying to international students in some OECD countries suggests that students take them into consideration when deciding where to study abroad (Box C4.2).

Countries that charge international students the full cost of education can reap significant economic benefits, if they are able to remain attractive destinations. Several countries in the Asia-Pacific region have actually made international education an explicit part of their socio-economic development strategy and have initiated policies to attract international students on a revenue-generating or at least a cost-recovery basis. New Zealand has successfully adopted differentiated tuition fees for international students (except those enrolling in PhDs), and it continues to attract a large number of international students (Table C4.1). This suggests that tuition fees do not necessarily discourage prospective international students, as long as the quality of education provided is high and its potential returns make the investment worthwhile.

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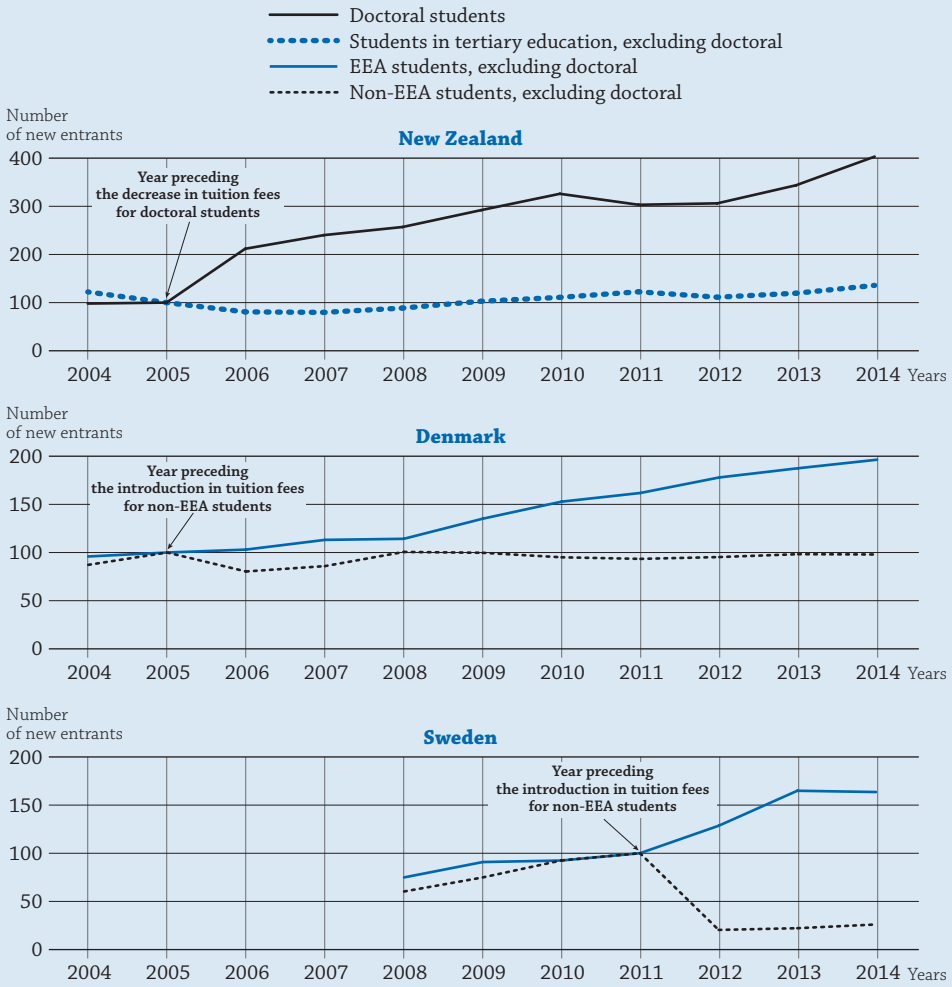
Box C4.2 Changes in the number of international students following tuition fee reforms in Denmark, New Zealand and Sweden

Since 2005, Denmark, New Zealand and Sweden have implemented reforms that changed the tuition fees charged by public institutions to some of their international students by several thousand dollars. The effect of these reforms on the number of international new entrants enrolling in tertiary education programmes shows that international students are less willing to go to countries with high tuition fees. However, the most motivated students enrol regardless of the fees, probably attracted by the quality of education, labour market prospects or life circumstances in the host countries.

From January 2006, the New Zealand Government took provisions to encourage international students to enrol in its Doctorate of Philosophy (PhD) programmes, including subsidising their tuition fees to the same extent as domestic students (but also, for example, granting some work rights to them and their partners).

Figure C4.b. Number of new entrants in tertiary education before and after tuition fees reform in New Zealand, Denmark and Sweden

Relative to the number of new entrants in the year preceding the reform (2005=100 for New Zealand and Denmark, 2011=100 for Sweden).



Notes: New entrants are defined as new entrants to tertiary education for ISCED levels 5 to 7; and as new entrants to the ISCED level for ISCED level 8. See Indicator C3 for more details on the definition of new entrants.

Source: Denmark and Sweden: national statistical offices of Denmark and Sweden; New Zealand: New Zealand Ministry of Education. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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As a result, the number of international new entrants to doctoral (including PhD) programmes more than doubled in 2006.

Meanwhile, international new entrants to others levels had been declining, and continued to decline in 2006. From 2007, the number of international new entrants has been growing steadily at both doctoral and other levels.

In 2006, Denmark introduced tuition fees for international students for short-cycle tertiary, bachelor's and master's or equivalent programmes. At these levels of education, the number of new entrants from outside the European Economic Area (EEA) decreased by one-fifth in 2006. From 2006 to 2014, it increased by only 22%, while the number of students from the EEA, who are not affected by the reform, almost doubled in the same period.

In Sweden, where a similar reform became effective in the academic year 2011/12, the effect of the reform was perhaps the most dramatic. The number of non-EEA new entrants to short-cycle tertiary, bachelor's and master's or equivalent programmes dropped by almost 80% in 2012. It picked up slightly thereafter, increasing by 6 percentage points from 2012 to 2014. As in Denmark a few years earlier, there was an increase in the number of new entrants from the EEA – 28% in the year in which the reform became effective.

The cost of education differs substantially across countries, as does the level of public subsidies and support (see Indicators B3 and B5). Furthermore, in some countries public subsidies and support can be mostly directed towards national students, so that tuition fees are differentiated for national and international students. In other cases, the same tuition fees apply to students coming from a specific subgroup of countries as to national students. For example, among EU countries, international students from other EU countries are treated as domestic students with respect to tuition fees (European Commission, 2010). Finally, some countries make no distinction between national and international students from any country of origin in terms of tuition fees.

Immigration policy

In recent years, several OECD countries have eased their immigration policies to encourage temporary or permanent immigration of international students (OECD, 2014b). This makes these countries more attractive to students by improving their job prospects and increases the pool of talent from which their economies can draw. For example, international students are allowed to stay in the country after their studies to look for a job for a maximum of three years in Canada and four years in Australia. Most other OECD countries issue similar job-search permits for international students for a shorter duration. Students are issued a work permit only if, within the duration of their job-search permit, they find a job matching their qualifications according to specific criteria. Some countries in which these criteria were particularly strict, such as France, have recently relaxed them (OECD, 2014b). This will presumably help them to attract and retain international students.

Other factors

Decisions on whether and where to study abroad are often complex, and students base them on a number of other factors such as recognition of foreign degrees and workload carried out abroad (including government policies to facilitate the transfer of credits between home and host institutions); the quality and admission policies of tertiary education in the home country; future opportunities to come back to work in the home country; and cultural aspirations. In addition, geographical, trade or migration links between countries can play a large role. This is true for both current geopolitical areas such as the European Union and the North American Free Trade Agreement area, and those related to historical links, such as the former Soviet Union, the Commonwealth or the Francophonie.

Definitions

The **country of prior education** is the country in which students obtained the qualification required to enrol in their current level of education. Country-specific operational definitions of international students are indicated in the tables as well as in Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm).

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 instance, Australia has a greater propensity to grant permanent residence to its immigrant populations than Switzerland. This implies that even when the proportion of foreign

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students in tertiary enrolment is similar for both countries, the proportion of international students in tertiary education is 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.

International students are those who left their country of origin and moved to another country for the purpose of study. 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.

Permanent or **usual residence** in the reporting country is defined according to national legislation. In practice, this means holding a student visa or permit, or electing a foreign country of domicile in the year prior to entering the education system of the country reporting the data.

Methodology

Data on international and foreign students refer to the academic year 2013/14 unless otherwise indicated and are based on the UOE data collection on education statistics administered by the OECD in 2014.

The fields of education used in the UOE data collection instruments follow the revised ISCED classification by field of education. The same classification is used for all levels of education (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm). Additional data from the UNESCO Institute for Statistics are also included.

Data on international and foreign students are obtained from enrolments in their countries of destination. The method used for obtaining data on international and foreign students is therefore the same as that used for collecting data on total enrolments, i.e. records of regularly enrolled students in an education programme.

Domestic and international students are usually counted on a specific day or period of the year. This procedure makes it possible to measure the proportion of international enrolments in an education system, but the actual number of individuals involved may be much higher since many students study abroad for less than a full academic year, or participate in exchange programmes that do not require enrolment, such as inter-university exchanges or short-term advanced research programmes.

The data do not include students enrolled in countries that did not report international or foreign students to the OECD or to the UNESCO Institute for Statistics. All statements on students enrolled abroad worldwide may therefore underestimate the actual number of citizens studying abroad (Table C4.3), especially in cases where many citizens study in countries that did not report their foreign students to the OECD or UNESCO Institute for Statistics, such as India.

Data on the total number of students enrolled abroad are based on the number of international students counts and, for the countries for which these are not available, on foreign students counts. The data do not include students enrolled in countries that did not report international or foreign students to the OECD or to the UNESCO Institute for Statistics. Aggregates, market shares and proportions of international students coming from particular countries rely on this estimate of the total (Tables C4.4 and C4.5, Figures C4.2 and C4.3).

Note regarding data from Israel

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

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Indicator C4 Tables

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Table C4.1	**International student mobility and foreign students in tertiary education (2014)**
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Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table C4.1. International student mobility and foreign students in tertiary education (2014)

International and foreign students enrolled as a percentage of all students (international plus domestic)

Reading the first column of the upper section of the table (international): 18% of all students in tertiary education in Australia are international students and 17% of all students in tertiary education in Switzerland are international students. The data presented in this table on international student mobility represent the best available proxy of student mobility for each country.

Reading the first column of the lower section of the table (foreign): 10% of all students in tertiary education in the Czech Republic are not Czech citizens, and 2% of all students in tertiary education in Korea are not Korean citizens.

		Share of international or foreign students by level of tertiary education					Rate of growth of the number of international or foreign students between 2013 and 2014, total tertiary education
		Total tertiary education	Short-cycle tertiary programmes	Bachelor's or equivalent level	Master's or equivalent level	Doctoral or equivalent level	
		(1)	(2)	(3)	(4)	(5)	(6)
		International students					
OECD	Australia	18	13.3	13.1	40	34	6
	Austria	15	1.0	18.6	18	25	-8
	Belgium[1]	11	4.9	8.2	20	37	24
	Canada[2]	10	9.0	8.1	14	27	12
	Chile	0	0.1	0.1	3	4	8
	Denmark	10	13.1	5.5	17	30	2
	Estonia	4	a	2.9	5	8	19
	Finland	7	a	5.2	12	19	4
	France	10	4.4	7.3	13	40	3
	Germany	7	0.0	4.4	12	7	7
	Hungary	7	0.6	5.0	15	8	12
	Iceland	m	m	m	m	m	m
	Ireland	7	1.1	5.8	14	23	11
	Japan	3	3.4	2.5	8	19	-2
	Latvia	5	1.6	6.0	5	7	28
	Luxembourg	44	11.3	25.3	68	85	3
	Mexico	m	m	m	m	m	m
	Netherlands	10	1.7	8.3	17	37	3
	New Zealand	19	27.4	14.3	23	45	18
	Norway	3	0.6	2.0	7	20	0
	Poland	2	0.0	1.6	3	2	25
	Portugal	4	a	2.6	5	16	2
	Slovenia	3	0.9	2.3	4	8	-3
	Spain[3]	2	5.0	0.8	5	m	-8
	Sweden	6	0.2	2.4	9	33	0
	Switzerland	17	0.0	9.9	28	53	5
	United Kingdom	18	5.5	13.7	37	42	3
	United States	4	2.0	3.5	9	35	7
	OECD total	6	3.0	4.9	12	27	5
	EU22 total	8	4.5	6.1	13	22	4
Partner	Lithuania	3	a	2.4	5	3	m
		Foreign students[4]					
OECD	Czech Republic	10	4.6	8.5	12	14	3
	Greece	4	a	4.7	m	m	m
	Israel	3	m	3.1	4	5	m
	Italy	5	a	4.7	4	13	m
	Korea	2	0.2	1.3	6	8	-6
	Slovak Republic	6	0.5	4.4	7	9	9
	Turkey	1	0.2	0.9	3	5	-11
Partners	Argentina	m	m	m	m	m	m
	Brazil	0	0.3	0.2	1	2	m
	China	0	0.0	0.4	1	3	12
	Colombia	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m
	India	0	a	0.1	0	1	m
	Indonesia	m	m	m	m	m	m
	Russian Federation	3	1.9	x(4)	6[d]	5	54
	Saudi Arabia	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m

Note: Countries using the "foreign students" definition are not taken into account in the OECD and EU22 totals.

1. Data on short-cycle tertiary education refer to foreign students.
2. Year of reference 2013.
3. Total tertiary education excludes doctoral students.
4. While international students include only students who moved to a country with the purpose of studying, foreign students comprise all students who have a different country of citizenship than the country in which they study; these data are not comparable with data on international students and are therefore presented separately in the table.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C4.2. Female students enrolled in tertiary education as a share of total enrolment, by field of education and mobility status (2014)

Share of female students among international students and among all students, for all fields of study and for three broad fields of study categories

		International students				All students			
		Education, humanities and arts, social sciences, business and law	Sciences, engineering, manufacturing and construction	Agriculture, health and welfare, services	All fields of education	Education, humanities and arts, social sciences, business and law	Sciences, engineering, manufacturing and construction	Agriculture, health and welfare, services	All fields of education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		International students							
OECD	Australia	52	26	63	47	60	28	71	57
OECD	Austria	60	37	55	53	62	28	66	53
OECD	Belgium	58	36	66	57	59	23	70	56
OECD	Canada[1]	52	29	57	45	60	31	71	56
OECD	Chile	47	28	50	44	61	19	65	52
OECD	Denmark	59	39	68	54	59	34	72	57
OECD	Estonia	47	26	74	47	71	32	67	59
OECD	Finland	55	26	57	43	65	24	74	54
OECD	France	61	35	55	52	62	31	65	55
OECD	Germany[2]	61	28	50	49	59	27	60	47
OECD	Hungary	57	26	51	50	67	25	62	55
OECD	Iceland	m	m	m	m	m	m	m	m
OECD	Ireland	55	28	54	50	57	27	63	51
OECD	Japan	52	28	57	48	50	15	63	47
OECD	Latvia	45	19	50	43	68	25	66	58
OECD	Luxembourg	55	28	68	50	57	24	70	51
OECD	Mexico	m	m	m	m	59	30	57	49
OECD	Netherlands	56	34	66	54	53	22	65	51
OECD	New Zealand	49	32	49	43	62	36	71	57
OECD	Norway	61	33	57	51	63	27	68	58
OECD	Poland	58	26	55	53	69	36	62	59
OECD	Portugal	58	37	59	52	61	32	66	54
OECD	Slovenia	65	40	65	57	71	31	64	58
OECD	Spain[3]	61	28	60	53	62	28	62	53
OECD	Sweden	60	33	59	48	66	34	75	59
OECD	Switzerland	58	33	63	50	55	24	67	50
OECD	United Kingdom	56	35	64	51	59	36	74	56
OECD	United States	52	30	57	45	58	30	70	56
	OECD total	55	31	59	48	59	28	68	54
	EU22 total	58	33	60	51	62	30	66	54
Partner	Lithuania	60	16	40	51	68	25	69	58
		Foreign students[4]							
OECD	Czech Republic	63	33	60	53	67	32	65	57
OECD	Greece	61	34	61	53	57	31	57	49
OECD	Israel	63	39	66	59	65	31	75	56
OECD	Italy	69	36	63	59	64	37	60	57
OECD	Korea	59	30	60	52	51	21	51	40
OECD	Slovak Republic	48	37	68	58	68	35	66	60
OECD	Turkey	34	20	38	31	48	30	54	46
Partners	Argentina	m	m	m	m	m	m	m	m
Partners	India	37	21	53	37	50	38	54	46
Partners	Brazil	51	29	57	44	62	33	70	57
Partners	China	m	m	m	45	m	m	m	51
Partners	Colombia	m	m	m	m	61	32	59	53
Partners	Costa Rica	m	m	m	m	63	38	67	58
Partners	Indonesia	m	m	m	m	m	m	m	m
Partners	Russian Federation	m	m	m	m	67	27	52	53
Partners	Saudi Arabia	m	m	m	m	m	m	m	m
Partners	South Africa	m	m	m	m	m	m	m	m

Note: Countries using the "foreign students" definition are not taken into account in the OECD and EU22 totals.

1. Year of reference 2013.

2. Students in doctoral programmes are included in the total of "sciences", but not in the breakdowns of "sciences" due to sample size. Therefore the breakdowns of "sciences" do not add up to the total.

3. Data exclude students in doctoral or equivalent programmes.

4. While international students include only students who moved to a country with the purpose of studying, foreign students comprise all students who have a different country of citizenship than the country in which they study; these data are not comparable with data on international students and are therefore presented separately in the table.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C4.3. Mobility patterns of foreign and international students (2014)

Percentage of national students enrolled abroad (total tertiary education), balance on mobility (total tertiary education) and cross-border mobility (master's and doctoral or equivalent programmes)

		Percentage of national tertiary students enrolled abroad (total tertiary education)	Number of international or foreign students per national student abroad (total tertiary education)	Percentage of international or foreign students coming from neighbouring countries (master's and doctoral or equivalent programmes)[1]
		(1)	(2)	(3)
OECD	Australia	1.0	20.7	5
	Austria	4.3	4.4	58
	Belgium	2.8	3.5	22
	Canada[2]	3.4	2.8	7
	Chile	0.8	0.3	8
	Czech Republic[3]	3.1	3.2	60
	Denmark	2.0	5.5	43
	Estonia	6.6	0.4	43
	Finland	2.9	2.6	12
	France	3.5	3.0	13
	Germany	4.5	1.6	13
	Greece[3]	m	m	m
	Hungary	2.6	2.3	21
	Iceland	13.7	0.4	m
	Ireland	8.0	0.8	8
	Israel[3]	4.4	0.6	2
	Italy[3]	2.8	1.7	29
	Japan	0.9	4.1	69
	Korea[3]	3.3	0.5	52
	Latvia	7.0	0.5	m
	Luxembourg	68.4	0.3	57
	Mexico	0.8	0.3	m
	Netherlands	2.3	4.9	23
	New Zealand	2.5	7.5	5
	Norway	6.8	0.5	13
	Poland	1.2	1.2	66
	Portugal	3.1	1.3	4
	Slovak Republic[3]	14.2	0.3	44
	Slovenia	2.7	1.0	37
	Spain[4]	1.5	1.9	27
	Sweden	4.2	1.4	18
	Switzerland	4.9	3.9	46
	Turkey[3]	1.0	1.1	50
	United Kingdom	1.5	14.3	10
	United States	0.3	11.8	5
	OECD total[5]	1.6	3.1	~
	EU22 total[5]	3.0	2.6	~
Partners	Argentina[3]	0.3	0.3	m
	Brazil	0.4	0.5	m
	China	2.1	m	m
	Colombia	1.3	m	m
	Costa Rica	m	m	m
	India	m	m	m
	Indonesia	0.7	m	m
	Lithuania	m	m	m
	Russian Federation[3, 6]	0.7	2.5	m
	Saudi Arabia[3]	5.7	0.8	m
	South Africa[3]	0.8	5.7	m

1. Neighbouring countries are considered to be those with land or maritime borders with the host country.
2. Year of reference 2013.
3. Domestic tertiary students are calculated as total enrolment minus foreign students instead of total enrolment minus international students.
4. Data exclude students in doctoral or equivalent programmes.
5. OECD total and EU22 total are not directly relevant for Column 3. The number of students studying in neighbouring countries is included in the statistics for the single member states.
6. The percentage of foreign students coming from neighbouring countries includes those from former Soviet Union countries, mostly of central Asia.

Sources: OECD and UNESCO Institute for Statistics for most data on non-OECD countries. Lithuania: Eurostat (UOE2014). CIA World Factbook 2014 for worldwide official languages. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C4.4. [1/2] Distribution of international and foreign students in master's and doctoral or equivalent programmes, by country of origin (2014)

International and foreign students enrolled in master's and doctoral or equivalent programmes from a given country of origin as a percentage of all international or foreign students in the country of destination, based on head counts

The table shows for each country the proportion of international students in master's and doctoral or equivalent programmes who are residents of or had their prior education in a given country of origin. When data on student mobility are not available, the table shows the proportion of foreign students in master's and doctoral or equivalent programmes that have citizenship of a given country of origin.

Reading Column 1: 0.8% of international students in master's and doctoral or equivalent programmes in Australia come from Korea, 1.5% come from the United States, etc.

Reading Column 7: 28.4% of international students in master's and doctoral or equivalent programmes in Estonia come from Finland, 4.8% come from Turkey, etc.

Reading Column 28: 57.0% of foreign students in master's and doctoral or equivalent programmes in the Czech Republic are Slovak citizens, 1.7% are Norwegian citizens, etc.

	OECD destination countries																		
	International students																		
Countries of origin	Australia	Austria	Belgium	Canada[1]	Chile	Denmark	Estonia	Finland	France	Germany[2]	Hungary	Iceland	Ireland	Japan	Latvia	Luxembourg	Mexico	Netherlands	New Zealand
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
OECD																			
Australia	a	0.2	0.2	0.4	0.0	0.5	0.4	0.2	0.1	0.3	0.1	m	0.6	0.2	0.1	0.0	m	0.2	3.9
Austria	0.1	a	0.1	0.1	0.0	0.8	0.3	0.6	0.1	2.2	1.0	m	0.7	0.1	2.1	0.8	m	0.7	0.3
Belgium	0.1	0.3	a	0.3	0.0	0.5	0.2	0.3	0.8	0.5	0.1	m	1.0	0.1	0.6	14.7	m	3.8	0.1
Canada	1.8	0.3	0.4	a	0.0	0.7	0.4	1.0	0.5	0.4	1.3	m	0.9	0.2	0.0	0.5	m	0.6	1.6
Chile	0.4	0.1	0.3	0.5	a	0.2	0.2	0.3	0.4	0.4	0.0	m	0.1	0.0	0.0	0.0	m	0.2	0.8
Czech Republic	0.0	0.7	0.2	0.1	0.0	0.6	0.3	0.5	0.2	0.8	0.1	m	0.1	0.1	1.3	0.2	m	0.6	0.1
Denmark	0.1	0.1	0.1	0.1	0.0	a	0.2	0.3	0.0	0.2	0.1	m	0.3	0.0	0.8	0.3	m	0.3	0.1
Estonia	0.0	0.1	0.1	0.0	0.0	0.7	a	3.0	0.0	0.2	0.0	m	0.1	0.0	1.8	0.2	m	0.2	0.0
Finland	0.0	0.2	0.1	0.1	0.0	0.9	28.4	a	0.1	0.4	0.3	m	0.2	0.1	1.5	0.2	m	0.4	0.1
France	0.5	0.9	14.8	8.0	0.0	1.8	0.6	1.0	a	3.1	0.9	m	3.5	0.8	3.7	27.7	m	1.8	1.1
Germany	0.7	38.7	1.3	1.3	0.0	11.4	2.3	3.4	2.3	a	19.0	m	6.1	0.5	9.0	14.7	m	16.6	2.7
Greece	0.1	0.8	1.1	0.2	0.0	3.3	0.9	1.0	0.9	1.3	1.0	m	0.7	0.1	0.3	1.9	m	7.7	0.0
Hungary	0.0	2.1	0.2	0.1	0.0	1.1	0.4	1.0	0.2	0.9	a	m	0.1	0.1	0.1	0.6	m	0.9	0.1
Iceland	0.0	0.0	0.0	0.1	0.0	3.5	0.2	0.1	0.0	0.0	0.9	m	0.2	0.0	0.1	0.1	m	0.3	0.0
Ireland	0.1	0.1	0.1	0.2	0.0	0.4	0.3	0.2	0.1	0.2	1.8	m	a	0.0	0.1	0.1	m	0.5	0.2
Israel	0.1	0.2	0.1	0.5	0.0	0.1	0.0	0.2	0.1	0.8	5.6	m	0.3	0.0	0.1	0.0	m	0.2	0.1
Italy	0.4	12.5	3.3	0.6	0.1	4.9	1.4	2.0	3.0	2.7	0.6	m	3.4	0.2	2.8	3.5	m	4.7	0.9
Japan	0.5	0.3	0.1	0.6	0.0	0.2	0.6	0.8	0.4	1.0	2.1	m	0.2	a	0.0	0.2	m	0.2	0.7
Korea,	0.8	0.3	0.2	0.8	0.0	0.0	0.4	0.8	0.4	2.1	2.3	m	0.2	7.4	0.3	0.0	m	0.4	0.6
Latvia	0.0	0.1	0.1	0.0	0.0	0.9	5.0	0.4	0.0	0.3	0.0	m	0.1	0.0	a	0.2	m	0.4	0.0
Luxembourg	0.0	0.8	1.5	0.0	0.0	0.2	0.0	0.0	0.4	0.9	0.0	m	0.1	0.0	0.3	a	m	0.1	0.0
Mexico	0.4	0.2	0.3	1.5	1.4	0.7	0.6	1.0	0.9	1.2	0.1	m	0.2	0.3	0.0	0.3	m	1.2	0.6
Netherlands	0.2	0.7	3.5	0.2	0.1	1.8	0.3	0.7	0.2	0.5	0.2	m	1.9	0.1	1.7	1.0	m	a	0.4
New Zealand	1.0	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.1	0.0	m	0.2	0.1	0.0	0.0	m	0.1	a
Norway	0.2	0.1	0.1	0.1	0.0	12.0	0.5	0.3	0.1	0.2	6.8	m	0.3	0.0	1.8	0.1	m	0.4	0.1
Poland	0.1	1.5	0.8	0.3	0.0	3.0	0.6	1.3	0.7	2.6	0.2	m	1.3	0.2	2.8	1.4	m	2.0	0.1
Portugal	0.1	0.2	0.7	0.1	0.0	1.0	0.3	0.5	0.4	0.3	0.5	m	0.7	0.1	1.3	1.3	m	1.1	0.1
Slovak Republic	0.0	1.4	0.2	0.1	0.0	0.7	0.3	0.3	0.2	0.5	6.5	m	0.0	0.0	1.1	0.0	m	0.5	0.0
Slovenia	0.0	0.7	0.1	0.0	0.0	0.3	0.1	0.2	0.0	0.2	0.1	m	0.0	0.0	0.0	0.5	m	0.4	0.1
Spain	0.1	0.9	1.9	0.3	0.4	3.3	1.7	1.6	1.8	3.1	1.8	m	1.9	0.2	3.4	1.5	m	2.8	0.3
Sweden	0.1	0.3	0.3	0.1	0.0	8.8	0.6	1.2	0.1	0.3	2.8	m	0.1	0.2	1.8	0.1	m	0.4	0.1
Switzerland	0.2	1.3	0.4	0.3	0.0	0.4	0.1	0.3	0.3	0.9	0.2	m	0.3	0.1	0.3	0.3	m	0.5	0.2
Turkey	0.2	2.3	0.7	0.6	0.0	0.5	4.8	1.3	0.5	2.5	1.7	m	0.3	0.3	5.8	0.7	m	1.6	0.2
United Kingdom	0.6	1.4	1.2	1.0	0.0	2.8	1.3	1.3	0.4	1.1	2.9	m	7.7	0.2	1.3	0.8	m	2.7	2.5
United States	1.5	1.4	0.9	7.1	0.2	2.9	2.9	2.0	0.9	2.6	1.6	m	11.1	0.8	2.5	1.3	m	1.8	4.8
Total from OECD	10.3	71.0	35.4	25.6	2.3	70.7	51.2	28.4	16.7	34.6	62.6	m	44.9	12.5	48.9	75.6	m	56.1	23.0
Total from EU22	3.3	63.8	26.4	13.9	2.0	49.1	49.0	19.9	12.5	23.4	42.5	m	21.1	3.2	37.8	71.2	m	48.7	7.2
Partners																			
Argentina	0.1	0.1	0.1	0.2	1.7	0.1	0.1	0.1	0.3	0.2	0.0	m	0.1	0.1	0.0	0.3	m	0.1	0.1
Brazil	0.4	0.3	0.6	0.9	7.8	0.7	0.6	0.6	2.0	1.8	0.2	m	0.7	0.4	0.0	0.3	m	0.4	0.4
China	35.2	1.0	2.5	18.9	0.1	5.0	3.7	11.2	10.8	11.6	1.4	m	15.1	60.9	0.7	2.5	m	9.9	28.7
Colombia	0.7	0.3	0.4	0.8	42.5	0.3	0.5	0.4	1.3	0.9	0.1	m	0.1	0.1	0.0	0.4	m	0.8	0.4
Costa Rica	0.0	0.0	0.0	0.1	0.9	0.0	0.0	0.1	0.1	0.1	0.0	m	0.0	0.0	0.0	0.0	m	0.1	0.0
India	15.2	1.0	1.2	8.3	0.0	1.3	3.9	5.7	1.3	5.6	0.4	m	11.3	1.0	2.8	1.0	m	3.9	10.8
Indonesia	3.1	0.1	0.3	0.2	0.0	0.2	0.4	0.3	0.2	0.7	0.0	m	0.6	4.1	0.0	0.1	m	2.0	2.8
Lithuania	0.0	0.2	0.2	0.0	0.0	3.2	1.3	0.7	0.1	0.3	0.1	m	0.2	0.0	6.2	0.4	m	1.2	0.1
Russian Federation	0.4	1.8	0.6	0.4	0.1	0.7	8.8	7.7	1.6	4.1	0.4	m	0.6	0.4	9.3	1.6	m	1.4	0.8
Saudi Arabia	2.1	0.1	0.0	4.7	0.0	0.0	0.0	0.0	0.2	0.1	1.3	m	3.4	0.3	0.0	0.0	m	0.1	1.5
South Africa	0.2	0.1	0.3	0.2	0.0	0.2	0.1	0.1	0.0	0.1	0.0	m	0.4	0.0	0.0	0.2	m	0.2	0.1
Total from other G20 and partner countries	57.5	5.1	6.2	34.7	53.1	12.4	24.3	27.4	17.9	25.8	4.0	m	32.8	67.4	19.0	7.0	m	20.5	45.7
Main geographic regions																			
Total from Africa	2.8	1.6	11.8	9.8	0.3	3.1	3.8	8.3	41.9	5.8	6.2	m	5.5	2.2	0.7	6.8	m	2.3	3.2
Total from Asia	84.5	10.1	9.6	52.2	0.2	12.4	27.0	38.5	23.1	39.6	27.3	m	38.2	90.8	31.2	8.9	m	23.6	70.4
Total from Europe	4.4	81.1	36.1	14.9	0.8	77.7	62.6	33.0	17.9	41.7	62.7	m	35.4	4.1	65.4	80.9	m	58.7	11.0
Total from North America	3.2	1.6	1.3	7.1	0.2	3.6	3.3	2.9	1.3	3.2	2.9	m	11.9	1.1	2.5	1.8	m	2.4	6.5
Total from Oceania	1.7	0.3	0.3	0.6	0.0	0.8	0.4	0.3	0.1	0.4	0.1	m	5.8	0.4	0.1	0.1	m	0.3	5.8
Total from Latin America and the Caribbean	3.0	1.5	3.0	5.9	80.0	2.5	2.8	3.2	6.6	6.3	0.5	m	3.1	1.5	0.0	1.5	m	4.2	3.1
Not specified	0.3	3.7	38.0	9.5	18.5	0.0	0.1	13.7	9.1	2.9	0.1	m	0.0	0.0	0.0	0.0	m	8.4	0.0
Total from all countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	m	100.0	100.0	100.0	100.0	m	100.0	100.0

1. Year of reference 2013.
2. Excludes doctoral or equivalent programmes (for Germany, these programmes are included only in main geographic regions).
3. Data exclude students in doctoral or equivalent programmes.
4. While international students include only students who moved to a country with the purpose of studying, foreign students comprise all students who have a different country of citizenship than the country in which they study; these data are not comparable with data on international students and are therefore presented separately in the table.
5. Only doctoral students.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD countries. Lithuania: Eurostat (UOE2014). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C4.4. [2/2] Distribution of international and foreign students in master's and doctoral or equivalent programmes, by country of origin (2014)

International and foreign students enrolled in master's and doctoral or equivalent programmes from a given country of origin as a percentage of all international or foreign students in the country of destination, based on head counts

The table shows for each country the proportion of international students in master's and doctoral or equivalent programmes who are residents of or had their prior education in a given country of origin. When data on student mobility are not available, the table shows the proportion of foreign students in master's and doctoral or equivalent programmes that have citizenship of a given country of origin.

Reading Column 1: 0.8% of international students in master's and doctoral or equivalent programmes in Australia come from Korea, 1.5% come from the United States, etc.

Reading Column 7: 28.4% of international students in master's and doctoral or equivalent programmes in Estonia come from Finland, 4.8% come from Turkey, etc.

Reading Column 28: 57.0% of foreign students in master's and doctoral or equivalent programmes in the Czech Republic are Slovak citizens, 1.7% are Norwegian citizens, etc.

		Countries of destination																	
		International students									Foreign students[4]								
	Countries of origin	Norway	Poland	Portugal	Slovenia	Spain[3]	Sweden	Switzerland	United Kingdom	United States	Czech Republic	Greece	Israel	Italy	Korea	Slovak Republic[5]	Turkey	Total OECD destinations	Total EU22 destinations
		(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
OECD	Australia	0.3	0.0	0.1	0.1	0.2	0.3	0.3	0.7	0.3	0.1	m	0.5	0.1	0.2	0.0	0.1	**0.3**	**0.3**
	Austria	0.3	0.1	0.2	1.4	0.3	0.7	2.3	0.4	0.1	0.2	m	0.4	0.2	0.0	4.2	0.0	**0.5**	**0.7**
	Belgium	0.2	0.1	0.8	0.1	0.8	0.4	0.6	0.5	0.1	0.0	m	0.5	0.2	0.0	0.2	0.1	**0.4**	**0.6**
	Canada	0.5	0.9	0.2	0.3	0.6	0.5	1.1	1.6	3.4	0.2	m	3.3	0.2	1.3	0.4	0.1	**1.5**	**0.8**
	Chile	0.2	0.0	0.1	0.0	1.9	0.1	0.3	0.3	0.4	0.0	m	0.3	0.3	0.0	0.0	0.0	**0.4**	**0.3**
	Czech Republic	0.4	2.1	0.1	0.3	0.2	0.3	0.4	0.2	0.1	a	m	0.2	0.2	0.0	20.5	0.0	**0.3**	**0.4**
	Denmark	1.2	0.1	0.1	0.3	0.2	0.8	0.2	0.3	0.1	0.0	m	0.3	0.1	0.0	0.0	0.0	**0.1**	**0.2**
	Estonia	0.2	0.0	0.0	0.1	0.0	0.6	0.1	0.1	0.0	0.0	m	0.1	0.1	0.0	0.0	0.0	**0.1**	**0.2**
	Finland	0.8	0.1	0.1	0.2	0.3	3.9	0.2	0.2	0.0	0.0	m	0.2	0.1	0.1	0.2	0.0	**0.2**	**0.4**
	France	0.8	1.1	1.8	0.6	5.9	2.4	11.5	2.1	0.7	0.4	m	2.0	1.9	0.2	0.6	0.1	**2.0**	**2.3**
	Germany	4.3	2.0	1.6	1.8	3.8	7.5	22.8	3.5	0.9	1.7	m	3.9	1.5	0.3	32.9	0.9	**3.5**	**4.9**
	Greece	0.9	0.0	0.3	0.4	0.6	3.3	2.1	2.8	0.3	1.7	m	0.3	8.2	0.0	0.3	2.7	**1.4**	**2.2**
	Hungary	0.4	0.2	0.1	0.2	0.3	0.4	0.5	0.2	0.1	0.1	m	0.4	0.3	0.0	1.9	0.0	**0.3**	**0.5**
	Iceland	1.0	0.0	0.0	0.0	0.0	1.1	0.1	0.1	0.0	0.0	m	0.0	0.0	0.0	0.0	0.0	**0.1**	**0.2**
	Ireland	0.1	0.2	0.1	0.3	0.2	0.3	0.1	2.5	0.1	0.2	m	0.1	0.1	0.1	0.0	0.0	**0.5**	**0.9**
	Israel	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.4	0.6	m	a	3.3	0.0	0.1	0.1	**0.4**	**0.5**
	Italy	1.7	0.8	3.0	6.5	14.0	2.5	9.0	2.5	0.6	0.3	m	2.0	a	0.0	0.6	0.2	**2.2**	**3.3**
	Japan	0.3	0.2	0.1	0.2	0.5	0.3	0.6	0.9	1.1	0.2	m	0.4	0.4	1.7	0.2	0.1	**0.7**	**0.6**
	Korea	0.0	0.2	0.0	0.1	0.3	0.2	0.4	0.9	5.7	0.1	m	1.2	1.0	a	0.1	0.3	**2.3**	**0.9**
	Latvia	0.4	0.2	0.0	0.1	0.1	0.4	0.2	0.1	0.0	0.0	m	0.0	0.1	0.0	0.0	0.0	**0.1**	**0.2**
	Luxembourg	0.0	0.0	0.4	0.0	0.1	0.1	0.7	0.2	0.0	0.0	m	0.0	0.0	0.0	0.0	0.0	**0.2**	**0.4**
	Mexico	0.5	0.2	0.4	0.3	5.5	0.6	0.7	0.7	1.3	0.2	m	1.0	0.7	0.2	0.2	0.0	**0.9**	**0.9**
	Netherlands	0.8	0.1	0.6	0.5	0.7	1.6	0.8	0.9	0.2	0.2	m	1.1	0.2	0.1	0.2	0.1	**0.5**	**0.7**
	New Zealand	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	m	0.1	0.0	0.2	0.0	0.0	**0.2**	**0.1**
	Norway	a	3.1	0.1	0.0	0.3	1.1	0.2	0.6	0.1	1.7	m	0.4	0.1	0.0	0.0	0.0	**0.5**	**0.8**
	Poland	1.8	a	0.8	0.8	0.7	1.3	1.3	0.7	0.2	1.0	m	0.8	1.6	0.1	15.3	0.1	**0.8**	**1.3**
	Portugal	0.4	0.4	a	0.5	4.5	0.6	0.6	0.6	0.1	2.1	m	0.0	0.3	0.0	0.1	0.0	**0.4**	**0.6**
	Slovak Republic	0.6	0.4	0.1	0.3	0.2	0.3	0.3	0.2	0.0	57.0	m	0.1	0.2	0.0	a	0.1	**1.0**	**1.9**
	Slovenia	0.2	0.1	0.0	a	0.1	0.2	0.2	0.1	0.0	0.1	m	0.0	0.3	0.0	0.0	0.0	**0.1**	**0.2**
	Spain	0.9	3.3	4.2	1.2	a	2.0	1.8	1.4	0.5	0.3	m	0.5	1.2	0.0	0.6	0.1	**1.2**	**1.9**
	Sweden	3.5	2.4	0.1	0.5	0.4	a	0.4	0.4	0.1	0.8	m	0.2	0.1	0.0	0.1	0.0	**0.4**	**0.6**
	Switzerland	0.5	0.1	0.4	0.1	0.7	0.3	a	0.6	0.1	0.1	m	0.3	0.8	0.1	0.7	0.0	**0.4**	**0.6**
	Turkey	0.5	2.0	0.5	0.4	0.7	1.1	1.4	1.1	1.7	0.4	m	0.5	1.4	0.3	0.2	a	**1.2**	**1.3**
	United Kingdom	0.9	0.6	0.6	0.2	1.7	1.5	1.2	a	0.7	2.5	m	3.6	0.3	0.3	0.6	0.2	**0.8**	**0.8**
	United States	2.4	1.9	1.1	0.4	2.8	2.0	2.5	4.7	a	0.8	m	32.8	0.6	4.4	0.3	0.9	**2.0**	**2.5**
	Total from OECD	26.9	23.0	18.1	18.2	48.6	38.0	65.2	32.3	19.6	73.4	m	57.4	25.8	9.9	80.5	6.5	**27.8**	**34.8**
	Total from EU22	16.6	16.7	14.3	15.8	38.5	30.3	56.5	20.8	7.0	67.6	m	13.7	18.5	1.5	77.7	4.6	**16.9**	**25.0**
Partners	Argentina	0.2	0.0	0.2	0.1	1.8	0.1	0.3	0.1	0.3	0.0	m	0.5	0.6	0.0	0.0	0.0	**0.2**	**0.2**
	Brazil	0.9	0.2	41.8	0.2	1.9	0.6	1.1	0.5	0.9	0.1	m	0.8	1.3	0.1	0.0	0.1	**1.2**	**1.6**
	China	10.3	2.2	1.4	1.2	4.7	10.4	3.5	23.8	35.1	0.9	m	1.8	10.8	50.1	0.6	2.1	**22.3**	**12.8**
	Colombia	0.6	0.1	0.4	0.1	6.9	0.5	0.8	0.4	0.9	0.1	m	0.4	1.6	0.1	0.0	0.1	**0.9**	**0.9**
	Costa Rica	0.0	0.0	0.1	0.0	0.4	0.1	0.1	0.0	0.1	0.0	m	0.2	0.1	0.0	0.0	0.0	**0.1**	**0.1**
	India	3.6	1.5	1.0	1.6	1.6	5.3	2.1	6.3	18.5	0.9	m	2.4	2.1	2.9	0.3	0.2	**8.6**	**3.8**
	Indonesia	1.1	0.1	0.2	0.2	0.1	0.3	0.1	0.7	0.5	0.1	m	0.0	0.3	1.9	0.0	0.8	**0.8**	**0.5**
	Lithuania	1.2	2.3	0.1	0.5	0.1	0.8	0.2	0.2	0.0	0.1	m	0.2	0.2	0.0	0.0	0.1	**0.2**	**0.4**
	Russian Federation	5.9	2.5	0.6	1.6	1.1	1.5	2.4	0.8	0.6	6.2	m	5.6	2.5	0.6	1.7	1.7	**1.4**	**2.0**
	Saudi Arabia	0.1	1.4	0.0	0.1	0.2	0.1	0.1	2.5	3.4	0.4	m	0.0	0.1	0.3	0.1	0.4	**1.7**	**0.9**
	South Africa	0.3	0.0	0.2	0.4	0.1	0.2	0.2	0.4	0.1	0.0	m	0.5	0.1	0.2	0.2	0.0	**0.2**	**0.2**
	Total from other G20 and partner countries	24.6	10.6	46.0	6.0	19.2	20.2	11.2	35.7	60.4	8.9	m	12.4	19.7	56.2	2.9	5.4	**37.6**	**23.3**
	Main geographic regions																		
	Total from Africa	15.2	2.1	25.9	1.6	4.8	4.6	4.0	10.0	3.6	2.1	m	2.0	10.5	4.8	5.2	11.3	**9.5**	**14.2**
	Total from Asia	41.2	16.0	9.4	6.0	11.2	32.7	13.0	54.6	79.9	11.8	m	10.3	33.1	85.4	5.4	71.6	**53.1**	**33.9**
	Total from Europe	36.6	78.2	18.6	90.8	40.5	39.2	66.4	25.2	6.7	83.7	m	29.2	47.5	2.5	88.3	15.1	**24.6**	**37.4**
	Total from North America	3.0	2.8	1.3	0.8	3.4	2.5	3.6	6.3	3.4	1.1	m	36.1	0.8	5.8	0.8	1.0	**3.5**	**3.4**
	Total from Oceania	0.5	0.1	0.2	0.1	0.2	0.4	0.5	0.9	0.5	0.1	m	0.6	0.1	0.5	0.0	0.1	**0.6**	**0.5**
	Total from Latin America and the Caribbean	3.5	0.8	44.7	0.8	39.3	3.0	4.6	3.0	6.0	0.8	m	4.3	7.7	1.0	0.3	0.3	**5.5**	**5.8**
	Not specified	0.0	0.0	0.0	0.0	0.4	17.7	8.0	0.1	0.0	0.4	m	17.5	0.3	0.0	0.0	0.7	**3.2**	**4.8**
	Total from all countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	m	100.0	100.0	100.0	100.0	100.0	**100.0**	**100.0**

1. Year of reference 2013.
2. Excludes doctoral or equivalent programmes (for Germany, these programmes are included only in main geographic regions).
3. Data exclude students in doctoral or equivalent programmes.
4. While international students include only students who moved to a country with the purpose of studying, foreign students comprise all students who have a different country of citizenship than the country in which they study; these data are not comparable with data on international students and are therefore presented separately in the table.
5. Only doctoral students.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD countries. Lithuania: Eurostat (UOE2014). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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C4

Table C4.5. [1/2] Students abroad in master's and doctoral or equivalent programmes, by country of destination (2014)

Number of foreign and international students enrolled in master's and doctoral or equivalent programmes in a given country of destination as a percentage of the OECD total, based on head counts

The table shows for each country the proportion of students studying abroad in master's and doctoral or equivalent programmes in a given country of destination.

Reading Column 2: 6.4% of Czech citizens enrolled in master's and doctoral or equivalent programmes in other OECD countries study in Austria, 13.1% of Italian citizens enrolled in master's and doctoral or equivalent programmes in other OECD countries study in Austria, etc.

Reading the first row: 2.7% of Australian citizens enrolled in master's and doctoral or equivalent programmes in another OECD country study in France, 7.0% of Australian citizens enrolled in master's and doctoral or equivalent programmes in another OECD country study in New Zealand, etc.

		Countries of destination																				
		OECD																				
	Country of origin	Australia	Austria	Belgium	Canada[1]	Chile	Czech Republic[2]	Denmark	Estonia	Finland	France	Germany[3]	Greece[2]	Hungary	Iceland	Ireland	Israel[2]	Italy[2]	Japan	Korea[2]	Latvia	Luxembourg
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
OECD	Australia	a	1.4	1.2	3.3	0.0	0.2	2.0	0.1	0.7	2.7	10.5	m	0.1	m	0.7	0.4	0.7	1.4	1.3	0.0	0.0
	Austria	2.3	a	0.5	0.7	0.0	0.7	2.1	0.0	1.1	3.3	47.2	m	1.9	m	0.6	0.2	1.0	0.3	0.1	0.2	0.3
	Belgium	1.3	1.4	a	1.9	0.0	0.1	1.5	0.0	0.6	21.2	12.3	m	0.2	m	0.9	0.3	1.3	0.5	0.1	0.1	5.6
	Canada	9.5	0.4	0.5	a	0.0	0.2	0.5	0.0	0.5	3.2	2.8	m	0.7	m	0.2	0.5	0.3	0.5	1.4	0.0	0.0
	Chile	10.4	0.6	1.7	3.8	a	0.2	0.5	0.0	0.6	10.5	9.9	m	0.1	m	0.1	0.2	1.9	0.4	0.2	0.0	0.0
	Czech Republic	1.2	6.4	1.2	0.9	0.0	a	2.4	0.1	1.5	9.6	29.8	m	0.3	m	0.1	0.2	1.6	0.7	0.2	0.3	0.1
	Denmark	4.3	1.8	1.6	1.6	0.0	0.3	a	0.1	1.4	3.0	15.5	m	0.5	m	0.7	0.4	1.0	0.8	0.4	0.3	0.3
	Estonia	0.6	1.7	1.3	0.5	0.0	0.4	8.5	a	25.8	2.9	19.5	m	0.2	m	0.3	0.2	1.9	0.7	0.0	1.0	0.3
	Finland	1.7	2.2	0.9	0.7	0.0	0.3	4.6	9.7	a	3.2	18.7	m	1.0	m	0.4	0.2	0.6	1.6	0.4	0.4	0.2
	France	2.0	1.0	13.4	11.6	0.0	0.3	1.0	0.0	0.4	a	15.3	m	0.4	m	0.7	0.2	2.5	1.2	0.2	0.1	2.1
	Germany	1.7	25.2	0.7	1.0	0.0	0.7	3.6	0.1	0.8	6.9	a	m	4.7	m	0.7	0.2	1.1	0.4	0.1	0.1	0.6
	Greece	0.4	1.4	1.5	0.5	0.0	1.7	2.8	0.1	0.6	7.0	9.6	m	0.6	m	0.2	0.0	15.8	0.1	0.0	0.0	0.2
	Hungary	1.4	15.6	1.5	0.7	0.0	0.6	4.3	0.1	2.7	7.3	28.7	m	a	m	0.1	0.3	2.6	1.2	0.2	0.0	0.3
	Iceland	1.2	0.6	0.3	1.9	0.0	0.2	36.7	0.1	0.7	1.2	4.5	m	7.5	m	0.7	0.0	0.3	0.4	0.0	0.1	0.1
	Ireland	1.6	0.4	0.5	1.1	0.0	0.6	0.8	0.0	0.4	1.9	4.4	m	3.0	m	a	0.0	0.4	0.2	0.2	0.0	0.0
	Israel	1.2	0.9	0.3	3.4	0.0	2.1	0.3	0.0	0.3	1.9	19.3	m	11.8	m	0.3	a	21.2	0.3	0.1	0.0	0.0
	Italy	1.4	13.1	2.8	0.8	0.0	0.2	2.5	0.1	0.7	14.5	12.3	m	0.2	m	0.6	0.2	a	0.3	0.0	0.1	0.2
	Japan	6.0	0.8	0.3	2.7	0.0	0.4	0.4	0.1	0.9	6.1	13.7	m	2.4	m	0.1	0.1	1.3	a	3.7	0.0	0.0
	Korea	2.8	0.3	0.1	1.0	0.0	0.1	0.0	0.0	0.3	2.0	8.8	m	0.9	m	0.0	0.1	1.2	9.4	a	0.0	0.0
	Latvia	0.0	1.8	1.6	0.5	0.0	0.4	10.3	4.1	3.4	5.1	25.7	m	0.2	m	0.3	0.0	2.5	0.8	0.0	a	0.3
	Luxembourg	0.2	7.5	11.7	0.4	0.0	0.0	1.1	0.0	0.1	19.8	37.8	m	0.1	m	0.2	0.0	0.2	0.1	0.0	0.1	a
	Mexico	3.3	0.5	0.7	4.8	0.3	0.3	0.8	0.0	0.9	10.3	12.5	m	0.1	m	0.1	0.2	1.9	0.9	0.3	0.0	0.0
	Netherlands	2.7	3.7	13.6	1.1	0.0	0.6	4.3	0.0	1.2	3.8	10.7	m	0.4	m	1.6	0.5	1.3	0.5	0.3	0.2	0.3
	New Zealand	47.3	0.9	0.5	2.8	0.0	0.1	1.3	0.0	0.3	0.9	3.7	m	0.2	m	0.5	0.1	0.2	1.1	1.7	0.0	0.0
	Norway	4.1	0.4	0.4	0.4	0.0	5.2	29.2	0.1	0.5	2.1	4.7	m	12.7	m	0.2	0.2	0.5	0.2	0.1	0.2	0.0
	Poland	1.0	4.3	1.9	1.1	0.0	1.9	4.3	0.1	1.3	9.9	32.5	m	0.3	m	0.7	0.2	5.5	0.6	0.2	0.2	0.3
	Portugal	1.6	1.4	3.2	0.5	0.0	7.6	3.0	0.1	1.0	10.4	7.3	m	1.1	m	0.7	0.0	2.1	0.4	0.0	0.2	0.5
	Slovak Republic	0.2	3.1	0.3	0.1	0.0	77.0	0.8	0.0	0.2	1.7	4.4	m	5.4	m	0.0	0.0	0.5	0.1	0.0	0.1	0.0
	Slovenia	1.1	17.8	1.2	0.2	0.0	1.0	3.5	0.1	1.4	2.8	22.2	m	0.9	m	0.0	0.1	9.1	0.3	0.1	0.0	0.8
	Spain	1.0	1.6	2.8	0.7	0.1	0.4	3.0	0.1	1.1	15.4	25.0	m	1.3	m	0.6	0.1	2.6	0.4	0.1	0.1	0.2
	Sweden	1.9	1.6	1.5	0.8	0.0	3.1	26.4	0.1	2.7	3.3	8.1	m	6.5	m	0.1	0.1	0.8	1.2	0.1	0.3	0.1
	Switzerland	3.4	7.9	1.7	2.5	0.0	0.2	1.3	0.0	0.6	9.0	24.1	m	0.5	m	0.3	0.2	5.9	0.6	0.3	0.0	0.1
	Turkey	1.4	4.3	1.0	1.5	0.0	0.5	0.5	0.3	0.9	4.2	20.3	m	1.2	m	0.1	0.1	3.0	0.7	0.4	0.2	0.1
	United Kingdom	6.5	4.1	2.8	3.1	0.0	4.6	4.0	0.1	1.4	5.7	13.3	m	3.2	m	3.7	1.0	1.1	0.7	0.5	0.1	0.2
	United States	6.3	1.6	0.8	10.3	0.0	0.6	1.7	0.1	0.8	4.7	13.1	m	0.7	m	2.1	3.7	0.8	1.2	3.6	0.1	0.1
	Total from OECD	3.1	5.8	2.3	2.6	0.0	3.7	2.9	0.2	0.9	6.3	12.3	m	1.9	m	0.6	0.5	2.5	1.3	0.6	0.1	0.4
	Total from EU22	1.6	8.7	3.4	2.2	0.0	5.8	3.3	0.2	1.0	7.6	12.9	m	2.0	m	0.7	0.2	2.7	0.5	0.1	0.1	0.7
Partners	Argentina	2.5	1.0	0.8	2.4	1.4	0.1	0.5	0.0	0.3	14.9	9.7	m	0.0	m	0.1	0.5	7.1	0.8	0.2	0.0	0.2
	Brazil	2.6	0.6	0.8	1.8	1.2	0.1	0.6	0.0	0.4	16.9	14.2	m	0.1	m	0.2	0.1	2.9	1.0	0.1	0.0	0.0
	China	13.1	0.1	0.2	1.9	0.0	0.1	0.2	0.0	0.4	5.1	5.1	m	0.1	m	0.3	0.0	1.3	8.0	3.6	0.0	0.0
	Colombia	6.5	0.7	0.9	2.4	8.8	0.2	0.3	0.0	0.4	14.9	9.9	m	0.1	m	0.1	0.1	4.9	0.4	0.2	0.0	0.1
	Costa Rica	3.8	0.7	1.2	3.2	2.1	0.1	0.7	0.0	1.0	8.3	8.0	m	0.1	m	0.0	0.5	2.1	1.5	0.3	0.0	0.0
	India	14.7	0.3	0.3	2.4	0.0	0.2	0.2	0.0	0.6	1.6	6.4	m	0.0	m	0.5	0.1	0.6	0.3	0.5	0.0	0.0
	Indonesia	31.5	0.4	0.6	0.6	0.0	0.2	0.2	0.0	0.3	3.0	8.0	m	0.0	m	0.3	0.0	1.1	14.7	3.6	0.0	0.0
	Lithuania	0.5	2.0	1.3	0.2	0.0	0.4	17.1	0.5	3.0	4.9	16.0	m	0.4	m	0.3	0.2	2.8	0.5	0.1	1.5	0.3
	Russian Federation	2.4	2.8	0.7	0.8	0.0	6.2	0.5	0.5	4.5	11.7	28.5	m	0.3	m	0.2	0.9	4.5	0.7	0.7	0.3	0.2
	Saudi Arabia	10.5	0.1	0.0	7.8	0.0	0.3	0.0	0.0	0.0	1.5	0.8	m	0.7	m	0.8	0.0	0.1	0.6	0.3	0.0	0.0
	South Africa	10.6	1.7	2.8	2.8	0.0	0.3	1.1	0.0	0.6	2.2	7.9	m	0.1	m	0.9	0.6	0.9	0.7	1.4	0.0	0.2
	Total from all countrie	8.3	2.3	1.8	2.7	0.2	1.4	1.1	0.1	0.8	10.5	9.8	m	0.9	m	0.4	0.2	2.6	2.9	1.6	0.1	0.2

Note: The proportion of students abroad is based only on the total of students enrolled in countries reporting data to the OECD and UNESCO Institute for Statistics.

1. Year of reference 2013.
2. Data refer to foreign instead of international (mobile) students.
3. Excludes doctoral or equivalent programmes (for Germany, these programmes are included only in main geographic regions).
4. Only doctoral students.
5. Data exclude students in doctoral or equivalent programmes.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD countries. Lithuania: Eurostat (UOE2014). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table C4.5. [2/2] Students abroad in master's and doctoral or equivalent programmes, by country of destination (2014)

Number of foreign and international students enrolled in master's and doctoral or equivalent programmes in a given country of destination as a percentage of the OECD total, based on head counts

The table shows for each country the proportion of students studying abroad in master's and doctoral or equivalent programmes in a given country of destination.

Reading Column 2: 6.5% of Czech citizens enrolled in master's and doctoral or equivalent programmes in other OECD countries study in Austria, 13.1% of Italian citizens enrolled in master's and doctoral or equivalent programmes in other OECD countries study in Austria, etc.

Reading the first row: 2.7% of Australian citizens enrolled in master's and doctoral or equivalent programmes in another OECD country study in France, 7.0% of Australian citizens enrolled in master's and doctoral or equivalent programmes in another OECD country study in New Zealand, etc.

		Countries of destination															
		OECD															
	Country of origin	Mexico	Netherlands	New Zealand	Norway	Poland	Portugal	Slovak Republic[2, 4]	Slovenia	Spain[5]	Sweden	Switzerland	Turkey[2]	United Kingdom	United States	Total OECD destinations	Total EU22 destinations
		(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
OECD	Australia	m	1.1	7.0	0.4	0.2	0.1	0.0	0.0	0.9	1.2	2.6	0.2	32.1	27.3	**100.0**	**56.0**
	Austria	m	2.5	0.4	0.3	0.3	0.3	0.6	0.3	1.1	2.1	11.4	0.1	12.9	5.3	**100.0**	**78.7**
	Belgium	m	15.7	0.2	0.2	0.3	1.3	0.0	0.0	2.9	1.3	3.3	0.2	19.3	5.9	**100.0**	**86.1**
	Canada	m	0.7	0.6	0.1	0.7	0.1	0.0	0.0	0.6	0.5	1.7	0.1	15.7	58.0	**100.0**	**27.7**
	Chile	m	1.0	1.2	0.2	0.0	0.2	0.0	0.0	7.7	0.5	1.7	0.1	14.4	32.1	**100.0**	**49.9**
	Czech Republic	m	3.9	0.1	0.6	9.2	0.2	5.3	0.1	1.2	1.5	3.8	0.1	11.2	5.9	**100.0**	**85.9**
	Denmark	m	3.4	0.4	3.3	1.1	0.2	0.0	0.2	2.0	7.2	2.9	0.1	33.6	11.2	**100.0**	**74.2**
	Estonia	m	4.2	0.0	1.0	0.5	0.1	0.0	0.1	0.5	8.5	2.6	0.2	11.6	5.0	**100.0**	**88.2**
	Finland	m	3.2	0.2	1.4	0.6	0.2	0.1	0.1	1.6	24.2	2.3	0.1	14.0	5.4	**100.0**	**85.8**
	France	m	1.5	0.3	0.2	0.6	0.6	0.0	0.0	4.3	1.7	13.0	0.1	15.6	9.4	**100.0**	**61.7**
	Germany	m	7.9	0.4	0.5	0.6	0.3	0.6	0.0	1.6	3.0	14.6	0.3	15.0	6.4	**100.0**	**74.2**
	Greece	m	9.4	0.0	0.3	0.0	0.1	0.0	0.0	0.6	3.4	3.4	2.2	31.3	6.6	**100.0**	**86.4**
	Hungary	m	5.0	0.2	0.5	0.9	0.1	0.4	0.0	1.3	1.9	3.9	0.2	10.1	7.7	**100.0**	**83.6**
	Iceland	m	4.1	0.1	3.8	0.1	0.1	0.0	0.0	0.5	14.1	1.9	0.0	7.5	11.3	**100.0**	**79.4**
	Ireland	m	1.7	0.3	0.1	0.4	0.1	0.0	0.0	0.5	0.7	0.4	0.1	74.3	5.7	**100.0**	**90.4**
	Israel	m	0.8	0.1	0.1	0.3	0.2	0.0	0.0	0.4	0.3	1.4	0.4	6.4	26.0	**100.0**	**67.0**
	Italy	m	3.6	0.2	0.3	0.4	0.9	0.0	0.3	9.3	1.7	9.2	0.1	17.2	6.7	**100.0**	**80.6**
	Japan	m	0.5	0.5	0.2	0.3	0.0	0.0	0.0	1.0	0.7	1.8	0.1	17.4	38.5	**100.0**	**46.5**
	Korea	m	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.4	0.2	6.1	65.4	**100.0**	**20.5**
	Latvia	m	6.8	0.0	1.8	2.8	0.3	0.0	0.1	0.8	5.4	3.7	0.2	14.6	6.7	**100.0**	**86.4**
	Luxembourg	m	1.0	0.0	0.0	0.0	1.2	0.0	0.0	0.4	0.4	6.9	0.0	9.8	0.9	**100.0**	**91.3**
	Mexico	m	2.2	0.3	0.2	0.2	0.3	0.0	0.0	8.6	0.9	1.7	0.0	11.4	36.2	**100.0**	**51.8**
	Netherlands	m	a	0.5	0.7	0.4	0.9	0.0	0.1	2.2	4.8	3.9	0.3	30.7	8.6	**100.0**	**80.8**
	New Zealand	m	0.8	a	0.3	0.0	0.0	0.0	0.0	0.5	0.5	1.9	0.0	15.5	18.5	**100.0**	**26.4**
	Norway	m	1.4	0.1	a	7.6	0.2	0.0	0.0	0.9	3.4	0.8	0.0	18.1	6.3	**100.0**	**87.7**
	Poland	m	4.2	0.1	1.0	a	0.7	1.3	0.1	1.3	2.3	3.8	0.2	13.7	5.2	**100.0**	**86.4**
	Portugal	m	4.6	0.1	0.4	1.3	a	0.0	0.1	17.0	2.3	3.6	0.1	22.0	7.3	**100.0**	**85.7**
	Slovak Republic	m	0.8	0.0	0.2	0.5	0.1	a	0.0	0.3	0.4	0.6	0.1	2.5	0.7	**100.0**	**98.0**
	Slovenia	m	6.5	0.3	0.8	0.8	0.2	0.0	a	1.8	2.4	4.3	0.4	14.3	5.7	**100.0**	**86.3**
	Spain	m	3.8	0.2	0.3	3.0	2.3	0.0	0.1	a	2.3	3.4	0.1	17.3	10.9	**100.0**	**82.8**
	Sweden	m	1.7	0.1	3.8	7.4	0.2	0.0	0.1	1.5	a	2.5	0.1	15.5	8.1	**100.0**	**81.1**
	Switzerland	m	2.4	0.3	0.5	0.2	0.6	0.1	0.0	2.7	1.3	a	0.1	24.4	8.6	**100.0**	**83.6**
	Turkey	m	2.2	0.1	0.2	1.8	0.3	0.0	0.0	0.8	1.3	2.5	a	13.9	36.3	**100.0**	**56.9**
	United Kingdom	m	5.8	1.7	0.5	0.8	0.5	0.0	0.0	3.1	2.7	3.5	0.3	a	24.8	**100.0**	**56.8**
	United States	m	1.6	1.3	0.5	1.1	0.4	0.0	0.0	2.1	1.5	2.8	0.5	35.9	a	**100.0**	**69.1**
	Total from OECD	m	3.4	0.5	0.4	1.0	0.4	0.2	0.1	2.5	2.0	5.3	0.3	17.5	18.6	**100.0**	**67.0**
	Total from EU22	m	4.8	0.3	0.5	1.0	0.6	0.3	0.1	3.0	2.6	7.6	0.3	17.7	7.6	**100.0**	**79.0**
Partners	Argentina	m	0.7	0.3	0.3	0.2	0.5	0.0	0.0	12.3	0.9	3.3	0.1	4.9	33.5	**100.0**	**54.4**
	Brazil	m	0.5	0.2	0.3	0.1	23.0	0.0	0.0	2.3	0.7	2.0	0.0	6.7	20.3	**100.0**	**70.3**
	China	m	0.7	0.7	0.2	0.1	0.0	0.0	0.0	0.3	0.7	0.4	0.1	16.0	41.4	**100.0**	**30.7**
	Colombia	m	1.6	0.2	0.3	0.1	0.3	0.0	0.0	11.4	0.8	2.1	0.1	6.7	25.7	**100.0**	**53.2**
	Costa Rica	m	2.4	0.1	0.0	0.2	1.1	0.0	0.0	8.4	1.2	3.8	0.0	5.1	44.1	**100.0**	**40.6**
	India	m	0.8	0.7	0.2	0.2	0.1	0.0	0.0	0.3	0.9	0.6	0.0	11.0	56.7	**100.0**	**23.8**
	Indonesia	m	4.0	1.9	0.5	0.1	0.1	0.0	0.0	0.2	0.5	0.4	1.0	11.9	14.7	**100.0**	**31.1**
	Lithuania	m	9.2	0.1	2.4	12.6	0.2	0.0	0.2	1.0	5.3	2.2	0.4	11.5	2.7	**100.0**	**89.1**
	Russian Federation	m	1.6	0.3	1.7	2.0	0.3	0.1	0.1	1.1	1.5	3.8	1.3	8.3	11.4	**100.0**	**75.7**
	Saudi Arabia	m	0.1	0.5	0.0	0.9	0.0	0.0	0.0	0.2	0.1	0.1	0.3	22.2	52.1	**100.0**	**27.9**
	South Africa	m	2.4	0.2	0.7	0.3	0.8	0.1	0.2	0.9	1.3	3.0	0.1	32.2	22.9	**100.0**	**56.9**
	Total from all countrie	m	1.7	0.5	0.4	1.1	0.7	0.1	0.1	1.4	1.4	2.2	1.1	15.0	26.3	**100.0**	**53.4**

Note: The proportion of students abroad is based only on the total of students enrolled in countries reporting data to the OECD and UNESCO Institute for Statistics.

1. Year of reference 2013.
2. Data refer to foreign instead of international (mobile) students.
3. Excludes doctoral or equivalent programmes (for Germany, these programmes are included only in main geographic regions).
4. Only doctoral students.
5. Data exclude students in doctoral or equivalent programmes.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD countries. Lithuania: Eurostat (UOE2014). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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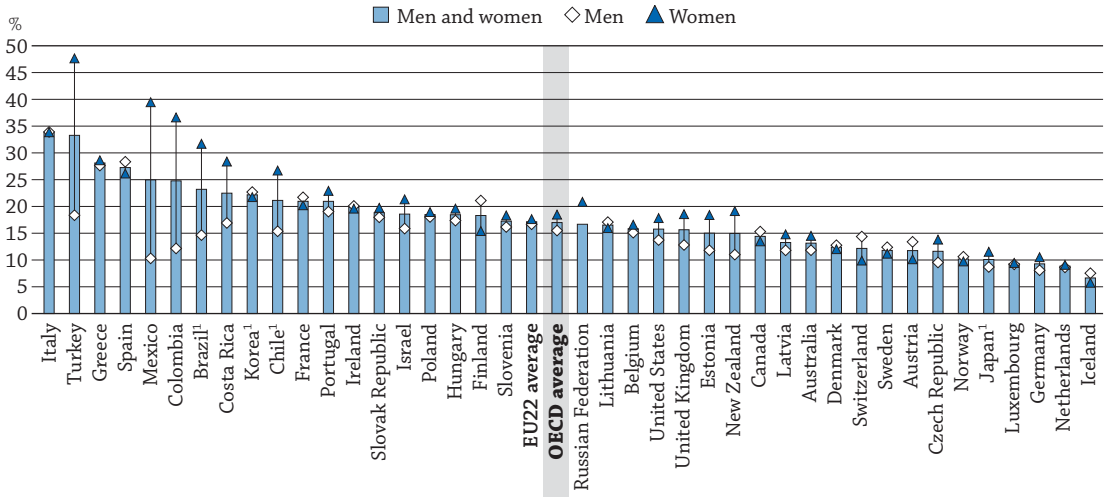
TRANSITION FROM SCHOOL TO WORK: WHERE ARE THE 15-29 YEAR-OLDS?

- On average across OECD countries, almost half of 20-24 year-olds (45%) are in education, and 38% are not in education but employed. Among 20-24 year-olds, more women than men are in education, but more men than women are employed.
- A substantial number of young people are neither employed nor in education or training (NEET) across countries. On average across OECD countries, 17.0% of 20-24 year-olds are NEETs.
- Across OECD countries, 18.5% of 20-24 year-old women are NEETs, compared to 15.5% of men in the same age group. In most countries, the inactive account for the majority of female NEETs, and the unemployed account for a larger share of male NEETs.

Figure C5.1. Percentage of NEETs among 20-24 year-olds, by gender (2015)



Note: NEET refers to young people neither employed nor in education or training.
1. Reference year differs from 2015. Refer to the source table for more details.
Countries are ranked in descending order of the percentage of 20-24 year-old NEET population of men and women.
Source: OECD. Table C5.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
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Context

The length and the quality of the schooling that individuals receive have an impact on their transition from education to work, as do labour market conditions and the economic environment. For example, in some countries, young people traditionally complete schooling before they look for work, while in others, education and employment are concurrent. In some countries, there is little difference between how young women and young men experience the transition from school to work, while in other countries, significant proportions of young women raise families full time after leaving the education system and do not enter the labour force. When labour market conditions are unfavourable, young people often tend to stay in education longer, because high unemployment rates drive down the opportunity costs of education.

To improve the transition from school to work, regardless of the economic climate, education systems may need to ensure that individuals have the skills required in the labour market. During recessions, public investment in education could be a sensible way to counterbalance unemployment and invest in future economic growth by building the needed skills. In addition, public investment could be directed towards potential employers, in the form of incentives to hire young people.

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Other findings

- The mean literacy score among young NEETs is generally lower than among those who are employed. A relatively large gap in literacy proficiency between NEETs and the employed can be noted in Canada, England (United Kingdom), New Zealand, Norway and the Slovak Republic, while in some countries, such as Greece, Italy, Japan, Korea, the Russian Federation, Singapore, Slovenia and Turkey, the gap in literacy proficiency between the two groups is not significant.
- In 2015, a typical 15-year-old in an OECD country could expect to spend about 7 additional years in formal education during the subsequent 15 years of his or her life. But there are large differences among OECD and partner countries in the number of expected years in education. In Brazil, Colombia, Mexico and the Russian Federation, a typical 15-year-old can expect to spend about five more years in education, while in Denmark, it is nine more years.

Trends

As educational attainment is increasing beyond compulsory schooling in most OECD and partner countries (see Indicator A1), the expected number of years in formal education after compulsory schooling has increased considerably in recent years. From 2005 to 2015, on average across OECD countries, about half a year has been added to the duration of formal education between the ages of 15 and 29. Ireland and Turkey have added about two years or more, the longest extension of formal education after compulsory education in the OECD (OECD, 2016a).

Governments' efforts to improve educational attainment among their populations and recent economic situations have resulted in significant changes in participation in education and the labour market over the past decade. In 2005, an average of 40% of 20-24 year-olds in OECD countries were in education, and by 2015, that proportion had grown to 45%. During the same period, on average across OECD countries, the proportion of 20-24 year-olds not in education but employed fell from 43% to 38%. Meanwhile, the share of 20-24 year-olds who are NEETs has generally fallen back to the 2005 pre-crisis levels, from 17.2% to 17.0% in the OECD, although a few countries, including Greece, Ireland, Italy, Portugal and Spain, still have a share higher than in 2005 (Figure C5.2 and Table C5.2).

Note

This indicator analyses the situation of young people in transition, those who are in education, those who are employed and those who are neither employed nor in education or training. That includes not only those who do not manage to find a job (unemployed NEET), but also those who do not actively seek employment (inactive NEET). The analysis first focuses mainly on 20-24 year-olds, as cross-country differences in the duration of compulsory education do not affect international comparisons of the transition from school to work at this age. Then, drawing from the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), proficiency levels of NEETs are evaluated. Due to the sample size, the analyses focus on 16-29 year-olds instead. The indicator ends with an analysis of the number of expected years in education and at work between the ages of 15 and 29.

Analysis

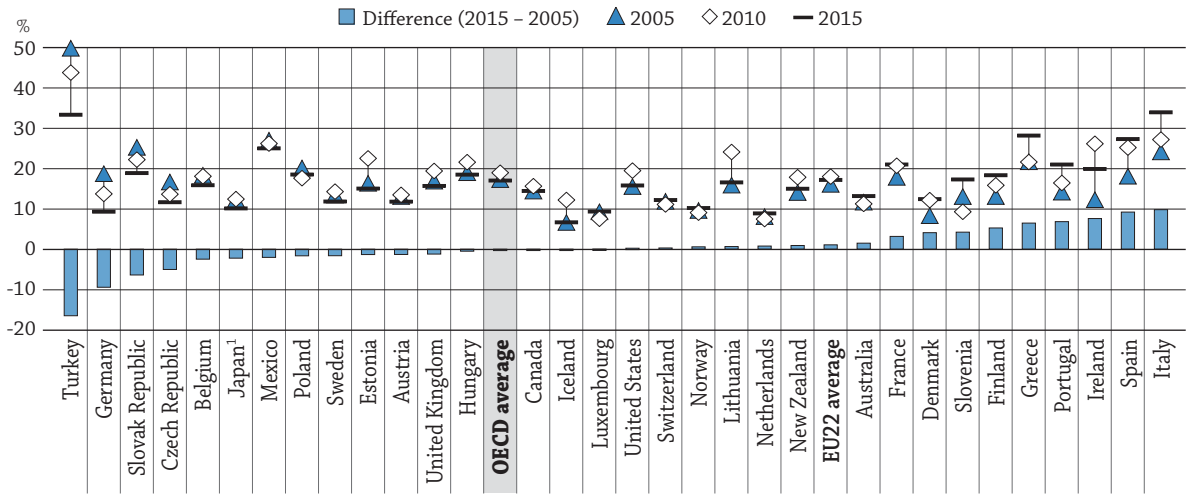
Young people in education or not and their labour market status

On average across OECD countries, the proportion of those in education among 20-24 year-olds increased from 40% in 2005 to 45% in 2015. In Austria, the Czech Republic, Germany, Greece, Ireland, the Slovak Republic, Spain, Switzerland and Turkey, participation in education has increased substantially – by more than 10 percentage points over the past decade. There are some exceptions: the share of young adults in education has decreased in Estonia, Finland, Hungary, Iceland, Lithuania, New Zealand and Poland, and the decrease is particularly large in Poland (over 14 percentage points) (Table C5.2).

In most countries, many young people who are no longer in education are employed, but the share of the employed has not gone back to the levels before the 2007-08 financial crisis. On average across the OECD, the share of 20-24 year-olds not in education but employed has decreased by about 5 percentage points, from 42.8% in 2005 to 38.2% in 2015. This reflects not only unfavourable employment prospects, but also a general trend of increased access to higher education among young adults (see Indicator C1). In Ireland and Spain, the share of the employed is over 20 percentage points lower than the 2005 level. However, some countries have not followed this general tendency. In Estonia, Hungary, Iceland, Israel, Lithuania, New Zealand and Poland, employment rates have increased among 20-24 year-olds over the past decade (Table C5.2). Employment prospects vary by educational attainment (see Indicator A5), but the likelihood of finding a job is rather high among the tertiary-educated within three years after graduation across countries (Box C5.1).

Although a large share of young people are in education or employed, a substantial number of young people across countries are neither employed nor in education or training. On average across OECD countries, almost 17.0% of 20-24 year-olds are NEETs, but the share of NEETs varies across countries. The share ranges from a high of over 30% of 20-24 year-olds in Italy and Turkey to less than 10% in Germany, Iceland, Luxembourg and the Netherlands. The share is also relatively high in Colombia, Greece, Mexico and Spain, at about 25% or more (Figure C5.1 and Table C5.2). The share of NEETs also varies across regions within countries (OECD/NCES, 2016).

Figure C5.2. Trends in the percentage of NEETs among 20-24 year-olds (2005, 2010, 2015)



Note: NEET refers to young people neither employed nor in education or training.
1. Reference year differs from 2015. Refer to the source table for more details.
Countries are ranked in ascending order of the difference in the percentage of the 20-24 year-old NEET population in 2005 and 2015.
Source: OECD. Table C5.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933398649

In many countries, the share of NEETs among 20-24 year-olds has fallen back to the pre-crisis level of 2005, and several countries have been able to reduce the number of NEETs considerably. In Turkey, almost one in two young persons was NEET in 2005, but the ratio fell to one in three in 2015. The decrease was also large in Germany, where the share of NEETs dropped by half over the last decade: in 2005, the share of NEETs (18.7%) was above

the OECD average (17.2%), but by 2015, it fell to 9.3%, well below the OECD average (17.0%). In both Turkey and Germany, the reduction is due to increased access to further education among the young. Other countries, such as the Czech Republic and the Slovak Republic, also reduced the share of NEETs considerably (Figure C5.2 and Table C5.2).

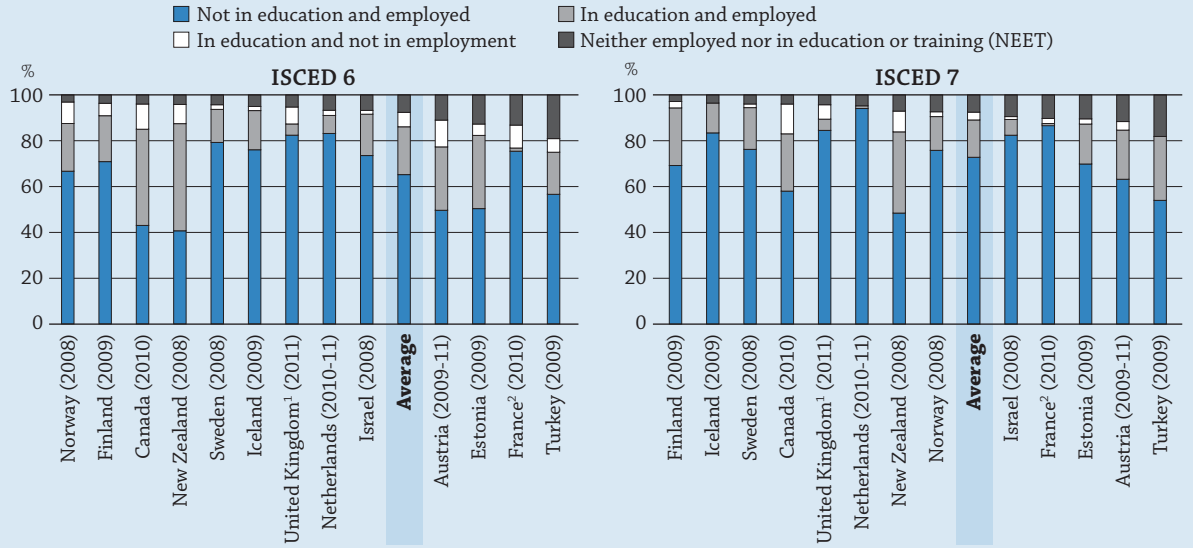
In a few countries, however, the share of NEETs is still higher than before the financial crisis. In Greece, Ireland, Italy, Portugal and Spain, all severely affected by the economic crisis, and also in Finland, the share of NEETs is more than 5 percentage points higher in 2015 than it was in 2005 (Figure C5.2). Countries affected severely by the crisis also have many long-term NEETs (OECD, 2016b). Short vocational training and internships, combined with job-search assistance and requirements, can be developed for targeted young populations to equip them with skills needed in the labour market and help them find work (OECD, 2015b). Successful programmes often also combine classroom learning and practical training with counselling and psychological support (OECD, 2016b).

Box C5.1. New data on employment transitions for young tertiary graduates

This box highlights the transition of young bachelor's or master's graduates at or near the typical age of graduation for their country, using cohort-based data, including longitudinally-linked administrative data and sample-based graduate surveys which were collected from OECD countries (see Box A6.1 for more details on data sources). These data can provide insights on the benefits of education among young people just after they complete their schooling, in particular on the transition between study and employment and how these patterns of transition vary across countries and change over time.

On average across the 13 countries with available data, three years after graduation, 86% of young adults with a bachelor's degree and 89% of those with a master's degree were employed (Figure C5.a). This is in line with high employment rates among the tertiary-educated after one and two years following the year of graduation. In many countries, over 70% of the tertiary-educated are employed one year after graduation, and the employment rate is more than 80% two years after graduation (OECD, 2015a)

Figure C5.a. Distribution of 20-29 year-olds with a bachelor's or master's degree three years after graduation in education/not in education, by work status



Notes: The year(s) in brackets relate to the year(s) the cohort of tertiary graduates left study. Data exclude graduates who left their home country. All graduates are under 30. All data are from linked administrative sources except for France and the United Kingdom where data are survey-based.
1. Data relate to full-time graduates of any age in full-time paid employment 3.5 years after graduation.
2. Data relate to all graduates who have taken a first break in their education career of at least one year.
Countries are ranked in ascending order of the percentage of young tertiary graduates neither employed nor in education or training.
Source: 2015 INES LSO Survey of Employment Outcomes of Recent Graduates.
StatLink http://dx.doi.org/10.1787/888933398688

...

Many young tertiary graduates remain in education after completing bachelor's or master's degrees. On average across countries with available data, for those graduates who stayed in their home country, about one in four bachelor's degree holders and about one in five master's degree holders is still in education three years after completing their degree.

A large share of those in education is also working. On average across countries with available data, 21% of bachelor's degree holders and 16% of master's degree holders were in education and employed three years after obtaining their degree. The share of young adults with a bachelor's degree in education and working ranges from less than 10% in France, the Netherlands and the United Kingdom to 47% in New Zealand, and the share of those with a master's degree in education and employed ranges from 1% in France to 35% in New Zealand. Hence, cross-country patterns are relatively consistent for holders of both bachelor's degree and master's degrees.

For both bachelor's and master's graduates, three years after completing their tertiary programme, the proportion of those neither employed nor in education or training is about 8% on average across 13 countries. The proportion of NEETs among bachelor's graduates is over 10% in Austria, Estonia and France, and as high as 19% in Turkey. In these countries, the share of NEETs among master's graduates is just as high (over 10% in Austria, Estonia and France, and as high as 18% in Turkey) (Figure C5.a). In contrast, three years after graduation, in Canada, Finland and Sweden, the share of NEETs is less than 5% among both bachelor's and master's degree holders.

There are several caveats that must be considered when interpreting these findings. These data relate to different years for different countries, and the majority of these graduates left their studies in the aftermath of the global financial crisis. The reference years and differences in the impact of the global recession need to be considered when interpreting these comparisons. The data exclude those graduates who had left their country three years after graduation. This can range from 2-3% of graduates in Finland to 20-30% in New Zealand (see Box C4.1). Furthermore, differences between countries in the size and mix of those with disaggregated tertiary degrees (see Indicator A1) will also have an impact on the transition from school to work.

Young people in education or not and their labour market status by gender

Across countries, more young women tend to be in education than young men, while more young men are employed than young women. On average across OECD countries, 42% of 20-24 year-old men are in education, while the share is higher for women (48%). Japan, Korea, Mexico, the Netherlands, New Zealand and Turkey are exceptions, where the share of men in education is higher than that of women. On the other hand, the share of those in employment and not in education is higher on average among men (43%) than among women (34%) across OECD countries. Contrary to this general pattern, more women in this age group are employed than men in some countries, including Japan, Korea, the Netherlands and Switzerland (Figure C5.3 and Table C5.1).

The likelihood of becoming NEET is generally higher among women than men, and in some countries, the gender gap is large. Across OECD countries, 18.5% of 20-24 year-old women are NEETs, compared to 15.5% of men in that age group. In several countries, high percentages of NEETs are associated with very high rates among women. In Brazil, Chile, Colombia, Costa Rica and Mexico, the share of NEETs is as high as over 25% for women, while it is less than 17% for men. Turkey has the highest share of NEETs among OECD countries: almost half of 20-24 year-old women are NEETs (47.6%) compared to only 18.3% of men. In Mexico, the share of NEETs among 20-24 year-olds is more than four times higher among women (40.5%) than among men (9.8%). The larger gender gap in these countries may be partially explained by traditional role-sharing between men and women, with the man as the breadwinner of the family and the woman taking care of the household and children. Other countries also have gender gaps in shares of NEETs. The share of NEETs among men is below the OECD average in Estonia (11.8%) and New Zealand (11.0%), but the share of NEETs among women is more than 1.5 times higher than that of men in both countries (18.4% in Estonia and 19.1% in New Zealand) (Figure C5.1 and Table C5.1).

In several countries, however, the gender gap in shares of NEETs is small, and in some other countries, the share of NEETs is higher among men than women. For instance, Greece, Italy and Spain are among the countries with the highest overall level of NEETs (more than 25%) in the OECD, but the gender gap is small (less than 3 percentage points).

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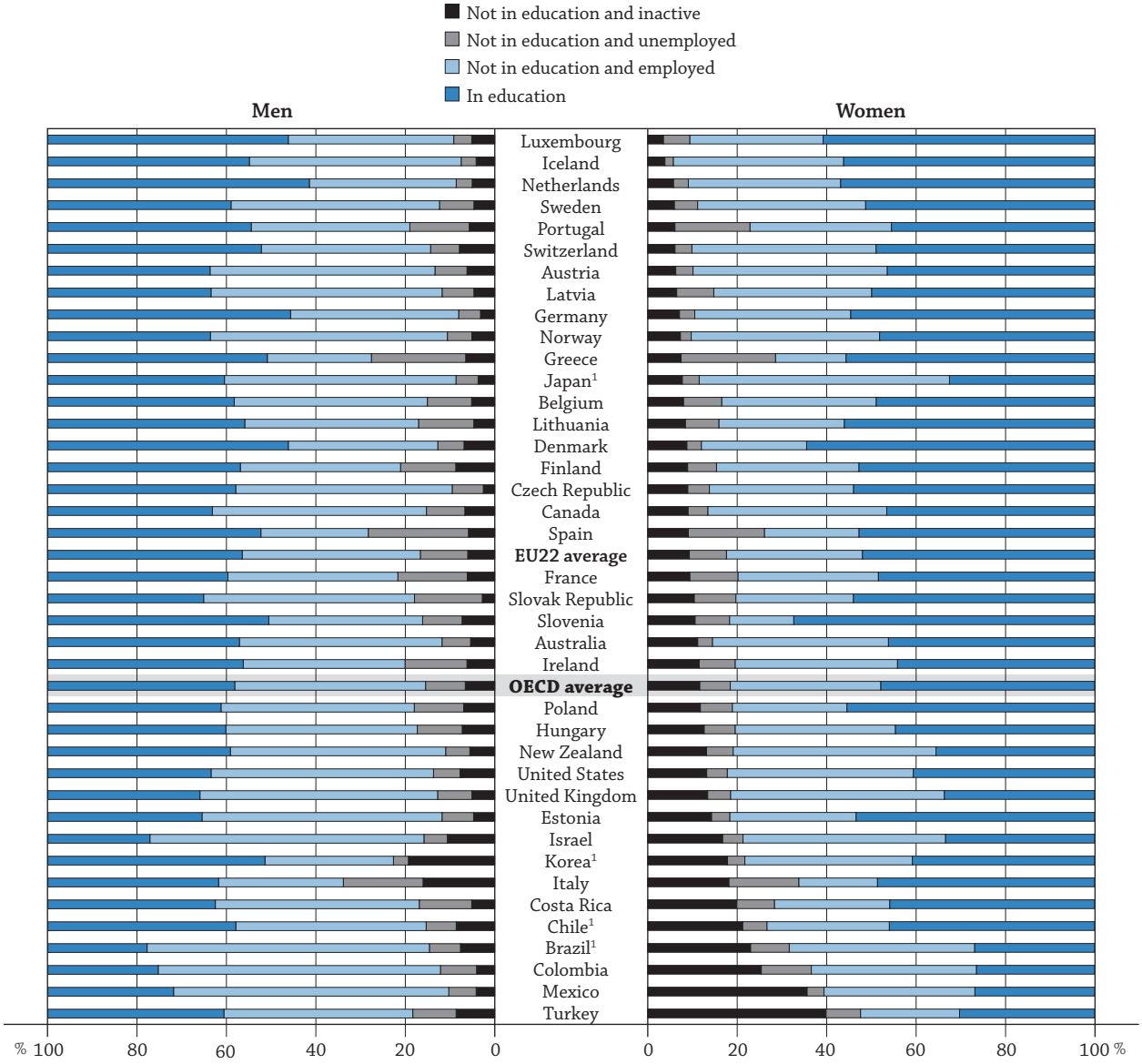
Among countries with a higher share of NEETs among men than women, Finland and Switzerland have the largest gender difference, with the share of NEETs about 5 percentage points higher among men than among women (Figure C5.1 and Table C5.1).

In most countries, the inactive account for the majority of female NEETs, and the unemployed account for a larger share of male NEETs. On average across OECD countries, 11.7% of 20-24 year-old women are inactive and no longer in education, compared to only 6.6% of men, while the share of the unemployed and not in education is 6.8% among women, compared to 8.9% among men (Figure C5.3 and Table C5.1). Different factors contribute to being inactive and not seeking employment. The main reasons for inactivity are childcare responsibilities among women, while health and other factors are more prevalent among men (OECD, 2016b).

Figure C5.3. Distribution of 20-24 year-olds in education/not in education, by gender and work status (2015)



1. Reference year differs from 2015.

Countries are ranked in ascending order of the percentage of 20-24 year-old women not in education and inactive.

Source: OECD. Table C5.1 and OECD (2016), "Transition from school to work", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_TRANS. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398654

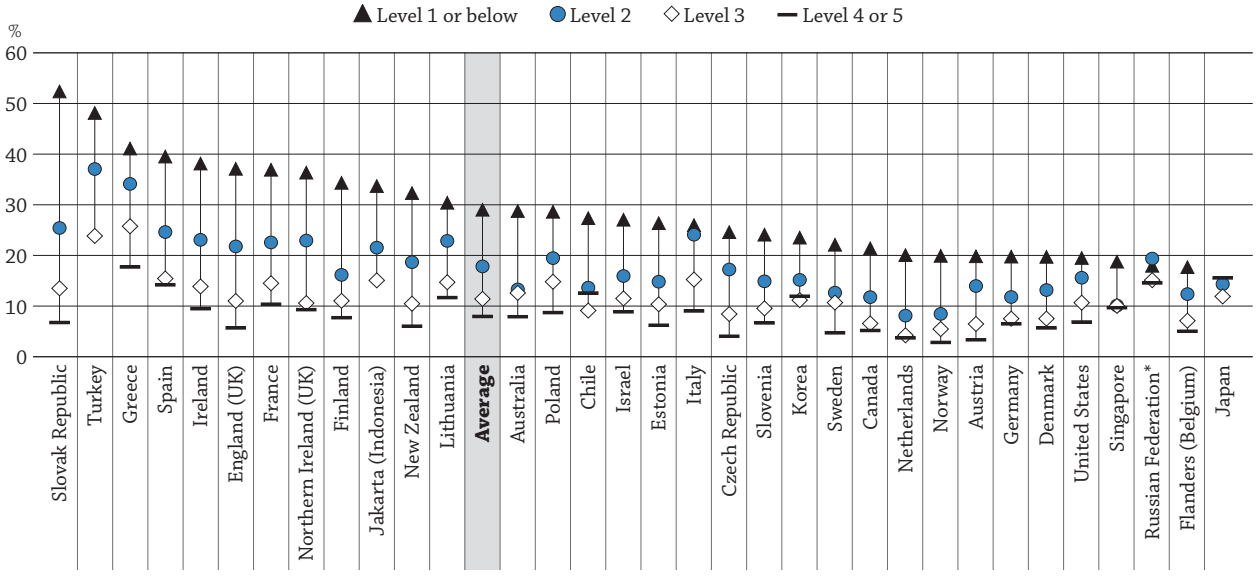
While this general pattern holds true in most countries, there are some notable exceptions. In Austria, Finland, Iceland and Portugal, the difference in the share of inactive NEETs among 20-24 year-old women and men is negligible (less than 0.5 percentage points), and the gender differences in the share of NEETs are mainly due to higher unemployment rates among men (Figure C5.3 and Table C5.1).

NEETs and skill levels

Although most young NEETs have high literacy, numeracy and problem-solving skill levels (OECD, 2015b), the share of NEETs is highest among lower-skilled. Across countries and subnational entities that participated in the Survey of Adult Skills, on average, the share of NEETs is only 8% among young adults with the highest proficiency level in literacy and 11% among those with proficiency Level 3 across countries with available data. The share increases to 18% among those with proficiency Level 2 and 29% among those with the lowest proficiency level (Figure C5.4 and Table C5.3 [L] and see the *Definitions* section at the end of this indicator).

Figure C5.4. Percentage of NEETs, by literacy proficiency (2012 or 2015)

Survey of Adult Skills,16-29 year-olds neither employed nor in education or training (NEET)



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of NEETs among 16-29 year-olds with literacy proficiency of Level 1 or below.

Source: OECD. Table C5.3 (L). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398664

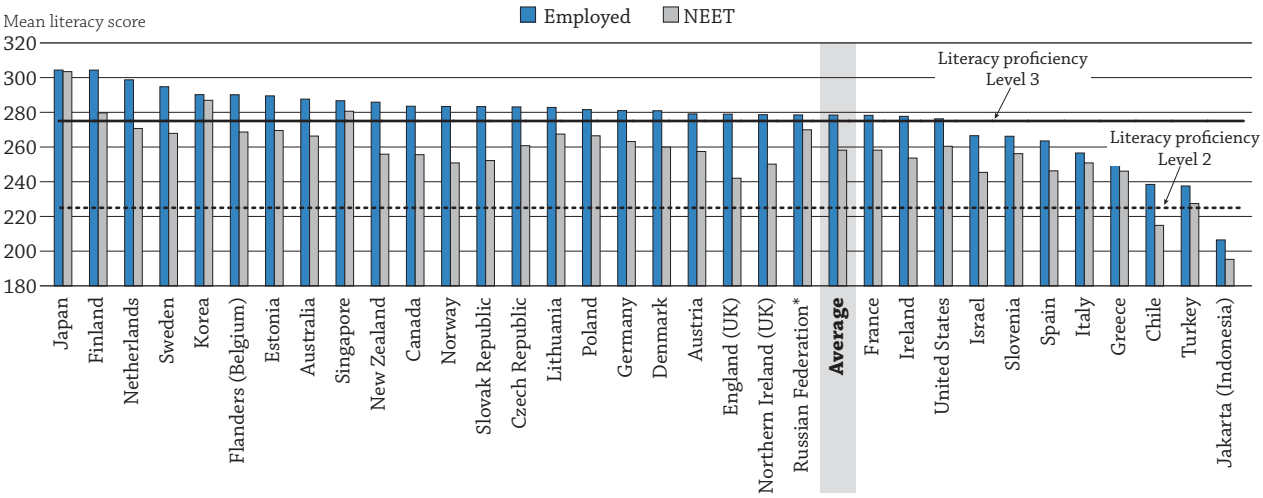
There are some important differences in the proportions of NEETs among proficiency levels in many countries. In some countries, such as England (United Kingdom), New Zealand and the Slovak Republic, the difference between the share of NEETs among young adults with the lowest literacy proficiency level and among those with the highest literacy proficiency level is particularly large. However, in a few countries, such as Japan, Korea and the United States, there is no statistical difference in the share of NEETs across proficiency levels.

The mean literacy score among 16-29 year-olds is generally lower for NEETs than for those who are employed. In most countries, the mean literacy score is between the lower and higher limits for literacy proficiency Level 3 among 16-29 year-olds who are employed and within the range for Level 2 among NEETs. A relatively large gap in mean literacy scores between NEETs and those who are employed can be noted in England (United Kingdom), New Zealand, Norway and the Slovak Republic (Figure C5.5 and Table C5.3a [L]). The gap in these countries suggests that bringing young adults who are not in education and not employed back to school or providing other adult learning opportunities may help to increase their employment prospects by equipping them with skills. A particular challenge for educational providers may be to identify them and reach out to them, as many may not be registered with public employment services or social institutions (OECD 2016b).

However, in some countries such as in Greece, Italy, Japan, Korea, the Russian Federation, Singapore, Slovenia and Turkey, there is no significant gap in literacy proficiency levels between NEETs and employed adults, suggesting a need for different strategies in terms of labour market insertion. In some of these countries, stagnant economic situations with high unemployment rates make it difficult for young people to find employment for an extended period, and this may explain why scores are similar for NEETs and the employed.

Figure C5.5. Mean literacy score of NEET and employed 16-29 year-olds (2012 or 2015)

Survey of Adult Skills



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012. NEET refers to young people neither employed nor in education or training.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and economies are ranked in descending order in the mean literacy score of employed 16-29 year-olds.

Source: OECD. Table 5.3a (L). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398678

Expected years in education and at work

Over the past decades, the number of years that students spend in education has increased in many countries. In 2015, a typical 15-year-old in an OECD country could expect to spend about 7 additional years in formal education during the subsequent 15 years of his or her life. During these seven years in education, he or she could expect to hold a job for two years and be unemployed or inactive for five years. Almost eight years would be spent not in education, during which he or she could expect to be employed for roughly five-and-a-half years, to be unemployed for about one year and to be out of the labour force (i.e. neither in education nor seeking work) for just over one year. On average across OECD countries, since 2005, about half a year has been added to the duration of formal education. Ireland and Turkey have added about two years or more, the longest extension of formal education after compulsory education in the OECD (OECD, 2016a).

There are large differences among countries in the expected number of years in education. In Brazil, Colombia, Mexico and the Russian Federation, a 15-year-old student could expect to spend an average of about five more years in education, while in Denmark, he or she could expect to spend an average of nine more years in education. In most countries, years spent in education are not combined with work, but in Denmark, Iceland, the Netherlands and Switzerland, young people spend an average of four years or more working while studying (OECD, 2016a).

The difference in expected years in education between women and men is less than one year in the majority of countries. On average across OECD countries, young women spend 0.4 years longer in education than young men. The difference is slightly over 1 year in Estonia, Iceland, Norway, Poland and the Slovak Republic, while in Slovenia, women spend 1.5 years longer in education than men. Contrary to this trend, the number of expected years in education is shorter among women than among men in Brazil, Chile, Germany, Ireland, Japan, Korea, Mexico, the Netherlands, New Zealand, Portugal, Switzerland and Turkey. Among these countries, Korea has the largest difference between men and women, and the number of expected years in education is 0.7 years longer for men than for women (OECD, 2016a).

Across countries, the gender difference in expected years in employment is slightly larger than that in expected years in education. On average across OECD countries, it is over one year longer among men than among women. In Colombia, Mexico and Turkey, gender differences are larger than three years. On the other hand, in Korea and Switzerland, the number of expected years at work is slightly higher among women than among men (OECD, 2016a).

Definitions

Employed individuals are those who, during the survey reference week, work for pay (employees) or profit (self-employed and unpaid family workers) for at least one hour, or have a job but are temporarily not at work (through injury, illness, holiday, strike or lock-out, educational or training leave, maternity or parental leave, etc.).

Inactive individuals are those who, during the survey reference week, are neither employed nor unemployed (i.e. individuals who are not looking for a job). The number of inactive individuals is calculated by subtracting the number of active people (labour force) from the number of all working-age people.

Individuals in education are those who receive education or/and training in the regular education system during the four weeks prior to the survey.

Levels of education: In this indicator, two ISCED (International Standard Classification of Education) classifications are used: ISCED 2011 and ISCED-97.

- ISCED 2011 is used for all the analyses that are not based on the Survey of Adult Skills. For ISCED 2011, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED 2011 levels 0, 1 and 2, and includes recognised qualifications from ISCED 2011 level 3 programmes, which are not considered as sufficient for ISCED 2011 level 3 completion, and without direct access to post-secondary non-tertiary education or tertiary education; **upper secondary or post-secondary non-tertiary** corresponds to ISCED 2011 levels 3 and 4; and **tertiary** corresponds to ISCED 2011 levels 5, 6, 7 and 8 (UNESCO Institute for Statistics, 2012)
- ISCED-97 is used for all analyses based on the Survey of Adult Skills. For ISCED-97, the levels of education are defined as follows: **below upper secondary** corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

See the section *About the new ISCED 2011 classification*, at the beginning of this publication, for a presentation of all ISCED 2011 levels and Annex 3 for a presentation of all ISCED-97 levels.

Literacy is the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals and to develop one's knowledge and potential. Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts. It does not, however, involve the production of text (writing). Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.

Proficiency levels for literacy are based on a 500-point scale. Each level has been defined by particular score-point ranges. Six levels are defined for literacy (Below Level 1 and Levels 1 through 5) which are grouped in four proficiency levels in *Education at a Glance*:

- Level 1 or below: all scores below 226 points
- Level 2: scores from 226 points to less than 276 points
- Level 3: scores from 276 points to less than 326 points
- Level 4 or 5: scores from 326 points and higher.

NEET: Neither employed nor in education or training.

Unemployed individuals are those who, during the survey reference week, are without work (i.e. neither had a job nor were at work for one hour or more in paid employment or self-employment), were actively seeking employment (i.e. had taken specific steps during the four weeks prior to the reference week to seek paid employment or self-employment), and were available to start work (i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week).

Work-study programmes: Work-study programmes are formal education/training programmes combining interrelated study and work periods for which the student/trainee receives earnings.

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Methodology

Data on population, educational attainment and labour market status for most countries are taken from OECD and Eurostat databases, which are compiled from National Labour Force Surveys by the OECD LSO (Labour Market, Economic and Social Outcomes of Learning) Network, and usually refer to the first quarter, or the average of the first three months of the calendar year. Some discrepancies may exist in the data collected. For example some countries may refer to all jobs instead of main job. Data on literacy proficiency levels and mean scores are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). See Annex 3 (www.oecd.org/education/education-at-a-glance-19991487.htm) for additional information.

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator C5 Tables

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Table C5.1	**Percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, by work status (2015)**
Table C5.2	**Trends in the percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, employed or not, by gender (2005 and 2015)**
Table C5.3 (L)	**Percentage of NEETs, by literacy proficiency (2012 or 2015)**
Table C5.3a (L)	**NEETs and employed mean literacy score (2012 or 2015)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table C5.1. [1/2] Percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, by work status (2015)

		15-29 year-olds											
		Total (young men + young women)											
		In education						Not in education					
		Employed								NEET			
		Employed	Students in work-study programmes	Other employed	Unemployed	Inactive	Sub-total (employed + unemployed + inactive)	Employed	NEET	Unemployed	Inactive	Sub-total (employed + unemployed + inactive)	Total in education and not in education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	25.0	3.4	21.6	3.3	19.1	47.4	40.8	11.8	3.7	8.1	52.6	100.0
	Austria	18.6	7.9	10.7	1.0	27.7	47.3	42.3	10.4	4.7	5.7	52.7	100.0
	Belgium	2.9	0.3	2.6	0.5	43.8	47.2	39.0	13.8	7.4	6.4	52.8	100.0
	Canada	18.0	x(3)	18.0	2.4	23.6	44.0	42.8	13.2	5.3	7.9	56.0	100.0
	Chile[1]	7.6	x(3)	7.6	2.0	39.0	48.6	32.7	18.8	4.9	13.8	51.4	100.0
	Czech Republic	4.2	0.5	3.8	0.3	40.9	45.4	42.3	12.2	4.9	7.4	54.6	100.0
	Denmark	31.8	x(3)	31.8	2.9	25.8	60.5	29.0	10.5	4.0	6.5	39.5	100.0
	Estonia	13.9	c	13.7	1.3	31.1	46.3	40.9	12.8	3.9	8.9	53.7	100.0
	Finland	15.6	x(3)	15.6	4.7	32.9	53.2	32.5	14.3	6.4	7.9	46.8	100.0
	France	7.1	x(3)	7.1	0.7	39.7	47.5	35.3	17.2	9.7	7.5	52.5	100.0
	Germany	20.3	10.1	10.2	0.8	32.6	53.8	37.7	8.6	3.4	5.2	46.2	100.0
	Greece	2.4	a	2.4	1.8	45.0	49.3	24.6	26.1	19.4	6.8	50.7	100.0
	Hungary	1.5	a	1.5	0.1	42.5	44.1	40.0	15.9	6.2	9.7	55.9	100.0
	Iceland	35.9	a	35.9	3.7	12.9	52.4	41.4	6.2	2.2	4.0	47.6	100.0
	Ireland	7.5	a	7.5	0.8	40.5	48.7	35.1	16.2	7.8	8.4	51.3	100.0
	Israel	13.0	x(3)	13.0	1.1	29.3	43.5	42.5	14.1	3.6	10.5	56.5	100.0
	Italy	1.8	a	1.8	0.9	44.4	47.1	25.5	27.4	12.3	15.1	52.9	100.0
	Japan[2]	7.3	a	7.3	0.1	35.6	42.9	47.2	9.8	3.2	6.6	57.1	100.0
	Korea[1]	5.5	a	5.5	0.5	41.7	47.7	34.3	18.0	3.0	15.1	52.3	100.0
	Latvia	6.1	a	6.1	0.5	34.0	40.7	46.4	13.0	6.4	6.6	59.3	100.0
	Luxembourg	8.2	a	8.2	2.8	41.7	52.7	38.8	8.4	5.1	3.3	47.3	100.0
	Mexico	7.5	a	7.5	0.6	28.9	37.0	41.1	21.9	3.4	18.5	63.0	100.0
	Netherlands	32.2	x(3)	32.2	4.0	19.7	55.9	35.9	8.3	3.0	5.3	44.1	100.0
	New Zealand	18.0	a	18.0	3.1	23.4	44.4	42.3	13.3	4.6	8.7	55.6	100.0
	Norway	14.8	0.4	14.3	2.3	28.5	45.6	45.3	9.2	3.1	6.0	54.4	100.0
	Poland	5.6	a	5.6	0.9	38.5	45.0	39.3	15.6	6.6	9.1	55.0	100.0
	Portugal	3.8	a	3.8	2.0	44.0	49.8	34.9	15.3	10.8	4.6	50.2	100.0
	Slovak Republic	2.0	0.2	1.8	0.2	40.5	42.7	40.1	17.2	9.0	8.2	57.3	100.0
	Slovenia	11.4	x(3)	11.4	1.0	41.9	54.3	31.1	14.6	8.5	6.1	45.7	100.0
	Spain	5.0	x(3)	5.0	4.5	40.2	49.7	27.5	22.8	16.0	6.8	50.3	100.0
	Sweden	12.8	a	12.8	6.4	32.0	51.1	39.8	9.1	4.7	4.4	48.9	100.0
	Switzerland	28.5	14.9	13.6	1.2	20.2	49.9	41.8	8.3	3.9	4.4	50.1	100.0
	Turkey	10.2	a	10.2	2.2	28.3	40.6	30.6	28.8	6.3	22.5	59.4	100.0
	United Kingdom	14.0	2.9	11.1	2.3	24.8	41.0	45.2	13.7	5.0	8.8	59.0	100.0
	United States	14.4	x(3)	14.4	1.3	29.1	44.9	40.8	14.4	3.9	10.5	55.1	100.0
	OECD average	12.4	m	11.2	1.8	33.2	47.5	37.9	14.6	6.2	8.4	52.5	100.0
	EU22 average	10.4	m	9.4	1.8	36.6	48.8	36.5	14.7	7.5	7.2	51.2	100.0
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[2]	13.1	a	13.1	3.0	19.5	35.6	44.5	20.0	6.0	13.9	64.4	100.0
	China	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	11.1	a	11.1	2.3	22.3	35.7	43.3	21.0	7.2	13.8	64.3	100.0
	Costa Rica	14.3	a	14.3	4.0	29.0	47.3	32.6	20.1	6.8	13.3	52.7	100.0
	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
	Lithuania	6.8	a	6.8	0.5	41.6	48.9	37.3	13.7	7.2	6.5	51.1	100.0
	Russian Federation	c	m	c	c	32.0	33.6	52.3	14.0	5.2	8.9	66.4	100.0
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m

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

1. Year of reference 2013.
2. Year of reference 2014.

Source: OECD (2015), "Transition from school to work", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_TRANS. Japan: OECD (forthcoming), *Investing in Youth: Japan*, OECD Publishing, Paris. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C5.1. [2/2] Percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, by work status (2015)

	20-24 year-olds											
	Total (young men + young women)											
	In education						Not in education					Total in education and not in education
		Employed							NEET			
	Employed	Students in work-study programmes	Other employed	Unemployed	Inactive	Sub-total (employed + unemployed + inactive)	Employed	NEET	Unemployed	Inactive	Sub-total (employed + unemployed + inactive)	
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
OECD												
Australia	29.1	4.1	25.0	2.4	12.9	44.5	42.4	13.1	4.9	8.3	55.5	100.0
Austria	18.5	3.3	15.2	1.1	21.8	41.4	46.9	11.7	5.5	6.2	58.6	100.0
Belgium	3.1	0.3	2.7	0.6	41.6	45.3	38.9	15.8	9.2	6.6	54.7	100.0
Canada	20.7	x(15)	20.7	1.8	19.1	41.6	44.0	14.4	6.6	7.8	58.4	100.0
Chile[1]	9.9	x(15)	9.9	2.8	31.3	44.0	34.9	21.1	6.1	15.0	56.0	100.0
Czech Republic	5.1	0.4	4.6	0.5	42.3	47.9	40.5	11.6	5.9	5.7	52.1	100.0
Denmark	34.9	x(15)	34.9	3.0	21.2	59.1	28.5	12.4	4.6	7.8	40.9	100.0
Estonia	16.6	c	16.5	1.7	25.3	43.6	41.4	15.0	5.6	9.4	56.4	100.0
Finland	18.6	x(15)	18.6	5.2	24.0	47.8	33.9	18.3	9.5	8.8	52.2	100.0
France	11.5	x(15)	11.5	1.1	31.8	44.4	34.7	20.9	13.1	7.8	55.6	100.0
Germany	28.0	13.8	14.1	0.9	25.5	54.4	36.3	9.3	4.2	5.1	45.6	100.0
Greece	3.9	a	3.9	3.3	45.1	52.3	19.6	28.1	21.1	7.0	47.7	100.0
Hungary	1.7	a	1.7	0.3	40.1	42.2	39.4	18.4	8.5	9.9	57.8	100.0
Iceland	36.1	a	36.1	2.6	11.8	50.6	42.8	6.6	2.6	4.0	49.4	100.0
Ireland	12.4	a	12.4	0.8	30.7	43.9	36.3	19.8	11.1	8.8	56.1	100.0
Israel	12.4	x(15)	12.4	0.9	14.7	28.1	53.4	18.6	4.9	13.7	71.9	100.0
Italy	2.2	a	2.2	1.1	40.0	43.3	22.9	33.9	16.8	17.1	56.7	100.0
Japan[2]	12.8	a	12.8	0.2	23.0	36.0	53.9	10.1	4.4	5.7	64.0	100.0
Korea[1]	9.8	a	9.8	0.7	33.9	44.4	33.5	22.2	3.6	18.5	55.6	100.0
Latvia	12.6	a	12.6	0.7	29.8	43.1	43.7	13.3	7.7	5.6	56.9	100.0
Luxembourg	10.3	a	10.3	2.7	44.2	57.2	33.4	9.3	5.0	4.4	42.8	100.0
Mexico	8.1	a	8.1	0.8	19.6	28.4	46.3	25.3	4.6	20.7	71.6	100.0
Netherlands	36.0	x(15)	36.0	3.3	18.5	57.7	33.5	8.8	3.4	5.4	42.3	100.0
New Zealand	21.2	a	21.2	2.5	14.6	38.3	46.8	14.9	5.7	9.3	61.7	100.0
Norway	18.9	0.9	18.0	1.9	21.3	42.1	47.7	10.2	4.0	6.2	57.9	100.0
Poland	9.7	a	9.7	1.7	35.4	46.8	34.7	18.5	9.2	9.3	53.2	100.0
Portugal	5.1	a	5.1	3.1	37.3	45.5	33.6	20.9	15.0	5.9	54.5	100.0
Slovak Republic	2.9	0.4	2.5	c	41.0	44.2	37.0	18.8	12.3	6.5	55.8	100.0
Slovenia	16.1	x(15)	16.1	1.5	40.9	58.5	24.3	17.2	8.3	9.0	41.5	100.0
Spain	6.4	x(15)	6.4	6.8	37.0	50.2	22.6	27.2	19.8	7.5	49.8	100.0
Sweden	14.2	a	14.2	6.6	25.3	46.0	42.2	11.8	6.5	5.3	54.0	100.0
Switzerland	29.4	9.8	19.6	1.0	17.9	48.3	39.5	12.2	5.1	7.0	51.7	100.0
Turkey	12.8	a	12.8	3.5	18.4	34.7	32.0	33.2	8.7	24.6	65.3	100.0
United Kingdom	14.7	3.2	11.6	1.8	17.3	33.8	50.5	15.6	6.4	9.2	66.2	100.0
United States	18.4	x(15)	18.4	1.2	18.9	38.5	45.7	15.8	5.3	10.5	61.5	100.0
OECD average	15.0	m	13.9	2.1	27.8	44.8	38.2	17.0	7.9	9.1	55.2	100.0
EU22 average	12.9	m	12.0	2.3	32.5	47.7	35.2	17.1	9.5	7.6	52.3	100.0
Partners												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[2]	13.9	a	13.9	2.2	8.4	24.5	52.3	23.2	7.8	15.4	75.5	100.0
China	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	11.8	a	11.8	2.8	10.9	25.6	49.6	24.8	9.7	15.1	74.4	100.0
Costa Rica	18.2	a	18.2	5.4	18.0	41.5	36.0	22.5	10.1	12.3	58.5	100.0
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
Lithuania	13.9	a	13.9	0.8	35.2	49.9	33.6	16.5	10.0	6.5	50.1	100.0
Russian Federation	c	m	c	c	32.4	35.1	48.3	16.7	7.3	9.4	64.9	100.0
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

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

1. Year of reference 2013.

2. Year of reference 2014.

Source: OECD (2015), "Transition from school to work", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_TRANS. Japan: OECD (forthcoming), *Investing in Youth: Japan*, OECD Publishing, Paris. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C5.2. [1/2] Trends in the percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, employed or not, by gender (2000 and 2015)

	15-29 year-olds						15-29 year-olds						15-29 year-olds					
	Total (young men + young women)						Young men						Young women					
	2005			2015			2005			2015			2005			2015		
	In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education	
	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	45.0	43.5	11.4	47.4	40.8	11.8	44.7	47.3	8.0	46.7	44.0	9.3	45.4	39.7	14.9	48.1	37.4	14.5
Austria	42.0	46.6	11.4	47.3	42.3	10.4	42.5	46.7	10.9	45.5	43.7	10.8	41.5	46.5	12.0	49.0	40.9	10.1
Belgium	44.4	41.4	14.2	47.2	39.0	13.8	42.8	44.8	12.4	45.7	41.5	12.8	46.0	38.0	16.0	48.8	36.4	14.9
Canada	44.1	43.6	12.3	44.0	42.8	13.2	42.3	46.1	11.6	41.8	45.0	13.2	45.9	41.0	13.1	46.2	40.6	13.2
Chile[1]	m	m	m	48.6	32.7	18.8	m	m	m	48.9	38.3	12.8	m	m	m	48.3	27.1	24.6
Czech Republic	39.5	44.6	15.9	45.4	42.3	12.2	38.4	52.7	8.9	42.9	49.5	7.6	40.6	36.2	23.2	48.1	34.9	17.1
Denmark	55.5	36.3	8.2	60.5	29.0	10.5	53.1	39.8	7.1	57.6	32.7	9.7	58.0	32.6	9.4	63.6	25.1	11.3
Estonia	54.0	31.3	14.8	46.3	40.9	12.8	54.1	35.8	10.1	42.6	49.2	8.2	53.9	26.6	19.5	50.2	32.0	17.8
Finland	55.4	33.7	10.9	53.2	32.5	14.3	53.5	37.2	9.3	51.2	35.2	13.6	57.3	30.2	12.5	55.3	29.7	15.0
France	46.8	38.7	14.5	47.5	35.3	17.2	45.3	42.3	12.4	46.1	37.6	16.3	48.2	35.2	16.6	48.9	33.1	18.1
Germany	52.2	33.1	14.7	53.8	37.7	8.6	52.8	34.9	12.4	54.5	38.6	6.9	51.5	31.4	17.1	53.0	36.7	10.4
Greece	38.6	41.7	19.7	49.3	24.6	26.1	37.6	49.3	13.1	47.0	28.0	24.9	39.5	33.9	26.6	51.5	21.1	27.4
Hungary	46.3	36.5	17.2	44.1	40.0	15.9	45.3	42.8	11.9	43.3	44.6	12.1	47.3	29.9	22.8	45.0	35.1	19.9
Iceland	50.6	44.0	5.5	52.4	41.4	6.2	46.3	49.1	4.5	48.5	45.3	6.2	55.0	38.5	6.4	56.5	37.4	6.1
Ireland	36.2	53.4	10.5	48.7	35.1	16.2	34.6	57.4	8.0	49.2	35.2	15.6	37.7	49.2	13.0	48.2	34.9	16.8
Israel[2]	37.9	31.3	30.8	43.5	42.5	14.1	36.0	33.1	30.9	42.1	46.4	11.4	39.8	29.5	30.7	44.8	38.5	16.7
Italy	41.5	37.5	21.1	47.1	25.5	27.4	38.7	44.1	17.1	44.5	29.1	26.3	44.3	30.6	25.1	49.7	21.8	28.5
Japan[3]	38.8	48.8	12.4	42.9	47.2	9.8	40.7	50.9	8.4	43.9	48.8	7.3	36.8	46.6	16.6	41.9	45.6	12.5
Korea[1]	m	m	m	47.7	34.3	18.0	m	m	m	50.0	33.0	17.0	m	m	m	45.4	35.5	19.1
Latvia	m	m	m	40.7	46.4	13.0	m	m	m	38.7	50.4	10.9	m	m	m	42.7	42.2	15.1
Luxembourg	48.5	44.2	7.3	52.7	38.8	8.4	48.0	47.5	4.5	51.6	41.5	6.9	48.9	40.9	10.2	53.9	36.2	10.0
Mexico	31.9	43.2	24.9	37.0	41.1	21.9	33.3	57.9	8.8	37.9	53.4	8.7	30.6	29.6	39.8	36.0	29.0	35.0
Netherlands	52.4	40.4	7.3	55.9	35.9	8.3	52.8	41.3	5.8	56.6	36.1	7.4	51.9	39.4	8.7	55.1	35.7	9.2
New Zealand	46.3	41.7	12.0	44.4	42.3	13.3	46.7	45.8	7.5	45.1	46.0	8.9	45.9	37.7	16.4	43.7	38.4	17.8
Norway	48.6	43.4	8.1	45.6	45.3	9.2	45.3	47.4	7.2	42.1	48.9	9.0	51.9	39.2	8.9	49.2	41.5	9.3
Poland	55.7	26.0	18.4	45.0	39.3	15.6	54.2	29.9	16.0	41.7	44.6	13.7	57.2	21.9	20.8	48.5	33.7	17.8
Portugal	38.9	48.2	12.9	49.8	34.9	15.3	36.7	52.5	10.7	50.4	35.9	13.8	41.2	43.7	15.1	49.2	33.8	16.9
Slovak Republic	41.1	38.3	20.5	42.7	40.1	17.2	40.1	43.8	16.2	38.7	47.6	13.7	42.2	32.7	25.1	46.9	32.2	20.9
Slovenia	55.5	34.4	10.1	54.3	31.1	14.6	53.1	38.3	8.6	49.6	37.2	13.2	58.0	30.4	11.6	59.3	24.5	16.1
Spain	39.3	44.8	15.8	49.7	27.5	22.8	35.7	52.0	12.3	48.8	28.7	22.5	43.4	36.7	19.9	50.7	26.1	23.2
Sweden	52.9	38.0	9.2	51.1	39.8	9.1	49.7	41.2	9.1	48.6	42.5	8.9	56.2	34.6	9.2	53.8	36.9	9.2
Switzerland	44.4	45.2	10.4	49.9	41.8	8.3	45.1	46.0	9.0	50.8	40.6	8.5	43.6	44.4	12.0	48.8	43.1	8.1
Turkey	22.4	34.0	43.6	40.6	30.6	28.8	26.0	48.8	25.2	43.4	41.6	15.1	18.8	19.1	62.1	37.8	19.3	42.9
United Kingdom	41.2	44.6	14.2	41.0	45.2	13.7	40.7	48.4	10.9	41.1	48.1	10.8	41.7	40.9	17.4	41.0	42.2	16.7
United States	45.2	41.7	13.1	44.9	40.8	14.4	43.6	47.1	9.4	43.6	44.4	12.0	46.8	36.2	17.0	46.2	37.0	16.8
OECD average	44.8	40.4	14.8	47.5	37.9	14.6	43.7	45.1	11.2	46.3	41.5	12.2	45.9	35.7	18.4	48.7	34.2	17.1
EU22 average	46.6	39.7	13.8	48.8	36.5	14.7	45.2	43.9	10.8	47.1	39.9	13.0	47.9	35.3	16.8	50.6	33.0	16.5
Partners																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[3]	m	m	m	35.6	44.5	20.0	m	m	m	34.9	52.8	12.3	m	m	m	36.3	36.1	27.6
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	35.7	43.3	21.0	m	m	m	35.5	53.4	11.1	m	m	m	35.9	33.3	30.8
Costa Rica	m	m	m	47.3	32.6	20.1	m	m	m	45.5	41.2	13.4	m	m	m	49.3	23.2	27.5
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
Lithuania	56.0	32.6	11.4	48.9	37.3	13.7	53.7	35.9	10.4	46.8	41.0	12.3	58.4	29.2	12.5	51.2	33.5	15.3
Russian Federation	m	m	m	33.6	52.3	14.0	m	m	m	33.1	57.3	9.6	m	m	m	34.1	47.2	18.7
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2013 instead of 2015.

2. The proportion of NEETs in 2015 is not comparable with data from 2010 and previous years. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

3. Year of reference 2014 instead of 2015.

Source: OECD (2015), "Transition from school to work", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_TRANS. Japan: OECD (forthcoming), *Investing in Youth: Japan*, OECD Publishing, Paris. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C5.2. [2/2] Trends in the percentage of 15-29 year-olds and 20-24 year-olds in education/not in education, employed or not, by gender (2000 and 2015)

		20-24 year-olds						20-24 year-olds						20-24 year-olds					
		Total (young men + young women)						Young men						Young women					
		2005			2015			2005			2015			2005			2015		
		In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education		In education	Not in education	
		Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive	Total	Employed	Unemployed or inactive
		(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
OECD	Australia	39.4	49.0	11.6	44.5	42.4	13.1	37.9	53.2	8.9	42.9	45.3	11.8	40.9	44.6	14.5	46.2	39.4	14.5
	Austria	31.3	55.6	13.1	41.4	46.9	11.7	30.3	55.1	14.6	36.3	50.3	13.4	32.3	56.1	11.6	46.4	43.5	10.1
	Belgium	38.1	43.6	18.3	45.3	38.9	15.8	34.2	47.9	17.8	41.7	43.2	15.1	41.9	39.3	18.8	48.9	34.5	16.6
	Canada	39.3	46.4	14.4	41.6	44.0	14.4	35.6	49.1	15.2	36.8	47.9	15.3	43.0	43.5	13.5	46.5	40.0	13.5
	Chile[1]	m	m	m	44.0	34.9	21.1	m	m	m	42.1	42.6	15.4	m	m	m	46.0	27.4	26.7
	Czech Republic	35.9	47.5	16.6	47.9	40.5	11.6	33.0	54.4	12.6	42.0	48.4	9.5	38.9	40.3	20.9	54.0	32.3	13.8
	Denmark	54.4	37.2	8.3	59.1	28.5	12.4	46.3	45.8	8.0	53.8	33.5	12.7	62.5	28.9	8.6	64.5	23.5	12.0
	Estonia	50.9	32.7	16.3	43.6	41.4	15.0	52.1	37.2	10.7	34.5	53.7	11.8	49.7	28.3	22.0	53.4	28.2	18.4
	Finland	52.8	34.1	13.0	47.8	33.9	18.3	48.8	39.0	12.2	43.1	35.8	21.1	56.9	29.2	13.9	52.7	31.9	15.4
	France	42.5	39.7	17.8	44.4	34.7	20.9	38.8	44.8	16.4	40.3	38.0	21.7	46.1	34.7	19.1	48.4	31.4	20.2
	Germany	44.2	37.1	18.7	54.4	36.3	9.3	43.3	38.3	18.4	54.3	37.6	8.1	45.1	36.0	19.0	54.6	34.9	10.5
	Greece	40.4	38.0	21.6	52.3	19.6	28.1	39.3	45.5	15.2	49.1	23.3	27.6	41.5	30.4	28.2	55.6	15.8	28.6
	Hungary	46.6	34.5	18.9	42.2	39.4	18.4	45.2	39.0	15.8	39.8	42.8	17.3	48.0	29.9	22.1	44.6	35.8	19.6
	Iceland	51.7	41.7	6.6	50.6	42.8	6.6	46.6	47.1	c	45.1	47.4	7.5	57.1	35.9	c	56.2	38.1	5.7
	Ireland	27.7	60.0	12.3	43.9	36.3	19.8	26.6	63.3	10.1	43.7	36.2	20.1	28.8	56.8	14.4	44.1	36.3	19.6
	Israel[2]	26.6	31.9	41.5	28.1	53.4	18.6	20.9	32.9	46.2	22.8	61.3	15.9	32.1	30.9	37.0	33.4	45.3	21.3
	Italy	38.6	37.3	24.1	43.3	22.9	33.9	33.5	44.0	22.4	38.2	27.9	33.9	43.8	30.4	25.8	48.6	17.6	33.8
	Japan[3]	31.9	55.8	12.3	36.0	53.9	10.1	36.7	53.1	10.2	39.5	51.8	8.7	27.0	58.5	14.5	32.5	56.0	11.5
	Korea[1]	m	m	m	44.4	33.5	22.2	m	m	m	48.6	28.7	22.7	m	m	m	40.8	37.5	21.7
	Latvia	m	m	m	43.1	43.7	13.3	m	m	m	36.5	51.7	11.8	m	m	m	49.9	35.3	14.8
	Luxembourg	47.4	43.3	9.3	57.2	33.4	9.3	45.6	47.4	7.0	53.8	37.0	9.2	49.2	39.1	11.6	60.8	29.8	9.4
	Mexico	24.3	48.7	27.0	28.4	46.3	25.3	26.0	64.8	9.1	29.7	60.5	9.8	22.8	34.2	43.1	27.2	32.3	40.5
	Netherlands	48.8	43.1	8.1	57.7	33.5	8.8	49.5	42.7	7.8	58.5	32.9	8.6	48.1	43.5	8.3	56.9	34.1	9.1
	New Zealand	39.2	46.7	14.0	38.3	46.8	14.9	41.0	51.0	8.0	40.8	48.2	11.0	37.5	42.5	20.0	35.5	45.4	19.1
	Norway	41.5	48.9	9.6	42.1	47.7	10.2	34.6	55.3	10.1	36.4	53.0	10.6	48.7	42.2	9.1	48.1	42.1	9.7
	Poland	62.7	17.2	20.1	46.8	34.7	18.5	59.5	20.6	19.9	38.7	43.2	18.0	65.9	13.8	20.3	55.4	25.6	18.9
	Portugal	37.4	48.4	14.1	45.5	33.6	20.9	32.8	54.7	12.6	45.5	35.5	19.0	42.3	42.0	15.7	45.5	31.6	22.9
	Slovak Republic	31.0	43.8	25.2	44.2	37.0	18.8	28.1	48.7	23.2	34.9	47.2	18.0	34.0	38.7	27.3	54.0	26.3	19.7
	Slovenia	55.7	31.3	13.0	58.5	24.3	17.2	50.9	38.4	10.6	49.4	34.4	16.1	60.7	23.8	15.6	67.3	14.4	18.3
	Spain	35.9	46.1	18.1	50.2	22.6	27.2	31.7	53.5	14.8	47.7	24.0	28.3	40.6	37.6	21.7	52.7	21.1	26.1
	Sweden	42.5	44.1	13.4	46.0	42.2	11.8	35.9	51.0	13.1	41.0	46.6	12.4	49.5	36.7	13.7	51.3	37.6	11.2
	Switzerland	37.9	50.3	11.9	48.3	39.5	12.2	37.2	50.7	12.2	47.8	37.9	14.4	38.6	49.9	11.5	48.9	41.2	9.9
	Turkey	15.4	34.9	49.7	34.7	32.0	33.2	19.0	50.1	30.9	39.4	42.3	18.3	12.2	21.8	66.0	30.3	22.1	47.6
	United Kingdom	32.1	51.0	16.8	33.8	50.5	15.6	31.8	55.5	12.8	34.0	53.2	12.8	32.5	46.7	20.8	33.6	47.8	18.5
	United States	36.1	48.4	15.5	38.5	45.7	15.8	33.7	54.0	12.3	36.5	49.8	13.7	38.5	42.8	18.7	40.6	41.6	17.8
	OECD average	40.0	42.8	17.2	44.8	38.2	17.0	37.7	47.8	14.8	41.9	42.7	15.5	42.4	37.8	20.2	47.9	33.6	18.5
	EU22 average	42.7	41.2	16.1	47.7	35.2	17.1	39.9	46.0	14.1	43.5	39.8	16.7	45.6	36.3	18.1	52.0	30.4	17.6
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[3]	m	m	m	24.5	52.3	23.2	m	m	m	22.2	63.2	14.6	m	m	m	26.9	41.5	31.7
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	25.6	49.6	24.8	m	m	m	24.7	63.2	12.2	m	m	m	26.5	37.0	36.6
	Costa Rica	m	m	m	41.5	36.0	22.5	m	m	m	37.5	45.6	16.9	m	m	m	45.9	25.8	28.4
	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
	Lithuania	51.4	32.7	15.9	49.9	33.6	16.5	47.0	37.9	c	44.1	38.9	17.1	55.9	27.4	c	56.0	28.0	15.9
	Russian Federation	m	m	m	35.1	48.3	16.7	m	m	m	33.9	53.5	c	m	m	m	36.3	42.9	20.8
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Year of reference 2013 instead of 2015.

2. The proportion of NEETs in 2015 is not comparable with data from 2010 and previous years. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

3. Year of reference 2014 instead of 2015.

Source: OECD (2015), "Transition from school to work", *Education at a Glance* (database), http://stats.oecd.org/Index.aspx?datasetcode=EAG_TRANS. Japan: OECD (forthcoming), *Investing in Youth: Japan*, OECD Publishing, Paris. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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C5

Table C5.3 (L). Percentage of NEETs, by literacy proficiency (2012 or 2015)

Survey of Adult Skills,16-29 year-olds

		All levels of education							
		Level 1 or below		Level 2		Level 3		Level 4 or 5	
		%	S.E	%	S.E	%	S.E	%	S.E
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	**National entities**								
	Australia	29	(5.2)	13	(2.3)	13	(1.9)	8	(2.5)
	Austria	20	(4.4)	14	(2.3)	6	(1.1)	3	(1.6)
	Canada	21	(2.1)	12	(1.2)	7	(0.9)	5	(1.6)
	Chile	27	(2.3)	14	(2.2)	9	(3.2)	13	(9.7)
	Czech Republic	25	(5.3)	17	(2.5)	8	(1.5)	4	(2.4)
	Denmark	20	(4.1)	13	(2.0)	8	(1.2)	6	(2.3)
	Estonia	26	(3.9)	15	(1.7)	10	(1.1)	6	(1.7)
	Finland	34	(6.4)	16	(2.8)	11	(1.4)	8	(1.6)
	France	37	(3.5)	23	(1.9)	15	(1.4)	10	(3.0)
	Germany	20	(4.0)	12	(1.8)	8	(1.3)	7	(1.9)
	Greece	41	(4.1)	34	(2.7)	26	(3.7)	18	(7.5)
	Ireland	38	(5.1)	23	(2.3)	14	(1.8)	10	(3.0)
	Israel	27	(2.4)	16	(1.6)	12	(1.5)	9	(2.6)
	Italy	26	(3.9)	24	(2.9)	15	(2.2)	9	(7.3)
	Japan	c	c	14	(3.0)	12	(1.5)	16	(2.5)
	Korea	24	(7.4)	15	(2.7)	11	(1.4)	12	(3.1)
	Netherlands	20	(5.8)	8	(2.2)	4	(1.0)	4	(1.5)
	New Zealand	32	(4.0)	19	(2.0)	10	(1.3)	6	(1.8)
	Norway	20	(4.3)	8	(1.8)	5	(1.1)	3	(1.7)
	Poland	29	(3.3)	19	(1.4)	15	(1.3)	9	(1.9)
	Slovak Republic	52	(4.7)	25	(2.1)	14	(1.4)	7	(3.3)
	Slovenia	24	(3.5)	15	(1.8)	10	(1.5)	7	(2.8)
	Spain	40	(3.7)	25	(2.1)	15	(2.2)	14	(5.0)
	Sweden	22	(4.4)	13	(2.6)	11	(1.6)	5	(1.7)
	Turkey	48	(3.0)	37	(2.3)	24	(4.3)	c	c
	United States	20	(4.3)	16	(2.0)	11	(1.9)	7	(2.5)
	Subnational entities								
	Flanders (Belgium)	18	(4.2)	12	(2.2)	7	(1.1)	5	(1.8)
	England (UK)	37	(3.9)	22	(2.7)	11	(1.7)	6	(2.2)
	Northern Ireland (UK)	36	(6.0)	23	(3.1)	11	(2.4)	9	(5.2)
	Average	29	(0.8)	18	(0.4)	11	(0.4)	8	(0.7)
Partners	Jakarta (Indonesia)	34	(1.6)	22	(2.0)	15	(4.8)	c	c
	Lithuania	30	(6.3)	23	(2.4)	15	(2.1)	12	(4.6)
	Russian Federation*	18	(4.5)	19	(2.3)	15	(2.2)	15	(4.0)
	Singapore	19	(4.3)	10	(1.6)	10	(1.2)	10	(2.4)

Notes: NEET refers to young people neither employed nor in education or training. Chile, Greece, Israel, New Zealand, Slovenia, Turkey, Jakarta (Indonesia), Lithuania, Singapore: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C5.3a (L). NEETs and employed mean literacy score (2012 or 2015)

Survey of Adult Skills,16-29 year-olds

	NEET		Employed	
	Mean	S.E	Mean	S.E
	(1)	(2)	(3)	(4)
OECD				
National entities				
Australia	266	(5.4)	288	(1.8)
Austria	257	(4.1)	279	(1.5)
Canada	256	(3.3)	283	(1.1)
Chile	215	(4.4)	238	(2.7)
Czech Republic	261	(4.7)	283	(2.4)
Denmark	260	(4.7)	281	(1.5)
Estonia	270	(3.0)	289	(1.5)
Finland	280	(4.6)	304	(2.3)
France	258	(2.7)	278	(1.7)
Germany	263	(4.0)	281	(2.0)
Greece	246	(3.5)	253	(3.4)
Ireland	254	(3.2)	278	(2.1)
Israel	245	(3.6)	267	(1.9)
Italy	251	(3.5)	257	(3.9)
Japan	303	(4.3)	304	(1.8)
Korea	287	(2.8)	290	(1.7)
Netherlands	271	(6.8)	299	(1.4)
New Zealand	256	(3.7)	286	(1.8)
Norway	251	(5.9)	283	(1.5)
Poland	266	(2.4)	282	(1.5)
Slovak Republic	252	(3.0)	283	(2.0)
Slovenia	256	(3.9)	266	(2.4)
Spain	246	(3.1)	264	(2.1)
Sweden	268	(4.6)	295	(1.9)
Turkey	227	(3.5)	238	(3.3)
United States	260	(4.2)	276	(2.1)
Subnational entities				
Flanders (Belgium)	269	(4.8)	290	(2.2)
England (UK)	242	(3.5)	279	(2.4)
Northern Ireland (UK)	250	(5.2)	279	(2.8)
Average	258	(0.8)	278	(0.4)
Partners				
Jakarta (Indonesia)	195	(2.5)	207	(2.1)
Lithuania	267	(3.4)	283	(2.5)
Russian Federation*	270	(4.2)	278	(2.5)
Singapore	281	(3.6)	287	(1.6)

Note: NEET refers to young people neither employed nor in education or training. Chile, Greece, Israel, New Zealand, Slovenia, Turkey, Jakarta (Indonesia), Lithuania, Singapore: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

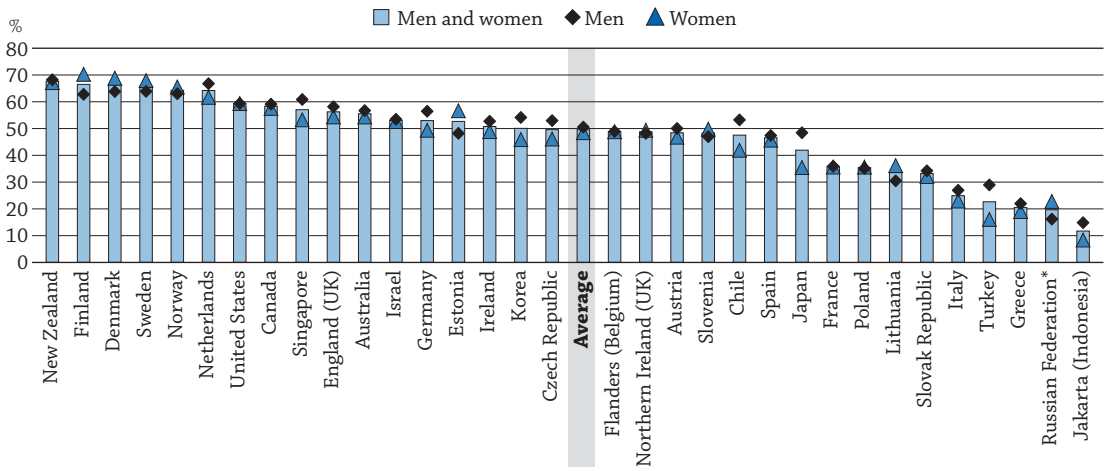
StatLink http://dx.doi.org/10.1787/888933398626

HOW MANY ADULTS PARTICIPATE IN EDUCATION AND LEARNING?

- Across OECD countries and subnational entities that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), 50% of all adults participate in formal and/or non-formal education in a given year.
- In the majority of OECD countries, the participation rate in formal and/or non-formal education is about the same for women and men.
- On average across OECD countries and subnational entities, 69% of those who read most frequently in everyday life participate in formal and/or non-formal education, while the participation rate is only 27% among those who use reading skills the least frequently.

Figure C6.1. Participation in formal and/or non-formal education, by gender (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-64 year-old men and women who participate in formal and/or non-formal education.

Source: OECD. Table C6.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398735

Context

Adult learning can play an important role in helping to develop and maintain key information-processing skills, and to acquire other knowledge and skills throughout life. It is crucial to provide and ensure access to organised learning opportunities for adults beyond initial formal education, especially for workers who need to adapt to changes throughout their careers and who have difficulty achieving high labour market outcomes (OECD, 2013).

Lifelong learning can also contribute to non-economic goals, such as personal fulfilment, improved health, civic participation and social inclusion. Social integration requires that individuals have the basic skills and knowledge needed to exercise their rights and responsibilities as citizens and enjoy the benefits of community life. The large variation in adult learning activities and participation among OECD countries at similar levels of economic development suggests that there are significant differences in learning cultures, learning opportunities at work and adult-education systems (Borkowsky, 2013).

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Other findings

- Proficiency and educational attainment are both positively associated with adult learning, and seem to have a mutually reinforcing effect on participation in formal and/or non-formal education.
- On average across countries, adults with high literacy proficiency and the most frequent use of reading skills in everyday life are four times more likely to participate in formal and/or non-formal education than those with low literacy proficiency and the least frequent use of reading skills in everyday life. Similar reinforcing patterns hold for numeracy proficiency and skills and readiness to use information and communication technologies (ICT) for problem solving in relation to participation in formal and/or non-formal education.
- The Internet is by far the most important source of information for adult learning opportunities. Around three-quarters of participants in formal and/or non-formal education and training consulted the Internet to get relevant education and training information.

Analysis

Participation in formal and/or non-formal education

Across OECD countries and subnational entities that participated in the Survey of Adult Skills, 50% of all adults participate in formal and/or non-formal education in a given year. Among all participating countries, the proportion ranges from more than 60% in Denmark, Finland, the Netherlands, New Zealand, Norway and Sweden to less than 30% in Greece, Italy, Jakarta (Indonesia), the Russian Federation and Turkey (Figure C6.1).

Men and women participate in formal and/or non-formal education at about the same rate in the majority of OECD countries. However, participation is higher among women in countries such as Denmark, Estonia, Finland and Lithuania, and higher among men in countries including Chile, the Czech Republic, Germany, Indonesia (Jakarta), Japan, Korea, the Netherlands, Singapore and Turkey (Figure C6.1).

Adults with higher levels of proficiency are more likely to participate in learning activities. This makes these individuals more likely to continue to benefit from learning opportunities than those with lower proficiency levels. On average across OECD countries and subnational entities, 30% of those with low literacy proficiency (Level 1 or below) participated in formal and/or non-formal education during the 12 months prior to the survey, while 73% of adults with high literacy proficiency (Level 4 or 5) did so. A highly proficient person was thus 2.4 times more likely to participate in formal and/or non-formal education than a person with low literacy proficiency (Table C6.1 [L], available on line). This trend is also observed for proficiency in numeracy and skills and readiness to use information and communication technologies for problem solving (Tables C6.1 [N] and C6.1 [P], available on line). Proficiency levels appear to influence participation in adult education but social factors and the work environment are also considered important in explaining differences in participation in adult learning opportunities (Grotlüschen et al., 2016).

Adults with higher education are also more likely to participate in learning opportunities, regardless of their proficiency level. On average across OECD countries and subnational entities, tertiary-educated adults are 2.7 times more likely to participate in formal and/or non-formal education than adults without upper secondary education. The positive relationship between participation in formal and/or non-formal education and educational attainment is consistently observed across countries (Table C6.3, available on line).

When analysed together, proficiency levels and educational attainment seem to have a mutually reinforcing effect on participation in formal and/or non-formal education. Across OECD countries and subnational entities, some 79% of people with high levels of proficiency in literacy and tertiary education participated in formal and/or non-formal education. They were almost four times more likely to participate than people with low levels of proficiency in literacy who did not have upper secondary education. Only 20% of this group participated in formal and/or non-formal education (Table C6.3, available on line). Mutually reinforcing effects of the proficiency levels and educational attainment of respondents hold not only for literacy, but also for numeracy and problem solving in technology-rich environments (OECD, 2014).

Some countries, however, have relatively high participation rates among adults with low levels of proficiency and qualification. Participation in formal and/or non-formal education for adults with low literacy proficiency (Level 1 or below) and below upper secondary education is significantly above 25% in Denmark, the Netherlands, New Zealand, Norway and Sweden (Table C6.3, available on line).

Individuals' readiness to learn is assessed by the Survey of Adult Skills through questions on the intensity of how they relate new ideas into real life, like learning new things, relate to existing knowledge when coming across something new, get to the bottom of difficult things, figure out how different ideas fit together and look for additional information. Results are combined in an index of readiness to learn.

The participation rate in formal and/or non-formal education is higher among adults with a high index of readiness to learn. On average across OECD countries and subnational entities, the participation rate of adults who show most readiness to learn is 62%, while that of adults who are least ready to learn is 29%. This positive relationship between the index of readiness to learn and the participation in formal and/or non-formal education persists across the different literacy proficiency levels: within each literacy proficiency level, those with a higher degree of readiness to learn show a higher participation rate (Table C6.2). But even if people are ready to learn, information on adult learning is not always readily available (Box C6.1), possibly hindering access to adult learning opportunities.

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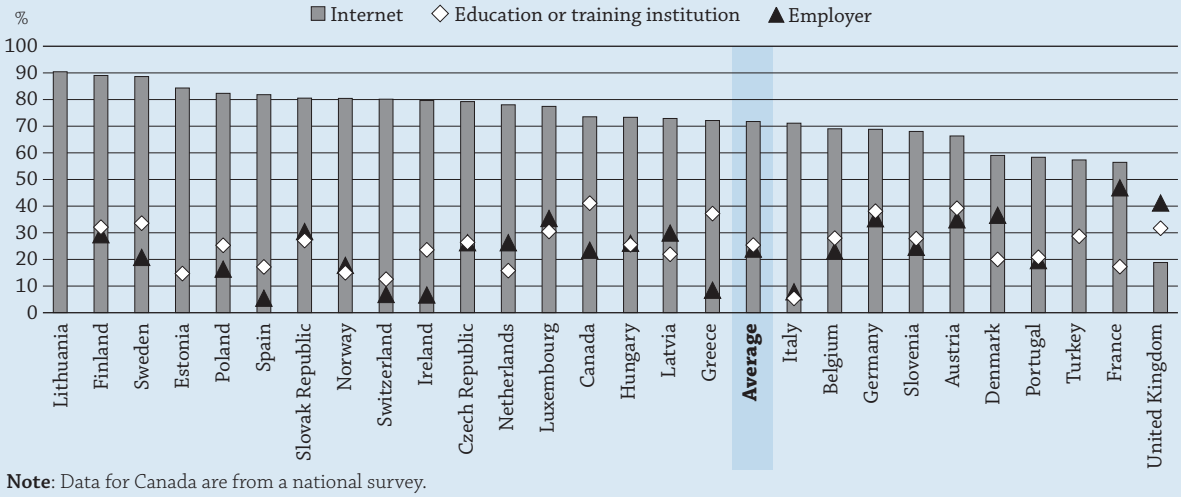
Box C6.1. Information about formal and/or non-formal education

Across OECD countries, 25% of adults have looked for information about formal and/or non-formal education possibilities. The percentage of adults looking for information differs widely between countries, ranging from less than 10% in Greece and Turkey to more than 35% in Canada, Denmark, Finland, Luxembourg and the United Kingdom. The share of adults looking for information tends to be higher in the countries where participation rates are high. But 3% of those who looked for information did not find what they were looking for (Figure C6.1 and Table C6.7, available on line).

Different means are used to disseminate information about formal and non-formal education for adults across countries, and adults may refer to more than one source at the same time. In every country except the United Kingdom, the Internet is by far the most often indicated source of information on formal and/or non-formal education (72% of participants on average across OECD countries). One-quarter of participants used educational or training institutions as a source of information across countries. These institutions are an important source of information in Austria, Canada, Germany and Greece, where about 40% of participants used them. On average, about a quarter of participants also reported that their employer was one of the sources they used. That was reported by more than 40% of participants in France and the United Kingdom. Books and mass media, such as TV, radio, newspapers or posters, are mentioned as important sources of information in countries such as the Czech Republic and the Slovak Republic (Figure C6.a and Table C6.8, available on line).

Figure C6.a. Sources of information on formal and/or non-formal education used by participants (2011)

Adult Education Survey, 25-64 year-olds



Note: Data for Canada are from a national survey.

Countries are ranked in descending order of the percentage of 25-64 year-old participants who reported that the source of information on formal and/or non-formal education they used was the Internet.

Source: OECD. Table C6.8, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398767

Participation as related to use of skills in everyday life

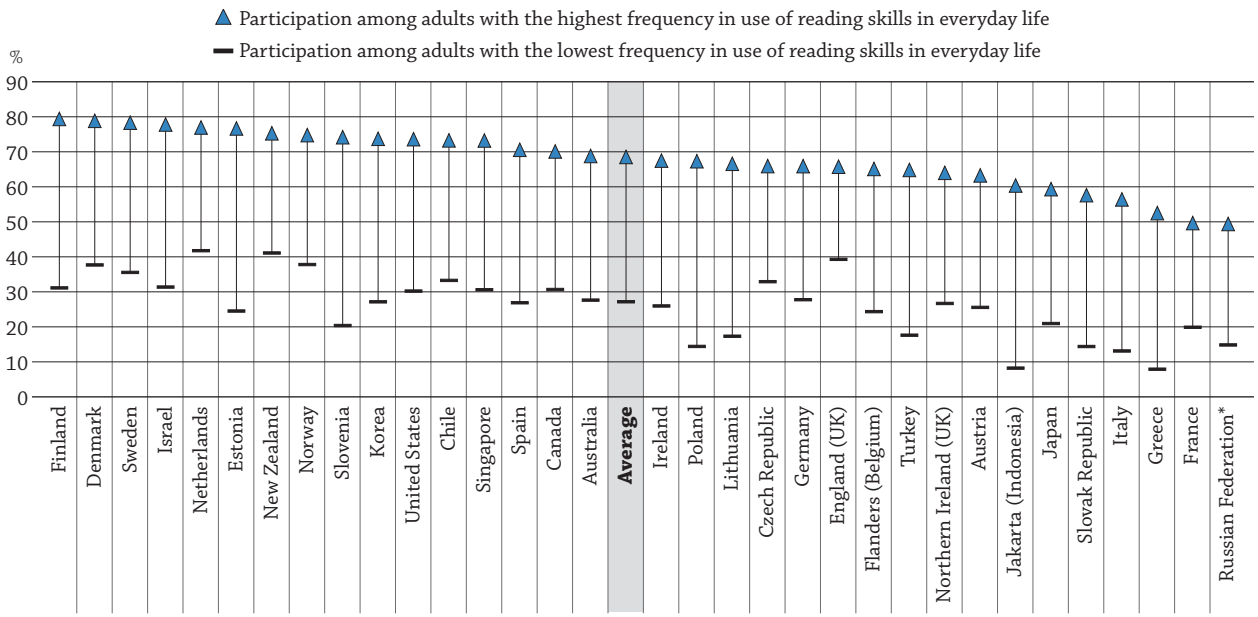
Participation in adult learning is high among those who use reading skills most frequently in everyday life, and participation in formal and/or non-formal education rises steadily with the use of reading activities (see the *Definitions* section at the end of this indicator). Across OECD countries and subnational entities, 69% of adults who use reading skills most frequently in everyday life participate in formal and/or non-formal education, while the participation rate is only 27% among those using reading skills the least frequently. This means that those with high use of reading skills in everyday life are 2.5 times more likely to participate in adult learning than those with low use of reading skills in everyday life. The gap between the two categories exists in all participating countries.

Among all participating countries, it is smallest in England (United Kingdom), the Netherlands and New Zealand, and these countries tend to provide adult learning to a large share of adults. On the other hand, the gap is largest in Greece and Jakarta (Indonesia) where the participation in adult learning tends to be low, particularly among those with low use of skills (Table C6.1 and Figures C6.1 and C6.2).

On average across OECD countries and subnational entities, adults who have high literacy proficiency and high use of reading skills in everyday life are four times more likely to participate in formal and/or non-formal education than those with low literacy proficiency and low use of reading skills. Countries with a less pronounced difference include England (United Kingdom), the Netherlands, New Zealand and Norway, while the difference is largest in countries including Poland and the Slovak Republic. Again, the gap tends to be greater in countries with a lower participation rate and smaller in countries with a higher participation rate (Table C6.1 [L], available on line).

Figure C6.2. Adult participation in formal and/or non-formal education, by frequency in use of reading skills in everyday life (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds



Notes: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

The highest frequency refers to reading daily or weekly and the lowest frequency refers to no reading, or reading rarely or less than once a month. See the *Definitions* section at the end of this indicator.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the percentage of 25-64 year-olds with the highest frequency of use of reading skills in everyday life who participate in formal and/or non-formal education.

Source: OECD. Table C6.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398749

Similar patterns are observed in relation to the use of other information-processing skills in everyday life. The frequency in use of numeracy skills in everyday life refers to activities such as calculating costs or budgets, the use of fractions or percentages, the use of a calculator or the use of simple algebra or formulas. Across countries, participation in adult learning rises with level of numeracy proficiency and frequency of use of numeracy skills, and proficiency and skill use have a mutually reinforcing effect (Table C6.1 [N], available on line). Patterns are also similar in the use of information and communication technologies (ICT) skills in everyday life, including browsing the Internet, using e-mails, conducting e-transactions and using the computer for word processing. Across countries, skills and readiness to use ICT for problem solving and the actual use of ICT skills in everyday life singly and in combination are strongly associated with participation in formal and/or non-formal education (Table C6.1 [P], available on line).

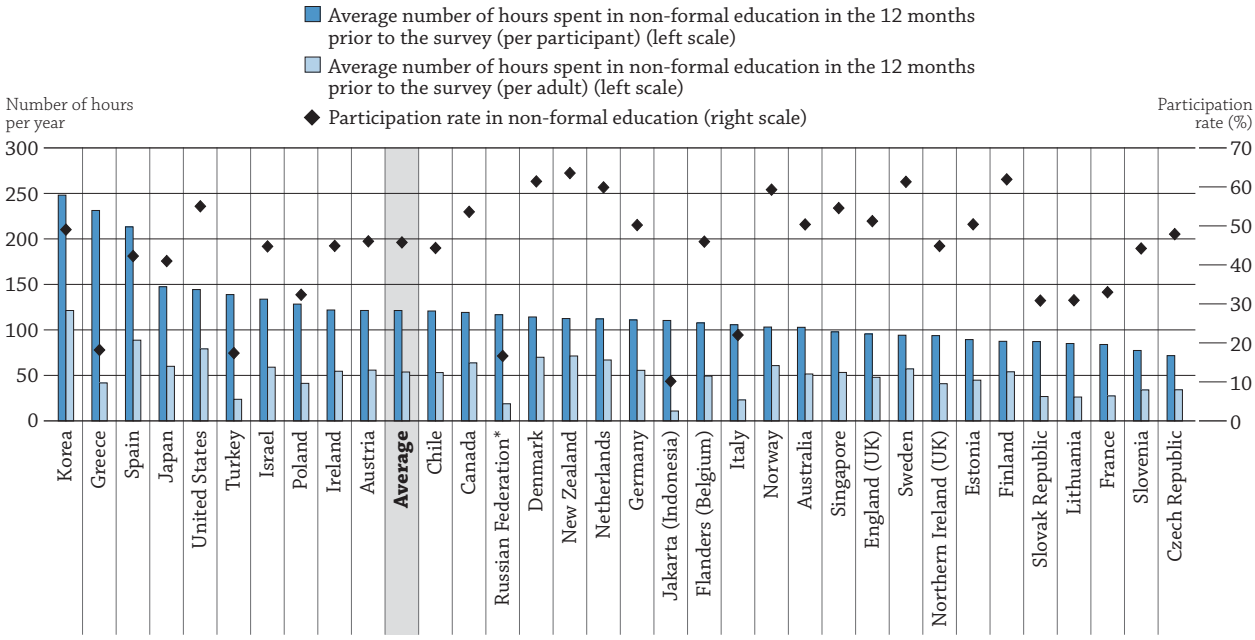
Intensity of participation

Across OECD countries and subnational entities, participants in non-formal education spent an average of 121 hours on non-formal education activities, such as courses offered through open or distance education, seminars or workshops, structured on-the-job training or private lessons, during the 12 months prior to the interview of the Survey of Adult Skills. This is quite a substantial investment. Among all participating countries and subnational entities, the average number of hours per participant is the highest in Greece, Korea and Spain and the lowest in the Czech Republic and Slovenia (Figure C6.3).

The total national investment – by individuals, public bodies and enterprises – can be measured by the number of hours per year of non-formal education per adult. This investment amounts to 54 hours per adult on average across OECD countries and varies from well over 100 hours in Korea, to less than 15 hours in Jakarta (Indonesia) among countries and subnational entities that participated in the Survey of Adult Skills (Figure C6.3).

Figure C6.3. Hours in non-formal education per participant and per adult and participation rate in non-formal education (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds



Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Countries and subnational entities are ranked in descending order of the average number of hours participants spent in non-formal education in the 12 months prior to the survey.

Source: OECD. Table C6.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398752

Countries take different approaches in relation to non-formal education for adults. In Korea, for example, the total investment in non-formal education, measured by the number of hours spent per adult (referring to both participants and non-participants), is high: almost half of the adult population participates, and participants on average spend the longest hours in the OECD. Spain also has a similar approach, with intensive adult learning opportunities offered to many. In Greece, although non-formal training is provided to participants for relatively long hours, it is offered to a smaller share of adults than in many other countries, which translates into relatively short hours per adult and a smaller total investment. The beneficiaries of adult learning are also limited in Italy, Jakarta (Indonesia), the Russian Federation and Turkey, with fewer hours per adult than in other countries. Several countries, including Denmark and New Zealand, provide non-formal education to a large share of adults (about 60% or more), but offer fewer hours per participant than many other countries. The total investment in adults learning in these countries is therefore above the OECD average (Figure C6.3).

Role of employers in formal and/or non-formal education

Employers play an important role in promoting access to adult learning and providing training to their workers. As indicated earlier, employers are an important source of information for adult learning, and they are also as important as educational institutions in providing non-formal education (Box C6.2).

Among the employed, most adult learning takes the form of participation in employer-sponsored formal and/or non-formal education. Participation in employer-sponsored formal and/or non-formal education is higher among people working in highly skilled occupations than among those working in low-skilled occupations, and higher among those with higher proficiency levels in literacy, numeracy and problem solving in technology-rich environments, and higher educational attainment than among those with lower proficiency and educational attainment. It is also higher among those with full-time jobs and indefinite contracts than among workers with part-time jobs and fixed-term contracts (OECD, 2015). In order to reduce inequalities in access to and participation in adult learning, governments may need to develop incentive mechanisms to promote workplace learning, particularly among the low-educated and low-skilled.

Box C6.2. Non-formal education

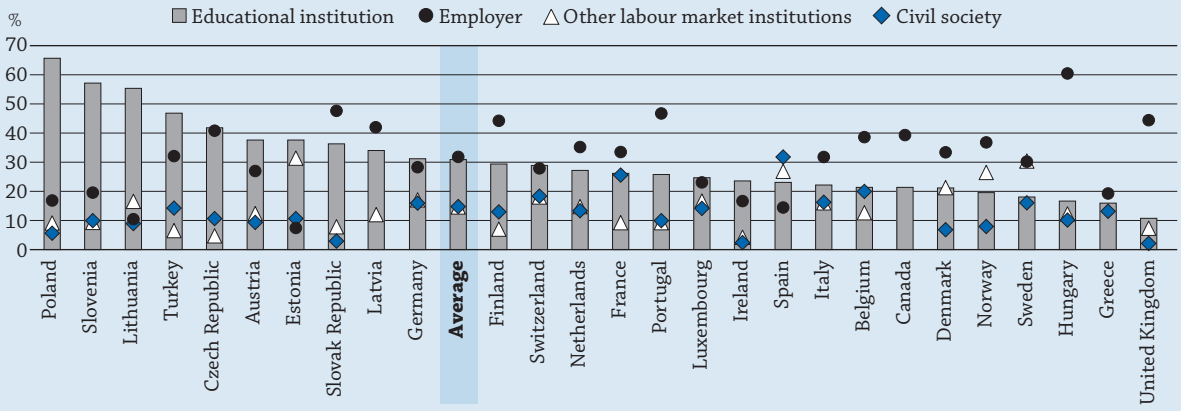
Providers of non-formal education

Adult education is provided by a wide range of providers. Across the OECD, 32% of non-formal education activities are provided by the participant's employer, 12% by a formal educational institution and 19% by a non-formal educational institution. A further 14% of non-formal education activities are provided by other institutions in the labour market, such as employers' organisations, chambers of commerce and trade unions. Civil society institutions and individuals provide 15% of the learning activities (Figure C6.b and Table C6.6, available on line).

Employers are the major providers of non-formal education in about half of the countries, providing more than 40% of the non-formal education activities in the Czech Republic, Finland, Hungary, Latvia, Portugal, the Slovak Republic and the United Kingdom. Educational institutions are the largest providers in about one-third of countries, providing more than 40% of the activities in the Czech Republic, Lithuania, Poland, Slovenia and Turkey. Other providers in the labour market play a larger role in Denmark, Estonia, Norway, Spain and Sweden than in other countries, offering more than 20% of the activities. Civil society institutions and individuals are important in non-formal education in France and Spain, providing more than 25% of the activities (Figure C6.b and Table C6.6, available on line).

Figure C6.b. Distribution of non-formal education and training activities, by provider (2011)

Adult Education Survey, 25-64 year-olds



Note: Data for Canada are from a national survey.

Countries are ranked in descending order of the share of non-formal education provided by educational institution (as reported by 25-64 year-olds who participated in such programme in the 12 months prior to the survey).

Source: OECD. Table C6.6, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Fields of job-related non-formal education

Job-related non-formal education is provided and pursued more often in the fields which seem to be widely applicable across industries than in other fields. The most common field of job-related non-formal education across OECD countries is "Social sciences, business and law", accounting for almost one in four activities. The percentage of activities in this field ranges from less than 15% in Denmark and Ireland to more than 30% in Belgium, Estonia, Germany, Lithuania, Sweden and the United Kingdom. "Computer science" and "Computer use" together, which are presumably applicable across industries due to the wide and increasing use of ICT, account for 11% of the activities on average across OECD countries. The share of job-related non-formal education in these two fields combined ranges from less than 7% in Italy to 15 % in Belgium, with the majority of countries close to the OECD average (11%). "Humanities and arts" and "General programmes" are also often taught. On average across countries, 12% of the learning activities are covered by these fields, with percentages in countries ranging from 8% and less in Estonia, Hungary, Ireland and Sweden to 19% and more in Denmark, Italy and Switzerland (Table C6.5, available on line).

The fields of education that are specific to an industry are also taught across countries. The field of "Services" accounts for 17% of the activities on average across the OECD, and the share is 13% for "Health and welfare" and 6% for "Education". Learning activities in these fields involve the acquisition of skills used in industry-specific contexts. The percentage of the three categories combined ranges from 26% in Denmark and Ireland to more than 40% in Hungary, Poland and the Slovak Republic (Table C6.5, available on line).

Definitions

Age groups: Adults refers to 25-64 year-olds.

Education and training: Formal education is planned education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous "ladder" of full-time education for children and young people. The providers may be public or private. **Non-formal** education is sustained educational activity that does not correspond exactly to the definition of formal education. Non-formal education may take place both within and outside educational institutions and cater to individuals of all ages. Depending on country contexts, it may cover education programmes in adult literacy, basic education for out-of-school children, life skills, work skills and general culture. The Survey of Adult Skills uses a list of possible non-formal education activities, including open or distance-learning courses, private lessons, organised sessions for on-the-job training, and workshops or seminars to prompt respondents to list all of their learning activities during the previous 12 months. Some of these learning activities might be of short duration.

Index of use of reading skills in everyday life, use of numeracy skills in everyday life, use of ICT skills in everyday life: These indices measure the level of engagement in information-processing activities outside work, either at home or elsewhere away from work. The indices are categorised as Warm's mean weighted likelihood estimation (WLE) and are derived from variables that are based on a Likert scale from "Never" to "Every day". The category "Less than 20%" represents low engagement (never, rarely or less than once a month) in a low number of activities, whereas the highest category "80% or more" reflects high engagement (daily or weekly) in multiple types of activities. For more details on the Index, see page 143 of *OECD Skills Outlook 2013: First Results from the Survey of Adults Skills* (OECD, 2013).

Intensity of participation in non-formal education: The respondents were asked to estimate the total time they spent in non-formal education activities during the previous 12 months, by number of weeks, days or hours. Weeks and days were converted into hours.

Levels of education: Below upper secondary corresponds to ISCED-97 levels 0, 1, 2 and 3C short programmes; **upper secondary or post-secondary non-tertiary** corresponds to ISCED-97 levels 3A, 3B, 3C long programmes and level 4; and **tertiary** corresponds to ISCED-97 levels 5A, 5B and 6.

Literacy is the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential. Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts. It does not, however, involve the production of text (writing). Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.

Numeracy is the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life. To this end, numeracy involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways.

Problem solving in technology-rich environments is the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks. The assessment focuses on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals and plans, and accessing and making use of information through computers and computer networks.

Proficiency levels for literacy and numeracy are based on a 500-point scale. Each level has been defined by particular score-point ranges. Six levels are defined for literacy and numeracy (Below Level 1 and Levels 1 through 5) which are grouped in four proficiency levels in *Education at a Glance*: Level 1 or below – all scores below 226 points; Level 2 – scores from 226 points to less than 276 points; Level 3 – scores from 276 points to less than 326 points; Level 4 or 5 – scores from 326 points and higher.

Providers of non-formal education: The provider of education is defined as the enterprise/municipality/governmental authority/private person who provides the teacher, lecturer or instructor for the learning activity. The ten categories of provider are: 1) formal educational institutions; 2) non-formal educational and training institutions; 3) employers; 4) commercial institutions where education and training is not the main activity (e.g. equipment suppliers); 5) employers' organisations, chambers of commerce; 6) trade unions; 7) non-profit associations (e.g. cultural society, political party); 8) individuals (e.g. students giving private lessons); 9) non-commercial institutions where education and training is not the main activity (e.g. libraries and museums); and 10) other (Eurostat, 2013).

Readiness to learn index summarises the answers to the question of how intensely the respondents did the following things "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".

Skills and readiness to use information and communication technologies (ICT) for problem solving in technology-rich environments are categorised into skill groups. Each group is described in terms of the characteristics of the types of tasks that can be successfully completed by adults, and the related scores in the assessment of problem solving in technology-rich environments in the Survey of Adult Skills.

- group 0 (no computer experience)
- group 1 (refused the computer-based assessment)
- group 2 (failed ICT core stage 1 or minimal problem-solving skills – scored below Level 1 in the problem solving in technology-rich environments assessment)
- group 3 (moderate ICT and problem-solving skills – scored at Level 1 in the problem solving in technology-rich environments assessment)
- group 4 (good ICT and problem-solving skills – scored at Level 2 or Level 3 in the problem solving in technology-rich environments assessment).

Use of information-processing skills in everyday life refers to the frequency of use of information-processing skills outside work; it can be at home or elsewhere outside work. **Reading** corresponds to reading documents (eight items: directions or instructions; letters, memos or e-mails; newspapers or magazines; professional journals or publications; books; manuals or reference materials; financial statements; diagrams or maps). **Numeracy** corresponds to six items (calculating costs or budgets; use of fractions or percentages; use of calculator; preparing charts, graphs or tables; simple algebra or formulas; use of advanced mathematics or statistics). **ICT skills** corresponds to using e-mail, Internet, spreadsheets, word processors, programming languages; conducting transactions on line; and participating in online discussions (conferences, chats).

Methodology

All data, except Boxes C6.1 and C6.2, are based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC).

A number of skills-use variables are taken directly from questions asked in the background questionnaire of the Survey of Adult Skills. Other variables have been derived based on more than one question from the background

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questionnaire. These variables have been transformed so that they have a mean of 2 and a standard deviation of 1 across the pooled sample of all participating countries, thus allowing for meaningful comparisons across countries (OECD, 2013). For more detailed information, see the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming) and see Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Data for Boxes C6.1 and C6.2 are from the 2011 European Union Adult Education Survey (AES) (Eurostat, 2011). The AES is a household survey which is part of the EU Statistics on lifelong learning. People living in private households are interviewed about their participation in education and training activities (formal, non-formal and informal learning). The target population of the survey is composed of people aged 25 to 64.

Note regarding data from Israel

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

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, forthcoming).

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Indicator C6 Tables

StatLink http://dx.doi.org/10.1787/888933398691

	Table C6.1	Participation in formal and/or non-formal education, by index of use of reading skills in everyday life (2012 or 2015)
WEB	Table C6.1 (L)	Participation in formal and/or non-formal education, by literacy proficiency level and index of use of reading skills in everyday life (2012 or 2015)
	Table C6.1 (N)	Participation in formal and/or non-formal education, by numeracy proficiency level and index of use of numeracy skills in everyday life (2012 or 2015)
WEB	Table C6.1 (P)	Participation in formal and/or non-formal education, by skills and readiness to use information and communication technologies for problem solving and index of use of ICT skills in everyday life (2012 or 2015)
	Table C6.2	Participation in formal and/or non-formal education, by gender, literacy proficiency level and index of readiness to learn (2012 or 2015)

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WEB	Table C6.3	Participation in formal and/or non-formal education, by literacy proficiency level and educational attainment (2012 or 2015)
	Table C6.4	Average number of hours spent in non-formal education and participation rate in non-formal education (2012 or 2015)
WEB	Table C6.5	Distribution of job-related non-formal education and training activities, by field of learning (2011)
WEB	Table C6.6	Distribution of non-formal education and training activities, by provider (2011)
WEB	Table C6.7	Looking for and finding information about formal and/or non-formal education (2011)
WEB	Table C6.8	Sources of information on formal and/or non-formal education used by participants (2011)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table C6.1. Participation in formal and/or non-formal education, by index of use of reading skills in everyday life (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Index of use of reading skills in everyday life											
	Less than 20%		20% to less than 40%		40% to less than 60%		60% to less than 80%		80% or more		Total	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
National entities												
Australia	28	(2.4)	44	(2.0)	52	(1.7)	63	(1.3)	69	(1.4)	56	(0.7)
Austria	26	(2.0)	40	(1.9)	49	(1.8)	58	(1.7)	63	(1.8)	48	(0.7)
Canada	31	(1.2)	48	(1.3)	62	(1.1)	65	(1.2)	70	(1.1)	58	(0.6)
Chile	33	(2.6)	45	(2.8)	60	(3.0)	68	(3.7)	73	(2.6)	48	(1.9)
Czech Republic	33	(1.8)	48	(2.4)	53	(3.1)	61	(2.2)	66	(2.9)	50	(1.2)
Denmark	38	(2.2)	59	(1.7)	68	(1.3)	74	(1.3)	79	(1.3)	66	(0.6)
Estonia	25	(1.2)	44	(1.3)	57	(1.5)	67	(1.3)	77	(1.4)	53	(0.7)
Finland	31	(2.6)	52	(1.9)	66	(1.4)	74	(1.2)	79	(1.3)	66	(0.7)
France	20	(1.0)	33	(1.0)	43	(1.4)	48	(1.6)	50	(1.8)	36	(0.6)
Germany	28	(2.5)	42	(2.3)	51	(1.8)	60	(1.8)	66	(1.4)	53	(1.1)
Greece	8	(0.9)	16	(1.4)	31	(2.8)	46	(3.0)	53	(2.4)	20	(0.8)
Ireland	26	(2.0)	43	(1.7)	53	(1.7)	59	(1.8)	68	(1.3)	51	(0.7)
Israel	31	(1.9)	47	(1.9)	59	(1.7)	70	(2.0)	78	(1.9)	53	(0.8)
Italy	13	(0.9)	29	(1.7)	35	(2.3)	47	(3.3)	56	(3.2)	25	(1.0)
Japan	21	(1.3)	39	(1.3)	46	(1.9)	56	(1.7)	59	(2.2)	42	(0.8)
Korea	27	(1.2)	51	(2.0)	57	(1.7)	63	(1.9)	74	(1.7)	50	(0.8)
Netherlands	42	(2.4)	55	(1.8)	66	(1.4)	70	(1.3)	77	(1.5)	64	(0.6)
New Zealand	41	(3.7)	55	(2.5)	63	(2.1)	70	(1.7)	75	(1.2)	68	(0.8)
Norway	38	(3.7)	46	(2.3)	63	(1.8)	67	(1.3)	75	(1.2)	64	(0.7)
Poland	14	(1.0)	30	(1.8)	46	(1.8)	58	(2.1)	67	(2.2)	35	(0.8)
Slovak Republic	14	(1.0)	28	(1.8)	41	(1.8)	51	(2.0)	58	(2.2)	33	(0.8)
Slovenia	20	(1.5)	36	(1.6)	52	(1.6)	59	(1.7)	74	(1.5)	48	(0.8)
Spain	27	(1.1)	39	(1.6)	55	(2.2)	66	(1.8)	71	(1.8)	47	(0.7)
Sweden	36	(3.0)	53	(2.2)	67	(1.6)	76	(1.6)	78	(2.1)	66	(0.8)
Turkey	18	(1.3)	36	(2.0)	45	(3.2)	46	(4.3)	65	(3.8)	23	(0.8)
United States	30	(3.1)	47	(2.3)	58	(1.9)	62	(1.8)	74	(1.6)	59	(1.1)
Subnational entities												
Flanders (Belgium)	24	(1.7)	45	(1.7)	56	(1.6)	60	(1.8)	65	(2.1)	49	(0.8)
England (UK)	39	(3.1)	47	(2.1)	57	(1.5)	60	(1.6)	66	(1.7)	56	(0.9)
Northern Ireland (UK)	27	(2.1)	42	(2.3)	54	(2.3)	60	(2.6)	64	(2.2)	49	(0.9)
Average	27	(0.4)	43	(0.4)	54	(0.4)	61	(0.4)	69	(0.4)	50	(0.2)
Partners												
Jakarta (Indonesia)	8	(0.7)	20	(2.2)	38	(4.1)	43	(5.5)	60	(5.6)	12	(0.6)
Lithuania	17	(1.2)	39	(1.6)	52	(2.8)	66	(3.1)	67	(4.0)	34	(0.8)
Russian Federation*	15	(1.9)	19	(1.9)	25	(3.5)	33	(3.1)	49	(6.2)	20	(1.6)
Singapore	31	(1.6)	50	(1.9)	65	(1.5)	71	(1.7)	73	(1.5)	57	(0.7)

Notes: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey. The index is categorised as Warm's mean weighted likelihood estimation (WLE). It is derived from variables that are based on a Likert scale from "Never" to "Every day". The categories should therefore be interpreted based on the frequency of the activity, with "Less than 20%" being the least frequent and "80% or more" being the most frequent. For more details on the index, see page 143 of the *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills* (http://dx.doi.org/10.1787/9789264204256-en).

Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for note (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398707

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Table C6.2. [1/4] Participation in formal and/or non-formal education, by gender, literacy proficiency level and index of readiness to learn (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Literacy proficiency level	Men and women											
		Index of readiness to learn										Total	
		Less than 20%		20% to less than 40%		40% to less than 60%		60% to less than 80%		80% or more			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD National entities													
Australia	Level 0/1	20	(3.2)	34	(5.7)	33	(6.3)	37	(7.2)	30	(5.9)	28	(2.3)
	Level 2	29	(2.9)	42	(3.2)	47	(4.4)	57	(3.9)	54	(4.7)	45	(1.8)
	Level 3	42	(4.0)	59	(2.8)	63	(2.9)	69	(2.7)	68	(2.9)	63	(1.3)
	Level 4/5	62	(11.2)	74	(4.6)	79	(3.8)	79	(3.9)	80	(3.1)	78	(2.0)
	Total	31	(1.3)	52	(1.6)	58	(1.6)	66	(1.7)	65	(1.6)	56	(0.7)
Austria	Level 0/1	15	(3.1)	25	(4.7)	36	(5.4)	36	(6.7)	48	(7.7)	27	(2.6)
	Level 2	25	(2.8)	39	(3.3)	45	(3.5)	52	(4.2)	53	(3.2)	41	(1.5)
	Level 3	41	(4.3)	56	(3.4)	59	(3.2)	67	(3.3)	66	(2.7)	60	(1.5)
	Level 4/5	c	c	69	(6.2)	71	(7.7)	77	(5.2)	77	(5.6)	74	(3.3)
	Total	27	(1.6)	44	(1.6)	52	(1.9)	60	(1.9)	62	(1.7)	48	(0.7)
Canada	Level 0/1	25	(2.7)	35	(3.3)	32	(3.7)	37	(3.3)	43	(3.3)	34	(1.6)
	Level 2	35	(3.1)	49	(2.6)	50	(2.5)	54	(2.4)	59	(2.1)	51	(1.1)
	Level 3	46	(4.0)	64	(2.9)	68	(2.1)	70	(1.9)	72	(1.6)	68	(1.0)
	Level 4/5	60	(13.6)	75	(5.2)	78	(3.4)	80	(3.3)	83	(1.9)	80	(1.5)
	Total	34	(1.6)	54	(1.5)	58	(1.2)	63	(1.1)	67	(1.0)	58	(0.6)
Chile	Level 0/1	19	(2.5)	32	(3.0)	33	(2.9)	43	(4.5)	48	(3.6)	36	(1.8)
	Level 2	31	(8.5)	49	(7.7)	46	(4.9)	61	(5.3)	67	(4.8)	58	(3.2)
	Level 3	c	c	65	(17.3)	70	(9.4)	72	(6.9)	78	(4.9)	74	(4.0)
	Level 4/5	c	c	c	c	c	c	c	c	c	c	85	(9.5)
	Total	21	(2.1)	39	(2.4)	40	(2.4)	53	(3.4)	61	(2.1)	48	(1.9)
Czech Republic	Level 0/1	23	(5.1)	29	(6.6)	36	(10.1)	49	(11.8)	39	(10.1)	32	(4.0)
	Level 2	35	(4.4)	43	(4.5)	44	(5.4)	46	(5.4)	58	(4.9)	44	(2.1)
	Level 3	43	(5.3)	53	(4.3)	54	(4.3)	63	(4.8)	64	(4.3)	56	(2.1)
	Level 4/5	53	(14.2)	63	(14.2)	72	(8.8)	78	(7.8)	76	(7.2)	71	(4.3)
	Total	36	(2.2)	46	(2.5)	50	(2.7)	57	(2.8)	62	(2.7)	50	(1.2)
Denmark	Level 0/1	25	(3.2)	40	(4.3)	43	(4.5)	58	(4.3)	52	(4.5)	42	(1.8)
	Level 2	35	(4.3)	57	(2.7)	65	(3.6)	67	(2.7)	68	(2.6)	61	(1.4)
	Level 3	55	(6.2)	68	(2.9)	78	(2.6)	77	(2.2)	79	(2.0)	75	(1.2)
	Level 4/5	c	c	81	(7.8)	89	(3.7)	86	(3.8)	87	(2.9)	86	(2.2)
	Total	35	(1.9)	58	(1.7)	70	(1.3)	72	(1.3)	74	(1.3)	66	(0.6)
Estonia	Level 0/1	22	(2.7)	34	(4.9)	46	(4.3)	45	(6.6)	49	(7.6)	33	(2.3)
	Level 2	27	(2.1)	48	(3.0)	55	(2.8)	61	(3.5)	60	(4.5)	46	(1.6)
	Level 3	36	(2.7)	57	(2.5)	63	(2.4)	68	(2.6)	76	(3.3)	59	(1.3)
	Level 4/5	50	(7.2)	73	(5.9)	76	(3.7)	82	(3.9)	88	(3.8)	77	(2.3)
	Total	29	(1.2)	51	(1.3)	60	(1.4)	66	(1.5)	72	(1.9)	53	(0.7)
Finland	Level 0/1	26	(6.5)	36	(6.7)	33	(7.2)	36	(5.1)	56	(5.2)	38	(2.6)
	Level 2	35	(5.9)	43	(4.6)	56	(3.6)	59	(3.0)	64	(3.0)	55	(1.7)
	Level 3	46	(7.7)	62	(4.1)	71	(2.8)	74	(2.1)	79	(1.8)	72	(1.1)
	Level 4/5	c	c	74	(6.1)	81	(3.3)	83	(2.2)	89	(1.7)	84	(1.3)
	Total	36	(3.2)	53	(2.2)	66	(1.3)	69	(1.2)	76	(1.1)	66	(0.7)
France	Level 0/1	15	(2.2)	21	(2.7)	22	(2.7)	21	(3.2)	30	(3.5)	20	(1.2)
	Level 2	19	(3.3)	26	(2.2)	34	(2.1)	35	(2.3)	38	(2.7)	31	(1.0)
	Level 3	23	(4.5)	40	(3.2)	48	(2.2)	49	(2.3)	53	(2.4)	47	(1.3)
	Level 4/5	c	c	47	(7.1)	64	(5.2)	60	(3.9)	65	(5.6)	60	(3.0)
	Total	18	(1.3)	30	(1.3)	39	(1.1)	40	(1.1)	46	(1.4)	36	(0.6)
Germany	Level 0/1	21	(2.8)	27	(4.2)	37	(6.3)	46	(8.4)	35	(7.0)	29	(2.3)
	Level 2	30	(3.4)	44	(3.3)	53	(3.8)	58	(4.6)	53	(4.9)	46	(2.0)
	Level 3	48	(4.6)	61	(3.1)	65	(2.9)	72	(3.4)	68	(3.6)	64	(1.6)
	Level 4/5	c	c	74	(5.5)	82	(4.0)	82	(4.9)	80	(6.1)	79	(2.6)
	Total	31	(1.8)	49	(1.6)	61	(1.8)	66	(2.0)	60	(2.4)	53	(1.1)

Notes: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey. Columns showing data broken down by gender are available for consultation on line (see Statlink below). The index of readiness to learn summarises the answers to the question of how intensely the respondents did the following things: "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".

Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398714

Table C6.2. [2/4] Participation in formal and/or non-formal education, by gender, literacy proficiency level and index of readiness to learn (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Literacy proficiency level	Men and women											
		Index of readiness to learn										Total	
		Less than 20%		20% to less than 40%		40% to less than 60%		60% to less than 80%		80% or more			
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD National entities													
Greece	Level 0/1	6	(2.3)	10	(3.2)	23	(6.7)	10	(2.9)	21	(5.8)	13	(1.6)
	Level 2	9	(2.4)	17	(2.9)	22	(4.3)	19	(3.1)	29	(4.0)	19	(1.3)
	Level 3	10	(3.1)	21	(3.6)	32	(5.6)	33	(4.0)	42	(4.7)	28	(2.0)
	Level 4/5	c	c	23	(9.1)	c	c	46	(11.3)	42	(10.8)	34	(5.0)
	Total	8	(1.2)	17	(1.7)	26	(2.4)	22	(1.8)	32	(2.0)	20	(0.8)
Ireland	Level 0/1	26	(3.9)	34	(4.4)	34	(5.8)	41	(5.1)	34	(5.1)	32	(2.3)
	Level 2	32	(3.6)	43	(2.9)	49	(3.4)	57	(3.2)	47	(4.1)	46	(1.3)
	Level 3	44	(4.7)	51	(3.4)	60	(3.0)	67	(2.8)	66	(3.2)	59	(1.5)
	Level 4/5	c	c	67	(6.7)	73	(6.6)	76	(5.8)	82	(3.9)	75	(2.9)
	Total	34	(1.9)	46	(1.7)	53	(1.7)	60	(1.6)	58	(1.8)	51	(0.7)
Israel	Level 0/1	20	(2.4)	27	(3.7)	41	(3.9)	41	(4.6)	51	(5.3)	33	(1.5)
	Level 2	29	(3.8)	47	(3.7)	52	(3.9)	56	(4.0)	62	(3.5)	51	(1.8)
	Level 3	44	(7.2)	64	(4.6)	66	(4.5)	69	(3.7)	74	(3.4)	68	(2.0)
	Level 4/5	c	c	c	c	81	(8.4)	80	(6.1)	88	(3.6)	81	(2.5)
	Total	27	(1.7)	46	(1.9)	56	(2.0)	60	(2.0)	69	(1.3)	53	(0.8)
Italy	Level 0/1	4	(1.9)	14	(4.0)	16	(3.7)	18	(3.4)	23	(4.3)	14	(1.5)
	Level 2	7	(2.1)	19	(3.7)	17	(2.2)	26	(2.7)	30	(3.1)	21	(1.4)
	Level 3	18	(5.1)	27	(5.2)	41	(4.0)	42	(3.8)	51	(3.8)	40	(2.3)
	Level 4/5	c	c	c	c	57	(11.6)	57	(9.3)	66	(11.0)	57	(6.1)
	Total	7	(1.2)	19	(2.2)	25	(1.5)	30	(1.7)	38	(2.4)	25	(1.0)
Japan	Level 0/1	17	(4.4)	c	c	c	c	c	c	c	c	22	(3.5)
	Level 2	25	(2.3)	36	(3.6)	44	(6.7)	55	(10.5)	45	(10.5)	30	(2.0)
	Level 3	34	(1.8)	53	(2.8)	53	(3.4)	59	(4.8)	55	(6.0)	43	(1.3)
	Level 4/5	47	(2.8)	61	(3.7)	60	(5.1)	65	(5.9)	68	(6.8)	56	(2.0)
	Total	33	(1.0)	51	(1.6)	53	(2.1)	60	(3.1)	56	(3.7)	42	(0.8)
Korea	Level 0/1	23	(2.3)	36	(6.2)	31	(10.0)	c	c	c	c	25	(1.9)
	Level 2	37	(1.6)	50	(3.8)	61	(4.3)	58	(5.3)	62	(5.7)	43	(1.4)
	Level 3	53	(2.0)	66	(3.0)	73	(3.3)	72	(3.8)	77	(4.0)	62	(1.5)
	Level 4/5	67	(5.0)	80	(6.8)	80	(5.9)	90	(5.3)	80	(8.6)	77	(2.9)
	Total	41	(1.0)	58	(2.0)	68	(2.3)	68	(2.6)	70	(2.5)	50	(0.8)
Netherlands	Level 0/1	34	(3.8)	45	(6.7)	52	(8.1)	54	(11.1)	64	(8.6)	41	(3.1)
	Level 2	41	(2.8)	54	(3.3)	65	(4.1)	59	(5.0)	73	(5.5)	53	(1.8)
	Level 3	56	(2.9)	70	(2.7)	79	(2.2)	79	(2.8)	77	(3.1)	72	(1.2)
	Level 4/5	67	(6.5)	77	(4.0)	83	(2.8)	84	(3.7)	85	(3.4)	81	(1.7)
	Total	46	(1.4)	64	(1.5)	75	(1.4)	74	(1.7)	78	(1.7)	64	(0.6)
New Zealand	Level 0/1	36	(4.8)	42	(5.2)	55	(6.1)	52	(6.9)	60	(7.7)	47	(2.7)
	Level 2	49	(4.7)	56	(3.4)	63	(3.6)	65	(4.1)	69	(3.0)	61	(1.6)
	Level 3	56	(5.3)	64	(3.6)	73	(3.1)	74	(2.8)	80	(2.1)	73	(1.4)
	Level 4/5	c	c	75	(6.0)	84	(4.4)	81	(3.8)	83	(3.0)	81	(2.2)
	Total	48	(2.6)	59	(1.7)	70	(1.7)	71	(1.6)	77	(1.4)	68	(0.8)
Norway	Level 0/1	28	(6.1)	51	(6.1)	46	(6.1)	56	(6.2)	50	(8.1)	46	(2.9)
	Level 2	39	(5.3)	52	(3.2)	55	(4.0)	64	(3.8)	61	(4.4)	55	(1.9)
	Level 3	58	(7.0)	65	(3.0)	68	(2.9)	76	(2.3)	76	(2.2)	71	(1.3)
	Level 4/5	c	c	74	(6.0)	78	(3.5)	81	(3.4)	80	(3.9)	78	(2.0)
	Total	42	(3.0)	59	(1.5)	63	(1.9)	72	(1.4)	71	(1.6)	64	(0.7)
Poland	Level 0/1	8	(1.9)	13	(3.2)	21	(4.0)	36	(5.7)	36	(6.2)	18	(2.0)
	Level 2	16	(2.3)	22	(3.1)	33	(3.7)	37	(4.0)	45	(4.4)	29	(1.6)
	Level 3	21	(3.9)	32	(4.2)	49	(4.1)	54	(4.1)	60	(3.4)	45	(1.7)
	Level 4/5	c	c	53	(9.0)	60	(7.3)	68	(6.3)	79	(5.3)	65	(3.2)
	Total	14	(1.3)	26	(1.6)	40	(1.9)	47	(1.6)	55	(2.1)	35	(0.8)

Notes: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey. Columns showing data broken down by gender are available for consultation on line (see Statlink below). The index of readiness to learn summarises the answers to the question of how intensely the respondents did the following things: "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".

Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398714

C6

Table C6.2. [3/4] Participation in formal and/or non-formal education, by gender, literacy proficiency level and index of readiness to learn (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Literacy proficiency level	Men and women											
		Index of readiness to learn											
		Less than 20%		20% to less than 40%		40% to less than 60%		60% to less than 80%		80% or more		Total	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD National entities													
Slovak Republic	Level 0/1	5	(1.7)	18	(6.0)	18	(6.5)	21	(6.3)	32	(8.6)	13	(2.0)
	Level 2	14	(1.6)	26	(3.5)	27	(4.2)	33	(3.4)	38	(4.0)	26	(1.4)
	Level 3	24	(2.8)	34	(3.7)	39	(3.1)	47	(2.5)	48	(3.0)	40	(1.4)
	Level 4/5	46	(13.2)	48	(11.6)	58	(8.4)	59	(6.4)	70	(6.6)	59	(3.9)
	Total	16	(1.0)	30	(2.3)	35	(2.0)	42	(1.6)	46	(2.0)	33	(0.8)
Slovenia	Level 0/1	18	(2.4)	27	(3.5)	39	(4.4)	39	(4.0)	47	(7.0)	30	(1.8)
	Level 2	25	(2.8)	42	(3.0)	49	(3.4)	54	(3.2)	65	(4.6)	45	(1.6)
	Level 3	41	(5.0)	57	(3.8)	63	(3.4)	68	(3.2)	80	(3.3)	64	(1.6)
	Level 4/5	c	c	70	(7.8)	74	(8.2)	80	(6.1)	89	(6.2)	78	(3.5)
	Total	25	(1.8)	44	(1.7)	52	(1.7)	57	(1.5)	70	(2.0)	48	(0.8)
Spain	Level 0/1	18	(2.2)	26	(3.3)	26	(3.2)	34	(3.6)	43	(4.3)	29	(1.5)
	Level 2	23	(3.5)	39	(3.1)	45	(2.8)	49	(2.8)	54	(3.1)	44	(1.3)
	Level 3	39	(6.7)	56	(3.7)	64	(4.0)	61	(3.2)	71	(2.9)	63	(1.9)
	Level 4/5	c	c	69	(9.5)	77	(8.5)	77	(6.9)	86	(5.1)	79	(3.9)
	Total	22	(1.6)	40	(1.7)	47	(1.6)	51	(1.7)	60	(1.5)	47	(0.7)
Sweden	Level 0/1	22	(5.1)	47	(6.8)	52	(6.8)	50	(6.8)	43	(8.2)	42	(3.0)
	Level 2	34	(4.9)	55	(5.0)	65	(4.3)	63	(4.3)	64	(4.4)	58	(2.0)
	Level 3	52	(5.6)	65	(3.2)	73	(3.1)	76	(2.9)	80	(2.2)	73	(1.3)
	Level 4/5	c	c	72	(7.5)	83	(3.7)	86	(3.4)	84	(3.0)	83	(1.9)
	Total	37	(2.8)	60	(1.9)	70	(1.9)	72	(1.7)	73	(1.6)	66	(0.8)
Turkey	Level 0/1	8	(1.0)	17	(2.5)	21	(3.8)	24	(3.0)	34	(6.1)	15	(1.0)
	Level 2	16	(2.7)	24	(3.3)	29	(3.9)	33	(3.4)	42	(4.3)	27	(1.7)
	Level 3	17	(6.8)	25	(7.3)	38	(7.6)	42	(5.6)	51	(5.9)	38	(3.0)
	Level 4/5	c	c	c	c	c	c	c	c	c	c	50	(13.2)
	Total	10	(0.9)	21	(1.9)	27	(2.3)	31	(1.8)	42	(2.9)	23	(0.8)
United States	Level 0/1	27	(5.2)	32	(4.3)	42	(6.0)	40	(4.5)	46	(4.0)	37	(2.5)
	Level 2	32	(3.9)	44	(4.3)	58	(4.2)	58	(4.1)	58	(3.6)	52	(2.1)
	Level 3	42	(7.2)	58	(4.2)	70	(3.1)	71	(2.9)	77	(2.1)	70	(1.3)
	Level 4/5	c	c	69	(8.6)	82	(5.8)	79	(4.4)	86	(2.8)	82	(2.5)
	Total	33	(2.6)	48	(1.9)	63	(2.0)	63	(1.9)	68	(1.4)	59	(1.1)
Subnational entities													
Flanders (Belgium)	Level 0/1	17	(2.7)	31	(4.2)	37	(6.2)	38	(6.6)	41	(8.5)	27	(1.9)
	Level 2	28	(2.6)	41	(3.4)	50	(4.4)	47	(4.0)	50	(5.2)	40	(1.7)
	Level 3	39	(3.1)	59	(2.8)	65	(3.2)	64	(2.9)	68	(3.6)	58	(1.4)
	Level 4/5	48	(9.3)	64	(5.5)	70	(4.3)	74	(5.4)	75	(4.7)	68	(2.4)
	Total	30	(1.4)	50	(1.6)	59	(2.0)	58	(1.9)	63	(2.3)	49	(0.8)
England (UK)	Level 0/1	22	(3.8)	39	(5.4)	46	(5.7)	46	(7.4)	52	(6.5)	38	(2.6)
	Level 2	33	(3.2)	45	(3.8)	53	(4.1)	56	(4.0)	60	(3.7)	48	(1.8)
	Level 3	47	(4.9)	62	(3.3)	65	(3.4)	66	(3.3)	69	(3.1)	63	(1.7)
	Level 4/5	65	(10.4)	71	(5.9)	78	(4.4)	74	(5.0)	82	(3.4)	76	(2.4)
	Total	35	(1.9)	54	(1.8)	61	(1.7)	62	(1.8)	67	(1.8)	56	(0.9)
Northern Ireland (UK)	Level 0/1	16	(3.4)	33	(6.3)	29	(7.3)	40	(7.4)	39	(10.2)	26	(2.5)
	Level 2	25	(3.2)	41	(4.2)	46	(4.7)	60	(5.0)	54	(5.8)	43	(2.3)
	Level 3	35	(5.5)	56	(4.6)	63	(4.7)	69	(4.2)	69	(4.1)	60	(2.1)
	Level 4/5	c	c	73	(7.9)	71	(11.2)	73	(7.2)	79	(5.2)	74	(4.2)
	Total	26	(1.7)	48	(2.5)	53	(2.7)	63	(2.4)	63	(2.4)	49	(0.9)
Average	Level 0/1	20	(0.7)	31	(0.9)	35	(1.1)	39	(1.2)	42	(1.3)	30	(0.4)
	Level 2	28	(0.7)	41	(0.7)	48	(0.7)	52	(0.8)	55	(0.8)	44	(0.3)
	Level 3	40	(1.0)	54	(0.9)	61	(0.7)	64	(0.7)	68	(0.6)	60	(0.3)
	Level 4/5	m	m	67	(1.5)	75	(1.3)	75	(1.1)	79	(1.1)	73	(0.8)
	Total	29	(0.3)	45	(0.3)	53	(0.4)	58	(0.4)	62	(0.4)	50	(0.2)

Notes: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey. Columns showing data broken down by gender are available for consultation on line (see Statlink below). The index of readiness to learn summarises the answers to the question of how intensely the respondents did the following things: "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".

Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table C6.2. [4/4] Participation in formal and/or non-formal education, by gender, literacy proficiency level and index of readiness to learn (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

		Literacy proficiency level	Men and women											
			Index of readiness to learn										Total	
			Less than 20%		20% to less than 40%		40% to less than 60%		60% to less than 80%		80% or more			
			%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Partners	Jakarta (Indonesia)	Level 0/1	6	(0.7)	12	(2.2)	22	(4.2)	29	(6.9)	c	c	8	(0.7)
		Level 2	13	(1.9)	27	(4.7)	32	(6.5)	38	(9.2)	c	c	19	(1.9)
		Level 3	17	(6.3)	24	(12.1)	c	c	c	c	c	c	27	(5.5)
		Level 4/5	c	c	c	c	c	c	c	c	c	c	48	(24.3)
		Total	8	(0.6)	18	(2.0)	31	(3.4)	35	(3.8)	36	(7.9)	12	(0.6)
	Lithuania	Level 0/1	12	(3.1)	18	(5.0)	26	(7.1)	22	(7.5)	22	(6.1)	17	(2.1)
		Level 2	18	(2.3)	28	(3.8)	34	(4.3)	35	(4.7)	45	(4.2)	28	(1.5)
		Level 3	26	(3.0)	36	(4.3)	45	(5.3)	52	(5.0)	66	(3.8)	44	(1.9)
		Level 4/5	45	(15.2)	55	(11.7)	59	(14.9)	68	(10.4)	67	(9.1)	59	(5.9)
		Total	19	(1.1)	31	(2.3)	39	(2.4)	43	(2.3)	52	(2.3)	34	(0.8)
	Russian Federation*	Level 0/1	11	(2.5)	25	(7.1)	c	c	32	(8.5)	25	(10.1)	16	(2.2)
		Level 2	10	(3.2)	18	(3.9)	29	(7.4)	25	(5.2)	25	(5.8)	18	(2.6)
		Level 3	12	(2.7)	22	(3.8)	27	(4.3)	27	(5.4)	31	(4.4)	21	(1.6)
		Level 4/5	13	(5.8)	19	(8.7)	20	(8.8)	31	(6.9)	35	(8.6)	23	(3.4)
		Total	11	(1.7)	20	(2.1)	25	(3.7)	27	(3.1)	29	(2.6)	20	(1.6)
	Singapore	Level 0/1	23	(1.9)	45	(4.1)	47	(4.4)	53	(5.7)	49	(8.0)	32	(1.5)
		Level 2	37	(2.7)	60	(3.4)	60	(4.2)	66	(3.5)	66	(4.7)	55	(1.6)
		Level 3	59	(4.1)	73	(3.1)	79	(3.0)	80	(2.7)	82	(3.2)	75	(1.2)
		Level 4/5	c	c	84	(5.0)	90	(4.5)	87	(4.5)	85	(4.3)	87	(2.5)
		Total	33	(1.2)	62	(1.9)	68	(1.8)	73	(1.5)	74	(2.1)	57	(0.7)

Notes: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey. Columns showing data broken down by gender are available for consultation on line (see Statlink below). The index of readiness to learn summarises the answers to the question of how intensely the respondents did the following things: "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".

Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398714

C6

Table C6.4. Average number of hours spent in non-formal education and participation rate in non-formal education (2012 or 2015)

Survey of Adult Skills, 25-64 year-olds

	Average number of hours spent in non-formal education in the 12 months prior to the survey				Participation rate in non-formal education in the 12 months prior to the survey	
	Per participant		Per adult			
	Mean	S.E.	Mean	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)
OECD — National entities						
Australia	103	(5.6)	52	(2.8)	50	(0.7)
Austria	121	(5.6)	56	(3.0)	46	(0.8)
Canada	119	(5.8)	64	(3.2)	54	(0.6)
Chile	121	(12.2)	53	(6.8)	44	(2.0)
Czech Republic	72	(4.9)	34	(2.3)	48	(1.2)
Denmark	114	(4.3)	70	(2.8)	61	(0.6)
Estonia	89	(3.3)	45	(1.7)	50	(0.7)
Finland	88	(4.2)	54	(2.6)	62	(0.7)
France	84	(4.6)	28	(1.6)	33	(0.6)
Germany	111	(5.4)	56	(2.9)	50	(1.1)
Greece	231	(16.9)	42	(3.6)	18	(0.8)
Ireland	122	(7.0)	55	(3.1)	45	(0.8)
Israel	134	(6.7)	59	(3.2)	45	(0.8)
Italy	106	(8.9)	23	(2.2)	22	(0.9)
Japan	147	(9.1)	60	(3.7)	41	(0.8)
Korea	248	(9.4)	121	(5.1)	49	(0.8)
Netherlands	112	(5.6)	67	(3.5)	60	(0.6)
New Zealand	113	(5.5)	71	(3.5)	64	(0.8)
Norway	103	(5.0)	61	(3.2)	59	(0.7)
Poland	128	(8.6)	41	(2.9)	32	(0.8)
Slovak Republic	87	(4.7)	27	(1.6)	31	(0.8)
Slovenia	77	(4.1)	34	(1.9)	44	(0.8)
Spain	213	(9.6)	89	(4.3)	42	(0.7)
Sweden	94	(4.6)	57	(2.9)	61	(0.8)
Turkey	139	(9.8)	24	(1.8)	17	(0.6)
United States	144	(10.5)	79	(6.4)	55	(1.1)
Subnational entities						
Flanders (Belgium)	108	(5.2)	49	(2.5)	46	(0.8)
England (UK)	96	(6.6)	48	(3.6)	51	(0.8)
Northern Ireland (UK)	94	(7.0)	41	(3.0)	45	(0.9)
Average	121	(1.4)	54	(0.6)	46	(0.2)
Partners						
Jakarta (Indonesia)	110	(15.4)	11	(1.6)	10	(0.6)
Lithuania	85	(6.3)	26	(2.1)	31	(0.8)
Russian Federation*	117	(11.8)	19	(3.1)	17	(1.4)
Singapore	98	(4.8)	53	(2.6)	55	(0.7)

Note: Chile, Greece, Israel, Jakarta (Indonesia), Lithuania, New Zealand, Singapore, Slovenia, Turkey: Year of reference 2015. All other countries: Year of reference 2012.
* See note on data for the Russian Federation in the *Methodology* section.
Source: OECD. Survey of Adult Skills (PIAAC) (2012, 2015). See Annex 3 for note (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933398729

Chapter

D

The Learning Environment and Organisation of Schools

Indicator D1 How much time do students spend in the classroom?
StatLink http://dx.doi.org/10.1787/888933398784

Indicator D2 What is the student-teacher ratio and how big are classes?
StatLink http://dx.doi.org/10.1787/888933398860

Indicator D3 How much are teachers paid?
StatLink http://dx.doi.org/10.1787/888933398933

Indicator D4 How much time do teachers spend teaching?
StatLink http://dx.doi.org/10.1787/888933399067

Indicator D5 Who are the teachers?
StatLink http://dx.doi.org/10.1787/888933399143

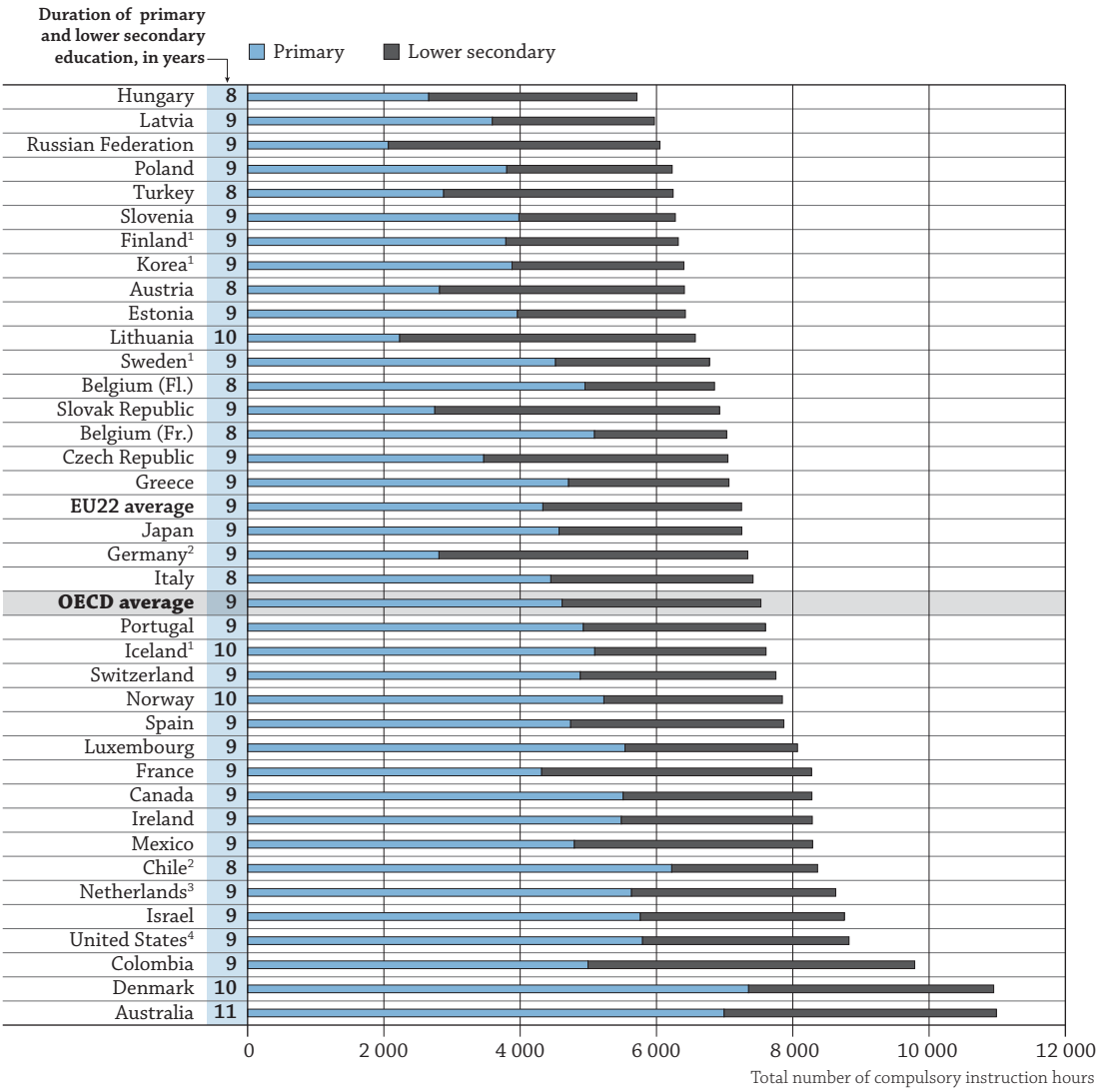
Indicator D6 Who are our school leaders and what do they do?
StatLink http://dx.doi.org/10.1787/888933399226

HOW MUCH TIME DO STUDENTS SPEND IN THE CLASSROOM?

- Students in OECD countries receive an average of 7 540 hours of compulsory instruction during their primary and lower secondary education, ranging from 5 720 hours in Hungary to almost double that in Australia (11 000 hours) and Denmark (10 960 hours).
- On average across OECD countries, instruction in reading, writing and literature, mathematics, and the arts represents 46% of compulsory instruction time for primary school students; and instruction in reading, writing and literature, second and other languages, and mathematics represents 38% of compulsory instruction time for lower secondary school students.

Figure D1.1. Compulsory instruction time in general education (2016)

In primary and lower secondary education



1. Estimated number of hours by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.
2. Year of reference 2015.
3. The number of grades in lower secondary education is three or four, depending on the track. The fourth year of pre-vocational secondary education (VMBO) was excluded from the calculation.
4. Year of reference 2012.

Countries and economies are ranked in ascending order of the total number of compulsory instruction hours.

Source: OECD. Table D1.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

Providing instruction in formal classroom settings accounts for a large portion of public investment in education. Countries make various choices concerning 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 provision of other educational resources constitute the main costs of education. The length of time during which these resources are made available to students (as partly shown in this indicator) is an important factor in determining how funds for education are allocated (see Indicator B7, which shows the factors influencing the salary cost of teachers per student). 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 indicator.

Other findings

- In OECD countries, compulsory instruction time for primary students averages 799 hours per year; lower secondary students receive an average of 116 more hours of compulsory education per year than primary students.
- The proportion of the compulsory curriculum for primary students that is devoted to reading, writing and literature ranges from 18% in Poland to 39% in the Russian Federation; for lower secondary students, it ranges from 12% in Australia, the Czech Republic, Finland, Ireland and Japan to 33% in Italy.
- The proportion of the compulsory curriculum devoted to mathematics at the primary level ranges from 12% in Denmark to 27% in Mexico and Portugal; at the lower secondary level it ranges from 11% in Greece and Korea to 20% in Italy.
- In OECD countries, an average of 12% of compulsory instruction time for primary students and 7% for lower secondary students is devoted to compulsory subjects with a flexible timetable. An average of 4% of compulsory instruction time at the primary level and 5% at the lower secondary level is devoted to compulsory flexible subjects chosen by schools.
- In more than one-quarter of countries with available data, 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).

Analysis

Compulsory general education

Both annual instruction time and the length of compulsory education have impacts on the total instruction time during compulsory education. In some countries, the duration of compulsory education is shorter and students bear a heavier workload, while in other countries, the workload is distributed evenly over more years.

In around three out of four countries and economies with available data, students are required to start primary education at the age of 6. However, in Estonia, Finland, Latvia, Lithuania, Poland, the Russian Federation and Sweden, students are not required to start until age 7. Only in Australia, England (United Kingdom), New Zealand and Scotland (United Kingdom) does primary education start at age 5.

There is also substantial variation in the duration of primary education. On average, primary education lasts six years, but it ranges from four years in Austria, Germany, Hungary, Lithuania, the Russian Federation, the Slovak Republic and Turkey to seven years in Australia, Denmark, Iceland, Norway and Scotland (United Kingdom). Lower secondary education averages three years but ranges from two years in Belgium (Flemish and French Communities) and Chile to five years in Germany, the Russian Federation and the Slovak Republic and six years in Lithuania. In around two out of three countries and economies with available data, at least one year of upper secondary education is part of compulsory full-time education (Table D1.2).

Countries also allocate annual instruction time differently over the year. The number of instruction days can vary significantly between countries, as can the way these instruction days are distributed across the school year, because countries organise holidays differently (Box D1.1). Within instruction days, countries also vary in the way they organise recess and breaks (Box D1.2).

Box D1.1. Distribution of instruction days within the school year

On average across OECD countries, primary students have 185 instruction days per year, and lower secondary students have 184 days. However, the number of instruction days varies between countries by more than 50 days at both the primary and lower secondary levels (from 160 to 219 days at the primary level and from 152 to 209 days at the lower secondary level).

Students have 170 instruction days or fewer per year in France (primary and lower secondary), Greece (lower secondary), Iceland (primary and lower secondary), Ireland (lower secondary), Latvia (primary), Lithuania (primary and lower secondary), Luxembourg (lower secondary) and the Russian Federation (primary). In contrast, primary and lower secondary school students have at least 200 instruction days per year in Australia, Brazil, Colombia, Denmark, Israel, Italy, Japan and Mexico (Table D1.2).

With usually five instruction days per school week in most countries (Table D1.2), these differences in the number of annual instruction days reflect differences in both the length of the school year and holidays during the school year. On average across OECD countries, students receive 36 weeks of instruction at the primary level and 35 weeks at the lower and upper secondary levels. But instruction times at primary and secondary levels range from 31 weeks in Greece (secondary) to 40 weeks or more in Australia, Brazil, Colombia, Germany, Japan (primary and lower secondary), Mexico (primary and lower secondary) and the Netherlands (primary) (Table D4.1).

These differences are partly related to summer holidays. In two-thirds of OECD and partner countries, the school year starts in September and usually ends in June. In Nordic countries (Denmark, Finland, Iceland, Norway and Sweden), the school year starts in August and ends in May (except in Iceland and Sweden, where it ends in June) (Table X1.2a). Among European countries, summer breaks last from 6 weeks in Germany, the Netherlands and the United Kingdom to 13 weeks in Italy, Latvia and Turkey (Eurydice, 2015).

Among European countries, there are four other main periods of school holidays: in the autumn, around Christmas and New Year's, winter/Carnival holidays, and in spring/Easter. End-of-the-year holidays are mostly similar in these countries, but school breaks differ both in length and timing (Eurydice, 2015).

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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, as per public regulations.

Students in OECD countries attend an average of 4 621 hours of instruction during primary school and 2 919 hours during lower secondary education. While the average total compulsory instruction time for primary and lower secondary students in OECD countries is 7 540 hours (in 9 years on average), formal instruction-time requirements range from 5 720 hours in Hungary (in 8 years) to 11 000 hours in Australia (in 11 years) (Figure D1.1). In England (United Kingdom), New Zealand and Scotland (United Kingdom) regulations do not prescribe compulsory instruction time in schools. However, schools are required to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements.

Compulsory instruction time can differ from actual instruction time, as it only captures the time spent by students in formal classroom settings. This is only a part of the total time students spend receiving instruction. Instruction also occurs outside compulsory school hours and outside the classroom and/or school. In some countries, 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, 2015). These lessons can be financed through public funds or by students and their families (see Box D1.1 in OECD, 2011).

Within compulsory instruction time, this indicator 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.

Intended instruction time

Total intended instruction time is the estimated number of hours during which schools are obliged to offer instruction in compulsory and if applicable non-compulsory subjects.

Intended and compulsory instruction time are of the same length (i.e. intended instruction time is fully compulsory) for primary and lower secondary students in about three out of four countries with available data. However in Finland, France (lower secondary), Greece (primary), Lithuania, Poland, Portugal and Slovenia, the intended instruction time is at least 3% longer than the compulsory instruction time.

Instruction time per subject

Primary students spend an average of 46% of the compulsory instruction time on three subjects: reading, writing and literature (22%), mathematics (15%) and the arts (9%). Together with physical education and health (8%), natural sciences (7%) and social studies (6%), these six study areas form the major part of the curriculum in all OECD countries where instruction time per subject is specified. Second and other languages, religion, 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 17% of the compulsory instruction time on average across OECD countries (Table D1.3a and Figure D1.2a).

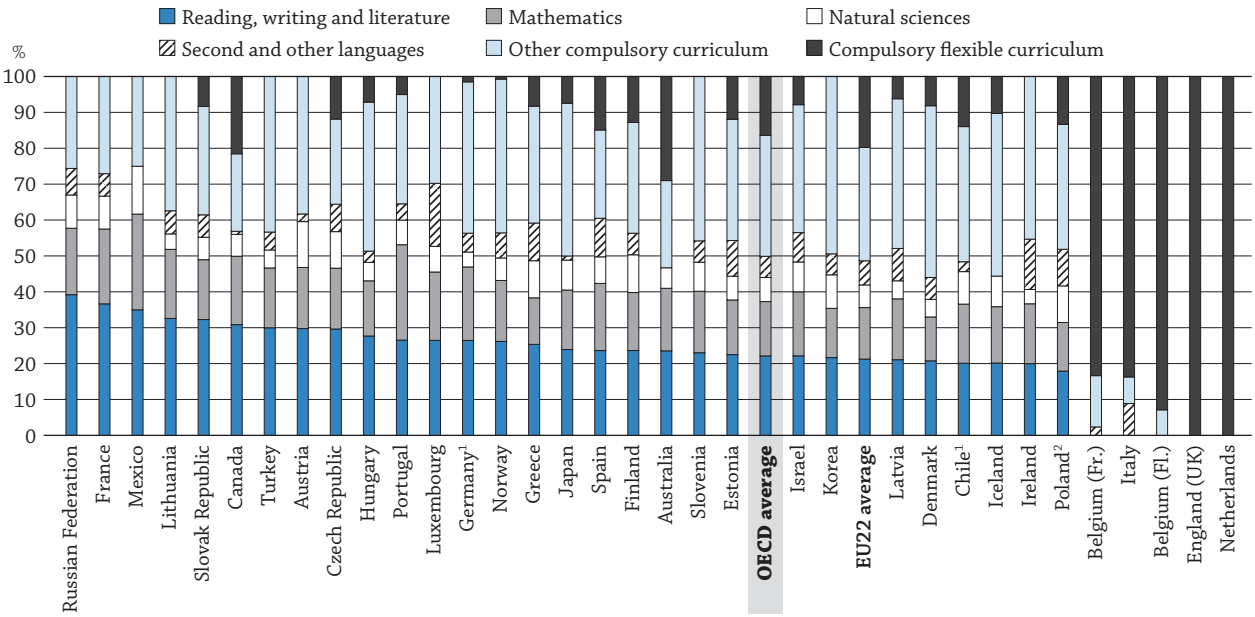
At the lower secondary level, an average of 38% of the compulsory curriculum is composed of three subjects: reading, writing and literature (14%), second and other languages (13%) and mathematics (12%). On average, an additional 11% of the compulsory curriculum is devoted to natural sciences and 10% to social studies. Together with physical education and health (7%) and the arts (6%), these seven study areas form the major part of the curriculum for this level of education in all OECD countries where instruction time per subject is specified. Religion, ICT, technology, practical and vocational skills, and other subjects make up the remainder (11%) of the non-flexible compulsory curriculum for students at this level of education (Table D1.3b and Figure D1.2b).

This is a significant shift in the allocation of time from primary schooling. Instruction in reading, writing and literature drops from 22% of the compulsory instruction time to 14%. Instruction in mathematics drops from 15% of compulsory instruction time to 12%. Conversely, instruction in natural science climbs from 7% of the compulsory curriculum to 11%, and in social studies from 6% to 10%, while instruction in other languages (second and others) climbs from 6% to 13%. At the national level, instruction in second and other languages accounts for the largest share of the compulsory core curriculum at the lower secondary level in Finland (together with natural sciences), France, Germany, Israel, Japan, Luxembourg and Norway (Tables D1.3a and b).

D1

Figure D1.2a. Instruction time per subject in primary education (2016)

As a percentage of total compulsory instruction time



1. Year of reference 2015.
2. Excludes the first three years of primary education for which a large proportion of the time allocated to compulsory subjects is flexible.

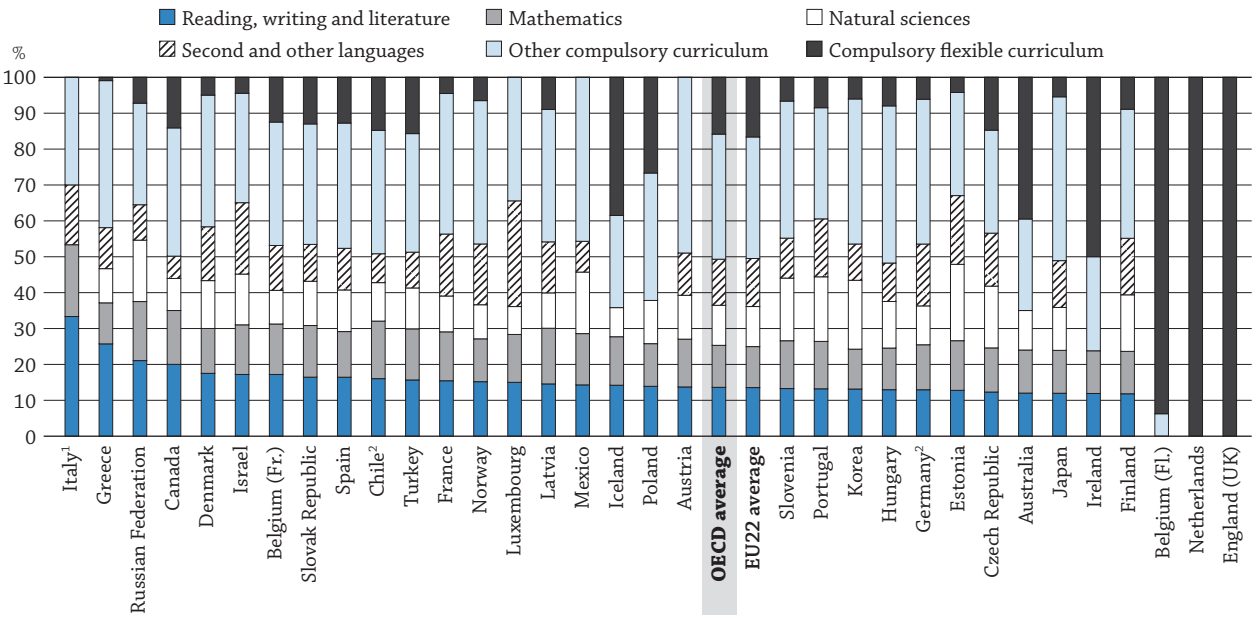
Countries and economies are ranked in descending order of the proportion of instruction hours devoted to reading, writing and literature.

Source: OECD. Table D1.3a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398849

Figure D1.2b. Instruction time per subject in general lower secondary education (2016)

As a percentage of total compulsory instruction time



1. Natural sciences included in mathematics.
2. Year of reference 2015.

Countries and economies are ranked in descending order of the proportion of instruction hours devoted to reading, writing and literature.

Source: OECD. Table D1.3b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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At the lower secondary level, there is substantial variation in how countries allocate time among the different subjects within the compulsory curriculum. For example, reading, writing and literature account for 12% of compulsory instruction time in Australia, the Czech Republic, Finland and Japan, but more than 25% of compulsory instruction time in Greece and Italy (in Italy, it also includes time devoted to social studies). In Ireland, reading, writing and literature are taught in two national languages, and therefore the actual estimation of the combined percentage can reach about 24% of the total compulsory instruction time. Second-language instruction accounts for 6% of compulsory instruction time in Canada and Greece and 17% in Luxembourg. In addition, in slightly less than half of countries with available data, studying another language in addition to a second language is compulsory for lower secondary students.

As seen at the primary and lower secondary levels, there are significant differences in how time is allocated to school subjects as students grow older. On average across OECD countries, 25% of instruction time for 7-year-olds is devoted to reading, writing and literature, 17% for 11-year-olds and 11% for 15-year-olds. By contrast, while an average of 2% of instruction time for 7-year-olds is devoted to the teaching of a second language, 9% of instruction time for 11-year-olds is spent studying a second language and 2% studying other languages, and for 15-year-olds 8% of instruction time is devoted to the second language and 4% to other languages. The share of instruction time dedicated to natural sciences increases from 6% for 7-year-olds to 8% for 11-year-olds, to 11% for 15-year-olds, while instruction time in social studies increases from 4% for 7-year-olds to 8% for 11-year-olds, and 9% for 15-year-olds. The portion of instruction time dedicated to the arts slips from 10% for 7-year olds students and 8% for 11-year-olds to 4% for 15-year-olds, while time dedicated to physical education remains fairly constant at 9% for 7-year-olds and 8% for 11-year-olds, before dropping to 6% for 15-year-olds (Tables D1.5b, f and j, available on line).

Box D1.2. **Recess and breaks during the school day**

Learning in the classroom demands that students be focused and concentrate for long periods of time. Based on annual instruction hours and the number of instruction days per year, primary students have less than four hours of compulsory instruction per school day in one-third of countries, but more than five hours a day in a few countries (Canada, Chile, Denmark, France, Luxembourg and the United States). At the lower secondary level, the number of compulsory instruction hours per day is usually higher, with one-third of countries at less than five hours per day, and Denmark, France and Spain at six hours or more per day (Tables D1.1 and D1.2).

Research has found that spending some time outside the classroom during the school day in activities other than instruction can help improve students' performance in the classroom. In primary education, breaks in instruction allow pupils to play, rest and freely interact with their peers to further develop cognitive, emotional and social skills. Research suggests that students may then apply those skills in the classroom, thus improving their learning (Pellegrini and Bohn, 2005; Pellegrini et al., 2002). OECD countries increasingly consider recess and breaks as important components of the school day.

How breaks are organised in OECD countries depends on how education systems are governed and the degree of autonomy that individual schools enjoy (see Box D1.1 in OECD, 2015). In most countries, the school day is divided into lessons that last from 45 to 50 minutes, allowing for short breaks between them to make up an entire hour. Across OECD countries, 10-15 minute breaks are generally long enough to allow students to change classrooms and visit the bathroom. These short breaks are different in length and purpose from longer breaks also observed in the majority of countries. During longer breaks, students can have breakfast or lunch and are commonly supervised by a teacher or group of teachers.

In primary education, long breaks are common and, in some cases, are even compulsory. In Spain, for example, breaks in primary school are considered part of compulsory instruction time. Primary students in Spain have a half-hour break every day in the middle of the morning session that is considered part of the five daily instruction hours. In several countries, a lunch break is set as part of the learning process, where students learn about hygiene, healthy eating habits and/or recycling waste.

In several countries, long breaks can be found at all levels of education. In Australia, schools at all levels of education tend to have one morning recess that lasts about 20 minutes and then a longer lunch break. In Canada, there is a midday break for lunch in primary through upper secondary education. In both countries,

...

long breaks can last around 40 to 60 minutes. Breaks can also occur throughout the day. In Switzerland, for example, schools usually organise two breaks of about 20 minutes each and a long lunch break of about 60 to 90 minutes. In Chile, schools with a large number of pupils may divide students up into two or more groups, by grade or age, for their breaks.

Schools can use recess and breaks for different purposes. They can use breaks as a way of helping students who have to commute a long distance to school or to harmonise the end of classes when the duration of lesson periods is different across grades, as in the Czech Republic, where ten-minute breaks can be shortened to five minutes. In Denmark, municipalities often use breaks and recess as an integrated part of daily exercise and physical activities for students at all grade levels. This is also the case in Slovenia, where schools sometimes organise a long break intended for students to practice sports in the gym and on the school's outdoor playing fields.

Flexibility in the curriculum

In most countries, 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 about one in four countries with available data, 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). In such cases, schools/local authorities are free to decide how much time should be allocated for each grade (Tables D1.2 and D1.4).

Setting compulsory subjects within a flexible timetable is more common at the primary level where, on average across OECD countries and economies, this approach accounts for 12% of the compulsory instruction time. In this case, compulsory subjects and total instruction time are specified, but not the time to be allocated to each subject. Local authorities, schools and/or teachers are free to decide how much time should be allocated to each compulsory subject. In Belgium (Flemish and French Communities) and Italy, compulsory subjects within a flexible timetable account for 80% or more of instruction time at the primary level. At the primary and lower secondary levels, England (United Kingdom) and the Netherlands allow complete flexibility in allocating instruction time across 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.

Flexibility in the choice of subjects is less common across OECD countries. On average, 4% of compulsory instruction time is allocated to subjects chosen by schools at the primary level. At the lower secondary level, 5% of compulsory instruction time is allocated to subjects chosen by schools and another 4% to subjects chosen by the students. However, some countries allocate a substantial part of the compulsory instruction time to flexible subjects. For example, at least 10% of compulsory instruction time is allocated to subjects chosen by schools in Belgium (Flemish and French communities, lower secondary), Canada (lower secondary), Chile, the Czech Republic, Estonia (primary), Poland, the Slovak Republic (lower secondary) and Spain. Up to more than 20% of compulsory instruction time is allocated in this way in Australia (29% at the primary level and 22% at lower secondary level). In Australia, Iceland and Turkey, at least 16% of compulsory instruction time is allocated to subjects chosen by lower secondary students, and the proportion reaches 40% in Ireland (Tables D1.3a and b).

Non-compulsory instruction time

Non-compulsory instruction time is rare across OECD countries. Only six countries at primary level and seven countries at lower secondary level devote some time to non-compulsory instruction. Across OECD countries, non-compulsory instruction time is equivalent to an average of 4% of the total compulsory instruction time for primary students and 2% for lower secondary students. Nevertheless, a considerable amount of additional non-compulsory instruction time is provided in some countries. At the primary level, additional non-compulsory time accounts for 35% of the total compulsory instruction time in Greece, 26% in Portugal and 20% in Slovenia. At the lower secondary level, non-compulsory instruction time accounts for 21% of the total compulsory instruction time in Slovenia, 15% in Lithuania and 10% in France (Tables D1.3a and b).

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Definitions

Compulsory 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 pupils 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 pupils 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-/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, and individual tutoring or private study.

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 to which students are entitled beyond the compulsory hours of instruction and that almost every public school is expected to provide. Subjects can vary from school to school or from region to region and take the form of elective subjects. Students are not required to choose one of the elective subjects, but all public schools are expected to offer this possibility.

Methodology

Data on instruction time are from the 2015 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 2015/16.

In editions of *Education at a Glance* prior to 2014, data on instruction time were collected through another survey with a different scope, methodology and definitions than the 2013 Joint Eurydice-OECD instruction time data collection first published in *Education at a Glance 2014*. As a result, data on instruction time are not comparable with those published in previous editions of *Education at a Glance*.

This indicator 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. A study conducted by *Regioplan Beleidsonderzoek* in the Netherlands showed that, 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).

The indicator also illustrates how minimum 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 dividing the total number of instruction hours per the number of grades.

Notes on definitions and methodologies for each country related to this indicator are provided in Annex 3, available at www.oecd.org/education/education-at-a-glance-19991487.htm.

Note regarding data from Israel

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

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Indicator D1 Tables

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	Table D1.1	Instruction time in compulsory general education (2016)
	Table D1.2	Organisation of compulsory general education (2016)
	Table D1.3a	Instruction time per subject in primary education (2016)
	Table D1.3b	Instruction time per subject in general lower secondary education (2016)
WEB	Table D1.4	Instruction time in compulsory general education, by age (2016)
WEB	Table D1.5a	Instruction time per subject for 6-year-olds (2016)
WEB	Table D1.5b	Instruction time per subject for 7-year-olds (2016)
WEB	Table D1.5c	Instruction time per subject for 8-year-olds (2016)
WEB	Table D1.5d	Instruction time per subject for 9-year-olds (2016)
WEB	Table D1.5e	Instruction time per subject for 10-year-olds (2016)
WEB	Table D1.5f	Instruction time per subject for 11-year-olds (2016)
WEB	Table D1.5g	Instruction time per subject for 12-year-olds (2016)
WEB	Table D1.5h	Instruction time per subject for 13-year-olds (2016)
WEB	Table D1.5i	Instruction time per subject for 14-year-olds (2016)
WEB	Table D1.5j	Instruction time per subject for 15-year-olds (2016)
WEB	Table D1.5k	Instruction time per subject for 16-year-olds (2016)
WEB	Table D1.5l	Instruction time per subject for 17-year-olds (2016)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table D1.1. [1/2] Instruction time in compulsory general education[1] (2016)

By level of education, in public institutions

		Primary							Lower secondary			
			Average hours per year			Total number of hours				Average hours per year		
		Number of grades that are part of compulsory education	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time	Number of grades that are part of compulsory education	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time
		(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)=(5)+(6)	(8)	(9)	(10)	(11)=(9)+(10)
OECD	Australia	7	1 000	m	m	7 000	m	m	4	1 000	m	m
	Austria	4	705	m	m	2 820	m	m	4	899	m	m
	Belgium (Fl.)	6	826	a	826	4 956	a	4 956	2	952	a	952
	Belgium (Fr.)	6	849	m	m	5 096	m	m	2	971	m	m
	Canada	6	919	a	919	5 517	a	5 517	3	924	6	930
	Chile[2]	6	1 039	a	1 039	6 231	a	6 231	2	1 071	a	1 071
	Czech Republic	5	694	m	m	3 469	m	m	4	897	m	m
	Denmark	7	1 051	a	1 051	7 360	a	7 360	3	1 200	a	1 200
	England (UK)	6	m	a	m	m	a	m	3	m	a	m
	Estonia	6	661	a	661	3 964	a	3 964	3	823	a	823
	Finland[3]	6	632	29	661	3 794	171	3 965	3	844	57	901
	France	5	864	a	864	4 320	a	4 320	4	991	99	1 090
	Germany[2, 4]	4	703	a	703	2 812	a	2 812	5	907	a	907
	Greece	6	786	279	1 065	4 715	1 672	6 387	3	785	a	785
	Hungary	4	665	a	665	2 661	a	2 661	4	765	a	765
	Iceland[3]	7	729	a	729	5 100	a	5 100	3	839	a	839
	Ireland	6	915	a	915	5 490	a	5 490	3	935	a	935
	Israel	6	961	a	961	5 769	a	5 769	3	999	a	999
	Italy	5	891	a	891	4 455	a	4 455	3	990	a	990
	Japan[5]	6	763	a	763	4 575	a	4 575	3	895	a	895
	Korea[3]	6	648	a	648	3 885	a	3 885	3	842	a	842
	Latvia	6	599	m	m	3 595	m	m	3	794	m	m
	Luxembourg	6	924	a	924	5 544	a	5 544	3	845	a	845
	Mexico	6	800	a	800	4 800	a	4 800	3	1 167	a	1 167
	Netherlands[6]	6	940	m	m	5 640	m	m	3	1 000	m	m
	New Zealand	6	m	m	m	m	m	m	4	m	m	m
	Norway	7	748	a	748	5 234	a	5 234	3	874	a	874
	Poland	6	635	58	692	3 807	347	4 154	3	810	64	874
	Portugal	6	822	217	1 039	4 932	1 303	6 235	3	892	27	919
	Scotland (UK)	7	m	a	m	m	a	m	3	m	a	m
	Slovak Republic	4	688	a	688	2 750	a	2 750	5	837	a	837
	Slovenia	6	664	131	796	3 986	788	4 774	3	766	163	928
	Spain	6	791	a	791	4 746	a	4 746	3	1 044	a	1 044
	Sweden[3]	6	754	m	m	4 523	m	m	3	754	m	m
	Switzerland	6	815	m	m	4 887	m	m	3	958	m	m
	Turkey	4	720	a	720	2 880	a	2 880	4	843	a	843
	United States[7]	6	967	m	m	5 802	m	m	3	1 011	m	m
	OECD average	6	799	26	~	4 621	159	~	3	915	15	~
	EU22 average	6	775	45	~	4 338	268	~	3	895	26	~
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m
	Brazil	5	m	m	m	m	m	m	4	m	m	m
	China	m	m	m	m	m	m	m	m	m	m	m
	Colombia	5	1 000	m	m	5 000	m	m	4	1 200	m	m
	Costa Rica	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
	Lithuania	4	558	29	587	2 234	116	2 350	6	724	108	832
	Russian Federation	4	517	m	m	2 068	m	m	5	798	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m

Note: Columns showing instruction time in compulsory upper secondary education (i.e. Columns 19-25) are available for consultation on line (see *StatLink* below).

1. Refers to full-time compulsory education and excludes pre-primary education, even if compulsory.
2. Year of reference 2015.
3. Estimated number of hours by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.
4. Excludes the last year of compulsory education, which can be classified at either the lower secondary or the upper secondary level.
5. Actual instruction time.
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 (VMBO) was excluded from the calculation.
7. Year of reference 2012.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398794

D1

Table D1.1. [2/2] Instruction time in compulsory general education[1] (2016)

By level of education, in public institutions

	Lower secondary			Primary and lower secondary			
	Total number of hours				Total number of hours		
	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time	Theoretical duration in years	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time
	(12)	(13)	(14)=(12)+(13)	(15)	(16)	(17)	(18) = (16) + (17)
OECD							
Australia	4 000	m	m	11	11 000	m	m
Austria	3 597	m	m	8	6 417	m	m
Belgium (Fl.)	1 904	a	1 904	8	6 860	a	6 860
Belgium (Fr.)	1 941	m	m	8	7 037	m	m
Canada	2 773	17	2 790	9	8 290	17	8 307
Chile[2]	2 143	a	2 143	8	8 374	a	8 374
Czech Republic	3 587	m	m	9	7 056	m	m
Denmark	3 600	a	3 600	10	10 960	a	10 960
England (UK)	m	a	m	9	m	a	m
Estonia	2 468	a	2 468	9	6 431	a	6 431
Finland[3]	2 533	171	2 704	9	6 327	342	6 669
France	3 964	396	4 360	9	8 284	396	8 680
Germany[2, 4]	4 536	a	4 536	9	7 348	a	7 348
Greece	2 356	a	2 356	9	7 071	1 672	8 744
Hungary	3 059	a	3 059	8	5 720	a	5 720
Iceland[3]	2 516	a	2 516	10	7 616	a	7 616
Ireland	2 806	a	2 806	9	8 296	a	8 296
Israel	2 998	a	2 998	9	8 767	a	8 767
Italy	2 970	a	2 970	8	7 425	a	7 425
Japan[5]	2 684	a	2 684	9	7 260	a	7 260
Korea[3]	2 525	a	2 525	9	6 410	a	6 410
Latvia	2 381	m	m	9	5 976	m	m
Luxembourg	2 535	a	2 535	9	8 079	a	8 079
Mexico	3 500	a	3 500	9	8 300	a	8 300
Netherlands[6]	3 000	m	m	9	8 640	m	m
New Zealand	m	m	m	10	m	m	m
Norway	2 622	a	2 622	10	7 856	a	7 856
Poland	2 430	193	2 623	9	6 237	539	6 776
Portugal	2 675	80	2 756	9	7 607	1 383	8 991
Scotland (UK)	m	a	m	10	m	a	m
Slovak Republic	4 183	a	4 183	9	6 933	a	6 933
Slovenia	2 298	488	2 785	9	6 284	1 275	7 559
Spain	3 132	a	3 132	9	7 878	a	7 878
Sweden[3]	2 262	m	m	9	6 785	m	m
Switzerland	2 874	m	m	9	7 761	m	m
Turkey	3 371	a	3 371	8	6 251	a	6 251
United States[7]	3 033	m	m	9	8 835	m	m
OECD average	2 919	50	~	9	7 540	208	~
EU22 average	2 919	83	~	9	7 257	351	~
Partners							
Argentina	m	m	m	m	m	m	m
Brazil	m	m	m	9	m	m	m
China	m	m	m	m	m	m	m
Colombia	4 800	m	m	9	9 800	m	m
Costa Rica	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m
Lithuania	4 343	651	4 994	10	6 577	766	7 344
Russian Federation	3 990	m	m	9	6 058	m	m
Saudi Arabia	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m

Note: Columns showing instruction time in compulsory upper secondary education (i.e. Columns 19-25) are available for consultation on line (see *StatLink* below).

1. Refers to full-time compulsory education and excludes pre-primary education, even if compulsory.
2. Year of reference 2015.
3. Estimated number of hours by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.
4. Excludes the last year of compulsory education, which can be classified at either the lower secondary or the upper secondary level.
5. Actual instruction time.
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 (VMBO) was excluded from the calculation.
7. Year of reference 2012.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398794

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Table D1.2. Organisation of compulsory general education[1] (2016)

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	Average number of instruction days per school week	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	Average number of instruction days per school week	Flexible allocation of instruction time across multiple grades
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	7	5	200	5.0	No	4	12	200	5.0	No
	Austria	4	6	180	5.0	No	4	10	180	5.0	No
	Belgium (Fl.)	6	6	177	5.0	No	2	12	179	5.0	No
	Belgium (Fr.)	6	6	182	5.0	No	2	12	182	5.0	No
	Canada	6	6	182	5.0	No	3	12	182	5.0	No
	Chile[2]	6	6	185	5.0	No	2	12	184	5.0	No
	Czech Republic	5	6	196	5.0	Yes	4	11	196	5.0	Yes
	Denmark	7	6	200	5.0	No	3	13	200	5.0	No
	England (UK)[3]	6	5	190	5.0	Yes	3	11	190	5.0	Yes
	Estonia	6	7	175	5.0	Yes	3	13	175	5.0	Yes
	Finland	6	7	189	5.0	Yes	3	13	189	5.0	Yes
	France	5	6	162	4.5	No	4	11	162	4.5	No
	Germany[2, 4]	4	6	188	5.0	No	5	10	188	5.0	No
	Greece	6	6	171	5.0	No	3	12	152	5.0	No
	Hungary	4	6	181	5.0	No	4	10	181	5.0	No
	Iceland	7	6	170	5.0	Yes	3	13	170	5.0	Yes
	Ireland	6	6	183	5.0	No	3	12	167	5.0	No
	Israel	6	6	219	6.0	No	3	12	209	6.0	Yes
	Italy	5	6	200	5.0	No	3	11	200	6.0	No
	Japan	6	6	201	5.0	No	3	12	202	5.0	No
	Korea	6	6	190	5.0	Yes	3	12	190	5.0	Yes
	Latvia	6	7	169	5.0	No	3	13	173	5.0	No
	Luxembourg	6	6	180	5.0	Yes	3	12	169	5.0	No
	Mexico	6	6	200	5.0	No	3	12	200	5.0	No
	Netherlands[5]	6	6	m	5.0	Yes	3	12	m	5.0	Yes
	New Zealand	6	5	192	5.0	m	4	11	191	5.0	m
	Norway	7	6	190	5.0	Yes	3	13	190	5.0	Yes
	Poland[6]	6	7	181	5.0	Yes	3	13	179	5.0	Yes
	Portugal	6	6	180	5.0	No	3	12	178	5.0	No
	Scotland (UK)[3]	7	5	190	5.0	Yes	3	12	190	5.0	Yes
	Slovak Republic	4	6	191	5.0	No	5	10	191	5.0	No
	Slovenia	6	6	190	5.0	No	3	12	185	5.0	No
	Spain	6	6	175	5.0	No	3	12	175	5.0	No
	Sweden	6	7	178	5.0	Yes	3	13	178	5.0	Yes
	Switzerland	6	6	188	5.0	No	3	12	188	5.0	No
	Turkey	4	6	180	5.0	No	4	10	180	5.0	No
	United States	6	6	180	5.0	m	3	12	180	5.0	m
	OECD average[3]	6	6	185	5.0	~	3	12	184	5.0	~
	EU22 average[3]	6	6	182	5.0	~	3	12	180	5.0	~
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	5	6	200	5.0	m	4	11	200	5.0	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	5	6	200	5.0	m	4	11	200	5.0	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	4	7	160	5.0	Yes	6	11	168	5.0	Yes
	Russian Federation	4	7	169	5.0	No	5	11	175	5.0	No
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m
	G20 average	m	m	m	m	m	m	m	m	m	m

Note: Columns showing the organisation of compulsory upper secondary education (i.e. Columns 11-15) are available for consultation on line (see *StatLink* below).

1. Refers to full-time compulsory education and excludes pre-primary education, even if compulsory.
2. Year of reference 2015.
3. England and Scotland (United Kingdom) are not included in the averages.
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 (VMBO) was excluded from the calculation.
6. In the 2015/16 school year, primary education was compulsory for 6-year-old children, but in 2016/17 school year, primary education is compulsory for 7-year-old children and admission of 6-year-olds to grade 1 of primary school is left to the parents' discretion.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398801

D1

Table D1.3a. Instruction time per subject in primary education (2016)

As a percentage of total compulsory instruction time

		Reading, writing and literature	Mathematics	Natural sciences	Social studies	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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	24	17	6	8[d]	x(16)	x(16)	8	5	x(4)	x(11)	4[d]	x(11)	x(16)	x(16)	m	29[d]	**100**	m
	Austria	30	17	13[d]	x(3)	2	0	11	9	9	x(17)	x(3)	6	4	a	0	a	**100**	m
	Belgium (Fl.)	x(14)	x(14)	x(14)	x(14)	x(14)	a	x(14)	x(14)	7	x(17)	x(14)	a	x(17)	93[d]	a	x(14)	**100**	a
	Belgium (Fr.)	x(14)	x(14)	x(14)	x(14)	2	a	7	x(14)	7	a	x(14)	a	a	83[d]	a	a	**100**	m
	Canada	31	19	6	5	1	a	10	6	0	a	0	0	1	17	a	5	**100**	a
	Chile[1]	20	16	9	9	3	x(16)	9	10	5	x(16)	3	x(16)	2	a	a	14[d]	**100**	a
	Czech Republic	30	17	10[d]	x(3)	8	a	8	10	x(13)	1	4[d]	x(11)	x(16)	a	x(16)	12[d]	**100**	m
	Denmark	21	12	5	3	5	1	6	8	3	x(14)	a	4	23	8	a	a	**100**	a
	England (UK)[2]	x(14)	x(14)	x(14)	x(14)	x(14)	a	x(14)	x(14)	x(14)	x(14)	x(14)	a	a	100[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	24	16	11	2	6	a	10	13	5	a	a	a	a	6	a	7	**100**	5
	France	37	21	9[d]	5	6	a	13	9	x(17)	x(3)	x(3)	a	a	a	a	a	**100**	a
	Germany[1]	26	20	4	6	5	0	11	14	7	1	1	0	3	a	2	a	**100**	a
	Greece	25	13	10	7	8	2	8	10	4	3	a	a	a	a	a	8	**100**	35
	Hungary	28	15	5	a	3	a	18	15	2	2	4	a	a	a	a	7	**100**	a
	Iceland	20	16	8	13[d]	x(14)	x(14)	9	19[d]	x(4)	3	a	x(8)	x(15)	5[d]	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	22	18	8[d]	8	6	2	6	5	13	a	x(3)	4	a	a	a	8	**100**	a
	Italy	x(14)	x(14)	x(14)	x(14)	9	a	x(14)	x(14)	7	a	x(14)	a	a	84[d]	a	x(17)	**100**	a
	Japan	24	17	8	8	1	a	10	12	3	a	a	a	10	7	a	a	**100**	a
	Korea	22	14	9[d]	9[d]	6	a	7	9	x(4, 13)	x(13)	x(12)	x(3)	24[d]	a	a	a	**100**	a
	Latvia	21	17	5	6	8	1	8	12	2	1	a	4	9	a	a	6	**100**	m
	Luxembourg[3]	26[d]	19	7	2	x(1)	18	10	11	7	a	a	a	a	a	a	a	**100**	a
	Mexico	35	27	13	10	m	a	5	5	5	a	a	a	a	a	a	a	**100**	a
	Netherlands	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**	m
	New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
	Norway	26	17	6	7	7	a	11	15	8	a	a	2	a	a	a	1	**100**	a
	Poland[4]	18	14	10	5	10	a	14	7	a	3	3	a	3	a	a	13	**100**	9
	Portugal	27	27	7	7	5	a	8	9	a	a	2	a	4	2	a	3	**100**	26
	Scotland (UK)[2]	m	m	m	m	m	m	m	m	m	m	m	m	a	a	a	a	**m**	a
	Slovak Republic	32	17	6	3	6	x(16)	8	10	4	2	a	2	x(16)	a	x(16)	8[d]	**100**	a
	Slovenia	23	17	8	7[d]	6	a	15	16	x(4)	x(17)	6	2	1	a	a	a	**100**	20
	Spain	24	19	7	8	11	x(16)	9	2	6	0	a	a	0	a	x(16)	15[d]	**100**	a
	Sweden	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
	Switzerland	m	m	m	m	a	a	m	m	m	m	m	a	m	a	a	a	**m**	m
	Turkey	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
	OECD average[2]	22	15	7	6	5	1	8	9	5	1	1	1	3	12	0	4	**100**	4
	EU22 average[2]	21	14	6	4	6	1	8	9	4	1	1	1	3	16	0	4	**100**	5
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
	Brazil	m	m	m	m	m	a	m	m	m	m	a	a	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
	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
	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
	Lithuania	33	19	4	4	6	a	12	17[d]	4	a	x(8)	a	a	a	a	a	**100**	5
	Russian Federation	39	19	9	a	7	a	9	9	a	a	7	a	a	a	a	m	**100**	m
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m

Notes: Please refer to Tables D1.5a to D1.5l, available on line, for instruction time per subject for each age (see *StatLink* below).
The averages were adjusted to 100% and do not correspond exactly to the average of each column.
1. Year of reference 2015.
2. England and Scotland (United Kingdom) are not included in the averages.
3. The second language of instruction includes other national languages taught.
4. Excludes the first three years of primary education for which a large proportion of the time allocated to compulsory subjects is flexible.
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933398816

Table D1.3b. Instruction time per subject in general lower secondary education (2016)

As a percentage of total compulsory instruction time

		Reading, writing and literature	Mathematics	Natural sciences	Social studies	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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia[1]	12	12	11	10[d]	x(16)	x(16)	8	4	x(4)	x(11)	4[d]	x(11)	x(16)	x(16)	18	22[d]	**100**	m
	Austria	14	13	12	11	12	0	11	12	7	x(17)	0	8	0	a	0	a	**100**	m
	Belgium (Fl.)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	6	a	x(14)	a	a	73[d]	a	20	**100**	a
	Belgium (Fr.)	17	14	9	13	13	a	9	3	6	x(16)	3	x(16)	a	a	x(16)	13[d]	**100**	m
	Canada	20	15	9	13	6	a	10	6	2	a	3	1	1	2	1	11	**100**	1
	Chile[2]	16	16	11	11	8	x(16)	5	8	5	x(16)	3	x(16)	3	a	a	15[d]	**100**	a
	Czech Republic	12	12	17	9	10	5	8	8	x(13)	1	2[d]	x(11)	x(16)	a	x(16)	15[d]	**100**	m
	Denmark	18	13	13	8	8	8	5	x(15)	2	x(15)	x(15)	2	21	a	5[d]	a	**100**	a
	England (UK)[3]	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]	x(14)	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	12	12	16	8	9	7	9	9	4	a	a	6	a	4	a	5	**100**	7
	France	15	14	10	11[d]	12	5	12	7	x(4)	x(11)	6[d]	x(15)	3	a	4[d]	1	**100**	10
	Germany[2]	13	13	11	11	12	5	9	9	5	1	2	2	2	a	6	a	**100**	a
	Greece	26	11	10	12	6	6	7	6	6	3	2	6	x(16)	a	a	1[d]	**100**	a
	Hungary	13	12	13	9	11	a	16	7	3	3	3	a	3	a	a	8	**100**	a
	Iceland	14	14	8	8[d]	x(14)	x(14)	8	8[d]	x(4)	2	a	x(8)	x(15)	19[d]	20[d]	x(15)	**100**	a
	Ireland[4]	12	12	x(15)	17	x(14)	x(15)	7	x(15)	x(16)	x(15)	x(15)	x(15)	2	10[d]	40[d]	x(15)	**100**	a
	Israel	17	14	14[d]	15	11	9	5	x(16)	9	x(3)	x(3)	1	a	3	a	2[d]	**100**	a
	Italy	33[d]	20[d]	x(2)	x(1)	10	7	7	13	3	a	7	a	a	0	a	x(17)	**100**	a
	Japan	12	12	12	11	13	a	10	7	3	a	3	a	12	5	a	a	**100**	a
	Korea	13	11	19[d]	15[d]	10	a	8	8	x(4)	x(12)	x(12)	x(3)	9	a	x(16)	6[d]	**100**	a
	Latvia	15	16	10	14	8	6	6	6	a	1	a	4	7	a	a	9	**100**	m
	Luxembourg[4]	15	13	8	11	17	13	8	9	7	a	a	a	a	a	a	a	**100**	a
	Mexico	14	14	17	12	9	a	6	6	8	a	11	a	3	a	a	a	**100**	a
	Netherlands	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**	m
	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	8	9	9	6	a	a	7	a	a	7	a	**100**	a
	Poland	14	12	12	12	x(14)	x(14)	12	4	a	2	2	a	4	14[d]	a	13	**100**	8
	Portugal	13	13	18	14	8	8	7	7	a	2	a	a	a	6	a	2	**100**	3
	Scotland (UK)[3]	m	m	m	m	m	m	m	m	m	m	m	m	a	a	a	a	**m**	a
	Slovak Republic	16	14	12	11	10	x(16)	7	6	3	3	x(16)	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**	21
	Spain	16	13	12	11	11	0	7	5	5	x(11)	3[d]	a	3	a	2	10	**100**	a
	Sweden	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
	Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	a	m	a	**m**	m
	Turkey	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
	OECD average[3]	14	12	11	10	9	4	7	6	4	1	2	2	3	7	4	5	**100**	2
	EU22 average[3]	14	11	11	10	9	5	7	6	3	1	2	2	2	8	3	5	**100**	3
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
	Brazil	m	m	m	m	m	a	m	m	m	m	a	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
	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
	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
	Lithuania	18	13	13	14	10	5	5	7	3	3	6	a	1	a	a	a	**100**	15
	Russian Federation	21	16	17	9	10	a	7	5	a	2	5	1	a	a	m	7	**100**	m
	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m

Notes: Please refer to Tables D1.5a to D1.5l, available on line, for instruction time per subject for each age (see *StatLink* below).

The averages were adjusted to 100% and do not correspond exactly to the average of each column.

1. The intended instruction time derived from the Australian Curriculum assumes that certain subjects, which may be considered compulsory in years 7 and 8, could be delivered to students as electives in years 9 and 10.
2. Year of reference 2015.
3. England and Scotland (United Kingdom) are not included in the averages.
4. The second language of instruction includes other national languages taught.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

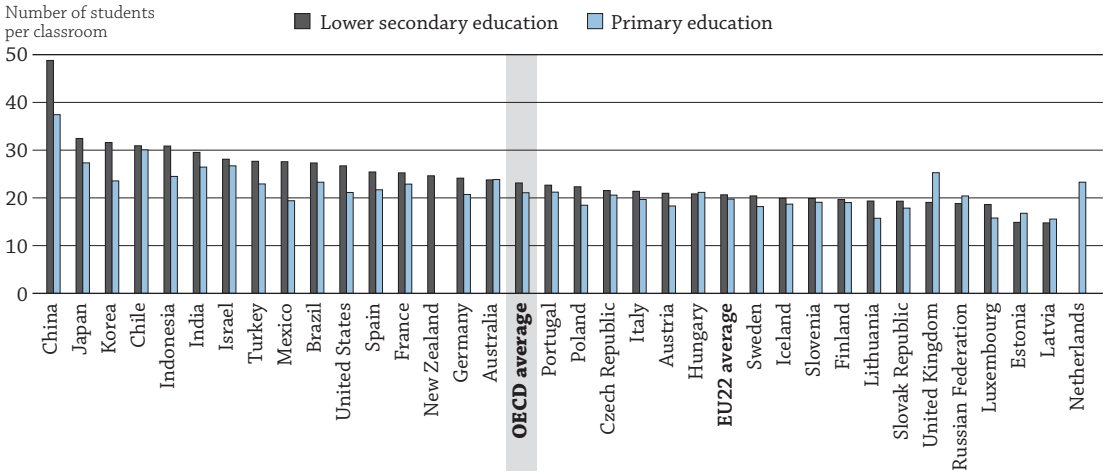
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

StatLink http://dx.doi.org/10.1787/888933398829

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

- The average primary school class in OECD countries has 21 students, and this average increases to 23 in lower secondary education. These figures represent a decrease when compared to the OECD average class sizes in 2005.
- The difference in average class size between public and private institutions in primary education varies substantially across OECD countries, but is considerably larger in partner countries.
- There are 15 students per teacher in primary education, on average across OECD countries. The figure increases to 17 students per teacher, on average, at the tertiary level.

Figure D2.1. Average class size, by level of education (2014)



Countries are ranked in descending order of the average class size in lower secondary education.

Source: OECD. Table D2.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398905

Context

Class size and student-teacher ratios are much-discussed aspects of education and, along with students' instruction time (see Indicator D1), teachers' working time (see Indicator D4), and the division of teachers' time between teaching and other duties, are among the determinants of the demand for teachers. Together with teachers' salaries (see Indicator D3) and the age distribution of teachers (see Indicator D5), class size and student-teacher ratios also have a considerable impact on the level of current expenditure on education (see Indicators B6 and B7).

Smaller classes are often seen as beneficial because they allow teachers to focus more on the needs of individual students and reduce the amount of class time needed to deal with disruptions. Yet, while there is some evidence that smaller classes may benefit specific groups of students, such as those from disadvantaged backgrounds (Piketty and Valdenaire, 2006), overall, evidence of the effect of differences in class size on student performance is weak.

The ratio of students to teaching staff indicates how resources for education are allocated. Smaller student-teacher ratios often have to be weighed against higher salaries for teachers, investing in their professional development, greater investment in teaching technology, or more widespread use of assistant teachers and other paraprofessionals, whose salaries are often considerably lower than those of qualified teachers.

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Other findings

- With the exceptions of Chile, Colombia, Luxembourg and Mexico, the student-teacher ratio decreases or stays the same between primary and lower secondary levels in all countries with available data, despite a general increase in class size between these levels.
- On average across OECD countries, the student-teacher ratio in lower and upper secondary education is slightly lower in private institutions than in public institutions. This is most striking in Mexico where, at the secondary level, there are at least 14 more students per teacher in public institutions than in private institutions.
- Class size varies significantly across countries. The biggest classes in primary education are observed in Chile (30 students per classroom) and China (37 students), while in Latvia, Lithuania and Luxembourg, classes have fewer than 17 students, on average.

Analysis

Average class size in primary and lower secondary education

The average primary class in OECD countries had 21 pupils in 2014. There are fewer than 26 pupils per primary classroom in nearly all of the countries with available data, with the exception of Chile, China, India, Israel and Japan.

At the lower secondary level, the average class in OECD countries has 23 students. Among all countries with available data on lower secondary education, that number varies from fewer than 20 students in Estonia, Latvia, Lithuania, Luxembourg, the Russian Federation, the Slovak Republic and the United Kingdom to 32 students per class in Japan and Korea, and 49 students in China (Table D2.1).

The number of students per class tends to increase between primary and lower secondary education. In China, Korea and Mexico, the increase in average class size exceeds seven students. Meanwhile, the United Kingdom and, to a lesser extent, Estonia, Latvia and the Russian Federation show a drop in the number of students per class between these two levels of education.

The indicator on class size is limited to primary and lower secondary education because class size is difficult to define and compare at higher levels, where students often split and attend several different classes, depending on the subject area.

Class size in public and private institutions

Class size is one factor that parents may consider when deciding on a school for their children, and the difference in average class size between public and private schools (and between different types of private institutions) could influence enrolment.

In most OECD countries, average class size does not differ between public and private institutions by more than two students per class in both primary and lower secondary education. However, there are marked differences among countries. For example, in Brazil, the Czech Republic, Iceland, Latvia, Poland, the Russian Federation and the United Kingdom, the average primary school class in public institutions is larger than the average class in a private school by more than four students (Table D2.1). However, with the exception of Brazil and the United Kingdom, the private sector is relatively small in all of these countries, representing at most 5% of students at the primary level (see Table C1.4a in OECD, 2015). In contrast, in China and Luxembourg, the average class in private institutions is larger than that in public institutions by six students.

The comparison of class size between public and private institutions shows a mixed picture at the lower secondary level, where private institutions are more prevalent. The average class in lower secondary private institutions is larger than in public institutions in 10 countries, smaller in 15 countries and the same in 7 countries. The differences, however, tend to be smaller than in primary education.

In countries where private institutions (including both government-dependent and independent) are more prevalent at the primary level (i.e. countries where more than 15% of students are enrolled in these institutions), such as Australia, Brazil, Indonesia, Israel and Spain, there may be considerable differences in class size between public and private institutions (see Table C1.4a in OECD, 2015). Among those countries, private institutions tend to have more students per class than public schools in Australia and Spain. .

Trends in average class size

On average across OECD countries, the size of classes in primary and lower secondary education decreased between 2005 and 2014. The most significant change occurred at the lower secondary level, where the average class size decreased by 6% in that period (Table D2.1). These averages mask considerably large changes in the class sizes of particular countries (Figure D2.2). In Estonia, for example, the average class size in lower secondary education decreased by 35% in these nine years. In Korea, classes at the primary level are, on average, 28% smaller. Other countries, however, experienced an increase in the average size of classes between 2005 and 2014, such as Portugal, where the average primary class size increased by 14%, and the Russian Federation, where the increase was 31%.

There have also been different trends in average class sizes within countries, when comparing changes in different types of institutions. In Estonia, while the average class size in primary public institutions experienced a sharp decrease of 15% between 2005 and 2014, the average class size in private institutions actually increased by 4%.

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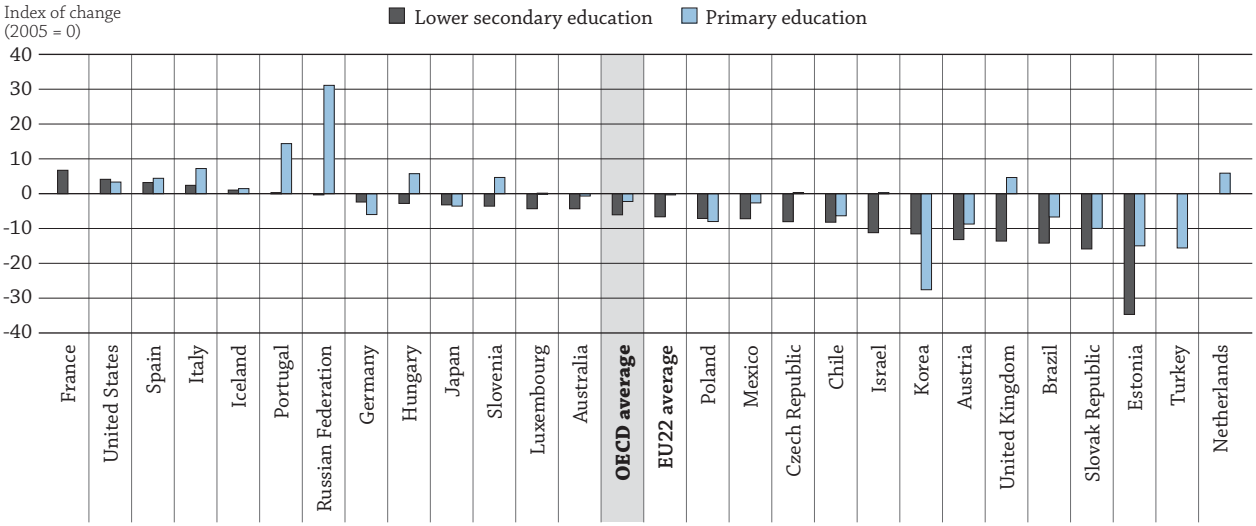
Indeed, during that period, the average primary class size in four countries (Chile, Estonia, Luxembourg and Turkey) increased in independent private institutions while it decreased in public institutions. The reverse is true in Portugal and Spain. However, even in countries where the average class sizes in public and private institutions have either both decreased or both increased during the period, the magnitude of change sometimes varies considerably. At the lower secondary level, for example, while the average class size in public institutions in Estonia decreased by 35%, the decrease in private institutions was smaller (14%) during the same period.

Figure D2.2. Change in average class size (2005, 2014)

Index of change, 2005 = 0



Countries are ranked in descending order of the index of change in lower secondary education between 2005 and 2014.

Source: OECD. Table D2.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398911

Student-teacher ratios

The ratio of students to teaching staff compares the number of students (full-time equivalent) to the number of teachers (full-time equivalent) at a given level of education and in similar types of institutions. However, this ratio does not take into account the amount of instruction time for students compared to the length of a teacher's working day, or how much time teachers spend teaching. Therefore, it cannot be interpreted in terms of class size (Box D2.1).

At the primary level, there are 15 students for every teacher, on average across OECD countries. The student-teacher ratio ranges from 27 students per teacher in Mexico to 10 or fewer in Greece, Lithuania, Luxembourg and Norway (Table D2.2).

Student-teacher ratios also vary, and to a larger extent, at the secondary school level, ranging from 27 students per full-time equivalent teacher in Mexico to fewer than 10 students per teacher in Austria, Lithuania and the Russian Federation. On average across OECD countries, there are about 13 students per teacher at the secondary level (Table D2.2).

As the differences in student-teacher ratios indicate, there are fewer full-time equivalent students per full-time equivalent teacher at the secondary level than at the primary level. In most countries, the student-teacher ratio decreases or stays the same between primary and lower secondary school despite an increase in class size. This is true in all but four countries: Chile, Colombia, Luxembourg and Mexico. However, the student-teacher ratio in Luxembourg is very low in both levels of education.

This reduction in the student-teacher ratio reflects differences in annual instruction time: since annual instruction time tends to increase with the level of education (see Indicator D1), so does the number of teachers. It may also result from delays in matching the teaching force to demographic changes, or from differences in teaching hours for teachers at different levels of education (the number of teaching hours tends to decrease with the level of education, as teacher specialisation increases).

At the tertiary level, the student-teacher ratio ranges from over 20 students per teacher in Belgium, Brazil, the Czech Republic, Greece, Indonesia, Korea and Saudi Arabia to 10 in Norway. However, comparisons at this level should be made with caution, since it is difficult to calculate full-time equivalent students and teachers on a comparable basis. In 6 of the 22 countries with available data at the tertiary level, the ratio of students to teaching staff is lower in short-cycle tertiary education than in bachelor's, master's, doctoral or equivalent levels. Among countries in which the ratio of students to teaching staff is higher in short-cycle tertiary education than in bachelor's, master's, doctoral or equivalent levels, Turkey displays the largest difference: 48 to 1 in short-cycle tertiary education and 17 to 1 in bachelor's, master's, doctoral or equivalent levels (Table D2.2).

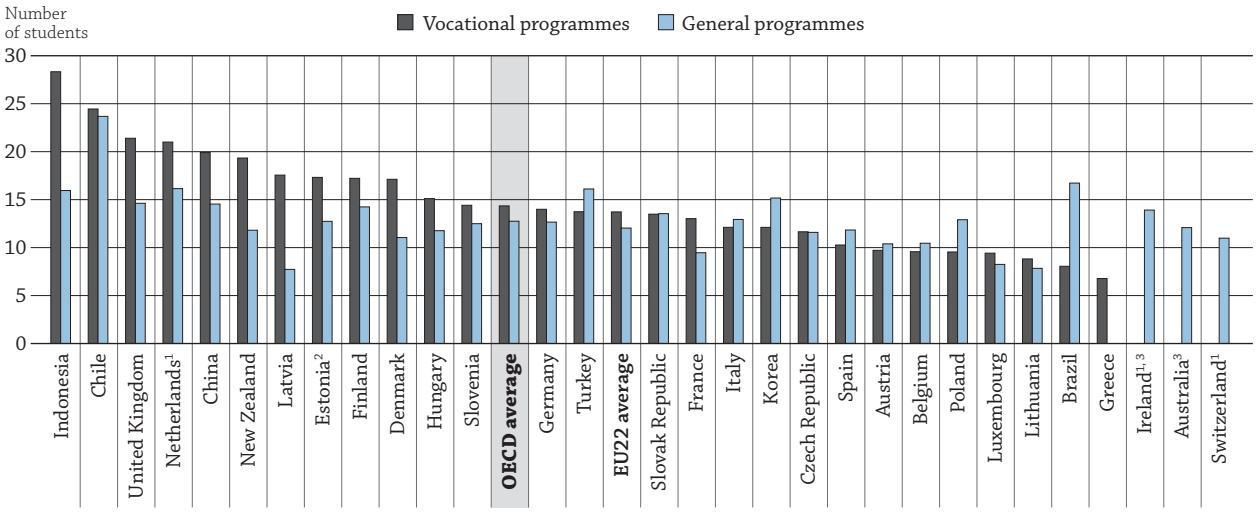
Differences between public and private institutions in student-teacher ratios are similar to those observed in class size. On average across the countries for which data are available, the ratios of students to teaching staff are slightly lower in private institutions than in public institutions at the lower and upper secondary levels. The largest differences between public and private institutions are in Brazil, Colombia, Mexico and Turkey, where, at the lower secondary level, there are at least seven more students per teacher in public institutions than in private institutions. At the upper secondary level, Colombia is the country with the highest difference in student-teacher ratios between public and private institutions, a difference of 13 students per teacher (Table D2.3).

However, in some countries, the student-teacher ratio is lower in public institutions than in private institutions. At the lower secondary level, this difference is most pronounced in Luxembourg, which has 22 students per teacher in private institutions, compared to 10 students per teacher in public institutions.

General and vocational programmes in upper secondary education

On average across OECD countries, the ratio of students to teaching staff in upper secondary vocational programmes (14 to 1) is slightly higher than that in general programmes (13 to 1) (Figure D2.3). The difference between the ratios of the two programmes can, however, be considerably higher in some countries. In Indonesia, which has the highest difference between programmes of all countries with available data, general programmes have 12 fewer students per teacher than vocational programmes. The difference is also large in Brazil, but the ratio is inversed: general programmes have 9 more students per teacher than vocational programmes. Among OECD countries with comparable data, Chile has the highest rate in both programmes: 24 students per teacher. When partner countries are also considered, Indonesia has the highest ratio in vocational programmes, 28 students per teacher.

Figure D2.3. Ratio of students to teaching staff in upper secondary education, by type of programme (2014)



1. Public institutions only.
2. Vocational programmes include programmes from post-secondary non-tertiary education.
3. Upper secondary general programmes include lower secondary.

Countries are ranked in descending order of the ratio of students to teaching staff in vocational programmes in upper secondary education.

Source: OECD. Table D2.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933398921

Box D2.1. What is the relationship between class size and the student-teacher ratio?

The student-teacher ratio is calculated by dividing the number of full-time equivalent students by the number of full-time equivalent teachers at a given level of education and type of institution. Class size, as presented in Table D2.1, 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. The calculation is done by dividing the number of students by the number of classes.

The two indicators, therefore, measure very different characteristics of the education system. Student-teacher ratios provide information on the level of teaching resources available in a country, whereas class size measures the average number of students that are grouped together in classrooms.

Given the difference between student-teacher ratio and average class size, it is possible for countries with similar student-teacher ratios to have different class sizes. For example, at the primary level, Israel and the United States have similar ratios of students to teaching staff (15 students per teacher – Table D2.2), but the average class size differs substantially (21 students in the United States and 27 in Israel – Table D2.1).

Definitions

Instructional personnel (teaching staff) includes two categories:

Teachers' aides and teaching/research assistants includes non-professional personnel or students who support teachers in providing instruction to students.

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

Methodology

Data refer to the academic year 2013/14 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm).

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.

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.

Notes on definitions and methodologies regarding this indicator for each country are presented in Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm.

Note regarding data from Israel

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

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D2

Indicator D2 Tables

StatLink http://dx.doi.org/10.1787/888933398860

Table D2.1	**Average class size by type of institution (2014) and index of change between 2005 and 2014**
Table D2.2	**Ratio of students to teaching staff in educational institutions (2014)**
Table D2.3	**Ratio of students to teaching staff, by type of institution (2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

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Table D2.1. [1/2] **Average class size by type of institution (2014) and index of change between 2005 and 2014**

By level of education, calculations based on number of students and number of classes

		Primary education					Lower secondary education				
			Private institutions					Private institutions			
		Public institutions	Total private institutions	Government-dependent private institutions	Independent private institutions	Total public and private institutions	Public institutions	Total private institutions	Government-dependent private institutions	Independent private institutions	Total public and private institutions
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	23	25	25	a	**24**	23	25	25	a	**24**
	Austria	18	19	x(2)	x(2)	**18**	21	21	x(7)	x(7)	**21**
	Belgium (Fr.)	m	m	m	m	**m**	m	m	m	m	**m**
	Canada	m	m	m	m	**m**	m	m	m	m	**m**
	Chile	29	31	32	24	**30**	30	31	33	25	**31**
	Czech Republic	21	15	15	a	**21**	22	19	19	a	**22**
	Denmark	m	m	m	m	**m**	m	m	m	m	**m**
	Estonia	17	16	x(2)	x(2)	**17**	15	13	x(7)	x(7)	**15**
	Finland	19	17	17	a	**19**	20	20	20	a	**20**
	France	23	23	23[d]	x(3)	**23**	25	26	26	13	**25**
	Germany	21	21	21[d]	x(3)	**21**	24	24	24[d]	x(8)	**24**
	Greece	m	m	m	m	**m**	m	m	m	m	**m**
	Hungary	21	20	21	16	**21**	21	21	22	16	**21**
	Iceland	19	13	13	a	**19**	20	11	11	a	**20**
	Ireland	25	m	a	m	**m**	m	m	a	m	**m**
	Israel	28	24	24	a	**27**	29	24	24	a	**28**
	Italy	20	20	a	20	**20**	21	21	a	21	**21**
	Japan	27	29	a	29	**27**	32	33	a	33	**32**
	Korea	24	28	a	28	**24**	32	31	31	a	**32**
	Latvia	16	9	a	9	**16**	15	10	a	10	**15**
	Luxembourg	15	21	17	21	**16**	19	19	20	18	**19**
	Mexico	19	19	a	19	**19**	28	24	a	24	**28**
	Netherlands	23[d]	m	x(1)	m	**23**	m	m	a	m	**m**
	New Zealand	m	m	m	m	**m**	25	21	a	21	**25**
	Norway[1]	m	m	m	m	**m**	m	m	m	m	**m**
	Poland	19	11	10	12	**18**	23	17	23	15	**22**
	Portugal	21	21	24	20	**21**	23	24	25	22	**23**
	Slovak Republic	18	17	17	0	**18**	19	18	18	0	**19**
	Slovenia	19	20	20	a	**19**	20	21	21	a	**20**
	Spain	21	24	25	22	**22**	25	26	27	22	**25**
	Sweden	18	16	16	a	**18**	20	21	21	a	**20**
	Switzerland	m	m	m	m	**m**	m	m	m	m	**m**
	Turkey	23	19	a	19	**23**	28	19	a	19	**28**
	United Kingdom	26	21	27	14	**25**	20	18	20	11	**19**
	United States	22	18	a	18	**21**	28	20	a	20	**27**
	OECD average	21	20	m	m	**21**	23	21	m	m	**23**
	EU22 average	20	18	m	m	**20**	21	20	m	m	**21**
Partners	Argentina	m	m	m	m	**m**	m	m	m	m	**m**
	Brazil	25	18	a	18	**23**	28	24	a	24	**27**
	China	37	43	x(2)	x(2)	**37**	49	51	x(7)	x(7)	**49**
	Colombia	m	m	m	m	**m**	m	m	m	m	**m**
	Costa Rica	m	m	m	m	**m**	m	m	m	m	**m**
	India[2]	x(5)	x(5)	x(5)	x(5)	**26**	x(10)	x(10)	x(10)	x(10)	**30**
	Indonesia	25	22	a	22	**25**	31	31	a	31	**31**
	Lithuania	16	15	a	15	**16**	19	20	a	20	**19**
	Russian Federation	21	13	a	13	**20**	19	12	a	12	**19**
	Saudi Arabia	m	m	m	m	**m**	m	m	m	m	**m**
	South Africa	m	m	m	m	**m**	m	m	m	m	**m**
	G20 average	24	23	m	m	**24**	28	26	m	m	**28**

1. Students are organised in groups that vary in size during the school day.
2. Year of reference 2013.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D2.1. [2/2] Average class size by type of institution (2014) and index of change between 2005 and 2014

By level of education, calculations based on number of students and number of classes

		Index of change between 2005 and 2014 (2005 = 100)							
		Primary education				Lower secondary education			
		Public institutions	Government-dependent private institutions	Independent private institutions	Total public and private institutions	Public institutions	Government-dependent private institutions	Independent private institutions	Total public and private institutions
		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	98	103	m	99	94	98	m	96
	Austria	91	m	m	91	87	m	m	87
	Belgium (Fr.)	m	m	m	m	m	m	m	m
	Canada	m	m	m	m	m	m	m	m
	Chile	86	98	102	94	86	95	101	92
	Czech Republic	101	92	m	100	92	88	m	92
	Denmark	m	m	m	m	m	m	m	m
	Estonia	85	x(13)	104[d]	85	65	x(13)	86[d]	65
	Finland	m	m	m	m	m	m	m	m
	France	m	m	m	m	107	105	100	107
	Germany	94	91[d]	x(12)	94	98	93[d]	x(16)	98
	Greece	m	m	m	m	m	m	m	m
	Hungary	106	110	m	106	97	101	m	97
	Iceland	102	98	m	101	101	90	m	101
	Ireland	102	m	m	m	m	m	m	m
	Israel	104	m	m	100	92	m	m	89
	Italy	108	m	103	107	103	m	98	102
	Japan	97	m	86	96	97	m	93	97
	Korea	72	m	86	72	88	90	m	88
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg	99	83	112	100	97	97	86	96
	Mexico	98	a	88	97	93	a	91	93
	Netherlands	m	m	m	106	m	m	m	m
	New Zealand	m	m	m	m	m	m	m	m
	Norway[1]	m	m	m	m	m	m	m	m
	Poland	94	82	100	92	94	86	102	93
	Portugal	117	95	96	114	100	102	99	100
	Slovak Republic	90	88	m	90	84	81	m	84
	Slovenia	105	115	m	105	96	101	m	96
	Spain	106	102	91	104	106	99	91	103
	Sweden	m	m	m	m	m	m	m	m
	Switzerland	m	m	m	m	m	m	m	m
	Turkey	84	m	115	84	m	m	m	m
	United Kingdom	102	m	127	105	83	108	116	86
	United States	103	a	99	103	105	a	95	104
	OECD average	98	m	m	98	94	m	m	94
	EU22 average	100	m	m	100	94	m	m	93
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	96	m	97	93	85	m	94	86
	China	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m	m
	India[2]	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	131	m	132	131	100	m	121	100
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m
	G20 average	m	m	m	m	m	m	m	m

1. Students are organised in groups that vary in size during the school day.
2. Year of reference 2013.

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table D2.2. Ratio of students to teaching staff in educational institutions (2014)

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

		Primary	Lower secondary	Upper secondary			All secondary education	Post-secondary non-tertiary	Tertiary		
				General programmes	Vocational programmes	All programmes			Short-cycle tertiary	Bachelor's, master's, doctoral or equivalent level	All tertiary
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	16	x(3)	12[d]	m	m	m	m	m	15	m
	Austria	12	9	10	10	10	9	11	9	17	15
	Belgium	13	9	10	10	10	10	17	x(10)	x(10)	22
	Canada[1, 2]	16[d]	x(1)	x(5)	x(5)	14	m	m	m	m	m
	Chile	21	23	24	24	24	24	a	m	m	m
	Czech Republic	19	12	12	12	12	12	21	12	22	22
	Denmark	12	11	11	17	13	12	a	23	14	14
	Estonia	13	10	13	17[d]	15[d]	12[d]	x(4)	a	15	15
	Finland	13	9	14	17	16	13	17	a	14	14
	France	19	15	9	13	10	13	x(8)	19[d]	18	18[d]
	Germany	15	13	13	14	13	13	13	13	12	12
	Greece	9	8	m	7	m	m	m	a	45	45
	Hungary	11	11	12	15	12	12	14	15	15	15
	Iceland	m	m	m	m	m	m	m	m	m	m
	Ireland[3]	16	x(4)	14[d]	m	14[d]	14[d]	m	x(10)	x(10)	20
	Israel[3]	15	12	x(5)	x(5)	11	11	m	m	m	m
	Italy	12	12	13	12	12	12	m	a	19	19
	Japan	17	14	x(5)	x(5)	12[d]	13[d]	x(3, 4)	m	m	m
	Korea	17	17	15	12	15	15	m	29	19	21
	Latvia[4]	11	8	8	18	10	9	16	23	18[d]	19
	Luxembourg	9	11	8	9	9	10	m	9	m	m
	Mexico	27	33	x(5)	x(5)	21	27	a	18	15	16
	Netherlands[3]	17	16	16	21	19	17	21	16	16	16
	New Zealand	16	16	12	19	13	15	21	17	17	17
	Norway	10	10	x(5)	x(5)	10[d]	10[d]	x(5)	x(5)	10	10
	Poland	11	10	13	10	11	11	15	8	15	15
	Portugal	14	10	x(5)	x(5)	9[d]	10[d]	x(5)	a	14[d]	14[d]
	Slovak Republic	17	12	14	14	14	13	13	9	14	14
	Slovenia	16	8	13	14	14	11	a	22	16	17
	Spain	14	12	12	10	11	12	a	11	13	13
	Sweden	13	12	x(5)	x(5)	14	13	11	10	11	11
	Switzerland[3]	15	12	11	m	m	m	m	m	m	m
	Turkey	19	18	16	14	15	17	a	48	17	20
	United Kingdom	20	15	15	21	16	16	a	18	17	17
	United States	15	15	x(5)	x(5)	15	15	x(10)	x(10)	x(10)	15[d]
	OECD average	15	13	13	14	13	13	m	m	17	17
	EU22 average	14	11	12	14	13	12	m	m	17	17
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	21	18	17	8	15	17	19	50	25	25
	China	16	13	15	20	17	14	x(8)	22[d]	19	20[d]
	Colombia	24	26	x(5)	x(5)	22	25	m	m	m	m
	Costa Rica	m	m	m	m	m	m	a	a	m	m
	India	m	m	m	m	m	m	m	a	m	m
	Indonesia	21	18	16	28	20	19	a	x(10)	x(10)	28
	Lithuania	10	7	8	9	8	8	14	a	16	16
	Russian Federation	20	9[d]	x(2)	x(7, 8)	x(2, 7, 8)	9	23[d]	11[d]	11	11[d]
	Saudi Arabia	m	m	m	m	m	m	m	x(10)	x(10)	21
	South Africa	m	26[d]	x(2)	m	m	m	m	m	m	m
	G20 average	18	17	14	15	15	15	m	m	17	18

1. Year of reference 2013.
2. Primary includes pre-primary.
3. Public institutions only. For Israel, public institutions only for upper secondary education.
4. Bachelor's, master's and doctoral programmes includes teachers from government-dependent institutions in short-cycle tertiary education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table D2.3. Ratio of students to teaching staff, by type of institution (2014)

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

	Lower secondary education				Upper secondary education				All secondary programmes			
	Public institutions	Private institutions			Public institutions	Private institutions			Public institutions	Private institutions		
		Total private institutions	Government-dependent private institutions	Independent private institutions		Total private institutions	Government-dependent private institutions	Independent private institutions		Total private institutions	Government-dependent private institutions	Independent private institutions
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia[1]	x(5)	x(6)	x(7)	a	13[d]	12[d]	12[d]	a	13	12	12	a
Austria	9	10	x(2)	x(2)	10	9	x(6)	x(6)	9	10	x(10)	x(10)
Belgium	9	9	9	m	10	10	10	m	10	10	10	m
Canada[2]	m	m	m	m	14	12	x(6)	x(6)	m	m	m	m
Chile	20	26	27	21	23	25	27	16	21	25	27	17
Czech Republic	12	10	10	a	11	13	13	a	12	12	12	a
Denmark	11	11	11	3	13	7	6	28	12	10	11	4
Estonia[3]	10	8	a	8	15[d]	12[d]	a	12[d]	12[d]	10[d]	a	10[d]
Finland	9	9	9	a	16	17	17	a	12	16	16	a
France	15	m	18	m	10	m	12	m	12	m	15	m
Germany	13	13	x(2)	x(2)	13	12	x(6)	x(6)	13	13	x(10)	x(10)
Greece	8	7	a	7	m	8	a	8	m	7	a	7
Hungary	11	11	12	8	12	13	12	14	12	12	12	13
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	x(5)	m	a	m	14[d]	m	a	m	14	m	a	m
Israel	12	8	8	a	11	m	m	a	11	m	m	a
Italy	12	11	a	11	13	7	a	7	12	8	a	8
Japan[3]	14	12	a	12	11[d]	14[d]	a	14[d]	13[d]	14[d]	a	14[d]
Korea	16	17	17	a	14	16	16	a	15	16	16	a
Latvia	8	5	a	5	10	8	a	8	9	7	a	7
Luxembourg	10	22	11	a	9	8	9	7	9	11	10	12
Mexico	36	18	a	18	23	15	a	15	30	16	a	16
Netherlands	16	m	a	m	19	m	a	m	17	m	a	m
New Zealand	16	13	a	13	13	11	12	11	15	12	12	12
Norway[3]	10	9	x(2)	x(2)	10[d]	14[d]	x(6)	x(6)	10[d]	13[d]	x(10)	x(10)
Poland	10	9	11	8	11	13	12	13	11	11	12	11
Portugal[3]	10	13	13	12	9[d]	8[d]	11[d]	7[d]	10[d]	9[d]	12[d]	8[d]
Slovak Republic	13	12	12	a	14	12	12	a	13	12	12	a
Slovenia	8	7	7	a	14	14	13	26	11	13	12	26
Spain	11	15	16	9	11	14	14	13	11	14	15	12
Sweden	12	15	15	0	14	14	14	0	13	14	14	0
Switzerland	12	m	m	m	m	m	m	m	m	m	m	m
Turkey	19	8	a	8	16	7	a	7	18	7	a	7
United Kingdom	15	15	16	10	15	17	19	8	15	16	18	9
United States	16	11	a	11	16	11	a	11	16	11	a	11
OECD average	13	12	m	m	13	12	m	m	13	12	m	m
EU22 average	11	11	m	m	13	11	m	m	12	11	m	m
Partners												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	19	12	a	12	17	10	a	10	18	11	a	11
China	12	18	18	a	16	19	19	a	14	18	18	a
Colombia	30	17	x(2)	x(2)	26	15	x(6)	x(6)	29	16	x(10)	x(10)
Costa Rica	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	19	17	a	17	18	22	a	22	19	19	a	19
Lithuania	7	9	a	9	8	6	a	6	8	8	a	8
Russian Federation	9[d]	3[d]	a	3[d]	x(1)	x(2)	a	x(4)	9	3	a	3
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
G20 average	16	13	17	m	15	13	15	m	15	13	16	m

1. Includes only general programmes in lower and upper secondary education.
2. Year of reference 2013.
3. Upper secondary education includes programmes from post-secondary non-tertiary education. For Norway, upper secondary also includes short-cycle tertiary education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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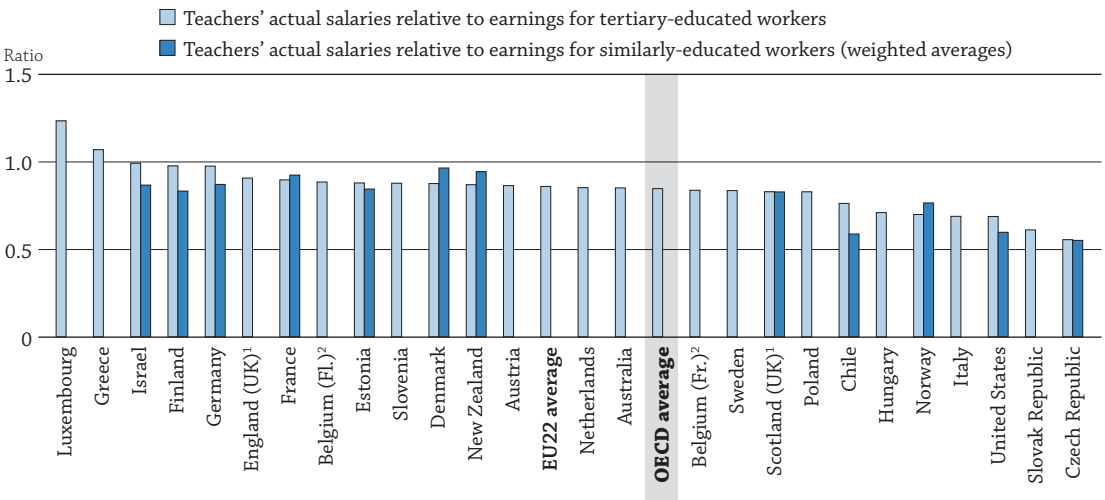
HOW MUCH ARE TEACHERS PAID?

- On average across OECD countries, pre-primary teachers' actual salaries are 74% of the earnings of a tertiary-educated 25-64 year-old full-time, full-year worker. Primary teachers are paid 81% of these benchmark earnings, lower secondary teachers 85% and upper secondary teachers 89%.
- The statutory salaries of teachers with 15 years of experience and typical qualifications average USD 39 245 at the pre-primary level, USD 42 675 at the primary level, USD 44 407 at the lower secondary level and USD 46 379 at the upper secondary level.

Figure D3.1. Lower secondary teachers' salaries relative to earnings for tertiary-educated workers (2014)

Actual salaries of lower secondary teachers teaching general programmes in public institutions



Note: For further details on the different metrics used to calculate these ratios, please refer to the *Methodology* section.

1. Data on earnings for full-time, full-year workers with tertiary education refer to the United Kingdom.

2. Data on earnings for full-time, full-year workers with tertiary education refer to Belgium.

Countries and economies are ranked in descending order of the ratio of teachers' salaries to earnings for full-time, full-year tertiary-educated workers aged 25-64.

Source: OECD. Table D3.2a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

Teachers' salaries represent the largest single cost in formal education and have a direct impact on the attractiveness of the teaching profession. They influence decisions to enrol in teacher education, become a teacher after graduation (as graduates' career choices are associated with relative earnings in teaching and non-teaching occupations and their likely growth over time), return to the teaching profession after a career interruption and/or remain a teacher (in general, the higher the salaries, the fewer the people who choose to leave the profession) (OECD, 2005). Burgeoning national debt, spurred by governments' responses to the financial crisis of late 2008, have put pressure on policy makers to reduce government expenditure – particularly on public payrolls. Since compensation and working conditions are important for attracting, developing and retaining skilled and high-quality teachers, policy makers should carefully consider teachers' salaries as they try to ensure both quality teaching and sustainable education budgets (see Indicators B6 and B7).

However, statutory salaries are just one component of teachers' 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 teachers' total remuneration. There are also large differences in taxation and social-benefits systems in OECD countries. All this should be borne in mind when analysing teachers' salaries and comparing them across countries.

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Other findings

- In most OECD countries, teachers' salaries increase with the level of education they teach. For example, the salary of an upper secondary school teacher with 15 years of experience and typical qualifications in Belgium, Denmark, Finland, Mexico and the Slovak Republic is at least 25% higher than that of a pre-primary school teacher with the same experience and typical qualifications.
- Salaries at the top of the scale for teachers with typical qualifications are, on average, 65% higher than starting salaries in pre-primary education, 70% higher in primary education, 70% higher in lower secondary education and 68% higher in upper secondary education. The difference tends to be greatest when it takes many years to progress through the scale. In countries where it takes 30 years or more to reach the top of the salary scale, salaries at that level can be more than 90% higher, on average, than starting salaries.
- Teachers with maximum qualifications at the top of their salary scales are paid, on average, USD 51 210 at the pre-primary level, USD 54 312 at the primary level, USD 57 602 at the lower secondary level and USD 58 605 at the upper secondary level.
- In 9 out of 25 countries with available data, the average annual salaries of upper secondary teachers including bonuses and allowances are at least 10% higher than statutory salaries for upper secondary teachers with 15 years of experience and typical qualifications.
- The average annual salaries for full-time equivalent tertiary academic instructional faculty members vary across the 18 countries with available data in 2014, ranging from USD 26 726 in the Slovak Republic to USD 133 025 in Luxembourg. For the 14 countries with available data on salaries by gender, the average salaries for men are significantly higher than for women.

Trends

Between 2005 and 2014, statutory salaries of teachers (with typical qualifications and 15 years of experience) increased in real terms, on average across OECD countries, by 6% at the pre-primary level, 4% at the primary level, 3% at the lower secondary level and 1% at the upper secondary level. However, the economic downturn in 2008 had a direct impact on teachers' salaries, which were either frozen or cut in some countries. Between 2005 and 2014, teachers' statutory salaries decreased in real terms, in one-third of the countries and economies with available data. The decrease (at pre-primary, primary and secondary levels) reached more than 10% in England (United Kingdom) and Portugal, and up to 30% in Greece.

Analysis

Statutory teachers' salaries

Teachers' salaries vary widely across countries (for salaries at the tertiary level, see Box D3.1). The salaries of lower secondary school teachers with 15 years of experience and typical qualifications range from less than USD 20 000 in the Czech Republic, Hungary and the Slovak Republic to more than USD 60 000 in Canada, Germany, the Netherlands and the United States, and exceed USD 110 000 in Luxembourg (Table D3.1a and Figure D3.2).

In most countries, teachers' salaries increase with the level of education they teach. In Belgium, Denmark and the Slovak Republic, upper secondary teachers with 15 years of experience and typical qualifications earn between 25% and 40% more than pre-primary teachers with the same experience; in Finland they earn 55% more, and in Mexico 82% more. In Finland and the Slovak Republic, the difference is mainly explained by the gap between pre-primary and primary teachers' salaries. In Belgium, teachers' salaries at the upper secondary level are significantly higher than at the other levels of education. The differences between salaries at each level of education should be interpreted in light of the requirements to enter the teaching profession (see OECD, 2014, Indicator D6).

On the other hand, the difference between salaries for upper secondary and pre-primary teachers with 15 years of experience and typical qualifications is less than 5% in Australia, Korea, Luxembourg, Slovenia and Turkey, and teachers receive the same salary irrespective of the level of education taught in Colombia, England (United Kingdom), Greece, Poland, Portugal and Scotland (United Kingdom). Salaries of teachers with 15 years of experience and typical qualifications are also equal at primary, lower secondary and upper secondary levels in Colombia, the Czech Republic, England (United Kingdom), Greece, Japan, Poland, Portugal, Scotland (United Kingdom), the Slovak Republic and Slovenia.

In Israel, the salary of a pre-primary teacher is 26% higher than the salary of an upper secondary teacher. This difference is the result of the "New Horizon" reform, begun in 2008 and almost fully implemented by 2014, that increased salaries for pre-primary, primary and lower secondary teachers. Another reform, launched in 2012, aims to raise salaries for upper secondary teachers.

Box D3.1. Tertiary faculty salaries

There have been substantial increases in enrolment rates in tertiary education programmes over the past two decades. These have been accompanied by growth in spending on tertiary education and an expansion of facilities and staffing to meet the needs of these new students. Policy makers and the public across OECD countries have become increasingly concerned about the capacity for tertiary educational institutions to continue to recruit sufficient numbers of high-quality instructors.

In a 2016 survey, data were gathered about the structures for determining faculty salaries and the average salaries offered by public and government-dependent private tertiary institutions. This survey was a follow-up to a similar survey administered in 2015. Criteria included in determining faculty salaries were similar across the two survey years. The majority of countries use national salary scales as a basis for determining tertiary faculty salaries, and, in most countries, individual institutions have discretion in modifying these payment levels. Almost all countries reported that academic rank and length of experience were used as criteria for setting faculty salaries. In addition, educational attainment, research experience and type of institution were factors commonly considered in establishing faculty salaries.

The 2016 survey obtained estimates for average actual annual salaries for all full-time equivalent (FTE) tertiary academic instructional faculty and for full-time full professors for the 2013/14 academic year. Though preliminary, these results reveal some interesting findings. In 2013/14, 18 OECD and partner countries reported average salaries for FTE tertiary faculty ranging from USD 26 726 in the Slovak Republic to USD 133 025 in Luxembourg (tertiary faculty salaries were converted using PPPs for private consumption from the OECD National Accounts database). For the 14 countries that were able to break out FTE faculty salaries by gender, the average salaries were consistently higher for males than for females. The difference between men's and women's salaries was smallest in Belgium (French Community), where female FTE faculty earn 2% less than male FTE faculty. The difference was greatest in Italy, where female FTE faculty earn 21% less than male FTE faculty. This gap may result from the difference in the age structure of female and male FTE faculty, women being younger than men and more prevalent at the beginning of the academic career.

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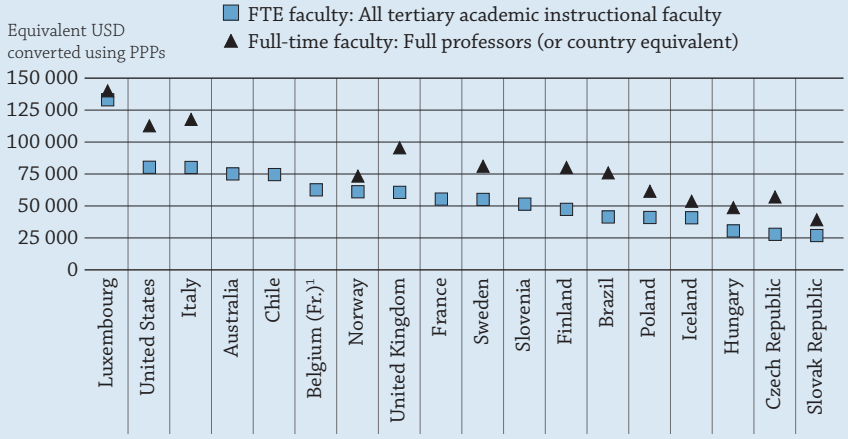
Fourteen countries reported 2013/14 salary data for full-time full professors. Among these, average annual actual salary estimates ranged from USD 39 116 in the Slovak Republic to USD 140 077 in Luxembourg. For the 11 countries that were able to break out these salaries by gender, the salary gap by gender for full-time full professors was less than the gap for FTE faculty. In Brazil and Norway, salaries for female full professors were only slightly lower than for male professors. The difference between men's and women's salaries was greatest in the United States, where female full-time full professors earn 15% less than male full-time full professors.

Salary data for 2013/14 could be compared to salary data from 2012/13 for countries which submitted data in both survey years. In 9 of 12 reporting countries, salaries for FTE tertiary academic instructional faculty increased in real terms between these two years, while salaries decreased in 3 countries. The largest increases were seen in Hungary and Poland, where salaries of FTE faculty were about 5% higher in 2013/14 than in 2012/13 and in Chile where the increase is more than 7% during this period. The largest decrease was seen in Slovenia, where salaries of FTE faculty were 1.5% lower in 2013/14 than in 2012/13. Changes in average faculty salaries can reflect both changes in salary scales and changes in distribution of faculty at lower and higher levels of the faculty salary scale.

Nine countries reported both 2012/13 and 2013/14 salary estimates for full-time full professors. In eight countries, salaries increased in real terms between these two years, while salaries decreased in one country. The largest increases were seen in the Czech Republic, Hungary, Poland and the United States. In each of these countries, salaries of full-time full professors were about 4% higher in 2013/14 than in 2012/13. In the United Kingdom, salaries of full-time full professors were 1% lower in 2013/14 than in 2012/13.

Figure D3.a. Average actual annual salaries of tertiary academic instructional faculty at public and government-dependent private institutions (2013/14)

Average actual annual salaries of teachers in public institutions, in equivalent USD converted using PPPs



1. Excludes actual salaries in universities.

Countries and economies are ranked in descending order of average annual actual salaries of FTE faculty: All tertiary academic instructional faculty.

Source: OECD. Table D3.10. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399054

Minimum and typical qualifications

Statutory salaries of teachers do not only vary with the level of education at which they teach or the number of years of experience of teachers, but also according to the qualification level of teachers.

The minimum qualifications required to teach at a given level of education refer to the usual duration and type of training required to enter the profession (see OECD, 2014, Indicator D6) and do not include other requirements to become a licensed teacher in the public school system, such as probation years. The typical level of qualifications refers to the level of qualifications and training that teachers typically have (i.e. the qualifications held by the largest proportion of teachers in the system, in a given year). The typical qualifications may include certificates and qualifications obtained while in the teaching profession. The definition varies by country (Box D3.2).

Box D3.2. Typical qualifications of teachers

In most OECD countries, teachers are required to have a specific level of attainment or type of diploma to enter the teaching profession, or even a combination of qualifications. Typical qualifications generally involve the completion of requirements beyond teachers' typical educational attainment (see Annex 3 for the differences between minimum and typical qualifications levels between countries). Very often, teachers have to undergo training, gain practical experience and/or demonstrate their skills over probation periods to become fully qualified teachers. Sometimes they have to satisfy additional criteria, such as passing competitive examinations, to be able to teach or to reach higher levels in pay scales and degrees of responsibility in the school system. Criteria may also change depending on the level of education at which they teach (for further information, see OECD, 2014, Indicator D6).

As a result, the minimum qualifications required to enter the teaching profession may not be the most commonly held qualifications in the teaching force. In several education systems, the "typical" teacher has most likely undergone certification and qualification processes beyond the minimum requirements and has reached a given position in a salary scale. This is what is referred to as the typical qualifications of teachers, and it varies depending on the country and the school system.

Variations between the minimum qualifications and the typical qualifications of teachers currently teaching are often seen in countries where policy or legislation has recently changed and the requirements for entering the teaching profession have been raised or lowered. Variations can also arise in systems where professional development activities have an effect on the definition of teachers' qualifications and on their salaries, as well as in systems where several types of qualifications (types of diploma and/or ISCED levels of attainment) are accepted for entrance into the teaching profession or where there are alternative pathways. Differences can also be indicators of teachers' progression throughout their careers.

Differences in salaries of teachers between those with minimum and typical qualifications are by no means the general rule (in countries with a large proportion of teachers with the minimum qualifications level, the minimum qualifications level may also represent the typical qualifications). In 16 of the 34 countries with available data, there are no differences in salaries between teachers with minimum and typical qualifications throughout a teacher's career. In the remaining 18 countries, differences in teachers' statutory salaries may reflect differences in whether teachers hold typical or minimum qualifications, at least in one education level and at least at one point in their career: at starting salary, after ten years of experience, after 15 years of experience or at the top of the salary scale (Table D3.1a and Table D3.1b, available on line).

In Chile, Ireland, Israel, Mexico and the Slovak Republic (primary, lower secondary and upper secondary), starting salaries are the same for all teachers. It is only after teachers have spent some time in the school system that the salaries of teachers with minimum and typical qualifications start to diverge. In Belgium (French Community), Canada, Colombia, the Czech Republic and the United States, teachers with typical qualifications have higher statutory salaries than teachers with minimum qualifications at all points of a teacher's career (including starting salaries), at all levels of education for which information is available. This is true in Australia as well, except at the top of the salary scale, where salaries do not generally depend on teachers' qualifications. In Norway, statutory salaries are higher for teachers with typical qualifications at all stages of their career and all education levels except pre-primary, where there is no difference between minimum and typical qualifications. Conversely, in Poland, the statutory salaries of teachers with typical qualifications are higher than those of teachers with minimum qualifications at all levels of education except upper secondary, since most teachers in Poland have a master's degree or the equivalent (ISCED 7), which is the qualification required to teach upper secondary but not other levels of education (Table D3.1a and Table D3.1b, available on line).

Differences in statutory salaries can be substantial between teachers with the minimum and typical qualifications and 15 years of experience. They range from 10% or less in Australia, Chile, Ireland, Israel, New Zealand and Spain (lower secondary level), to more than 30% in Belgium (French Community, upper secondary level, after 10 or more years of experience), England (United Kingdom), and Poland (at pre-primary and primary levels, after 15 years of experience or at the top of the scale) (Table D3.1a and Table D3.1b, available on line).

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Starting and maximum teachers' salaries

Education systems compete with other sectors of the economy to attract high-quality graduates as teachers. Research shows that salaries and alternative employment opportunities are important influences on the attractiveness of teaching (Santiago, 2004). Teachers' starting salaries relative to other non-teaching occupations and the likely growth in earnings have a huge influence over a graduate's decision to become a teacher.

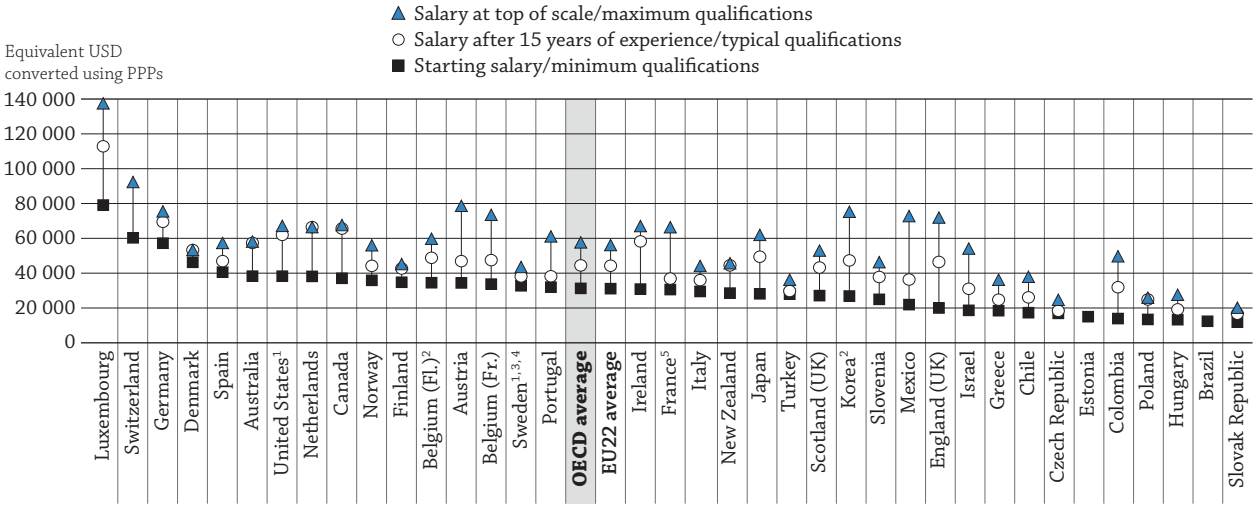
Countries that are looking to increase the supply of teachers, especially those with an ageing teacher workforce and/or a growing school-age population, might consider offering more attractive starting wages and career prospects. However, to ensure a well-qualified teaching workforce, efforts must be made not only to recruit and select, but also to retain the most competent and qualified teachers.

At the lower secondary level, new teachers entering the profession with minimum qualifications earn, on average, USD 31 220. Starting salaries range from below USD 15 000 in Brazil, Estonia, Hungary, Poland and the Slovak Republic to more than USD 40 000 in Denmark, Germany and Spain, more than USD 60 000 in Switzerland and nearly USD 80 000 in Luxembourg. For teachers at the top of the salary scale and with the maximum qualifications, salaries average USD 57 602. This maximum salary ranges from less than USD 25 000 in the Czech Republic and the Slovak Republic, to USD 75 000 or more in Austria, Germany and Korea, more than USD 90 000 in Switzerland and more than USD 130 000 in Luxembourg.

Comparing the extent of the statutory salary scale, from starting salaries (with minimum qualifications) to maximum salaries (with maximum qualifications), most countries and economies with starting salaries below the OECD average also show maximum salaries below the OECD average. At the lower secondary level, some exceptions are England (United Kingdom), Japan, Korea and Mexico, where starting salaries are at least 10% lower than the OECD average, but maximum salaries are 7% to 30% higher. The opposite is true for Denmark, Finland, Norway and Spain where starting salaries are at least 10% higher than the OECD average, while maximum salaries are lower than OECD average (Figure D3.2, and Table D3.6, available on line). This results from the fact that a number of countries have relatively flat/compressed salary scales. The difference between starting and maximum salaries is 30% or less in Denmark, Finland (pre-primary), Norway (pre-primary) and Sweden (pre-primary).

Figure D3.2. Lower secondary teachers' salaries at different points in teachers' careers (2014)

Annual statutory salaries of teachers in public institutions, in equivalent USD converted using PPPs



1. Actual base salaries.
2. Salaries at top of scale and typical qualifications, instead of maximum qualifications.
3. Salaries at top of scale and minimum qualifications, instead of maximum qualifications.
4. Data from 2013.
5. Includes the average of fixed bonuses for overtime hours.

Countries and economies are ranked in descending order of starting salaries for lower secondary teachers with minimum qualifications.

Source: OECD. Table D3.1a, Tables D3.1b and D3.6, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399015

Weak financial incentives may make it more difficult to retain teachers as they approach the peak of their earnings. However, there may be some benefits to compressed pay scales. For example, organisations in which there are smaller differences in salaries among employees may enjoy more trust, freer flows of information and more collegiality among co-workers.

By contrast, maximum salaries are at least double the starting salaries in Belgium (French Community), Chile, Israel and Korea at all levels of education, in Poland in pre-primary and primary levels, in Ireland and Japan in primary and secondary levels, in Austria and France at lower and upper secondary levels, and in Hungary at the lower secondary level. Maximum salaries are more than three times higher than starting salaries at all levels of education in Colombia, England (United Kingdom) and Mexico (except at the upper secondary level) (Figure D3.2, and Table D3.6, available on line).

At the top of the salary scale, the salary premium for higher qualifications also varies across countries. At the lower secondary level, while there is no difference between salaries at the top of the scale for teachers with minimum and maximum qualifications in 11 of 34 countries and economies with data for both, in Belgium (French Community), Colombia, the Czech Republic, France, Israel, Norway and the Slovak Republic, the difference is at least 25%. This salary gap is widest in England (United Kingdom) and Mexico, where teachers with maximum qualifications at the top of the scale earn at least twice as much as those with the same experience but minimum qualifications. In England (United Kingdom) this gap reflects the salary increase available to teachers accessing the "Leading Practitioner" pay scale. A similar picture is seen at the upper secondary level (Table D3.1b and Table D3.6, available on line).

When analysing starting and maximum salaries, it is important to bear in mind that "minimum" and "maximum" qualifications do not refer to all teachers, as teachers may have other qualifications levels, such as the typical qualifications (see Table X2.5 for the proportion of teachers with minimum or typical qualifications levels), that not all teachers may aim for or reach the top of the salary scale and that few of them hold the maximum qualifications.

Teaching experience and salary scales

Salary structures usually define the salaries paid to teachers at different points in their careers. Deferred compensation, which rewards employees for staying in organisations or professions and for meeting established performance criteria, is also used in teachers' salary structures. OECD data on teachers' salaries are limited to information on statutory salaries at four points of 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. Further qualifications can influence differences in starting and maximum salaries and lead to wage increases in some countries.

In OECD countries, teachers' salaries rise during the course of a career (for a given qualifications level), although the rate of change differs across countries. With a typical qualifications level, the average statutory salaries for lower secondary school teachers with 10 years of experience are 28% higher than the average starting salaries, and 37% higher with 15 years of experience. In addition, salaries at the top of the scale (reached after an average of 24 years of experience) are 65% higher, on average, than starting salaries. In Greece, Israel, Italy, Korea and Spain, lower secondary school teachers reach the top of the salary scale only after 35 years of service or more. By contrast, lower secondary teachers in Australia, Colombia and Scotland (United Kingdom) reach the highest step on the salary scale within 6 to 9 years (Tables D3.1a and D3.3a).

Statutory salaries per hour of net teaching time

As the number of hours of teaching varies considerably between countries and also between levels of education, differences in statutory salaries of teachers may also translate into different levels of salary per teaching hour. The average statutory salary per teaching hour after 15 years of experience and with typical qualifications is USD 55 for primary teachers, USD 65 for lower secondary teachers and USD 74 for upper secondary teachers in general education.

Chile, the Czech Republic (except upper secondary level) and the Slovak Republic show the lowest salaries per teaching hour: USD 30 or less. By contrast, salaries per teaching hour are USD 90 or more at the lower and upper secondary levels in Germany and at the upper secondary level in Belgium (Flemish and French communities), Denmark, Japan and Norway. They exceed USD 120 in Luxembourg at all levels. For pre-primary teachers with typical qualifications, the average statutory salary per teaching hour after 15 years of experience is USD 44. However, in about a third of the countries, pre-primary teachers with 15 years of experience and typical qualifications earn less than USD 30 per teaching hour (Table D3.3a).

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Because secondary teachers are required to teach fewer hours than primary teachers, their salaries per teaching hour are usually higher than those of teachers at lower levels of education, even in countries where statutory salaries are similar (see Indicator D4). On average across OECD countries, upper secondary teachers' salaries per teaching hour exceed those of primary teachers by about 35%. In Scotland (United Kingdom), there is no difference, while in Denmark the salary per teaching hour for an upper secondary teacher is 91% higher than for a primary teacher (Table D3.3a).

However, the difference in salaries per teaching hour between primary and secondary teachers may disappear when comparing salaries per hour of working time. In Portugal, for example, there is a 23% difference in salaries per teaching hour between primary and upper secondary teachers, even though statutory salaries and total working time are the same at these levels. The difference is explained by the fact that primary teachers spend more time in teaching activities than upper secondary teachers (see Table D4.1).

Trends since 2000

Among the half of the OECD countries with available data on statutory salaries of teachers with typical qualifications for 2000 and 2014, teachers' salaries increased overall in real terms in most of these countries during this period. Notable exceptions are Denmark (upper secondary), England (United Kingdom) and France, where there was a decline of about 9% to 11%, Greece where salaries decreased by 18% and Italy (primary and secondary education), where there was a slight decline (less than 2%) in teachers' salaries in real terms. Among other countries, salaries increased most significantly (by 20% or more over this period) in Hungary (pre-primary to upper secondary), Ireland (primary to upper secondary), Israel (pre-primary to lower secondary), Mexico (pre-primary to lower secondary), Scotland (United Kingdom) (pre-primary), Turkey (pre-primary and primary) and the United States (pre-primary and primary). The increase exceeded 40% in Scotland (United Kingdom) (pre-primary) (Table D3.5a).

Over the period 2005 to 2014, where three-quarters of OECD countries have comparable data, more than half of these countries showed an increase in their salaries in real terms. On average across countries with available data for 2005 and 2014 reference years, salaries increased by 4% at the primary level, 3% at the lower secondary level and 1% at the upper secondary level. The increase exceeded 20% in Poland at pre-primary, primary and secondary levels – the result of a 2007 government programme that aimed to increase teachers' salaries successively between 2008 and 2013 and to improve the quality of education by providing financial incentives to attract high-quality teachers – and also in Israel (pre-primary, primary and lower secondary), Luxembourg (pre-primary and primary) and Turkey (pre-primary and primary).

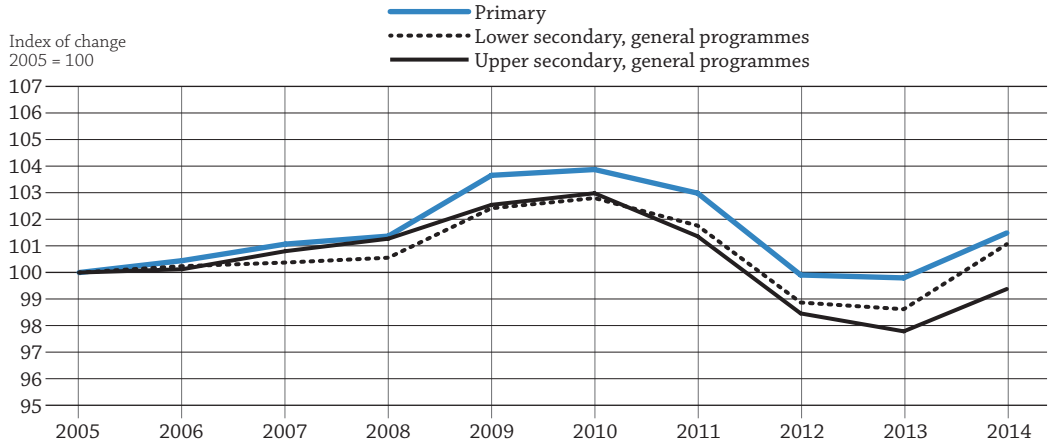
In most countries, similar increases in teachers' salaries were seen at the primary, lower secondary and upper secondary levels. However, this is not true in Israel and Luxembourg. In Israel, salaries increased by more than 40% at the pre-primary level, by 27% at the primary level, by 37% at the lower secondary level and by 13% at the upper secondary level. In Luxembourg, the increase exceeded 45% at the pre-primary and primary levels, compared to a 17% increase at lower and upper secondary levels. In both Israel and Luxembourg, the difference in the index of change between primary and secondary teachers' salaries is due to reforms that aimed to increase primary teachers' salaries. In Israel, this is largely the result of the gradual implementation of the "New Horizon" reform in primary and lower secondary schools, begun in 2008, following an agreement between the education authorities and the Israeli Teachers Union (for primary and lower secondary education). This reform includes higher teacher pay in exchange for more working hours (see Indicator D4). In the academic year 2013/14 for example, 93% of full-time equivalent teachers in pre-primary education, 97% in primary education and 92% in lower secondary education were included in the reform. The same year, a similar reform ("*Oz Letmura*") was introduced at the upper secondary level, affecting 31% of full-time equivalent teachers in the academic year 2013/14.

By contrast, salaries (at pre-primary, primary and secondary levels) have decreased by more than 10% since 2005 in England (United Kingdom) and Portugal, and also in Hungary at the upper secondary level, and by 30% in Greece.

However, these overall changes in teachers' salaries in OECD countries between 2005 and 2014 mask different periods of change in teachers' salaries as a result of the impact of the economic downturn in 2008. On average across OECD countries with available data over the period, salaries were either frozen or cut between 2009 and 2013 and then started to increase again (Figure D3.3, and for more information see Box D3.3 in OECD, 2015). As a consequence the period from 2010 to 2014 is of particular interest to analyse the change in teachers' salaries further to the crisis.

Figure D3.3. Change in teachers' salaries in OECD countries (2005-14)

OECD average index of change, among countries with data on statutory salaries for all reference years, for teachers with 15 years of experience and minimum qualifications (2005 = 100, constant prices)



Source: OECD. Table D3.5b, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

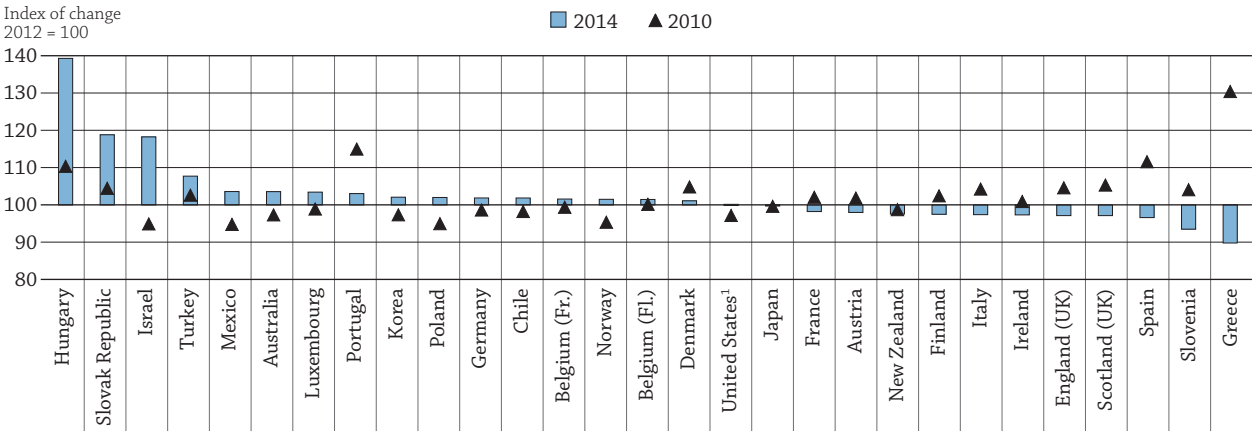
StatLink http://dx.doi.org/10.1787/888933399029

At the lower secondary level of education, changes in statutory salaries show different patterns among the 29 countries with available data for 2010, 2012 and 2014 (Figure D3.4). In most of the countries, salaries increased over both 2010-12 and 2012-14 or decreased over both periods. Salaries decreased continuously in nearly a third of the countries and economies, all of them in Europe (Austria, England [United Kingdom], Finland, France, Greece, Ireland, Italy, Scotland [United Kingdom], Spain and Slovenia), while salaries increased continuously in more than a third of the countries (most of them outside Europe).

In a small group of countries (Denmark, Hungary, Portugal, the Slovak Republic and Turkey), statutory salaries decreased from 2010 to 2012 and then increased from 2012 to 2014. In Hungary, the Slovak Republic and Turkey, the decrease in salaries between 2010 and 2012 was counterbalanced by a larger increase in salaries between 2012 and 2014. In Denmark and Portugal, the increase in salaries between 2012 and 2014 did not counterbalance the large decrease between 2010 and 2012, and salaries in 2014 are lower than those in 2010 (especially in Portugal) (Figure D3.4).

Figure D3.4. Change in lower secondary teachers' statutory salaries (2010, 2012 and 2014)

Index of change between 2010 and 2014 (2012 = 100, constant prices), for statutory salaries of teachers with 15 years of experience and typical qualifications



1. Actual base salaries.

Countries and economies are ranked in descending order of the index of change, between 2012 and 2014, in the statutory salaries of lower secondary teachers with 15 years of experience.

Source: OECD. Table D3.5a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399036

The above analysis on trends in salaries is based on teachers with 15 years of experience and typical qualifications (a proxy for mid-career teachers). But teachers at certain stages of their career may experience more rapid pay increases than teachers at other stages of their career. For example, some countries that have been experiencing teacher shortages may implement targeted policies to improve the attractiveness of the profession by increasing the salaries of beginning teachers (OECD, 2005). In France, for example, starting teachers received an increase in pay in 2010 and 2011.

Formation of base salary and additional payments: Incentives and allowances

Statutory salaries, based on pay scales, are only one component of teachers' total compensation. School systems also offer additional payments, such as allowances, bonuses or other rewards to teachers. These may take the form of financial remuneration and/or reduction in the number of teaching hours, and decisions on the criteria used for the formation of base salary are taken at different levels (Table D3.8, available on line).

Criteria for additional payments vary across countries. In the large majority of countries, core tasks of teachers (teaching, planning or preparing lessons, marking students' work, general administrative work, communicating with parents, supervising students and working with colleagues) are rarely considered as meriting bonuses or additional payments (Table D3.7). Shouldering other responsibilities, however, often entails having some sort of extra compensation. In about half of the countries and economies with information available for lower secondary teachers, teachers who participate in school management activities in addition to their teaching duties receive some sort of compensation, either reduced teaching time, as in Chile, Denmark, Finland, Luxembourg, Portugal and the Slovak Republic, or an annual additional payment, as in Canada (in some provinces/territories), England (United Kingdom), France, Ireland, Italy, Japan, Korea, Norway and Spain. It is also common to see additional payments, either annual or occasional, when teachers teach more classes or hours than required by their full-time contract, have responsibility as a class or form teacher, or perform special tasks, like training student teachers (Table D3.7).

Occasional additional payments are also awarded for outstanding performance of teachers, as is the case for lower secondary teachers in the Czech Republic, Estonia, Israel, Japan, Korea, Poland, the Slovak Republic, Slovenia and Turkey (but performance bonuses can also be administered through increases in basic salary, such as in England [United Kingdom], France, Hungary and Mexico). Additional payments can also include bonuses for special teaching conditions, for teaching students with special needs in regular schools and for teaching in disadvantaged, remote or high-cost areas (Table D3.7).

Actual average salaries

Unlike statutory salaries, actual salaries of teachers may include work-related payments, such as annual bonuses, results-related bonuses, extra pay for holidays, sick-leave pay and other additional payments. These bonuses and allowances can represent a significant addition to base salaries. In this case, teachers' actual average salaries are influenced by the prevalence of bonuses and allowances in the compensation system on top of factors such as the level of experience or the qualifications level of the teaching force (Box D3.3). Differences between statutory and actual average salaries are also linked to the distribution of teachers by year of experience and qualifications level, as these two factors have an impact on the salary level of teachers.

Actual salaries of teachers aged 25-64 average USD 37 274 at the pre-primary level, USD 41 476 at the primary level, USD 43 961 at the lower secondary level and USD 46 575 at the upper secondary level.

Among the 25 OECD countries with available data on both statutory salaries of teachers with 15 years of experience and typical qualifications and actual salaries of 25-64 year-old teachers, actual annual salaries are 10% to 40% higher than statutory salaries in around a third of the countries: Austria, the Czech Republic, Denmark (upper secondary level), Finland (primary and secondary levels), France (secondary level), Hungary, Israel, Poland (primary and secondary levels) and the Slovak Republic. By contrast, actual annual salaries are over 10% lower than statutory salaries at the pre-primary level in Australia and Slovenia, and at pre-primary and primary levels in Luxembourg (Tables D3.1a and D3.4). This may result from the proportion of younger and/or less experienced teachers at these levels.

In some countries, average actual teachers' salaries vary more across education levels than statutory salaries for teachers with 15 years of experience and typical qualifications. For example, in the Czech Republic, statutory salaries are 7% higher at upper secondary level than at the pre-primary level, while actual salaries are 21% higher at upper secondary level than at the pre-primary level. The gap in average actual salaries between upper secondary teachers and pre-primary teachers is at least 15 percentage points greater than the difference in their statutory salaries in France and Israel, and this gap exceeds 45 percentage points in Slovenia, partly because statutory salaries do not increase much between pre-primary and upper secondary levels. The variety of bonuses available for different levels of education partly explains these differences (see Annex 3, available on line).

Box D3.3. Actual average salaries, by age group and gender

At pre-primary, primary and secondary levels, actual salaries of older teachers (those aged 55-64) are, on average, 37% to 40% higher than those of younger teachers (those aged 25-34). This difference between age groups varies considerably between countries and economies. The difference is less than 30% at all levels of education in the Czech Republic, Denmark, England (United Kingdom), Finland, Italy, New Zealand, Norway and Sweden, while it is 53% or more in Austria, Chile, Greece, Israel, Luxembourg and Slovenia.

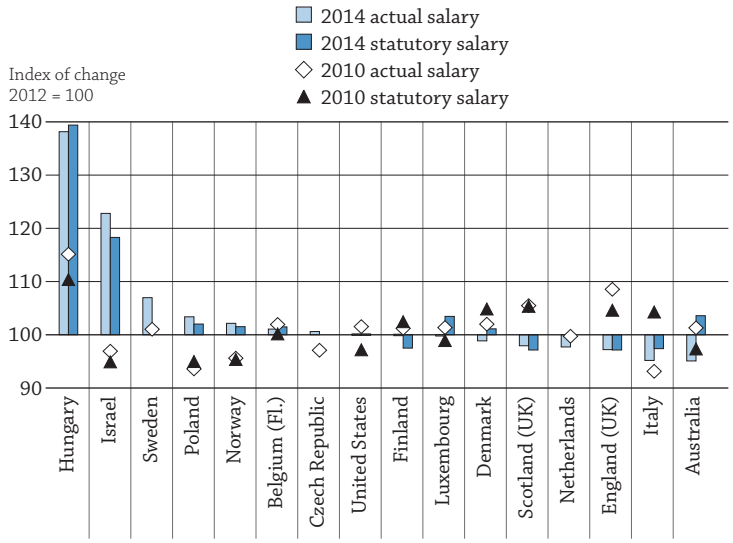
Despite the increase in teachers' salaries for older age groups, the comparison of teachers' salaries with earnings of tertiary-educated workers seems to show that teachers' salaries may evolve at a slower rate than earnings of other workers and that the teaching profession is less attractive as the work force ages. On average across OECD countries, teachers' actual salaries relative to earnings of tertiary-educated workers are about 8 to 9 percentage points higher among the youngest adults (25-34 year-olds) than among the older age groups (55-64 year-olds). However, there are large differences between countries, and in Chile, Hungary and Luxembourg, teachers' actual salaries relative to earnings of tertiary-educated workers are higher for older age groups at pre-primary, primary and secondary levels.

A comparison of the actual salaries of male and female teachers shows that differences in actual salaries are small – 3% or less, on average, at pre-primary, primary and secondary levels. Female teachers earn, on average, only slightly more than male teachers at the pre-primary level and slightly less at the primary, lower secondary and upper secondary levels.

Larger gender differences are shown in the ratio of teachers' salaries to earnings for similarly educated workers aged 25-64. On average across OECD countries, actual salaries of male teachers (aged 25-64) are 64% (at pre-primary level) to 81% (at upper secondary level) of the earnings of a tertiary-educated 25-64 year-old full-time, full-year male worker. Teachers' actual salaries relative to earnings of tertiary-educated workers are about 25 percentage points higher among women than among the men at pre-primary, primary and secondary levels of education. This higher ratio among female teachers shows that the teaching profession may be more attractive to women than to men compared to other professions, but it also reflects the persistent gender gap in earnings in the labour market (Tables D3.2 and D3.4).

Figure D3.5. Change in lower secondary teachers' actual and statutory salaries (2010, 2012 and 2014)

Index of change between 2010 and 2014 (2012 = 100, constant prices), for actual salaries of 25-64 year-old teachers and for statutory salaries of teachers with 15 years of experience and typical qualifications



Countries and economies are ranked in descending order of the index of change, between 2012 and 2014, in actual salaries of lower secondary teachers.

Source: OECD. Table X2.4f. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399047

Among countries with available data for both statutory and actual salaries of lower secondary teachers over 2010-14 actual salaries of teachers changed in a similar way to statutory salaries of teachers in most countries. However, in Australia, actual salaries decreased between both 2010-12 and 2012-14, while statutory salaries increased during the whole period (Figure D3.5).

Teachers' salaries relative to earnings for tertiary-educated workers

Young people's decisions to undertake teacher training, and graduates' decisions to enter or stay in the profession, are influenced by the salaries of teachers relative to those of other occupations requiring similar qualifications and by likely salary increases. In most OECD countries, a tertiary degree is required to become a teacher at all levels of education, so the likely alternative to teacher education is a similar tertiary education programme. Thus, to interpret salary levels in different countries and reflect comparative labour-market conditions, actual teachers' salaries are compared to earnings of other tertiary-educated professionals: 25-64 year-old full-time, full-year workers with a similar tertiary education. Moreover, to ensure that the comparison is not biased by differences between the distribution of teachers by tertiary attainment and the distribution of tertiary-educated workers by attainment level, actual salaries of teachers are compared to a weighted average of earnings of similarly educated workers (earnings of similarly educated workers weighted by the proportion of teachers with similar tertiary attainment) (see Table X2.6 in Annex 2 for the proportion of teachers by attainment level).

Among the 13 countries with available data (for at least some of the education levels), actual salaries of teachers amount to less than 60% of earnings of similarly educated workers in Chile (pre-primary, primary and lower secondary), the Czech Republic (primary, secondary) and the United States (pre-primary and primary), and only upper secondary teachers in France and New Zealand have actual salaries equivalent to earnings of similarly educated workers.

Considering the few countries with available data for this relative measure of teachers' salaries, a second benchmark is based on the actual salaries of all teachers, relative to earnings for full-time, full-year workers with tertiary education (ISCED 5 to 8). Against this benchmark, pre-primary teachers' salaries amount to 74% of full-time, full-year earnings, on average, among 25-64 year-olds with tertiary education. Primary teachers earn 81% of the benchmark salary, lower secondary teachers 85% and upper secondary teachers 89% (Table D3.2a and Figure D3.1).

Upper secondary teachers in only 7 of the 26 countries with available data have actual salaries that are equal to or higher than earnings of workers with a tertiary attainment. In almost all countries with available information, and at almost all levels of education, teachers' actual salaries are lower than the earnings of tertiary-educated workers. Relative salaries for teachers are highest in Belgium (Flemish Community, upper secondary), Finland (upper secondary) and Luxembourg (lower and upper secondary), where teachers' actual salaries are at least 10% higher than the earnings of tertiary-educated workers. The lowest relative teachers' actual salaries are found in the Czech Republic and the Slovak Republic where pre-primary teachers' actual salaries are less than 50% of the earnings of a full-time, full-year tertiary-educated worker (Table D3.2a and Figure D3.1).

Definitions

Actual salaries for teachers aged 25-64 refer to the annual average earnings received by full-time teachers aged 25 to 64, before taxes. 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. 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, are not included.

An **adjustment to base salary** is defined as any difference in salary between what a particular teacher actually receives for work performed at school and the amount that he or she would expect to receive on the basis of experience (i.e. number of years in the teaching profession). Adjustments may be temporary or permanent, and they can effectively move a teacher off the scale and to a different salary scale or to a higher step on the same salary scale.

Earnings for workers with tertiary education are average earnings for full-time, full-year workers aged 25-64 with an education at ISCED 5/6/7 or 8 level. The relative salary indicator is calculated for the latest year with available earnings data. For countries in which teachers' salaries and workers' earnings information are not available for the same year (e.g. Australia, Belgium, Canada, Chile, the Czech Republic, France, Italy, Luxembourg, the Netherlands, Spain and Sweden), the indicator is adjusted for inflation using the deflators for private consumption. Reference statistics for earnings for workers with tertiary education are provided in Annex 3.

Maximum salary refers to the maximum scheduled annual salary (top of the salary scale) for a full-time classroom teacher with the maximum qualifications recognised for compensation.

Salary after 15 years of experience refers to the scheduled annual salary of a full-time classroom teacher. Statutory salaries may refer to the salaries of teachers with the minimum training necessary to be fully qualified or salaries of teachers with the typical qualifications, plus 15 years of experience.

Starting salary refers to the average scheduled gross salary per year for a full-time classroom teacher with the minimum training necessary to be fully qualified 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). In Table D3.3a and Table D3.3b, available on line, salary per hour of net contact time divides a teacher's annual statutory salary by the annual net teaching time in hours (see Table D4.1).

Methodology

Data on statutory teachers' salaries and bonuses are derived from the 2015 OECD-INES Survey on Teachers and the Curriculum. Data refer to the school year 2013/14 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 LSO (Labour Market and Social Outcomes of Learning) Network.

Data on teachers' salary at upper secondary level refer only to general programmes.

Measuring the statutory salary of a full-time teacher relative to the number of hours per year that a teacher is required to spend teaching does not adjust salaries for the amount of time that teachers spend in various other teaching-related activities. Since the proportion of teachers' working time spent teaching varies across OECD countries, statutory salaries per hour of net teaching time must be interpreted with caution (see Indicator D4). However, they can provide an estimate of the cost of the actual time teachers spend in the classroom.

Gross teachers' salaries were converted using PPPs for private consumption from the OECD National Accounts database. Prior to the 2012 edition of *Education at a Glance* (OECD, 2012), salaries were converted using PPPs for GDP. As a consequence, teachers' salaries in USD (Table D3.1a and Table D3.1b, available on line) are not directly comparable with the figures published prior to the 2012 edition of *Education at a Glance*. Information on trends in teachers' salaries can be found in Table D3.5a and Table D3.5b, available on line. As a complement to Table D3.1a and Table D3.1b, available on line, which present teachers' salaries in equivalent USD, converted using PPPs, tables with teachers' salaries in national currency are included in Annex 2. The period of reference for teachers' salaries is from 1 July 2013 to 30 June 2014. The reference date for PPPs is 2013-14, except for some Southern Hemisphere countries (e.g. Australia and New Zealand) where the academic year runs from January to December. In these countries the reference year is the calendar year (i.e. 2014).

For calculation of changes in teachers' salaries (Table D3.5a and Table D3.5b, available on line), the deflator for private consumption is used to convert salaries to 2005 prices.

In most countries, the criteria to determine the typical qualifications of teachers are based on a principle of absolute majority (i.e. the level of qualifications of more than half of all current teachers in the system). When this is not possible, a principle of relative majority has been used (i.e. the level of qualifications of the largest proportion of teachers).

In Table D3.2a, the ratios of teachers' salaries to earnings for full-time, full-year workers with tertiary education aged 25-64 are calculated using the annual average salaries (including bonuses and allowances) for teachers aged 25-64, for countries with available data (Table D3.4). The ratios based on weighted averages (first four columns) use information collected for every country individually, on the percentage of teachers by ISCED level of tertiary attainment (see Table X2.6 in Annex 2). These percentages are used to calculate the weighted average earnings of tertiary-educated workers, used as denominator for the ratio (when data on the wages of workers by ISCED level of tertiary attainment are available) (i.e. the earnings for full-time, full-year workers). The ratios have been calculated for countries for which these data are available (and when data on earnings of workers referred to a different reference year than the 2014 reference year used for teachers' salaries, a deflator has been used to adjust earnings data to 2014 reference year). For all other ratios in Table D3.2a and those in Table D3.2c, information

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on all tertiary-educated workers was used instead of weighted averages. Data on earnings of workers take account of earnings from work for all individuals during the reference period, including salaries of teachers. In most countries the population of teachers is large and then may impact of the average earnings of workers.

The same procedure was used in Table D3.2b (available on line), but the ratios are calculated using the statutory salaries of teachers with 15 years of experience instead of their actual salaries.

Notes on definitions and methodologies for each country are provided in Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm.

Note regarding data from Israel

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

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Indicator D3 Tables

StatLink http://dx.doi.org/10.1787/888933398933

	Table D3.1a	Teachers' statutory salaries, based on typical qualifications, at different points in teachers' careers (2014)
WEB	Table D3.1b	Teachers' statutory salaries, based on minimum qualifications, at different points in teachers' careers (2014)
	Table D3.2a	Teachers' actual salaries relative to wages of tertiary-educated workers (2014)
WEB	Table D3.2b	Teachers' statutory salaries relative to wages of tertiary-educated workers (2014)
WEB	Table D3.2c	Teachers' actual salaries relative to wages of tertiary-educated workers, by age group and by gender (2014)
	Table D3.3a	Comparison of teachers' statutory salaries, based on typical qualifications (2014)
WEB	Table D3.3b	Comparison of teachers' statutory salaries, based on minimum qualifications (2014)
	Table D3.4	Average actual teachers' salaries, by age group and by gender (2014)
	Table D3.5a	Trends in teachers' salaries, based on typical qualifications, between 2000 and 2014
WEB	Table D3.5b	Trends in teachers' salaries, based on minimum qualifications, between 2000 and 2014
WEB	Table D3.6	Starting/Maximum teachers' statutory salaries, based on minimum/maximum qualifications (2014)
	Table D3.7	Criteria used for base salary and additional payments awarded to teachers in public institutions, by level of education (2014)
WEB	Table D3.8	Decision-making level to criterion used for determining teachers' base salaries and additional payments, by level of education (2014)
WEB	Table D3.9	Conceptual structure of salary systems for full-time tertiary academic instructional faculty in public and government-dependent private institutions (2013/14)
WEB	Table D3.10	Average actual annual salaries of tertiary academic instructional faculty in public and government-dependent private institutions (2013/14)
WEB	Table D3.11	Composition of average actual annual salaries of tertiary academic instructional faculty in public and government-dependent private institutions (2013/14)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

D3

Table D3.1a. [1/2] Teachers' statutory salaries, based on typical qualifications, at different points in teachers' careers (2014)

Annual teachers' salaries, in public institutions, in equivalent USD converted using PPPs for private consumption

		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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	Australia[1]	40 297	57 445	57 445	57 717	39 819	57 246	57 246	57 455
	Austria	m	m	m	m	32 830	38 619	43 276	64 336
	Belgium (Fl.)	34 459	43 279	48 757	59 715	34 459	43 279	48 757	59 715
	Belgium (Fr.)	33 690	42 130	47 435	58 044	33 690	42 130	47 435	58 044
	Canada	m	m	m	m	39 511	63 188	65 543	65 543
	Chile	17 250	23 199	26 048	36 457	17 250	23 199	26 048	36 457
	Czech Republic	16 583	16 790	17 146	18 282	17 080	17 578	18 324	20 853
	Denmark[2]	40 437	45 898	45 898	45 898	45 909	51 141	52 481	52 481
	England (UK)	27 246	43 140	46 390	46 390	27 246	43 140	46 390	46 390
	Estonia	m	m	m	m	m	m	m	m
	Finland[1, 2, 3]	27 566	29 771	29 771	29 771	32 157	37 223	39 456	41 824
	France[4]	27 867	31 865	34 149	50 141	27 867	31 865	34 149	50 141
	Germany	m	m	m	m	51 584	61 172	63 961	67 998
	Greece	18 408	21 071	24 712	34 776	18 408	21 071	24 712	34 776
	Hungary	13 228	17 858	19 181	25 133	13 228	17 858	19 181	25 133
	Iceland	m	m	m	m	m	m	m	m
	Ireland	m	m	m	m	30 813	51 949	57 597	64 509
	Israel	21 333	27 588	31 286	58 850	18 498	24 322	28 281	49 820
	Italy	27 314	30 048	32 995	40 151	27 314	30 048	32 995	40 151
	Japan[2]	m	m	m	m	28 101	41 740	49 378	61 922
	Korea	26 910	40 548	47 352	75 297	26 910	40 548	47 352	75 297
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg[2]	68 121	90 208	108 110	122 059	68 121	90 208	108 110	122 059
	Mexico	17 041	22 148	28 262	36 228	17 041	22 148	28 262	36 228
	Netherlands	36 097	44 847	53 544	53 544	36 097	44 847	53 544	53 544
	New Zealand	m	m	m	m	28 541	42 765	42 765	42 765
	Norway	35 409	40 520	40 520	40 520	40 815	44 136	44 136	48 227
	Poland	15 135	20 325	24 828	25 882	15 135	20 325	24 828	25 882
	Portugal	31 930	35 270	38 166	61 047	31 930	35 270	38 166	61 047
	Scotland (UK)	27 055	43 163	43 163	43 163	27 055	43 163	43 163	43 163
	Slovak Republic	10 583	11 648	12 177	13 128	11 838	14 222	16 663	17 967
	Slovenia	24 917	29 594	36 356	41 877	24 917	30 740	37 751	45 187
	Spain	36 405	39 371	41 940	51 304	36 405	39 371	41 940	51 304
	Sweden[5]	32 698	35 086	36 128	37 919	32 313	36 060	37 391	42 699
	Switzerland[6]	47 641	59 122	m	72 874	52 863	65 938	m	80 882
	Turkey	26 964	27 746	28 740	30 862	26 964	27 746	28 740	30 862
	United States[7]	43 255	52 076	59 111	72 087	42 256	54 639	60 266	67 983
	OECD average	29 494	36 491	39 245	47 826	31 028	39 673	42 675	51 254
	EU22 average	28 934	35 335	38 992	45 170	30 745	38 240	42 285	49 509
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m
	Colombia	17 476	31 871	31 871	35 581	17 476	31 871	31 871	35 581
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m
	G20 average	m	m	m	m	m	m	m	m

Note: The definition of teachers' typical qualification is based on a broad concept, including the typical ISCED level of attainment and other criteria. Please see Box D3.2 for further details.

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D3.1a. [2/2] Teachers' statutory salaries, based on typical qualifications, at different points in teachers' careers (2014)

Annual teachers' salaries, in public institutions, in equivalent USD converted using PPPs for private consumption

	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
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD								
Australia[1]	39 804	57 293	57 293	57 478	39 961	56 427	56 427	56 710
Austria	34 345	41 718	46 852	66 595	36 043	44 326	50 508	74 536
Belgium (Fl.)	34 459	43 279	48 757	59 715	43 056	54 949	62 699	75 616
Belgium (Fr.)	33 690	42 130	47 435	58 044	41 915	53 430	60 934	73 441
Canada	39 511	63 188	65 543	65 543	39 677	63 508	65 833	65 833
Chile	17 250	23 199	26 048	36 457	18 236	24 497	27 495	38 448
Czech Republic	17 080	17 578	18 324	20 853	17 080	17 578	18 324	20 853
Denmark[2]	46 188	51 826	53 226	53 226	46 033	58 317	58 317	58 317
England (UK)	27 246	43 140	46 390	46 390	27 246	43 140	46 390	46 390
Estonia	m	m	m	m	m	m	m	m
Finland[1, 2, 3]	34 730	40 201	42 613	45 170	36 828	44 230	45 999	48 759
France[4]	30 532	34 530	36 814	52 981	30 820	34 819	37 103	53 300
Germany	57 131	66 647	69 431	75 422	60 305	70 339	73 632	84 116
Greece	18 408	21 071	24 712	34 776	18 408	21 071	24 712	34 776
Hungary	14 494	17 858	19 181	25 133	14 494	19 567	21 016	27 538
Iceland	m	m	m	m	m	m	m	m
Ireland	30 813	53 903	58 190	65 102	30 813	53 903	58 190	65 102
Israel	18 602	26 686	30 977	48 973	18 910	22 128	24 853	39 112
Italy	29 445	32 618	35 951	44 093	29 445	33 411	36 958	46 096
Japan[2]	28 101	41 740	49 378	61 922	28 101	41 740	49 378	63 615
Korea	26 815	40 453	47 257	75 202	26 815	40 453	47 257	75 202
Latvia	m	m	m	m	m	m	m	m
Luxembourg[2]	79 048	98 810	112 760	137 404	79 048	98 810	112 760	137 404
Mexico	21 892	28 337	36 288	46 317	40 950	47 896	51 527	56 115
Netherlands	38 089	56 986	66 366	66 366	38 089	56 986	66 366	66 366
New Zealand	29 521	44 424	44 424	44 424	30 500	46 082	46 082	46 082
Norway	40 815	44 136	44 136	48 227	45 191	49 842	49 842	55 944
Poland	15 135	20 325	24 828	25 882	15 135	20 325	24 828	25 882
Portugal	31 930	35 270	38 166	61 047	31 930	35 270	38 166	61 047
Scotland (UK)	27 055	43 163	43 163	43 163	27 055	43 163	43 163	43 163
Slovak Republic	11 838	14 222	16 663	17 967	11 838	14 222	16 663	17 967
Slovenia	24 917	30 740	37 751	45 187	24 917	30 740	37 751	45 187
Spain	40 762	44 107	46 865	57 278	40 762	44 107	46 865	57 278
Sweden[5]	32 698	36 673	38 054	43 487	33 980	38 196	39 896	45 610
Switzerland[6]	60 231	75 299	m	92 258	67 483	86 525	m	103 480
Turkey	27 904	28 686	29 680	31 803	27 904	28 686	29 680	31 803
United States[7]	44 001	54 598	61 918	67 053	43 362	55 700	60 884	68 062
OECD average	32 485	41 613	44 407	53 557	34 186	43 952	46 379	56 152
EU22 average	32 274	40 309	44 204	52 058	33 420	42 314	46 420	54 943
Partners								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m
Colombia	17 476	31 871	31 871	35 581	17 476	31 871	31 871	35 581
Costa Rica	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
Lithuania	m	m	m	m	m	m	m	m
Russian Federation	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m

Note: The definition of teachers' typical qualification is based on a broad concept, including the typical ISCED level of attainment and other criteria. Please see Box D3.2 for further details.

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D3.2a. Teachers' actual salaries relative to wages of tertiary-educated workers (2014)

Ratio of salary, using annual average salaries (including bonuses and allowances) of teachers in public institutions relative to the wages of workers with similar educational attainment (weighted average) and to the wages of full-time, full-year workers with tertiary education.

		Year of reference	Actual salaries of all teachers, relative to earnings for full-time, full-year similarly-educated workers (weighted averages)				Actual salaries of all teachers, relative to earnings for full-time, full-year workers with tertiary education (ISCED 5 to 8)			
			25-64 year-olds				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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD	Australia[1]	2014	m	0.84	m	m	0.82	0.84	0.85	0.85
	Austria	2014	m	m	m	m	m	0.75	0.86	0.94
	Belgium (Fl.)	2014	m	m	m	m	0.89	0.91	0.89	1.15
	Belgium (Fr.)	2014	m	m	m	m	0.85	0.85	0.84	1.04
	Canada		m	m	m	m	m	m	m	m
	Chile	2014	0.57	0.59	0.59	0.62	0.70	0.73	0.73	0.77
	Czech Republic	2014	0.71	0.56	0.55	0.56	0.48	0.56	0.56	0.58
	Denmark	2014	0.80	0.95	0.97	0.84	0.73	0.87	0.88	1.00
	England (UK)	2014	m	m	m	m	0.84	0.84	0.91	0.91
	Estonia	2014	0.65	0.84	0.84	0.83	0.59	0.88	0.88	0.88
	Finland	2013	0.72	0.77	0.83	0.92	0.65	0.89	0.98	1.10
	France	2013	0.86	0.85	0.92	1.02	0.77	0.76	0.90	0.99
	Germany	2014	m	0.79	0.87	0.94	m	0.89	0.98	1.05
	Greece	2014	m	m	m	m	0.96	0.96	1.07	1.07
	Hungary	2014	m	m	m	m	0.66	0.71	0.71	0.73
	Iceland		m	m	m	m	m	m	m	m
	Ireland	2014	m	m	m	m	m	m	m	m
	Israel	2014	0.87	0.84	0.87	0.79	0.90	0.92	0.99	0.88
	Italy	2014	m	m	m	m	0.65	0.65	0.69	0.72
	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
	Luxembourg	2014	m	m	m	m	1.08	1.08	1.23	1.23
	Mexico		m	m	m	m	m	m	m	m
	Netherlands	2014	m	m	m	m	0.68	0.68	0.85	0.85
	New Zealand	2014	m	0.91	0.94	1.01	m	0.85	0.87	0.93
	Norway	2014	0.69	0.77	0.77	0.76	0.62	0.70	0.70	0.74
	Poland	2014	m	m	m	m	0.71	0.82	0.83	0.81
	Portugal		m	m	m	m	m	m	m	m
	Scotland (UK)	2014	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
	Slovak Republic	2014	m	m	m	m	0.45	0.61	0.61	0.61
	Slovenia	2014	m	m	m	m	0.63	0.86	0.88	0.95
	Spain		m	m	m	m	m	m	m	m
	Sweden	2013	m	m	m	m	0.76	0.82	0.84	0.88
	Switzerland		m	m	m	m	m	m	m	m
	Turkey		m	m	m	m	m	m	m	m
	United States	2014	0.57	0.59	0.60	0.61	0.65	0.68	0.69	0.71
	OECD average		~	~	~	~	0.74	0.81	0.85	0.89
	EU22 average		~	~	~	~	0.74	0.81	0.86	0.92
Partners	Argentina		m	m	m	m	m	m	m	m
	Brazil		m	m	m	m	m	m	m	m
	China		m	m	m	m	m	m	m	m
	Colombia		m	m	m	m	m	m	m	m
	Costa Rica		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
	Lithuania		m	m	m	m	m	m	m	m
	Russian Federation		m	m	m	m	m	m	m	m
	Saudi Arabia		m	m	m	m	m	m	m	m
	South Africa		m	m	m	m	m	m	m	m
	G20 average		m	m	m	m	m	m	m	m

1. Data for the percentage of teachers by ISCED level of attainment used for the weighted average are from 2013.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D3.3a. Comparison of teachers' statutory salaries, based on typical qualifications (2014)

Ratio of salaries at different points in teachers' careers, and salary per hour in USD converted using PPPs for private consumption

		Ratio of salary at top of scale to starting salary				Years from starting to top salary (lower secondary)	Salary per hour of net contact (teaching) time after 15 years of experience (in USD)				Ratio of salary per teaching hour of upper secondary teachers to primary teachers (after 15 years of experience)
		Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes		Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	1.43	1.44	1.44	1.42	8	65	66	71	70	1.07
	Austria	m	1.96	1.94	2.07	34	m	56	77	86	1.55
	Belgium (Fl.)	1.73	1.73	1.73	1.76	27	67	66	89	122	1.87
	Belgium (Fr.)	1.72	1.72	1.72	1.75	27	60	65	71	101	1.54
	Canada	m	1.66	1.66	1.66	11	m	82	88	88	1.07
	Chile	2.11	2.11	2.11	2.11	30	23	23	23	24	1.06
	Czech Republic	1.10	1.22	1.22	1.22	27	15	22	30	31	1.40
	Denmark	1.14	1.14	1.15	1.27	12	32	79	80	151	1.91
	England (UK)	1.70	1.70	1.70	1.70	m	64	64	62	62	0.97
	Estonia	a	m	m	m	m	m	m	m	m	m
	Finland[1]	1.08	1.30	1.30	1.32	20	m	59	72	84	1.43
	France	1.80	1.80	1.74	1.73	29	37	37	57	57	1.55
	Germany	m	1.32	1.32	1.39	28	m	80	93	103	1.29
	Greece	1.89	1.89	1.89	1.89	45	36	43	54	54	1.24
	Hungary	1.90	1.90	1.73	1.90	15	17	32	32	36	1.10
	Iceland	m	m	m	m	m	m	m	m	m	m
	Ireland	m	2.09	2.11	2.11	22	m	63	79	79	1.26
	Israel	2.76	2.69	2.63	2.07	36	31	34	45	46	1.36
	Italy	1.47	1.47	1.50	1.57	35	35	44	58	60	1.37
	Japan	m	2.20	2.20	2.26	34	m	67	81	96	1.45
	Korea	2.80	2.80	2.80	2.80	37	81	72	86	86	1.19
	Latvia	m	m	m	m	m	m	m	m	m	m
	Luxembourg	1.79	1.79	1.74	1.74	30	123	134	153	153	1.14
	Mexico	2.13	2.13	2.12	1.37	14	53	35	35	61	1.72
	Netherlands	1.48	1.48	1.74	1.74	12	58	58	88	88	1.54
	New Zealand	m	1.50	1.50	1.51	7	m	46	53	61	1.31
	Norway	1.14	1.18	1.18	1.24	16	27	60	67	95	1.60
	Poland	1.71	1.71	1.71	1.71	20	17	40	46	57	1.41
	Portugal	1.91	1.91	1.91	1.91	34	40	51	63	63	1.23
	Scotland (UK)	1.60	1.60	1.60	1.60	6	50	50	50	50	1.00
	Slovak Republic	1.24	1.52	1.52	1.52	32	11	20	26	27	1.35
	Slovenia	1.68	1.81	1.81	1.81	25	28	60	60	66	1.10
	Spain	1.41	1.41	1.41	1.41	38	48	48	66	68	1.42
	Sweden[2]	1.16	1.32	1.33	1.34	a	m	m	m	m	m
	Switzerland	1.53	1.53	1.53	1.53	26	m	m	m	m	m
	Turkey	1.14	1.14	1.14	1.14	27	27	40	59	59	1.48
	United States[3]	1.67	1.61	1.52	1.57	m	m	m	63	m	m
	OECD average	1.65	1.70	1.70	1.68	25	44	55	65	74	1.35
	EU22 average	1.55	1.63	1.63	1.66	26	43	56	67	76	1.36
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	2.04	2.04	2.04	2.04	9	m	57	66	66	1.16
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	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
	G20 average	m	m	m	m	m	m	m	m	m	m

Note: The definition of teachers' typical qualification is based on a broad concept, including the typical ISCED level of attainment and other criteria. Please see Box D3.2 for further details.

1. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
2. Actual base salaries for 2013.
3. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398963

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Table D3.4. Average actual teachers' salaries, by age group and by gender (2014)

Annual average salaries (including bonuses and allowances) of teachers in public institutions, in equivalent USD converted using PPPs for private consumption, by age group and gender

	25-64 year-olds				25-64 year-old men				25-64 year-old women			
	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
	(1)	(2)	(3)	(4)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
OECD												
Australia	50 735	51 577	52 438	52 458	m	m	m	m	m	m	m	m
Austria[1]	m	55 362	63 691	69 590	m	56 278	66 424	73 497	m	55 281	62 428	66 115
Belgium (Fl.)	49 692	50 607	49 189	63 872	48 427	52 024	48 065	64 644	49 712	50 276	49 589	63 421
Belgium (Fr.)	47 490	47 269	46 579	57 959	41 775	47 958	46 926	58 097	47 648	47 109	46 384	57 872
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	26 316	27 442	27 400	28 947	27 431	30 662	29 625	29 888	26 297	26 253	26 264	28 230
Czech Republic	18 877	21 887	21 838	22 773	18 975	21 945	21 843	23 009	18 876	21 883	21 837	22 675
Denmark[2]	46 823	55 635	56 319	64 443	47 222	55 985	56 744	65 436	46 703	55 631	56 141	63 564
England (UK)	41 918	41 918	45 048	45 048	40 184	40 184	45 736	45 736	42 146	42 146	44 684	44 684
Estonia	13 063	19 322	19 322	19 322	m	m	m	m	m	m	m	m
Finland[3]	32 392	43 890	48 240	54 266	32 045	46 421	49 059	55 330	32 402	43 018	47 911	53 763
France	37 089	36 600	43 002	47 317	38 083	39 142	44 411	48 540	37 005	35 938	42 224	46 240
Germany	m	61 179	67 158	72 098	m	m	m	m	m	m	m	m
Greece	22 898	22 898	25 466	25 466	23 553	23 553	25 715	25 715	22 701	22 701	25 312	25 312
Hungary	21 917	23 526	23 526	24 325	19 313	23 033	23 033	24 275	21 930	23 607	23 607	24 352
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	34 421	35 029	37 908	33 529	a	34 971	37 253	m	34 439	35 039	38 086	m
Italy	33 246	33 246	35 487	37 335	25 634	25 634	35 027	37 253	33 512	33 512	35 617	37 379
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	m	m	m	m	m	m	m	m	m
Luxembourg	95 090	95 090	108 226	108 226	95 090	95 090	108 226	108 226	95 090	95 090	108 226	108 226
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	49 405	49 405	61 643	61 643	50 368	50 368	63 333	63 333	49 226	49 226	59 706	59 706
New Zealand	m	41 608	42 705	45 755	m	41 741	42 941	46 341	m	41 583	42 581	45 292
Norway	42 891	48 537	48 537	51 517	42 061	48 536	48 536	51 547	42 956	48 537	48 537	51 486
Poland	25 863	29 694	30 173	29 609	24 403	28 208	29 202	29 006	25 866	29 872	30 459	29 822
Portugal	m	m	m	m	m	m	m	m	m	m	m	m
Scotland (UK)[4]	41 167	41 167	41 167	41 167	m	m	m	m	m	m	m	m
Slovak Republic	15 099	20 618	20 618	20 475	m	m	m	m	m	m	m	m
Slovenia[5]	25 775	35 269	35 916	38 722	21 710	33 332	35 854	38 416	26 156	35 398	35 934	38 811
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden[6]	34 565	37 472	38 224	40 171	34 121	37 288	38 489	40 535	34 635	37 503	38 102	39 933
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Turkey	m	m	m	m	m	m	m	m	m	m	m	m
United States	50 578	52 136	53 161	54 928	49 579	54 723	54 720	56 951	51 166	51 632	52 138	53 685
OECD average	37 274	41 476	43 961	46 575	37 776	42 242	45 294	49 289	38 867	41 964	44 560	48 028
EU22 average	36 243	41 103	44 042	47 191	37 394	42 278	46 131	50 065	38 907	42 387	45 510	48 867
Partners												
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
China	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
Costa Rica	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
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation[7]	18 953	21 450	21 450	21 450	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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: Columns showing average actual teachers' salaries, broken down by age groups (i.e. Columns 5-20), are available for consultation on line (see *StatLink* below).

1. Also includes data on actual salaries of headmasters, deputies and assistants.
2. Also includes data on actual salaries of teachers in early childhood educational development programmes for pre-primary education.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes all teachers, irrespective of their age.
5. Also includes data on actual salaries of pre-school teaching assistants for pre-primary education.
6. Average actual teachers' salaries for 2013, not including bonuses and allowances.
7. Average actual teachers' salaries for all teachers, irrespective of the level of education they teach except pre-primary education.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398970

Table D3.5a. Trends in teachers' salaries, based on typical qualifications, between 2000 and 2014

Index of change between 2000 and 2014 in teachers' statutory salaries after 15 years of experience (2005 = 100), by level of education, converted to constant prices using deflators for private consumption

		Pre-primary				Primary				Lower secondary, general programmes				Upper secondary, general programmes			
		2000	2010	2012	2014	2000	2010	2012	2014	2000	2010	2012	2014	2000	2010	2012	2014
		(1)	(7)	(9)	(11)	(12)	(18)	(20)	(22)	(23)	(29)	(31)	(33)	(34)	(40)	(42)	(44)
OECD	Australia	m	103	106	112	m	105	107	111	m	105	107	111	m	105	107	110
	Austria[1, 2]	m	104	102	m	91	104	102	100	88	104	102	100	95	110	108	106
	Belgium (Fl.)	m	102	101	103	93	102	101	103	98	102	101	103	98	102	102	103
	Belgium (Fr.)	94	104	104	106	94	104	104	106	99	103	103	105	99	103	103	105
	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
	Czech Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Denmark	88	101	98	98	94	106	101	102	94	107	102	103	107	103	99	103
	England (UK)	94	91	87	85	94	91	87	85	94	91	87	85	94	91	87	85
	Estonia	m	m	m	m	85	137	126	m	85	137	126	m	85	137	126	m
	Finland	92	110	108	106	87	111	109	106	88	107	104	102	92	107	107	104
	France	105	97	95	95	105	97	95	95	105	98	96	94	104	98	96	94
	Germany	m	m	m	m	m	104	107	110	m	106	108	110	m	102	102	103
	Greece	88	101	78	70	88	101	78	70	88	101	78	70	88	101	78	70
	Hungary[3]	59	82	75	111	63	78	71	99	63	78	71	99	64	74	66	87
	Iceland	m	95	97	m	m	95	89	m	m	95	89	m	m	88	88	m
	Ireland	m	m	m	m	83	119	118	115	83	119	118	115	83	119	118	115
	Israel	95	106	131	141	100	123	131	127	99	110	116	137	100	103	112	113
	Italy	m	100	96	93	94	100	96	93	95	100	96	93	95	100	96	93
	Japan	m	m	m	m	m	93	93	93	m	93	93	93	m	93	93	93
	Korea	m	96	98	100	m	93	96	98	m	93	96	98	m	93	96	98
	Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Luxembourg	m	136	138	146	m	136	138	146	m	112	113	117	m	112	113	117
	Mexico	87	103	108	113	87	103	108	113	87	104	109	113	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	106	106	101	m	106	107	105	m	106	106	109
	Norway	m	111	116	118	m	106	111	113	m	106	111	113	m	107	112	115
	Poland	m	113	119	121	m	113	119	121	m	113	119	121	m	113	119	121
	Portugal	m	98	86	88	m	98	86	88	m	98	86	88	m	98	86	88
	Scotland (UK)	50	98	93	90	81	98	93	90	81	98	93	90	81	98	93	90
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	86	109	105	98	86	109	105	98	86	109	105	98
	Spain	m	107	98	94	m	107	98	94	m	106	95	92	m	106	95	92
	Sweden[4]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Turkey	99	114	112	121	99	114	112	121	99	113	110	118	99	113	110	118
	United States[4, 5]	98	m	119	120	82	93	98	98	103	107	110	110	98	102	103	103
	OECD average	88	103	103	106	89	105	103	104	91	104	102	103	92	103	101	101
	Average for OECD countries with available data for all reference years	~	~	~	~	90	103	101	101	91	103	100	102	93	102	99	99
	Average for EU22 countries with available data for all reference years	~	~	~	~	89	102	97	97	89	101	97	97	91	101	97	96
Partners	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
	China	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
	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
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	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
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Years 2005, 2006, 2007, 2008, 2009, 2011 and 2013 are available for consultation on line (see *StatLink* below).The definition of teachers' typical qualification is based on a broad concept, including the typical ISCED level of attainment and other criteria. Please see Box D3.2 for further details.

1. Break in time series following methodological changes in 2007 for upper secondary education.
2. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
3. Break in time series in 2014 following changes in the salary system in 2013.
4. Actual base salaries.
5. The typical qualification for pre-primary and primary teachers in 2000 was a bachelor's degree (ISCED 6), and a master's degree (ISCED 7) for later years.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933398982

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Table D3.7. [1/2] Criteria used for base salary and additional payments awarded to teachers in public institutions, by level of education (2014)

Teachers' tasks and other criteria related to teachers' base salaries and additional payments

		Lower secondary													
		Tasks							Other responsibilities						
		Teaching	Individual planning or preparation of lessons either at school or elsewhere	Marking/correcting of student work	General administrative work (including communication, paperwork and other clerical duties undertaken as part of the job)	Communication and co-operation with parents or guardians	Supervision of students during breaks	Team work and dialogue with colleagues at school or elsewhere	Participation in school or other management in addition to teaching duties (e.g. serving as head of department or co-ordinator of teachers)	Teaching more classes or hours than required by full-time contract (e.g. overtime compensation)	Student counselling (including student supervising, virtual counselling, career guidance and delinquency prevention)	Engaging in extracurricular activities (e.g. homework clubs, sports and drama clubs, summer school)	Special tasks (e.g. training student teachers, guidance counselling)	Class teacher/form teacher	Participation in mentoring programmes and/or supporting new teachers in induction programmes
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD	Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Austria	1	1	1	1	1	1	1	5	3	5	2	5	5	a
	Belgium (Fl.)	1	a	a	a	a	a	a	1	3	a	a	a	a	a
	Belgium (Fr.)	a	a	a	a	a	a	a	a	3	a	a	5	a	a
	Canada	1	1	1	1	1	1	1	4	a	1	m	m	m	m
	Chile	1	1	1	1	1	1	2	2	3	3	5	5	3	3
	Czech Republic	1	a	a	5	a	a	a	3	3	5	5	5	5	5
	Denmark	a	a	a	a	a	a	a	2	4	2	2	m	2	a
	England (UK)	1	1	1	1	1	1	1	4	a	a	a	4	a	a
	Estonia	1	1	1	1	1	3	1	3	5	3	5	5	3	a
	Finland	1	1	1	1	1	1	1	2	4	4	4	4	4	4
	France	1	1	1	1	1	a	a	4	4	4	a	4	4	4
	Germany	1	1	1	1	1	1	1	1	1	a	a	a	a	a
	Greece	1	1	1	1	1	1	1	a	5	1	a	a	1	1
	Hungary	1	1	1	1	1	1	1	3	5	1	1	3	3	1
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	1	1	1	1	1	1	1	4	a	a	a	a	4	a
	Israel	1	1	1	1	1	1	1	3	3	3	a	5	3	5
	Italy	1	1	1	1	1	1	1	4	4	5	5	5	a	5
	Japan	1	1	1	1	1	1	1	4	1	1	5	1	1	1
	Korea	a	a	a	a	a	a	a	4	5	a	a	a	4	a
	Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Luxembourg	1	1	1	1	1	1	2	2	4	2	2	2	2	2
	Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Netherlands	1	1	1	1	1	1	1	m	5	1	1	1	1	a
	New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Norway	1	1	1	1	4	1	1	4	5	4	a	a	4	1
	Poland	1	a	a	a	a	a	a	a	4	a	a	5	4	4
	Portugal	a	a	a	a	a	a	a	2	5	a	a	a	a	2
	Scotland (UK)	1	1	1	a	1	a	1	a	a	1	a	1	1	1
	Slovak Republic	1	a	a	a	a	a	a	2	1, 2	2, 3	3, 4	3	3	3
	Slovenia	1	1	1	1	1	1	1	3	5, 3	1	5	1	2, 3	3
	Spain	a	a	a	a	a	a	a	4	a	a	a	a	a	a
	Sweden	a	a	a	a	a	a	a	a	a	a	a	a	a	a
	Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Turkey	1	4	a	a	a	a	a	a	4	a	4	4	4	4
	United States	1	m	m	m	m	m	m	m	m	m	m	m	m	m
Partners	Argentina	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
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	1	1	1	1	1	1	1	3	5	a	a	a	a	a
	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
	Russian Federation	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
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m

What is the nature of compensation?

1: Part of statutory base salary paid to teachers
2: Compensated by reduction in teaching time
3: Defined as percentage of statutory base salary paid to teachers
4: Annual additional payments
5: Incidental/occasional additional payments
6: Position in base salary

Note: Pre-primary, primary and upper secondary levels (added in separate rows) are available for consultation on line (see *StatLink* below).
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933398997

Table D3.7. [2/2] Criteria used for base salary and additional payments awarded to teachers in public institutions, by level of education (2014)

Teachers' tasks and other criteria related to teachers' base salaries and additional payments

		Lower secondary															
		Qualifications, training and performance							Teaching conditions				Experience and demographic characteristics			Benefits	
		Holding an initial educational qualification higher than the minimum required to enter the teaching profession	Attaining high scores in the qualification examination	Holding an educational qualification in multiple subjects	Completed professional development activities	Participation in professional development activities (not dependent on their successful completion)	Holding a higher than minimum teacher certification or participating in training during professional life	Outstanding performance in teaching	Teaching courses in a particular field (e.g. mathematics or science)	Teaching students with special educational needs (in regular schools)	Teaching in a disadvantaged,remote or high-cost area (location allowance)	Residence allowance (not dependent on any location allowance)	Years of experience	Family status (e.g. married, number of children)	Age (independent of years of teaching experience)	Holiday benefits (e.g. for religious and/ or official holidays)	Thirteen month benefits
		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
OECD	Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Austria	a	a	a	a	a	a	a	5	a	a	a	1	5	a	a	1
	Belgium (Fl.)	a	a	a	a	a	4	a	a	a	a	a	1	a	a	a	a
	Belgium (Fr.)	1	a	a	a	a	a	a	a	a	a	a	1	1	a	1	1
	Canada	1	a	a	a	m	1	a	a	m	m	a	m	a	a	m	a
	Chile	3	3	3	3	a	3	3	1	1	3	a	3	a	a	3	a
	Czech Republic	3	a	3	5	5	5	5	a	1	a	a	1	a	a	a	a
	Denmark	m	m	m	m	a	m	m	m	2	m	a	1	a	a	m	m
	England (UK)	1	a	1	4	1	1	1	4	4	4	4	1	a	a	a	a
	Estonia	a	a	a	a	a	1	5	a	2	a	a	a	a	a	a	5
	Finland	a	a	a	a	a	m	4	a	a	1	a	3, 4	a	a	4	m
	France	a	a	a	a	1	4	1	a	1	4	3	1	1	a	a	a
	Germany	a	a	a	a	a	a	a	a	a	a	a	1	1	1	a	4
	Greece	a	a	a	a	a	a	a	a	a	4	a	6	4	a	a	a
	Hungary	1	1	1	1	1	1	1	1	3	3	1	1	1	1	m	m
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	a	a	a	a	a	4	a	a	a	a	a	1	a	a	a	a
	Israel	a	a	a	3	a	3	5	a	3	4	a	1	2	2	a	a
	Italy	a	a	a	a	a	a	a	a	a	a	a	1	4	a	a	4
	Japan	1	a	a	a	a	a	5	a	4	4	4	1	4	a	a	a
	Korea	1	a	a	a	a	1	5	4	4	4	a	1	4	a	3	a
	Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Luxembourg	a	a	a	a	1	a	a	a	a	a	a	1	1	1	1	1
	Mexico	1	1	a	1	a	1	1	a	a	1	a	1	a	a	a	a
	Netherlands	m	a	m	m	a	m	m	m	m	m	a	1	a	a	1	1
	New Zealand	m	m	m	m	m	m	m	m	m	a	m	1	a	a	m	a
	Norway	6	a	6	6	6	6	6	4	4	4	4	6	a	a	1	a
	Poland	1	a	a	a	a	a	5	a	4	3	3	a	a	1	1	1
	Portugal	a	a	a	a	a	a	a	a	a	a	a	a	4	a	a	a
	Scotland (UK)	a	a	a	a	a	a	a	a	a	4	a	1	a	a	a	a
	Slovak Republic	1	a	a	1	3	3	5	1	1	a	3	1	a	a	a	a
	Slovenia	4	a	3	1	a	1	5	a	1	a	a	1	a	a	3	a
	Spain	a	a	a	4	a	a	a	a	a	4	a	4	a	a	a	a
	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	a	a	m	m	a	m	m
	Turkey	4, 6	a	a	4	a	4	5, 6	a	a	6	a	6	4	a	a	a
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	a
Partners	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
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	1	a	a	a	a	1	a	a	a	1	a	1	a	a	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
	Russian Federation	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

What is the nature of compensation?

1: Part of statutory base salary paid to teachers
2: Compensated by reduction in teaching time
3: Defined as percentage of statutory base salary paid to teachers
4: Annual additional payments
5: Incidental/occasional additional payments
6: Position in base salary

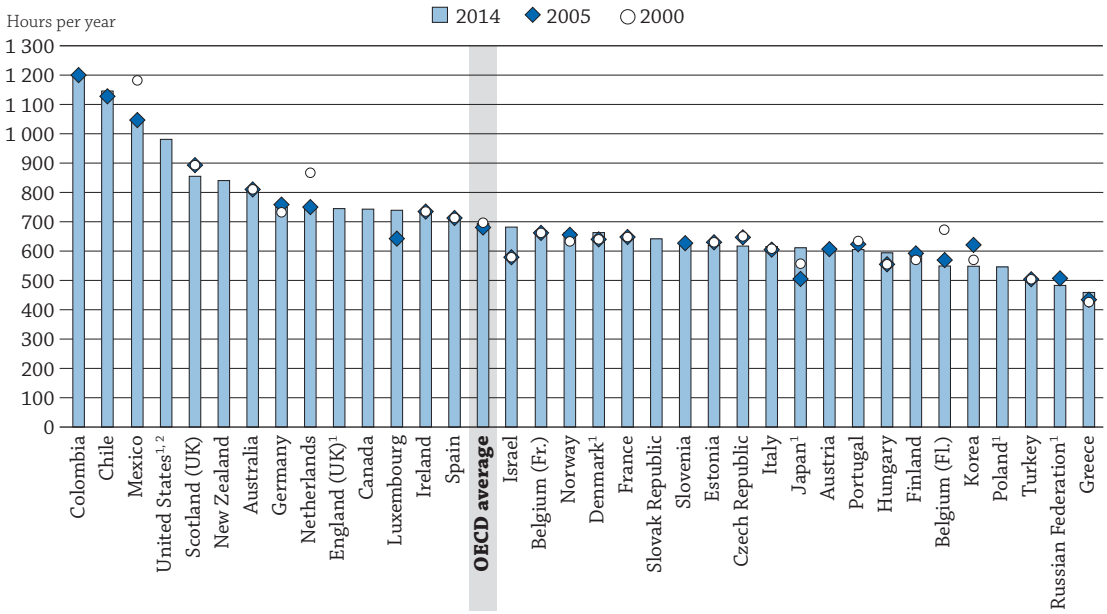
Note: Pre-primary, primary and upper secondary levels (added in separate rows) are available for consultation on line (see *StatLink* below).
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933398997

HOW MUCH TIME DO TEACHERS SPEND TEACHING?

- Public school teachers teach an average of 1 005 hours per year at the pre-primary level, 776 hours at the primary level, 694 hours at the lower secondary level (general programmes), and 644 hours at the upper secondary level (general programmes).
- In the majority of countries with available data, the amount of teaching time in primary, lower secondary and upper secondary public institutions remained largely unchanged between 2000 and 2014.

Figure D4.1. Number of teaching hours per year in general lower secondary education (2000, 2005 and 2014)

Net statutory contact time in public institutions



1. Actual teaching time.
2. Year of reference 2013 instead of 2014.

Countries and economies are ranked in descending order of the number of teaching hours per year in general lower secondary education in 2014.

Source: OECD. Table D4.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399102

Context

Although statutory working hours and teaching hours only partly determine teachers' actual workload, they do offer valuable insight into the demands placed on teachers in different countries. Teaching hours and the extent of non-teaching duties may also affect the attractiveness of the teaching profession. Together with teachers' salaries (see Indicator D3) and average class size (see Indicator D2), this indicator presents some key measures regarding the working lives of teachers.

The proportion of statutory working time spent teaching provides information on the amount of time available for non-teaching activities such as lesson preparation, correction, in-service training and staff meetings. A large proportion of statutory working time spent teaching may indicate that less time is devoted to tasks such as assessing students and preparing lessons. It also could indicate that teachers have to perform these tasks on their own time and hence to work more hours than required by statutory working time.

In addition to class size and the ratio of students to teaching staff (see Indicator D2), students' hours of instruction (see Indicator D1) and teachers' salaries (see Indicator D3), the amount of time teachers spend teaching also affects the financial resources countries need to allocate to education (see Indicator B7).

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Other findings

- The number of teaching hours per year required of the average public school teacher in pre-primary, primary and secondary education varies considerably across countries and tends to decrease as the level of education increases.
- On average, in public institutions pre-primary teachers are required to teach about 34% more hours than primary school teachers, but the difference between pre-primary and primary school teachers in the time during which teachers are required to be working at school, or in their total working time, is often much smaller.
- Required teaching time in public schools varies more at the pre-primary level across countries than at any other level.
- The number of teaching hours in public pre-primary schools averages 1 005 hours per year, ranging from 532 hours per year in Mexico to 1 508 hours in Norway.
- Public primary school teachers teach an average of 776 hours per year, but teaching time ranges from 569 hours or less in Greece and the Russian Federation to 1 148 hours in Chile.
- The number of teaching hours in public lower secondary schools averages 694 hours per year, ranging from 459 hours in Greece to over 1 000 hours in Chile, Colombia and Mexico.
- Teachers in public upper secondary schools teach an average of 644 hours per year, but teaching time ranges from 386 hours in Denmark to over 1 000 hours in Chile and Colombia.
- Most countries regulate the number of hours per year that teachers are formally required to work, including teaching and non-teaching activities. Some of these countries regulated the specific number of hours required at school, while others set the overall working time, including hours at school and elsewhere.

Trends

While there has been little change in average teaching hours over the past decade, some countries with available data reported an increase or decrease of 10% or more in teaching time in public pre-primary, primary, lower secondary and/or upper secondary education between 2000 and 2014. In Korea, however, net teaching time at the primary level dropped dramatically, by more than 20% between 2000 and 2014, while net teaching time increased by 16% or more in Japan at primary level and Israel at the lower secondary level.

D4

Analysis

Teaching time

At pre-primary, primary and secondary levels of education, countries vary considerably in the number of teaching hours per year required of the average public school teacher.

Required teaching time at the pre-primary level in public schools varies more across countries than it does at any other level. The number of teaching days ranges from 162 days in France to 225 in Norway. Annual teaching time ranges from less than 700 hours in Greece, Korea and Mexico to more than 1 500 hours in Norway. On average across OECD countries, teachers at this level of education are required to teach 1 005 hours per year, spread over 40 weeks or 190 days of teaching (Table D4.1 and Figure D4.2).

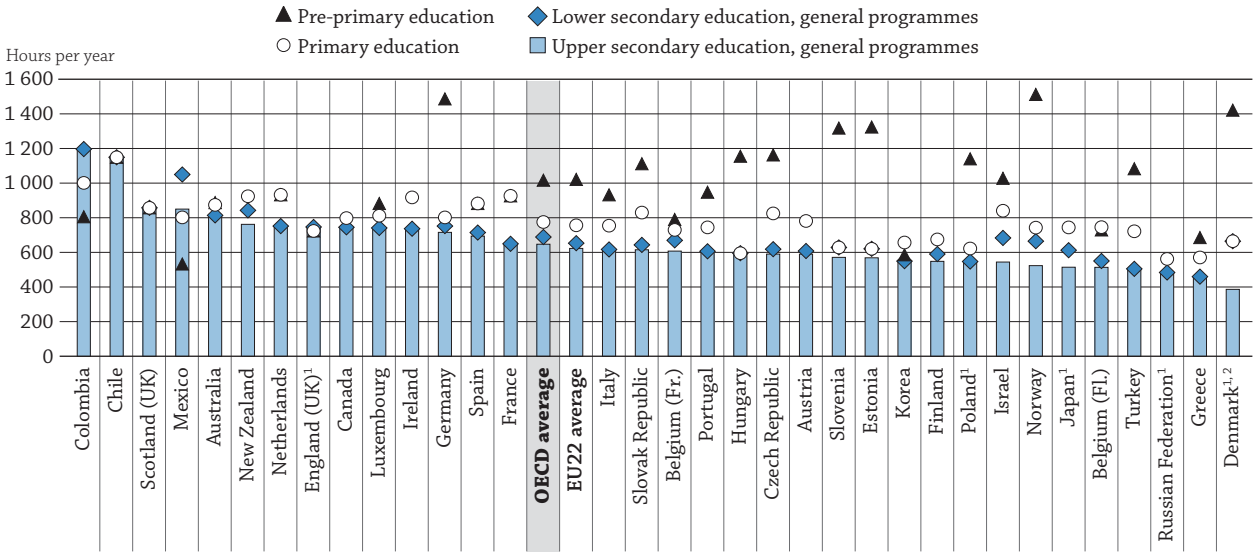
Primary school teachers are required to teach an average of 776 hours per year in public institutions. In most countries with available data, teachers are required to teach between three and six hours a day. The exception is Chile, where teachers teach slightly more than six hours per day (based on a five-day week). There is no set rule on how teaching time is distributed throughout the year. In Spain, for example, primary school teachers must teach 880 hours per year, about 100 hours more than the OECD average. However, those teaching hours are spread over three more days of instruction than the OECD average because primary school teachers in Spain teach an average of 5 hours per day compared to the OECD average of 4.3 hours.

Lower secondary school teachers in general programmes in public institutions teach an average of 694 hours per year. Teaching time at the lower secondary level ranges from less than 600 hours in Belgium (Flemish Community), Finland, Greece, Hungary, Korea, Poland, the Russian Federation and Turkey to more than 1 000 hours in Chile, Colombia and Mexico.

A teacher of general subjects in upper secondary education in public institutions has an average teaching load of 644 hours per year. Teaching time exceeds 800 hours in only five countries and economies: Australia, Chile, Colombia, Mexico and Scotland (United Kingdom). However, in Chile and Scotland (United Kingdom), the reported hours refer to the maximum time teachers can be required to teach, not to their typical teaching load. In contrast, teachers are required to teach less than 500 hours per year in Denmark, Greece and the Russian Federation. Teachers in Finland, Greece, Japan, Korea, Norway, the Russian Federation, Slovenia and Turkey teach for three hours or less per day, on average, compared to more than six hours in Chile.

Figure D4.2. Number of teaching hours per year, by level of education (2014)

Net statutory contact time in public institutions



1. Actual teaching time.
2. Year of reference 2013.

Countries and economies are ranked in descending order of the number of teaching hours per year in general upper secondary education.

Source: OECD. Table D4.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399112

Reported teaching time refers to net contact time as stated in regulations, excluding preparation time and periods of time formally allowed for breaks between lessons or groups of lessons. The exclusion of these breaks in some countries, but not in others, may explain some of these differences. Variations in how teaching time is reported and/or regulated across countries (minimum, typical or maximum) may also explain some of these differences.

Differences in teaching time between levels of education

In most countries, teaching time at the upper secondary level is less than at the pre-primary level. The exceptions are Chile and Scotland (United Kingdom), where the maximum time teachers can be required to teach is the same, irrespective of the level of education taught, and Colombia, England (United Kingdom) and Mexico, where upper secondary school teachers are required to teach more hours than pre-primary school teachers (Table D4.1 and Figure D4.2).

Teaching time requirements vary the most between the pre-primary and primary levels of education. On average, pre-primary school teachers are required to spend almost 34% more time in the classroom than primary school teachers. In Denmark, Norway and Slovenia, pre-primary school teachers are required to teach at least twice the amount of time per year as primary school teachers.

In Belgium (Flemish Community), the Czech Republic, France and Turkey, primary school teachers have at least 30% more annual teaching time than lower secondary school teachers. In contrast, there is no difference in Chile, Denmark, Estonia, Hungary, Scotland (United Kingdom) and Slovenia. The teaching load for primary school teachers is slightly lighter than for lower secondary school teachers in England (United Kingdom) and much lighter in Colombia and Mexico.

Teaching time at the lower and upper secondary levels is similar across most countries. However, in Israel, Mexico and Norway, the annual required teaching time at the lower secondary level is at least 20% higher than at the upper secondary level. This difference amounts to more than 70% in Denmark.

Actual teaching time

Statutory teaching time, as reported by most of the countries in this indicator, must be distinguished from actual teaching time. Actual teaching time is the annual average number of hours that full-time teachers teach a group or a class of students, including overtime, and it thus provides a full picture of teachers' actual teaching load.

Only a few countries could report both statutory and actual teaching time, but these data suggest that actual teaching time can sometimes differ significantly from statutory requirements. In Slovenia, for example, lower secondary teachers work around 6% more than the statutory benchmark time, while in Hungary, actual teaching time is up to 9% more than statutory requirements. By contrast, in Estonia actual teaching time is about 3% less than statutory teaching time at the lower secondary level (Figure D4.4, available on line).

It is difficult to determine why there are differences between statutory and actual teaching time. Some of these variations can be the result of overtime due to teacher absenteeism or shortages of teachers. Some may be explained by the nature of the data, as figures on statutory teaching time refer to official requirements and agreements, whereas actual teaching time is based on administrative registers, statistical databases, representative sample surveys or other representative sources.

Trends in teaching time

While there has been little change in average teaching hours over the last 15 years, some countries with available data reported an increase or decrease of 10% or more in teaching time in one or several levels among pre-primary, primary, lower secondary and upper secondary education between 2000 and 2014 (Table D4.2 and Figure D4.1).

At the pre-primary level, among the few countries and economies with available data for 2000 and 2014, annual teaching time stayed constant during this period (France, Mexico, Spain and Turkey), but decreased by 8% or more (corresponding to 90 hours or more) in Portugal (from 1 035 hours to 945 hours) and in Scotland (United Kingdom) (from 950 hours to 855 hours).

At the primary level, teaching time increased by at least 14% (more than 100 hours) between 2000 and 2014 in Israel and Japan. In Israel, this increase in teaching (and working) time is part of the "New Horizon" reform that has been gradually implemented since 2008. One of the key measures of this reform was to lengthen teachers' workweek to accommodate small-group teaching in exchange for more generous compensation. Teachers' working time was increased from 30 to 36 hours per week and now includes 5 hours of small-group teaching in primary schools. To compensate, salaries have been raised substantially (see Indicator D3).

Teaching time for lower secondary school teachers also increased in Israel by nearly 18% (more than 100 hours) during this period. The increase at the lower secondary level is also significant, albeit to a lesser extent, in Hungary (by 39 hours) and Japan (by 54 hours) during this period. At the upper secondary level, the largest increase in teaching time also occurred in Japan, where teachers had to teach 7% hours more (35 hours) in 2014 than in 2000.

By contrast, net teaching time dropped between 2000 and 2014 in some countries and economies. Teaching time decreased by 10% or more in Belgium (Flemish Community) at lower and upper secondary levels (by 120 hours or more), in Mexico at lower secondary level (by 135 hours), in the Netherlands at secondary level (by 117 hours), in Scotland (United Kingdom) at the primary level (by 95 hours) and in Turkey at upper secondary level (by 63 hours). The decrease exceeded 24% in Korea at the primary level (209 hours). In Scotland (United Kingdom), the decrease in teaching time for primary teachers was part of the Teachers' Agreement, "A Teaching Profession for the 21st Century", which introduced a 35-hour working week for all teachers and a phased reduction of maximum teaching time to 22.5 hours per week for primary, secondary and special-school teachers in 2001. However, even with this decrease of net contact time, the maximum time teachers at these levels in Scotland (United Kingdom) can be required to teach is more than the OECD average teaching time. In Turkey, this reduction in teaching and working time for upper secondary teachers is related to shorter classes, as general upper secondary classes were cut from 45 to 40 minutes in 2013. As a result, teachers' total annual teaching time was reduced compared to previous years.

Teachers' working time

In most countries, teachers are formally required to work a specified total number of hours per week, including teaching and non-teaching time, as stipulated in collective agreements or other contractual arrangements, to earn their full-time salary. Some countries also regulate the time a teacher has to be present in the school. Within this framework, however, countries differ in how they allocate time for each activity.

More than half of OECD countries specify the time during which teachers are required to be available at school (in public institutions), for both teaching and non-teaching activities, at one or various levels of education. In half of these countries, the difference between the time upper secondary school teachers and pre-primary school teachers are required to be available at school is less than 10%. However, in Norway, Sweden and Turkey, pre-primary teachers are required to be available at school at least 30% more hours than upper secondary school teachers (Table D4.1).

In Austria (primary and lower secondary education), Belgium (French Community, pre-primary and primary education), the Czech Republic, Denmark, France (lower and upper secondary education), Germany, Japan, Korea, the Netherlands, Poland and the Slovak Republic, teachers' total annual statutory working time (at school and elsewhere) is specified, but the allocation of time spent at school and time spent elsewhere is not (Table D4.1).

In Sweden, although the total working time per year is decided through collective agreements, school leaders decide on the number of working hours per week and on the use of teachers' time (teaching or non-teaching activities).

In addition, workload and teaching load requirements may evolve throughout the career. In some countries, some beginning teachers might have a reduced teaching load as part of their induction programmes, and some countries also encourage older teachers to stay in the teaching profession by diversifying their duties and reducing their teaching hours. For example, Greece reduces teaching hours according to how many years a teacher has served. At the secondary level, teachers are required to teach 23 class sessions per week. After six years, this drops to 21 sessions, and after 12 years to 20 sessions. After 20 years of service, teachers are required to teach 18 class sessions a week – more than 20% less than teachers who have just started their careers. However, the remaining hours of teachers' working time must be spent at school.

Non-teaching time

Although teaching time is a substantial component of teachers' workloads, assessing students, preparing lessons, correcting students' work, in-service training and staff meetings should also be taken into account when analysing the demands placed on teachers in different countries. The amount of time available for these non-teaching activities varies across countries, and a large proportion of statutory working time spent teaching may indicate that less time is devoted to activities such as assessing students and preparing lessons.

In the majority of countries, teachers' working time is determined by the statutory teaching time specified in working regulations. In addition, in most countries, teachers are formally required to work a specific number of hours per year. This may be specified either as the number of hours teachers must be available at school for teaching

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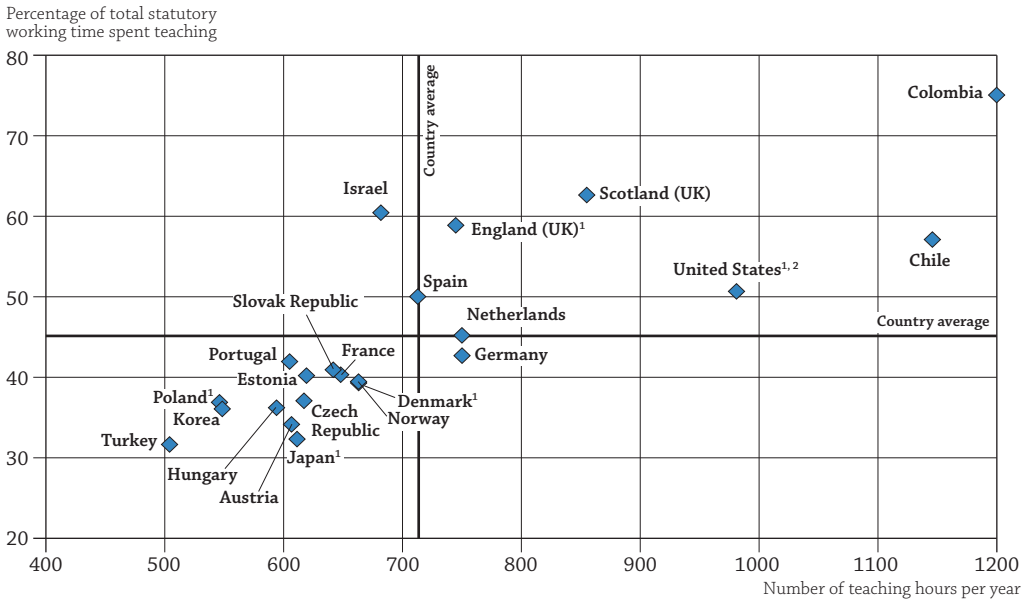
and non-teaching activities or as the number of total working hours. Both correspond to official working hours as specified in contractual agreements. In Israel, for example, recent reforms take into account working hours at school beyond teaching time. Regulations now specify the working time required at school, including teaching and non-teaching time. Following the reform non-teaching hours at school have been extended, to allow for tasks that were previously completed at home.

In the 22 countries with data for both teaching and total working time for lower secondary teachers, 45% of teachers' working time is spent on teaching on average, with the proportion ranging from less than 35% in Austria, Japan and Turkey to 63% in Scotland (United Kingdom). While the proportion of working time spent teaching increases with the annual number of teaching hours, there are significant variations between countries. For example, Japan and Portugal have a similar number of teaching hours (611 hours in Japan and 605 hours in Portugal), but 32% of working time is spent on teaching in Japan, compared to 42% in Portugal. Moreover, in some countries, teachers devote similar proportions of their working time to teaching, even if the number of teaching hours differs considerably. This is the case, for example, in Spain and the United States, where lower secondary teachers spend half of their working time teaching, but teachers teach 713 hours in Spain, compared to 981 hours in the United States. Even if teaching is a core activity of teachers, in a large number of countries, most of the working time is spent on activities other than teaching. Only teachers in Chile, Colombia, England (United Kingdom), Israel, Scotland (United Kingdom), Spain and the United States spend at least 50% of their statutory working time teaching (Figure D4.3).

Figure D4.3. Percentage of lower secondary teachers' working time spent teaching (2014)

Net teaching time (typical annual number of hours) as a percentage of total statutory working time



1. Actual teaching time.
2. Year of reference for net teaching time is 2013. Year of reference for working time is 2012.

Source: OECD. Table D4.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399128

In some countries, such as Austria (upper secondary level), Belgium (Flemish and French Communities, secondary level), Brazil and Italy, there are no formal requirements regarding time spent on non-teaching activities. However, this does not mean that teachers are given total freedom to carry out other tasks. In the Flemish Community of Belgium, although there are no regulations regarding the time devoted to preparing lessons, correcting tests, marking students' papers and other non-teaching tasks, additional non-teaching hours at school are set at the school level. In Italy, there is a requirement of up to 80 hours of scheduled non-teaching collegial work at school per year. Of these 80 hours, up to 40 hours of compulsory working time per year are dedicated to meetings of the teachers' assembly, staff planning meetings and meetings with parents, with the remaining compulsory 40 hours dedicated to class councils (Table D4.1).

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Box D4.1. Non-teaching tasks required of teachers in lower secondary education (2014)

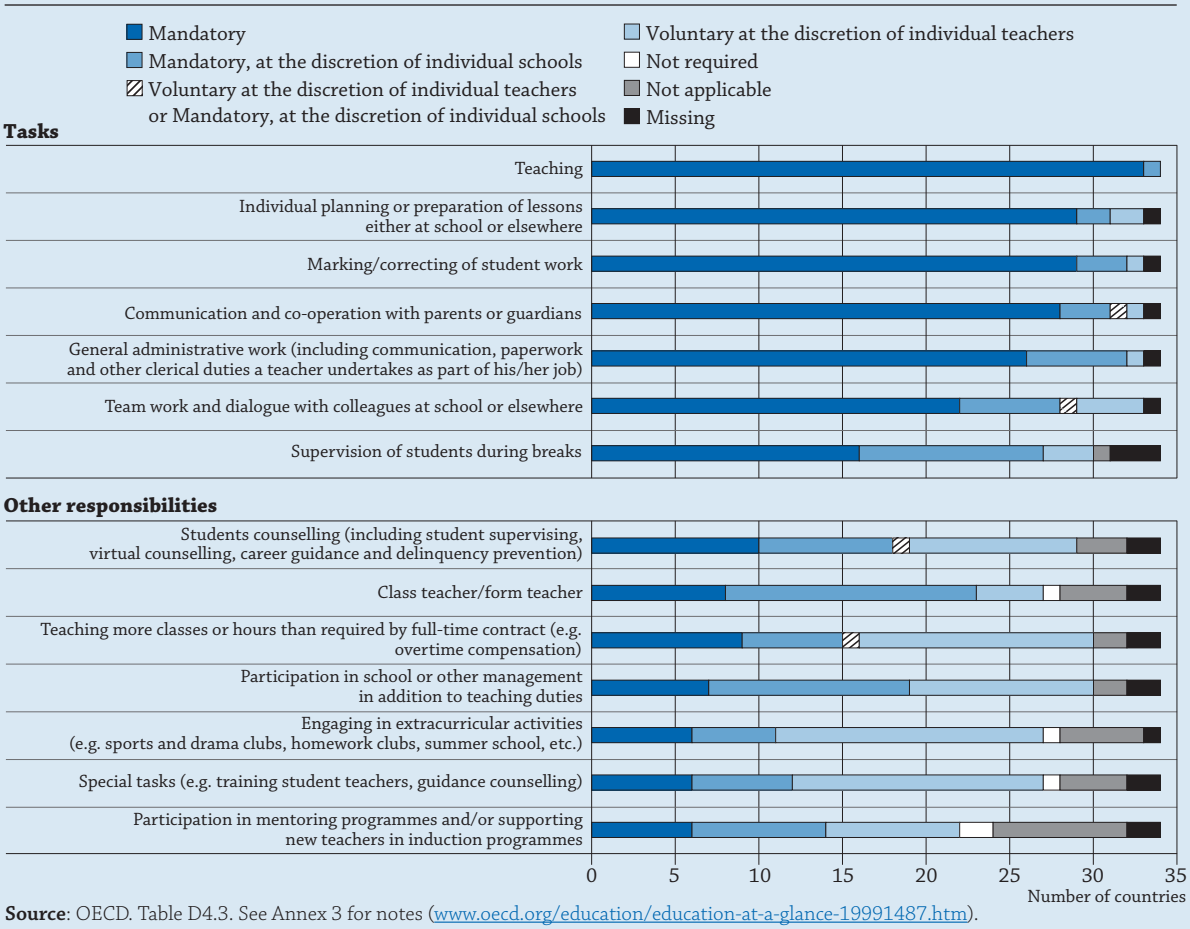
Non-teaching tasks are a part of teachers' workload and working conditions. These non-teaching activities required by legislation, regulations or agreements between stakeholders (e.g. teachers' unions, local authorities, school boards) do not necessarily reflect the actual participation of teachers in non-teaching activities, but they provide an insight into the breadth and complexity of teachers' roles.

According to regulations, individual planning or preparing lessons, marking/correcting student work, general administrative communication and paperwork, and communicating and co-operating with parents are the most common non-teaching tasks required of lower secondary teachers during their statutory working time at school or statutory total working time (Table D4.3). These tasks were required in at least 26 of the 34 countries with available data. Teamwork and dialogue with colleagues and supervising students during breaks were also required in around half of the countries with available data. In a quarter of countries, lower secondary teachers are required to take on different additional responsibilities, such as counselling students, teaching more classes or hours than required by full-time contract, or being class teacher/form teacher (Table D4.3).

Teachers do not only perform tasks that are required by regulations; they often voluntarily perform such tasks as engaging in extracurricular activities, training student teachers, offering guidance counselling and participating in school or other management activities. In almost half of the countries, individual teachers decided whether or not to perform these tasks. Responsibilities such as being class/form teacher or participating in school or other management in addition to teaching duties are largely distributed at the school level.

Figure D4.a. Tasks and responsibilities lower secondary teachers are required to perform (2014)

For lower secondary teachers teaching general programmes



Source: OECD. Table D4.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399130

Definitions

Actual 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. The data can be from administrative registers, statistical databases, representative sample surveys or other representative sources.

The **number of teaching days** is the number of teaching weeks multiplied by the number of days per week a teacher teaches, less the number of days on which the school is closed for holidays.

The **number of teaching weeks** refers to the number of weeks of instruction excluding holiday weeks.

Statutory teaching time is defined as the scheduled number of 60-minute hours per year that a full-time teacher teaches a group or class of students as set by policy, teachers' contracts of employment or other official documents. Teaching time can be defined on a weekly or annual basis. **Annual teaching time** is normally calculated as the number of teaching days per year multiplied by the number of hours a teacher teaches per day (excluding preparation time and periods of time formally allowed for breaks between lessons or groups of lessons). At the primary level, short breaks between lessons are included if the classroom teacher is responsible for the class during these breaks.

Total statutory working time refers to the number of hours that a full-time teacher is expected to work as set by policy. It can be defined on a weekly or annual basis. It does not include paid overtime. According to a country's formal policy, working time can refer to:

- the time directly associated with teaching and other curricular activities for students, such as assignments and tests
- the time directly associated with teaching and hours devoted to other activities related to teaching, such as preparing lessons, counselling students, correcting assignments and tests, professional development, meetings with parents, staff meetings and general school tasks.

Working time required at school refers to the time teachers are required to spend working at school, including teaching and non-teaching time.

Methodology

Data are from the 2015 OECD-INES Survey on Teachers and the Curriculum and refer to the school year 2013/14.

In interpreting differences in teaching hours among countries, net contact time, as used here, does not necessarily correspond to the teaching load. Although contact time is a substantial component of teachers' workloads, preparing for classes and necessary follow-up, including correcting students' work, also need to be included when making comparisons. Other relevant elements, such as the number of subjects taught, the number of students taught and the number of years a teacher teaches the same students, should also be taken into account.

Notes on definitions and methodologies for each country are provided in Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm.

Note regarding data from Israel

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

Reference

OECD (2015), "Indicator D4: How much time do teachers spend teaching?", in *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-33-en.

Indicator D4 Tables

StatLink http://dx.doi.org/10.1787/888933399067

	Table D4.1	Organisation of teachers' working time (2014)
	Table D4.2	Number of teaching hours per year (2000, 2005, 2010 to 2014)
	Table D4.3	Tasks and responsibilities of teachers, by level of education (2014)
WEB	Figure D4.4	Actual and statutory teaching time in general lower secondary education (2014)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

D4

Table D4.1. Organisation of teachers' working time (2014)

Number of statutory teaching weeks, teaching days, net teaching hours and teachers' working time in public institutions over the school year

	Number of weeks of teaching				Number of days of teaching				Net teaching time, in hours				Working time required at school, in hours				Total statutory working time, in hours			
	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	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
OECD																				
Australia[1]	40	40	40	40	197	197	197	195	885	872	812	804	1 226	1 214	1 233	1 233	a	a	a	a
Austria[1, 2]	m	38	38	38	m	180	180	180	m	779	607	589	a	a	a	a	a	1 776	1 776	a
Belgium (Fl.)[1]	37	37	37	37	175	175	147	147	729	744	549	513	910	910	a	a	a	a	a	a
Belgium (Fr.)[1]	37	37	37	37	182	182	182	182	788	728	668	606	a	a	a	a	962	962	a	a
Canada[1]	m	37	37	37	m	183	183	183	m	796	743	744	m	1 227	1 233	1 236	m	a	a	a
Chile[3]	38	38	38	38	183	183	183	183	1 146	1 146	1 146	1 146	1 874	1 874	1 874	1 874	2 006	2 006	2 006	2 006
Czech Republic[1]	39	39	39	39	187	187	187	187	1 159	823	617	589	a	a	a	a	1 664	1 664	1 664	1 664
Denmark[1, 4, 5]	a	a	a	a	a	a	a	a	1 417	663	663	386	a	a	a	a	1 680	1 680	1 680	1 680
England (UK)[4]	38	38	38	38	190	190	190	190	722	722	745	745	1 265	1 265	1 265	1 265	1 265	1 265	1 265	1 265
Estonia[3]	46	35	35	35	220	172	172	172	1 320	619	619	568	1 610	1 540	1 540	1 540	1 610	1 540	1 540	1 540
Finland[6]	m	38	38	38	m	187	187	187	m	673	589	547	m	791	706	645	a	a	a	a
France[1]	36	36	36	36	162	162	a	a	924	924	648	648	972	972	a	a	1 607	1 607	1 607	1 607
Germany[1]	39	40	40	40	190	193	193	193	1 482	800	750	714	a	a	a	a	1 757	1 757	1 757	1 757
Greece[1]	35	35	31	31	171	171	152	152	684	569	459	459	1 140	1 140	1 170	1 170	a	a	a	a
Hungary[6]	36	36	36	36	170	165	165	164	1 152	594	594	590	1 152	1 152	1 152	1 152	1 640	1 640	1 640	1 640
Iceland[1]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	m	37	33	33	m	183	167	167	m	915	735	735	m	1 073	768	768	a	a	a	a
Israel[1]	38	38	36	36	181	181	174	174	1 025	838	682	543	1 051	1 225	1 128	852	1 051	1 225	1 128	852
Italy[1]	42	39	39	39	186	171	171	171	930	752	616	616	a	a	a	a	a	a	a	a
Japan[4]	39	40	40	39	m	201	202	197	m	742	611	513	a	a	a	a	1 891	1 891	1 891	1 891
Korea[6]	36	38	38	38	180	190	190	190	585	656	548	550	a	a	a	a	1 520	1 520	1 520	1 520
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg[1]	36	36	36	36	176	176	176	176	880	810	739	739	1 060	990	828	828	a	a	a	a
Mexico[1]	41	41	41	36	200	200	200	173	532	800	1 047	848	772	800	1 167	971	a	a	a	a
Netherlands[3]	40	40	m	m	195	195	m	m	930	930	750	750	a	a	a	a	1 659	1 659	1 659	1 659
New Zealand[1]	m	38	38	38	m	192	191	190	m	922	840	760	m	1 536	1 243	950	a	a	a	a
Norway[3]	45	38	38	38	225	190	190	190	1 508	741	663	523	1 508	1 300	1 225	1 150	a	1 688	1 688	1 688
Poland[4]	45	37	37	37	215	181	179	177	1 137	621	546	545	m	m	m	m	1 800	1 496	1 480	1 464
Portugal[3]	41	36	36	36	189	165	165	165	945	743	605	605	1 095	1 013	914	914	1 586	1 442	1 442	1 442
Scotland (UK)[3]	38	38	38	38	190	190	190	190	855	855	855	855	1 045	1 045	1 045	1 045	1 365	1 365	1 365	1 365
Slovak Republic[1]	42	38	38	38	198	186	186	186	1 109	828	642	614	m	m	m	m	1 568	1 568	1 568	1 568
Slovenia[1]	46	38	38	38	219	190	190	190	1 314	627	627	570	a	a	a	a	m	m	m	m
Spain[1]	37	37	37	36	176	176	176	171	880	880	713	693	1 140	1 140	1 140	1 140	1 425	1 425	1 425	1 425
Sweden[1]	47	a	a	a	224	a	a	a	m	a	a	a	1 792	1 360	1 360	1 360	a	1 767	1 767	1 767
Switzerland	38	38	38	38	185	185	185	185	m	m	m	m	m	m	m	m	m	m	m	m
Turkey[1]	38	38	38	38	180	180	180	180	1 080	720	504	504	1 160	980	836	836	1 592	1 592	1 592	1 592
United States[4, 7]	36	36	36	36	180	180	180	180	m	m	981	m	1 365	1 362	1 366	1 365	1 890	1 922	1 936	1 960
OECD average	40	38	37	37	190	183	181	180	1 005	776	694	644	1 230	1 178	1 160	1 115	1 577	1 585	1 609	1 588
EU22 average	40	37	37	37	190	180	177	176	1 019	754	652	622	1 198	1 107	1 081	1 075	1 542	1 538	1 576	1 560
Partners																				
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[1]	42	42	42	42	203	203	203	203	m	m	m	m	a	a	a	a	a	a	a	a
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia[1]	40	40	40	40	200	200	200	200	800	1 000	1 200	1 200	1 350	1 350	1 350	1 350	1 600	1 600	1 600	1 600
Costa Rica	m	m	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	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation[4]	m	34	35	35	m	170	210	210	m	561	483	483	a	a	a	a	m	m	m	m
Saudi Arabia	m	m	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	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

1. Typical teaching time (in Denmark, for pre-primary level only).
2. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
3. Maximum teaching time.
4. Actual teaching time (in Denmark except for pre-primary level).
5. Year of reference 2015 for upper secondary education.
6. Minimum teaching time.
7. Year of reference for net teaching time is 2013. Year of reference for working time is 2012.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399073

Table D4.2. Number of teaching hours per year (2000, 2005, 2010 and 2014)

Net statutory contact time in public institutions, by level of education

	Primary				Lower secondary, general programmes				Upper secondary, general programmes			
	2000	2005	2010	2014	2000	2005	2010	2014	2000	2005	2010	2014
	(12)	(13)	(18)	(22)	(23)	(24)	(29)	(33)	(34)	(35)	(40)	(44)
OECD												
Australia	882	888	868	872	811	810	819	812	803	810	803	804
Austria[1]	m	774	779	779	m	607	607	607	m	589	589	589
Belgium (Fl.)	758	752	752	744	677	569	557	549	633	532	520	513
Belgium (Fr.)	722	722	732	728	662	662	671	668	603	603	610	606
Canada	m	m	799	796	m	m	740	743	m	m	744	744
Chile	m	1 128	1 105	1 146	m	1 128	1 105	1 146	m	1 128	1 105	1 146
Czech Republic	m	813	862	823	650	647	647	617	621	617	617	589
Denmark[2, 3]	640	640	650	663	640	640	650	663	m	m	377	386
England (UK)[2]	m	m	684	722	m	m	703	745	m	m	703	745
Estonia	630	630	630	619	630	630	630	619	578	578	578	568
Finland	656	677	680	673	570	592	595	589	527	550	553	547
France	924	924	924	924	648	648	648	648	648	648	648	648
Germany	783	808	805	800	732	758	756	750	690	714	713	714
Greece	609	604	589	569	426	434	415	459	429	430	415	459
Hungary	583	583	604	594	555	555	604	594	555	555	604	590
Iceland	629	671	624	m	629	671	624	m	464	560	544	m
Ireland	915	915	915	915	735	735	735	735	735	735	735	735
Israel	731	731	820	838	579	579	598	682	524	524	521	543
Italy	744	739	770	752	608	605	630	616	608	605	630	616
Japan[2]	635	578	707	742	557	505	602	611	478	429	500	513
Korea	865	883	807	656	570	621	627	548	530	605	616	550
Latvia	882	882	882	m	882	882	882	m	882	882	882	m
Luxembourg	m	774	739	810	m	642	634	739	m	642	634	739
Mexico	800	800	800	800	1 182	1 047	1 047	1 047	m	848	843	848
Netherlands	930	930	930	930	867	750	750	750	867	750	750	750
New Zealand	m	m	m	922	m	m	m	840	m	m	m	760
Norway	713	741	741	741	633	656	654	663	505	524	523	523
Poland[2]	m	m	644	621	m	m	572	546	m	m	571	545
Portugal	779	765	779	743	634	623	634	605	577	567	634	605
Scotland (UK)	950	893	855	855	893	893	855	855	893	893	855	855
Slovak Republic	m	m	841	828	m	m	652	642	m	m	624	614
Slovenia	m	627	627	627	m	627	627	627	m	570	570	570
Spain	880	880	880	880	713	713	713	713	693	693	693	693
Sweden	m	m	m	a	m	m	m	a	m	m	m	a
Switzerland	884	m	m	m	859	m	m	m	674	m	m	m
Turkey	720	720	720	720	504	504	504	504	567	567	567	504
United States[2, 4]	m	m	m	m	m	m	m	981	m	m	m	m
OECD average	770	775	774	776	686	680	681	694	628	648	645	644
Average for OECD countries with 2000, 2005, 2010 and 2014 data	766	764	771	762	673	660	667	665	622	616	623	615
Average for EU22 countries with 2000, 2005, 2010 and 2014 data	767	764	766	759	665	653	656	652	644	631	637	632
Partners												
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
China	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	1 000	1 000	1 000	m	1 200	1 200	1 200	m	1 200	1 200	1 200
Costa Rica	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
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation[2]	m	615	615	561	m	507	507	483	m	507	507	483
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
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: Data on years 2000 to 2014 for pre-primary education (i.e. Columns 1-11) are available for consultation on line. Data on years 2006, 2007, 2008, 2009, 2011, 2012 and 2013 for primary education, lower secondary education and upper secondary education (i.e. Columns 14-17; 19-21; 25-28; 30-32; 36-39; 41-43) are available for consultation on line (see *StatLink* below).

1. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
2. Actual teaching time (in Denmark except for pre-primary level, in Poland, except reference year 2014).
3. Year of reference 2011 instead of 2012 and 2013, and year of reference 2015 instead of 2014 for upper secondary education.
4. Year of reference 2013 instead of 2014.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399083

D4

Table D4.3. [1/2] Tasks and responsibilities of teachers, by level of education (2014)

Teachers' tasks and responsibilities in public institutions as defined explicitly in regulations and/or steering documents

	Lower secondary education						
	Tasks						
	Teaching	Individual planning or preparation of lessons either at school or elsewhere	Marking/ correcting of student work	General administrative work (including communication, paperwork and other clerical duties undertaken as part of the job)	Communication and co-operation with parents or guardians	Supervision of students during breaks	Team work and dialogue with colleagues at school or elsewhere
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
OECD							
Australia	m	m	m	m	m	m	m
Austria	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.
Belgium (Fl.)	Mand.	Mand.	School Req.	School Req.	School Req.	School Req.	School Req.
Belgium (Fr.)	Mand.	Mand.	Mand.	Mand.	Mand.	Voluntary	Voluntary
Canada	Mand.	Mand.	Mand.	Mand.	Mand.	m	Mand.
Chile	Mand.	Mand.	Mand.	School Req.	School Req./ Vol.	School Req.	School Req./ Vol.
Czech Republic	Mand.	Voluntary	Voluntary	School Req.	Voluntary	School Req.	School Req.
Denmark	Mand.	Mand.	Mand.	Mand.	Mand.	m	Mand.
England (UK)	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Estonia	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.	Mand.
Finland	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.	Mand.
France	Mand.	Voluntary	Mand.	Mand.	Mand.	a	Voluntary
Germany	Mand.	Mand.	Mand.	School Req.	Mand.	School Req.	Voluntary
Greece	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Hungary	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Iceland	m	m	m	m	m	m	m
Ireland	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Israel	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Italy	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Japan	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Korea	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Latvia	m	m	m	m	m	m	m
Luxembourg	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Voluntary
Mexico	m	m	m	m	m	m	m
Netherlands	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.
New Zealand	m	m	m	m	m	m	m
Norway	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.	School Req.
Poland	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Portugal	Mand.	Mand.	Mand.	Mand.	Mand.	Voluntary	Mand.
Scotland (UK)	Mand.	Mand.	Mand.	Voluntary	Mand.	Voluntary	Mand.
Slovak Republic	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Slovenia	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.	Mand.
Spain	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
Sweden	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.	Mand.
Switzerland	Mand.	m	m	m	m	m	m
Turkey	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
United States	Mand.	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.
Partners							
Argentina	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m
Colombia	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
India	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m
Russian Federation	Mand.	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m

Is the performance mandatory for teachers?

Mand. = Mandatory
School Req. = Mandatory, at the discretion of individual schools
Voluntary / Vol. = Voluntary at the discretion of individual teachers
Not req. = Not required

Note: Pre-primary, primary and upper secondary levels (added in separate rows) are available for consultation on line (see *StatLink* below).
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933399099

Table D4.3. [2/2] Tasks and responsibilities of teachers, by level of education (2014)

Teachers' tasks and responsibilities in public institutions as defined explicitly in regulations and/or steering documents

		Other responsibilities						
		Participation in school or other management duties in addition to teaching (e.g. serving as head of department or co-ordinator of teachers)	Teaching more classes or hours than required by full-time contract (e.g. overtime compensation)	Students counselling (including student supervising, virtual counselling, career guidance, and delinquency prevention)	Engaging in extracurricular activities (e.g. homework clubs, sports and drama clubs, summer school)	Special tasks (e.g. training student teachers, guidance counselling)	Class teacher/ form teacher	Participation in mentoring programmes and/or supporting new teachers in induction programmes
		(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD	Australia	m	m	m	m	m	m	m
	Austria	School Req.	Mand.	School Req.	Voluntary	Voluntary	Mand.	a
	Belgium (Fl.)	Voluntary	Voluntary	a	Voluntary	Voluntary	Voluntary	a
	Belgium (Fr.)	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	School Req.
	Canada	m	m	m	Voluntary	m	m	Voluntary
	Chile	Voluntary	School Req./ Vol.	School Req./ Vol.	Voluntary	Voluntary	School Req.	Voluntary
	Czech Republic	School Req.	School Req.	Voluntary	Voluntary	School Req.	School Req.	School Req.
	Denmark	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	School Req.	a
	England (UK)	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.
	Estonia	School Req.	Voluntary	School Req.	School Req.	School Req.	School Req.	a
	Finland	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	School Req.	School Req.
	France	Voluntary	Voluntary	Mand.	Voluntary	Voluntary	Voluntary	Voluntary
	Germany	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	School Req.	a
	Greece	a	Voluntary	Mand.	a	a	Mand.	Mand.
	Hungary	Mand.	Mand.	Mand.	Mand.	Mand.	Not req.	Mand.
	Iceland	m	m	m	m	m	m	m
	Ireland	School Req.	a	a	Voluntary	Voluntary	School Req.	Voluntary
	Israel	Voluntary	Voluntary	School Req.	a	Voluntary	School Req.	Voluntary
	Italy	School Req.	Voluntary	Voluntary	Voluntary	Voluntary	a	Voluntary
	Japan	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.
	Korea	School Req.	Voluntary	Mand.	School Req.	Voluntary	School Req.	School Req.
	Latvia	m	m	m	m	m	m	m
	Luxembourg	Mand.	Mand.	Mand.	Mand.	Mand.	Voluntary	Voluntary
	Mexico	m	m	m	m	m	m	m
	Netherlands	School Req.	Voluntary	School Req.	School Req.	Voluntary	School Req.	a
	New Zealand	m	m	m	m	m	m	m
	Norway	School Req.	School Req.	School Req.	Not req.	Not req.	School Req.	School Req.
	Poland	School Req.	School Req.	Voluntary	Mand.	School Req.	Mand.	Mand.
	Portugal	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	School Req.
	Scotland (UK)	a	Voluntary	Mand.	Voluntary	School Req.	School Req.	Mand.
	Slovak Republic	Voluntary	School Req.	Voluntary	Voluntary	Voluntary	Mand.	Voluntary
	Slovenia	School Req.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.
	Spain	Mand.	a	a	a	a	a	a
	Sweden	Voluntary	Voluntary	School Req.	Voluntary	Voluntary	School Req.	a
	Switzerland	m	m	m	m	m	m	m
	Turkey	Voluntary	Mand.	Mand.	Voluntary	Mand.	Mand.	Mand.
	United States	School Req.	School Req.	School Req.	School Req.	School Req.	School Req.	m
Partners	Argentina	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m
	Colombia	Mand.	Mand.	Voluntary	a	a	a	Not req.
	India	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m

Is the performance mandatory for teachers?

Mand. = Mandatory
School Req. = Mandatory, at the discretion of individual schools
Voluntary / Vol. = Voluntary at the discretion of individual teachers
Not req. = Not required

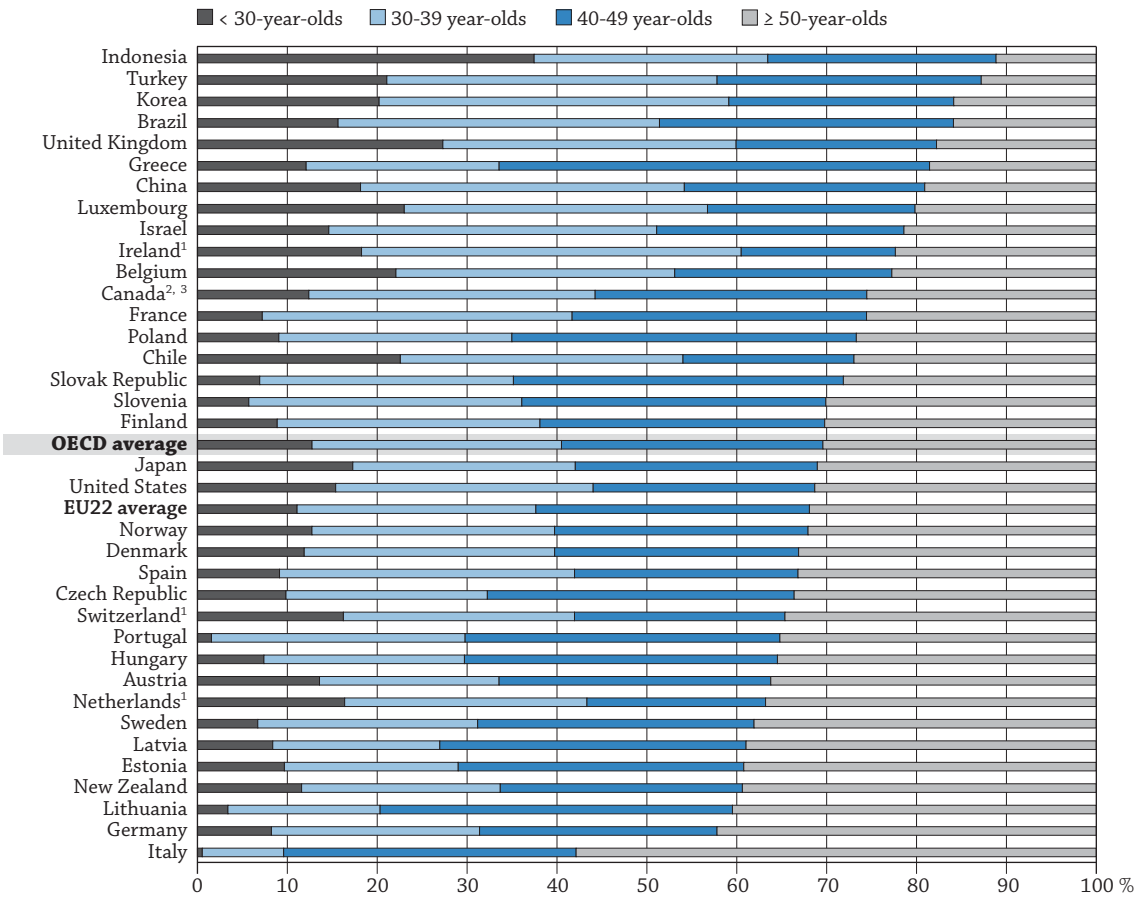
Note: Pre-primary, primary and upper secondary levels (added in separate rows) are available for consultation on line (see *StatLink* below).
Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink http://dx.doi.org/10.1787/888933399099

WHO ARE THE TEACHERS?

- On average across OECD countries, 31% of primary school teachers were at least 50 years old in 2014. The average increases to 34% at the lower secondary level and 38% at the upper secondary level.
- More than two out of three teachers are women, on average across OECD countries, but the percentage of female teachers decreases as the level of education increases: 97% at the pre-primary level, 82% at the primary level, 68% at the lower secondary level, 58% at the upper secondary level and 43% at the tertiary level.
- Between 2005 and 2014, the share of secondary teachers aged 50 or older has risen in 16 of the 24 OECD countries with available data.

Figure D5.1. Age distribution of teachers in primary education (2014)

Distribution of teachers in educational institutions, by age group



1. Public institutions only.
2. Primary includes pre-primary and lower secondary.
3. Year of reference 2013.

Countries are ranked in ascending order of the percentage of teachers aged 50 years or older at the primary level.

Source: OECD. Table D5.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

The demand for teachers depends on a range of factors, including the age structure of the school-age population, average class size, the required instruction time for students, the use of teaching assistants and other "non-classroom" staff in schools, enrolment rates at the different levels of education, and the starting and ending age for compulsory education. With large proportions of teachers in several

OECD countries set to reach retirement age in the next decade, and/or the projected increase in the size of the school-age population, governments will be under pressure to recruit and train new teachers. Given compelling evidence that the calibre of teachers is the most significant in-school determinant of student achievement, concerted efforts must be made to attract top talent to the teaching profession and to provide high-quality training (Hiebert and Stigler, 1999; OECD, 2005).

Teacher-retention policies need to promote work environments that encourage effective teachers to continue teaching. In addition, as teaching at the pre-primary, primary and lower secondary levels remains largely dominated by women, the gender imbalance in the teaching profession and its impact on student learning warrant detailed study.

Other findings

- In nearly all countries except Finland, Latvia, Lithuania and the Russian Federation, most teachers at the tertiary level are men.
- Indonesia has the largest proportion (37%) of primary teachers under the age of 30 of all countries with available data. By contrast, Italy and Portugal have fewer than 3% of primary teachers in that age group.

Trends

Between 2005 and 2014, the proportion of secondary teachers aged 50 or older climbed by 4 percentage points, on average across countries with comparable data. This corresponds to an average annual growth rate of 1.32% (Figure D5.2).The increase over these nine years is 10 percentage points or more in Greece, Japan, Korea, Portugal, Slovenia and Spain, and, in Austria, it is 19 percentage points. In countries that stand to lose a significant number of teachers through retirement and whose school-age population is expected to remain the same or grow, governments will have to boost the appeal of teaching to upper secondary and tertiary students, expand teacher-training programmes and, if necessary, provide alternate routes to certification for mid-career professionals intent on changing careers. Fiscal constraints (particularly those driven by pension obligations and health-care costs for retirees) are likely to result in greater pressure on governments to reduce academic offerings, increase class size, integrate more self-paced online learning – or implement some combination of these measures (Abrams, 2011; Peterson, 2010).

D5

Analysis

Age distribution of teachers

The age distribution of teachers varies considerably across countries and can be affected by a variety of factors, such as the size and age distribution of the population, the duration of tertiary education, and teachers' salaries and working conditions. Declining birth rates, for example, may drive down the demand for new teachers, and longer tertiary education can delay the entrance of teachers to the labour market. Competitive salaries and good working conditions may attract young people to teaching in some countries and, in others, help to retain effective teachers.

The age distribution of teachers is similar for the primary and secondary levels of education: about 82% of teachers are between 30 and 59 years old. At the primary level, 31% of school teachers are at least 50 years old, on average across OECD countries. The proportion exceeds 40% in Germany, Italy and Lithuania. At the other end of the spectrum, in most countries with available data, only 15% or less of primary teachers are under the age of 30. Only in Belgium, Chile, Indonesia, Korea, Luxembourg, Turkey and the United Kingdom does the proportion of primary teachers under the age of 30 equal or exceed 20% (Figure D5.1).

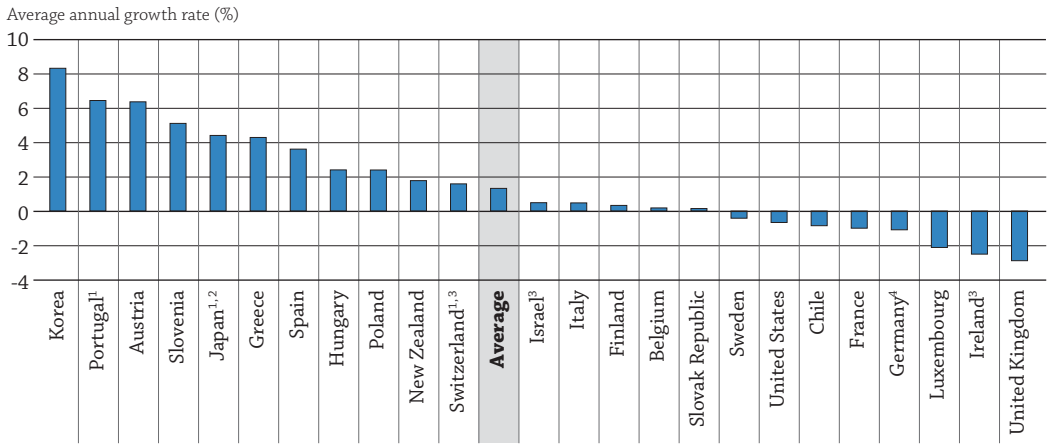
At the lower secondary level, on average across OECD countries, 34% of teachers are at least 50 years old, and 7% are 60 or older. The proportion of lower secondary teachers aged 60 or older varies from 1% or less in China, Indonesia, Korea and Turkey to 21% in Italy. At the upper secondary level, the proportion of teachers aged 50 or older is 4 percentage points larger than it is in lower secondary education, on average across OECD countries. Only in Brazil, Chile, China, Indonesia and Turkey are most upper secondary teachers below the age of 40.

The ageing of the teaching force has a number of implications for countries' education systems. In addition to prompting recruitment and training efforts to replace retiring teachers, it may also affect budgetary decisions. In most school systems, there is a positive link between teachers' salaries and years of teaching experience. Thus, the ageing of teachers increases school costs, which can in turn limit the resources available to implement other initiatives (see Indicator D3).

Change in the age distribution of teachers between 2005 and 2014

The average annual growth rate between 2005 and 2014 in the proportion of secondary teachers aged 50 or older varied considerably among countries. In Austria, Greece, Japan, Korea, Portugal and Slovenia, it was over 4%. The proportion of secondary teachers aged 50 or older increased the most in Korea, by an average of 8.3% per year. In France, Germany, Ireland, Luxembourg and the United Kingdom, the proportion of secondary teachers aged 50 or older decreased by an average of 1% or more per year during the period (Figure D5.2).

Figure D5.2. Average annual growth rate of the share of teachers over the age of 50 in secondary education (2005 to 2014)



1. Upper secondary include programmes from post-secondary non-tertiary.
2. Year of reference 2004 instead of 2005.
3. Public institutions only.
4. Year of reference 2006 instead of 2005.

Countries are ranked in descending order of the average annual growth rate of the share of teachers aged 50 years or older at the secondary level.

Source: OECD. Table D5.2. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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In all countries, changes in the number of teachers should be balanced against changes in the school-age population. In countries with an increase in the school-age population over the period (see Indicator C1), new teachers will be needed to compensate for the staff who will reach retirement age over the next decade. Teacher-training programmes will likely have to grow in these countries, and incentives for students to enter the teaching profession may have to increase (see Indicator D6 in OECD, 2014a).

Gender profile of teachers

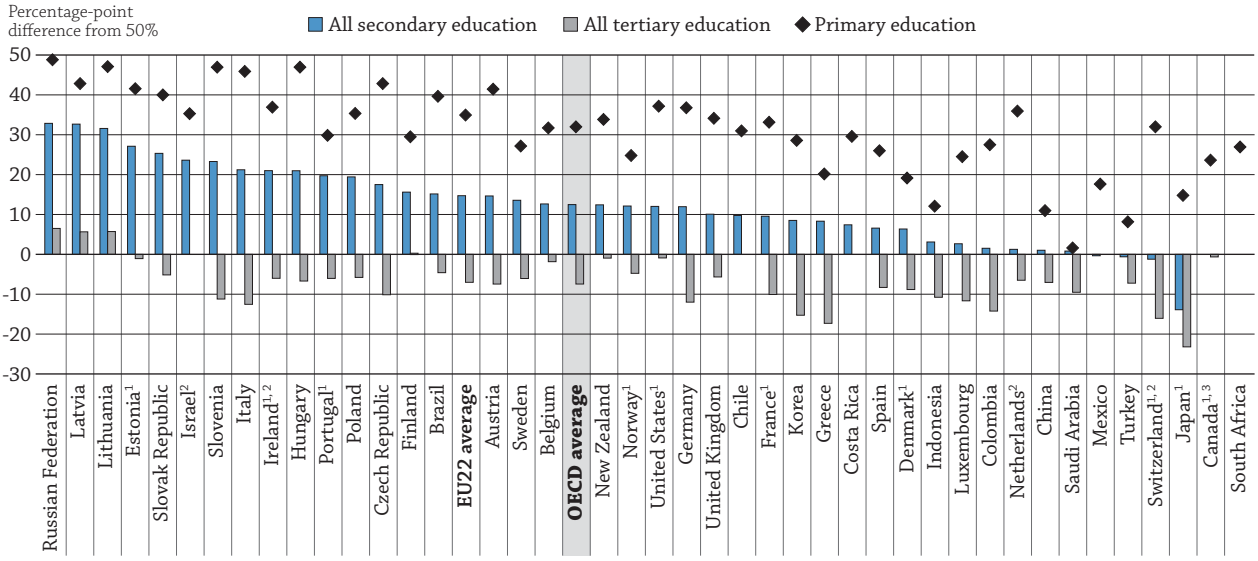
On average across OECD countries, more than two out of three teachers in all levels of education combined are women. The highest proportions of female teachers, however, are concentrated in the earlier years of schooling and shrink at each successive level of education. Indeed, while women represent 97% of the teaching staff in pre-primary education on average across OECD countries, the average drops to 43% at the tertiary level.

In 36 of the 38 OECD and partner countries with available data, 93% or more of pre-primary teachers are women. The exceptions are France, where 83% of pre-primary teachers are women, and the Netherlands (87%). In primary education, the share of female teachers is higher than 60% in all OECD and partner countries except Saudi Arabia and Turkey, averaging 82% across OECD countries.

In lower and upper secondary education, female teachers continue to be the majority, but the proportion of male teachers is larger at these levels than at the pre-primary and primary levels. In lower secondary education, 68% of teachers on average across OECD countries are women. Indeed, they represent at least 50% in all but one country with available data, – Japan, where women represent 42% of the teaching staff at this level. At the upper secondary level, the OECD average drops to 58%, and the proportion of female teachers varies considerably, from 30% in Japan to 81% in Latvia. When considering both lower and upper secondary levels combined, over half of all secondary teachers are men in Japan, Switzerland and Turkey (Figure D5.3).

Figure D5.3. Gender distribution of teachers (2014)

Percentage-point difference from 50% for share of women among teaching staff in public and private institutions, by level of education



How to read this figure

The zero line represents a 50-50 gender ratio for teachers in a given education level. Points above zero mean there is a higher share of female teachers and points below zero mean there is a higher share of male teachers. For example, in Slovenia, 97% of teachers in primary education are female, and the same is true for 73% of teachers at secondary and only 39% at the tertiary level.

1. Some levels of education are included with others. Please refer to "x" code in Table D5.3 for details.
2. Public institutions only. For the Netherlands, private data are available and included for pre-primary education. For Israel, private data are available and included in all levels except for pre-primary and upper secondary.
3. Year of reference 2013.

Countries are ranked in descending order of the percentage of female teachers at the secondary level.

Source: OECD. Table D5.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399207

At the tertiary level, the gender profile of teachers is reversed. Male teachers represent 57% of the teaching staff at that level, on average across OECD countries. In fact, of the OECD countries with available data, only two, Finland and Latvia, have a share of female teachers that is not below 50% in tertiary education. As at the lower and upper secondary levels, Japan has the smallest share of female teachers (27%) at the tertiary level of all countries with available data.

The potential impact of gender imbalance in the teaching profession on student achievement, student motivation and teacher retention is worthy of study, especially in countries where few men are attracted to the profession (Drudy, 2008; OECD, 2005; OECD, 2009). There is little evidence that a teacher's gender has an impact on student performance (e.g. Antecol, Eren and Ozbeklik, 2012; Holmlund and Sund, 2008), but some research has shown that female teachers' attitudes towards some school subjects, such as mathematics, can influence their female students' achievement (Beilock et al., 2009; OECD, 2014b).

In addition, school leadership does not reflect the gender balance among teachers (OECD, 2014b). While the proportion of male teachers in primary schools is relatively small in many countries, there is an over-representation of male principals relative to male teachers, especially at that level of education. This suggests that male teachers tend to be promoted to principal positions more often than female teachers – which is surprising, given that most principals are former teachers and most teachers are female (see Indicator D6).

Box D5.1 Relationship between male teachers' actual salaries and share of male teachers

A low share of male teachers in early levels of education is a policy-relevant reality in many OECD countries. There are a number of reasons that could explain why so few men decide to enter the teaching profession at these levels. From a cultural perspective, men and women may decide which careers they want to follow based on social perceptions of links between gender and vocations. This gender bias often arises very early at home, when parents have aspirations for their children's professions based on gender stereotypes (Croft et al., 2014; Kane and Mertz, 2011; OECD, 2015).

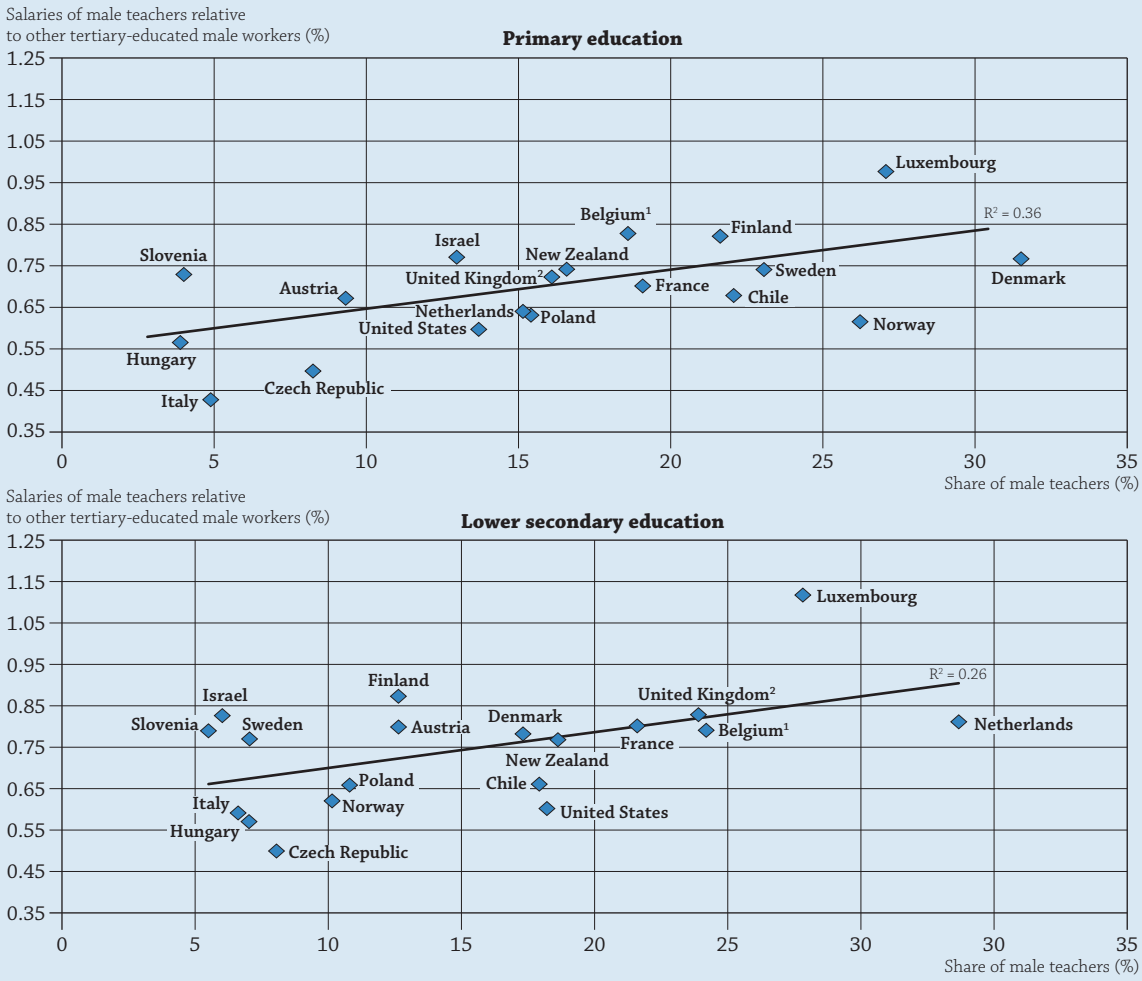
From the economic point of view, the choice of future jobs is also influenced by young people's expectations about their future wages. Thus, the low proportions of male teachers at initial levels of education can additionally be related to opportunity costs. Young men might have higher incentives to follow other careers, in which they know that they will earn higher salaries for similar qualifications. Indeed, in every country with available data, male teachers earn less than their male tertiary-educated counterparts in other professions. On average across OECD countries, male teachers between 25 and 64 years old at the primary level in public institutions earn 29% less than other male workers with higher education. The gap is similar at the lower secondary level, at which male teachers earn 24% less than other male workers with a tertiary degree. This pattern, however, is not observed among women. On average, female teachers in primary and lower secondary education earn virtually the same as women with a tertiary degree in other fields (see Indicator D3).

Figure D5.a shows a positive correlation between the share of male teachers in primary and lower secondary education and male teachers' actual salaries relative to wages of tertiary-educated male workers. That is, as the difference between teachers' wages and those of tertiary-educated workers decreases, the share of male teachers in public institutions tends to increase. In Hungary, for example, only 3% of teachers at the primary level in public institutions are men, and their salary corresponds to 57% of what other tertiary-educated male workers earn. In contrast, primary male teachers in Luxembourg earn, on average, only 2% less than other tertiary-educated male workers, and men represent 25% of the teaching force, the second highest share for primary education among countries with available data.

This relation could be capturing two different effects: either a higher relative salary tends to attract more men into the teaching profession, or the wage gap between male teachers and other tertiary-educated workers tends to shrink in countries where the share of men in the teaching profession is higher. Either way, it highlights an important issue of wage gap that warrants further investigation.

...

Figure D5.a. Relationship between male teachers' actual salaries and share of male teachers in public institutions, by level of education (2014)



1. Unweighted average of salaries' ratio from the French and Flemish communities.
2. Data for the salaries' ratio correspond to England only.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399215

Methodology

Data refer to the academic year 2013/14 and are based on the UOE data collection on education statistics administered by the OECD in 2015 (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm). Data on teachers by age for 2005 may have been revised in 2016 to ensure consistency with 2014 data.

Note regarding data from Israel

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

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Indicator D5 Tables

StatLink http://dx.doi.org/10.1787/888933399143

Table D5.1	**Age distribution of teachers (2014)**
Table D5.2	**Age distribution of teachers (2005, 2014)**
Table D5.3	**Gender distribution of teachers (2014)**

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table D5.1. Age distribution of teachers (2014)

Percentage of teachers in public and private institutions, by level of education and age group, based on head counts

	Primary					Lower secondary					Upper secondary				
	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	14	20	30	34	3	9	17	26	44	4	6	20	32	37	5
Belgium	22	31	24	22	1	18	29	25	26	3	15	28	26	28	3
Canada[1, 2]	12[d]	32[d]	30[d]	21[d]	4[d]	x(1)	x(2)	x(3)	x(4)	x(5)	12	32	30	21	4
Chile	23	31	19	19	8	22	30	19	20	10	21	30	19	21	9
Czech Republic	10	22	34	29	5	11	27	28	25	8	6	21	25	34	13
Denmark	12	28	27	23	10	12	29	27	22	9	7	26	27	24	16
Estonia[3]	10	19	32	28	11	8	16	25	32	19	8[d]	18[d]	23[d]	30[d]	20[d]
Finland	9	29	32	26	4	9	31	30	25	5	4	20	31	32	13
France	7	34	33	24	2	8	32	32	22	5	4	22	37	30	8
Germany	8	23	26	28	14	7	20	23	34	16	5	23	29	30	13
Greece	12	21	48	19	0	1	18	40	37	4	1	16	40	39	5
Hungary	7	22	35	35	1	6	23	32	37	2	6	30	31	28	4
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland[4]	18	42	17	19	3	x(11)	x(12)	x(13)	x(14)	x(15)	8[d]	36[d]	27[d]	24[d]	5[d]
Israel[4]	15	36	28	18	4	10	32	30	22	6	10	29	27	23	12
Italy	1	9	33	42	16	0	11	29	38	21	0	7	24	51	18
Japan[3]	17	25	27	30	2	16	25	29	29	2	11[d]	22[d]	29[d]	33[d]	4[d]
Korea	20	39	25	14	2	13	33	30	24	1	12	31	27	28	2
Latvia	8	19	34	29	10	5	16	31	36	12	6	16	28	35	15
Luxembourg	23	34	23	17	3	18	43	22	16	2	8	31	29	25	6
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands[4]	16	27	20	28	9	14	23	21	29	12	9	19	21	36	15
New Zealand	12	22	27	25	14	11	22	25	26	15	10	21	25	27	16
Norway[3]	13	27	28	20	12	13	27	28	20	12	7[d]	20[d]	29[d]	26[d]	18[d]
Poland	9	26	38	25	2	8	35	33	21	2	7	32	31	23	7
Portugal[3]	2	28	35	32	3	1	22	42	32	3	3[d]	27[d]	39[d]	28[d]	3[d]
Slovak Republic	7	28	37	23	6	12	30	23	27	8	8	25	24	32	10
Slovenia	6	30	34	29	1	5	33	27	32	3	4	22	38	30	6
Spain	9	33	25	28	5	3	26	37	30	5	2	25	37	30	5
Sweden	7	24	31	23	15	7	24	31	23	15	6	23	28	27	17
Switzerland[3, 4]	16	26	23	28	7	11	29	25	28	8	5[d]	23[d]	30[d]	31[d]	10[d]
Turkey	21	37	29	12	1	34	43	16	7	1	16	42	31	10	1
United Kingdom	27	33	22	15	2	24	31	23	17	4	20	27	24	21	7
United States	15	29	25	24	8	17	29	25	22	8	14	27	26	23	10
OECD average	13	28	29	25	6	11	27	28	27	7	8	25	29	29	9
EU22 average	11	27	30	26	6	9	26	29	29	8	7	23	30	31	10
Partners															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	16	36	33	14	2	17	35	30	15	3	17	34	29	16	3
China	18	36	27	19	0	18	41	31	10	0	21	41	30	8	0
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
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	37	26	25	11	0	21	30	37	12	0	23	33	33	12	0
Lithuania	4	17	39	33	7	7	20	29	34	10	5	16	28	36	15
Russian Federation	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
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	16	30	28	22	4	15	30	29	22	5	12	28	30	24	6

1. Year of reference 2013.
2. Primary includes pre-primary.
3. Upper secondary includes programmes from post-secondary non-tertiary.
4. Public institutions only. For Israel, public institutions only for upper secondary education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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D5

Table D5.2. Age distribution of teachers (2005, 2014)

Percentage of teachers in public and private institutions, in secondary education, based on head counts

		Secondary (2014)					Secondary (2005)					Percentage of teachers aged 50 years or older
		< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	Average annual growth rate (2005-14)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	m	m	m	m	m	m	m	m	m	m	m
	Austria	8	18	29	41	5	7	22	45	25	1	6.38
	Belgium	16	28	26	27	3	17	23	31	27	2	0.18
	Canada	m	m	m	m	m	m	m	m	m	m	m
	Chile	21	30	19	21	9	12	25	30	25	7	-0.86
	Czech Republic	9	24	26	30	11	m	m	m	m	m	m
	Denmark	9	28	27	23	13	m	m	m	m	m	m
	Estonia[1]	8[d]	17[d]	24[d]	31[d]	19[d]	m	m	m	m	m	m
	Finland	6	25	30	29	9	8	25	30	32	5	0.33
	France	6	27	35	26	6	12	29	24	34	1	-1.00
	Germany[2]	6	21	25	32	15	3	18	26	44	9	-1.10
	Greece	1	17	40	38	4	6	24	41	27	2	4.30
	Hungary[3]	6	27	32	32	3	15	26	30	24	4	2.40
	Iceland	m	m	m	m	m	m	m	m	m	m	m
	Ireland[4]	8	36	27	24	5	11	25	27	29	7	-2.52
	Israel[4]	10	30	28	22	10	10	29	30	26	5	0.49
	Italy	0	9	26	45	19	0	6	32	55	8	0.47
	Japan[1, 5]	13[d]	24[d]	29[d]	31[d]	3[d]	9	28	40	21	2	4.42
	Korea	12	32	28	26	1	17	30	40	12	1	8.34
	Latvia	6	16	29	35	14	m	m	m	m	m	m
	Luxembourg	12	36	26	21	4	18	25	26	29	2	-2.13
	Mexico	m	m	m	m	m	m	m	m	m	m	m
	Netherlands[4]	12	21	21	32	14	m	m	m	m	m	m
	New Zealand	10	21	25	27	16	14	21	29	29	8	1.77
	Norway[1]	9[d]	23[d]	29[d]	24[d]	15[d]	m	m	m	m	m	m
	Poland	7	33	32	22	5	16	33	29	19	3	2.40
	Portugal[1]	2[d]	25[d]	40[d]	30[d]	3[d]	16	35	31	16	2	6.46
	Slovak Republic	11	28	24	29	9	16	21	25	30	7	0.14
	Slovenia	4	28	32	31	5	11	33	34	20	2	5.12
	Spain	3	25	37	30	5	8	32	35	21	4	3.62
	Sweden	6	23	29	25	16	10	24	24	30	13	-0.42
	Switzerland[1, 4]	8[d]	26[d]	27[d]	29[d]	9[d]	13	24	30	28	5	1.59
	Turkey	25	42	23	8	1	m	m	m	m	m	m
	United Kingdom	22	29	24	20	6	15	24	28	31	2	-2.90
	United States	16	28	25	23	9	17	26	23	26	8	-0.67
	OECD average	9	26	28	28	9	12	25	31	28	5	~
	Average for countries with available data for both reference years	9	26	29	29	8	11	25	30	28	5	1.32
	EU22 average	8	25	29	30	9	11	25	30	29	4	~
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m
	Brazil	17	35	29	16	3	m	m	m	m	m	m
	China	19	41	31	9	0	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	22	31	35	12	0	m	m	m	m	m	m
	Lithuania	6	19	29	35	12	m	m	m	m	m	m
	Russian Federation	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
	G20 average	13	28	28	24	6	m	m	m	m	m	m

1. Upper secondary includes programmes from post-secondary non-tertiary.
2. Year of reference 2006 instead of 2005.
3. Includes data on management personnel in reference year 2005.
4. Public institutions only. For Israel, public institutions only for upper secondary education.
5. Year of reference 2004 instead of 2005.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D5.3. Gender distribution of teachers (2014)

Percentage of women among teaching staff in public and private institutions by level of education, based on head counts

		Pre-primary education	Primary	Lower secondary	Upper secondary			Post-secondary non-tertiary	Tertiary			All levels of education
					General programmes	Vocational programmes	All programmes		Short-cycle tertiary	Bachelor's, master's, doctoral or equivalent level	All tertiary	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	m	m	m	m	m	m	m	m	44	m	m
	Austria	99	91	72	63	50	55	68	52	41	43	66
	Belgium	97	82	63	63	62	62	45	x(10)	x(10)	48	70
	Canada[1]	x(2)	74[d]	x(2)	x(6)	x(6)	74	m	54	43	49	m
	Chile	99	81	68	57	50	55	a	m	m	m	m
	Czech Republic	100	93	77	59	59	59	41	52	40	40	75
	Denmark	m	69	64	51	45	49	a	40	41	41	m
	Estonia[2]	99[d]	92	82	78	65[d]	72[d]	x(5)	a	49	49	82
	Finland	97	79	72	70	54	59	54	a	50	50	72
	France	83	83	65	56	52	55	x(8)	49[d]	38	40[d]	66
	Germany	97	87	66	55	47	53	58	21	38	38	66
	Greece	99	70	66	54	45	51	58	a	33	33	64
	Hungary	100	97	78	69	51	65	51	47	43	43	76
	Iceland	m	m	m	m	m	m	m	m	m	m	m
	Ireland[3]	m	87	x(4)	71[d]	m	71[d]	m	x(10)	x(10)	44	m
	Israel[3]	99	85	79	x(6)	x(6)	70	m	m	m	m	m
	Italy	99	96	78	72	62	67	m	a	37	37	78
	Japan	97	65	42	x(6)	x(6)	30[d]	x(4, 5, 8, 9)	48[d]	21[d]	27[d]	48
	Korea	99	79	69	51	44	50	m	44	32	35	61
	Latvia[4]	100	93	84	85	72	81	72	67	54	56	84
	Luxembourg	96	75	58	54	44	49	m	44	38	38	m
	Mexico	95	68	52	x(6)	x(6)	47	a	m	m	m	m
	Netherlands[3]	87	86	51	51	51	51	51	x(10)	x(10)	44	66
	New Zealand	98	84	66	60	56	60	55	51	49	49	71
	Norway[2]	93[d]	75	75	x(6)	x(6)	52[d]	x(6)	x(6)	45	45	69
	Poland	98	85	74	70	62	66	67	71	44	44	74
	Portugal	99	80	72	x(6)	x(6)	68[d]	x(6, 9)	a	44[d]	44[d]	70
	Slovak Republic	100	90	78	74	71	72	68	62	44	45	77
	Slovenia	98	97	79	70	65	67	a	47	37	39	75
	Spain	93	76	59	56	51	54	a	47	40	42	64
	Sweden	96	77	77	x(6)	x(6)	53	43	43	44	44	75
	Switzerland[3]	97	82	54	46	42[d]	43[d]	x(5)	a	34	34	60
	Turkey	95	58	53	46	46	46	a	39	43	43	54
	United Kingdom	96	84	59	62	59	61	a	52	43	44	67
	United States	94	87	67	x(6)	x(6)	57	x(10)	x(10)	x(10)	49[d]	70
	OECD average	97	82	68	62	54	58	m	m	41	43	69
	EU22 average	97	85	70	64	56	61	m	m	42	43	72
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m
	Brazil	95	90	69	62	50	60	46	44	45	45	71
	China	97	61	52	50	50	50	x(8)	48[d]	40	43[d]	59
	Colombia	96	77	54	x(6)	x(6)	46	m	35	36	36	m
	Costa Rica	93	80	57	x(6)	x(6)	58	a	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	96	62	54	53	49	52	a	x(10)	x(10)	39	61
	Lithuania[2]	99[d]	97	82	82	71	80	66	a	56	56	81
	Russian Federation[2]	99[d]	99	83[d]	x(3)	x(7, 8)	x(3, 7, 8)	61[d]	72[d]	51	57[d]	82
	Saudi Arabia	100	52	50	x(6)	x(6)	52	a	29	41	40	52
	South Africa	m	78	x(4)	56[d]	m	m	55	m	m	m	m
	G20 average	96	76	61	56	51	54	m	46	40	42	64

Note: The data in "All levels of education" do not include early childhood educational development (ISCED 01).

1. Year of reference 2013.
2. Pre-primary includes early childhood development programmes.
3. Public institutions only. For the Netherlands, private data are available and included for pre-primary education. For Israel, private data are available and included in all levels except for pre-primary and upper secondary levels.
4. Bachelor's, master's and doctoral programmes include teachers from government-dependent institutions in short-cycle tertiary education.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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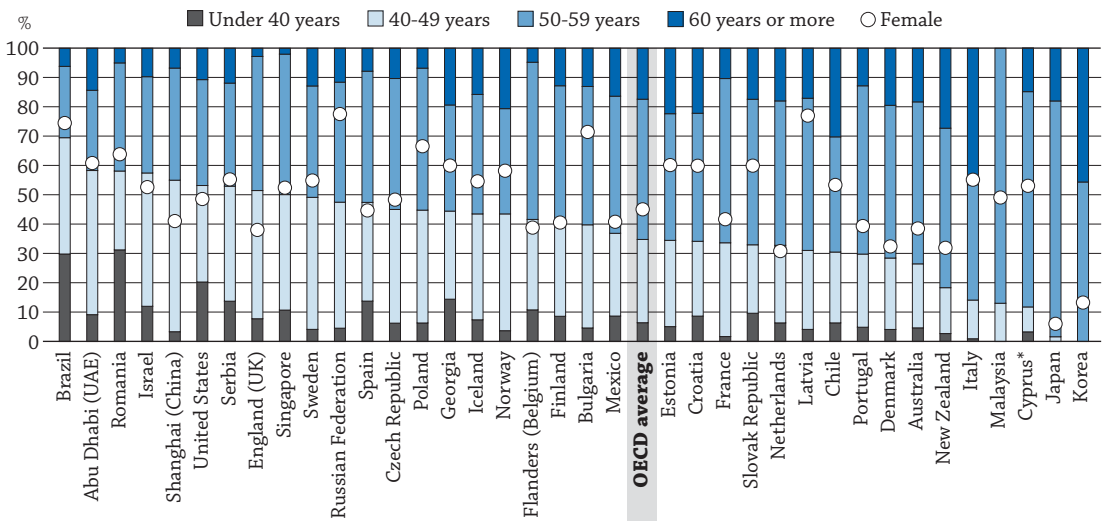
WHO ARE OUR SCHOOL LEADERS AND WHAT DO THEY DO?

- The average age of a lower secondary principal in the countries participating in the 2013 OECD Teaching and Learning International Survey (TALIS) is 52 years old. Given that principals are often recruited from the ranks of teachers, it is not surprising that the proportion of principals under 40 years old is small in most countries.
- The gender distribution of principals differs from the gender distribution of teachers. Although the majority of teachers in all but one country are women, the proportion of female principals is generally lower.

Figure D6.1. Gender and age distribution of principals in lower secondary education (TALIS 2013)

Percentage of female principals and age of principals



* *Note by Turkey:* The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Countries and economies are ranked in ascending order of the percentage of principals who are over 50 years old.

Source: OECD. Table D6.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

School principals are often the connection between teachers, students and their parents or guardians, the education system and the wider community. Although principals have always played this role, the profession has become increasingly challenging over time. Some principals say they confront often incompatible demands, referring to the challenge of reconciling the demands of teachers, students and parents or guardians with the expectations of the system in which they work and the communities where their school is located. In contexts where most decision-making authority has been devolved to the school level, principals can be especially challenged by the number and variety of demands they face: increasing social diversity, inclusion of students with special needs, emphasis on retaining students until graduation, and ensuring that students have the skills and knowledge necessary to participate in an increasingly competitive economy.

These demands require principals to manage human and material resources, communicate and interact with individuals in a variety of positions, make evidence-informed decisions and also provide the instructional leadership teachers need to help students succeed. Thus, school leadership is

increasingly a priority for many countries concerned about boosting student achievement results and improving underperforming or failing schools. Many see principals as major contributors to student achievement, through their impact on schools' organisation and climate, and especially on teachers and teaching (OECD, 2014a).

Other findings

- On average across TALIS countries, school principals have 21 years of teaching experience and 9 years of experience in their current role. Around two-thirds of them are employed full time as principals, without teaching responsibilities.
- On average, only 40% of school leaders say they observe instruction in the classroom "often" or "very often". However, this proportion varies significantly across countries, ranging from more than 80% in Abu Dhabi (United Arab Emirates), Bulgaria, Malaysia, Romania and Shanghai (China), to 15% or less in Estonia, Finland, France and Portugal.
- Principals who take actions to support co-operation among teachers to develop new teaching practices, and who stimulate teachers' responsibility for their teaching skills and students' learning outcomes, more often work in schools where teachers are inclined to exchange practices.
- The TALIS data reveal a wide variation among countries in the extent to which principals share responsibility for various tasks. For example, the percentage of principals in Croatia, Denmark and the Netherlands reporting shared responsibility for the appointment of teachers is 75% or more. For Bulgaria, France, Japan, Korea, Malaysia, Mexico and the Russian Federation, it is 20% or less (the overall average is 41%).
- TALIS data show that principals who participate in professional development activities are more often engaged in distributed leadership, although the kind of professional development activities that are related to distributed leadership differs widely across countries.

Analysis

Age and gender of principals

School principals bring a variety of prior experience to their role as principals, including work in other school management roles, prior work as teachers and experience in other jobs. However, experience as a principal is typically built upon a foundation of teaching experience. On average, principals have 21 years of teaching experience. The countries with principals who have the highest average years of teaching experience are Australia (27 years), Korea (29 years) and Japan (30 years). Those with the fewest years of experience (less than 15 years) are Abu Dhabi (United Arab Emirates), Brazil, France, Iceland, Serbia, Singapore and Sweden (see Table 3.12 in OECD, 2014a).

The average age of a lower secondary school leader in the countries participating in TALIS 2013 is 52 years old (Table D6.1). Given that principals are often recruited from the ranks of teachers, it is not surprising that the proportion of principals younger than 40 years old is small, with some notable exceptions. In Brazil and Romania, for example, around 30% of school principals are under 40 (Figure D6.1). In Italy and Korea, nearly half of school leaders are 60 or older (Table D6.1).

The gender distribution of principals in lower secondary schools differs from the gender distribution of teachers. In all OECD countries but Japan, more than half of the lower secondary education teaching workforce is made up of women. On average, across OECD countries, 69% of all teachers are women (see Table D5.3). However, the percentage of women principals is generally lower: 45% of principals in lower secondary schools in the TALIS countries are women (Table D6.1 and Figure D6.1). There are a few exceptions to this. School leadership positions are primarily occupied by women in Brazil (75%), Bulgaria (71%), Latvia (77%) and the Russian Federation (78%), while men predominate in Japan (94%) and Korea (87%).

The percentage of women principals is generally lower than men. However, on average, women appear to be stronger advocates of instructional leadership than men. This is particularly evident in Australia, Japan, Norway and Portugal, but female principals are more engaged in instructional leadership actions than males in about two-thirds of all countries participating in TALIS. In contrast, male principals in Finland, Latvia, the Netherlands, Mexico and Romania give more attention to instructional leadership than females, but the gender differences in these countries are much smaller than those in favour of female principals in many other countries (OECD, 2016).

Employment status of principals

Regardless of the level or type of education that a principal might have, there is often no substitute for experience. No amount of education can prepare a person for some of the situations that might be encountered in a school, and these experiences can shape a principal's behaviour and actions. Leading and teaching are both demanding responsibilities. Table D6.2 contains data about the teaching obligations of principals. At one end of the spectrum are ten countries in which more than 90% of the principals are employed full time (90% of their time) as principals, without the responsibilities of teaching. At the other end are countries in which 90% or more of the principals employed full time must balance their work as principals and as teachers (Bulgaria, the Czech Republic, Malaysia and the Slovak Republic). The proportions of principals employed on a part-time basis who must balance their responsibilities as principals with the responsibilities of a teacher are 15% in Georgia, 29% in Romania and 19% in Spain.

While principals who must also carry the workload of a classroom teacher will undoubtedly have many extra tasks to accomplish, retaining some teaching responsibilities also keeps them closer to the core job of the school. They are able to maintain a different kind of relationship with students – and possibly with teaching staff – and can even test some of the policies they are trying to enact at a school level (Table D6.2).

Principals' leadership activities

The work of principals includes a variety of administrative activities that, if not performed, could impede the effective operation of the school. The TALIS survey asked principals about the leadership activities in which they engaged during the preceding 12 months. Table D6.3 presents data about the proportion of principals who report having engaged "often" or "very often" in particular leadership activities. Among the most challenging of teachers' responsibilities is maintaining a productive and orderly environment in which teachers can teach and students can learn. However, collaboration between principals and teachers to solve classroom discipline problems varies significantly across countries. On one end of the spectrum are Malaysia and Romania, where more than 90% of principals report frequent collaboration with teachers to solve discipline problems. At the other end of the spectrum are England (United Kingdom), Japan, the Netherlands, New Zealand, the Russian Federation and Shanghai (China) where 60% of principals or more report infrequent collaboration with teachers to solve classroom discipline problems.

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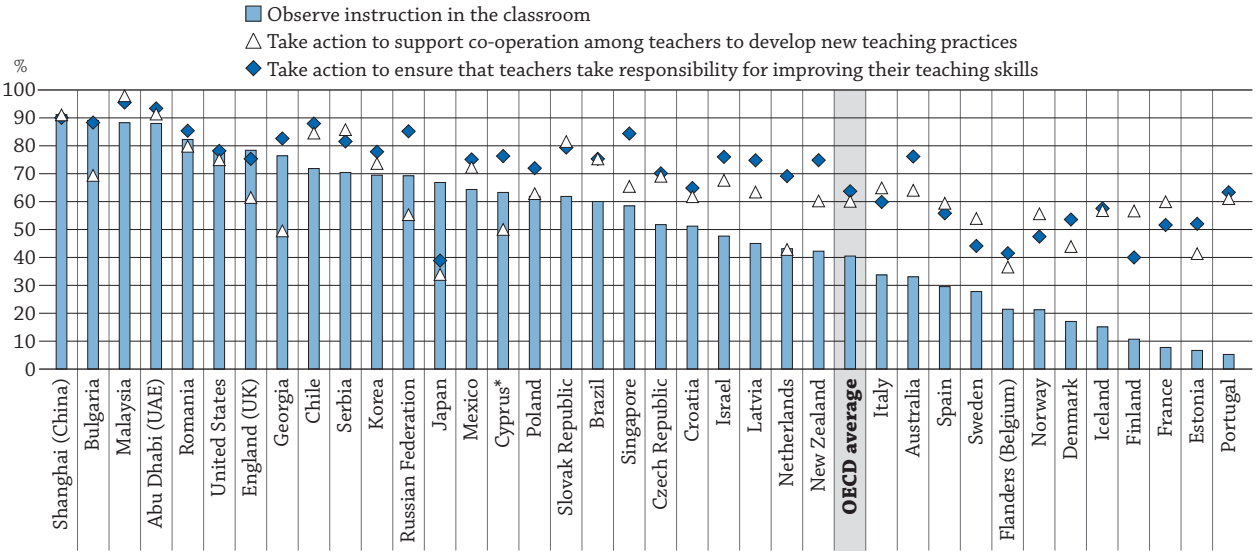
It is important to keep in mind that the patterns reported here may reflect differences in disciplinary issues among countries rather than differences in the attention that principals pay to disciplinary matters. Further investigation is necessary to determine the significance of these differences (Table D6.3).

In addition to the help principals may provide to teachers in solving disciplinary problems, principals can observe instruction and provide teachers with feedback based on their observations. Improving instructional effectiveness and improving teaching should, in turn, help to improve student learning outcomes. The average proportion of principals who say they frequently observe instruction in the classroom is more evenly divided. On average, only 40% of school leaders say they observe instruction in the classrooms "often" or "very often" (Table D6.3 and Figure D6.2). Frequent observation of instruction is more commonly reported among principals in Abu Dhabi (United Arab Emirates) (88%), Bulgaria (89%), Malaysia (88%), Romania (82%) and Shanghai (China) (91%) and substantially less frequently reported among principals in Estonia (7%), Finland (11%), France (8%), Iceland (15%) and Portugal (5%).

Another challenge that teachers face is maintaining the currency of their knowledge and practice. By encouraging teachers to learn from one another, principals help teachers remain current in their practice and may also help to develop more collaborative practices between teachers in their schools. Principals were asked about taking action to support co-operation among teachers to develop new teaching practices. As Figure D6.2 indicates, on average 60% of principals report taking such action frequently (ranging from 34% in Japan to 98% in Malaysia). In Abu Dhabi (United Arab Emirates), Chile, Malaysia, Romania, Serbia, Shanghai (China) and the Slovak Republic principals report the highest incidence (between 80% and 98%) of frequently supporting co-operation among their teachers around the development of new teaching practices. In Denmark, Estonia, Flanders (Belgium), Georgia, Japan and the Netherlands, more than half of principals report doing this never, rarely, or only sometimes (Table D6.3 and Figure D6.2).

Figure D6.2. Collaboration between teachers and principals in lower secondary education (TALIS 2013)

Percentage of principals who report having engaged "often" or "very often" in the following leadership activities during the 12 months prior to the survey



* See note under Figure D6.1.

Countries and economies are ranked in descending order of the percentage of lower secondary education principals who report having engaged "often" or "very often" in observing instruction in the classroom during the 12 months prior to the survey.

Source: OECD. Table D6.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Principals can also play an important role in ensuring that teachers take responsibility for improving their teaching skills. Table D6.3 and Figure D6.2 show that, on average, a majority of principals (64%) take this action frequently (ranging from 39% in Japan to 95% in Malaysia). Abu Dhabi (United Arab Emirates) (93%), Bulgaria (88%), Chile (88%), Malaysia (95%), Romania (85%), the Russian Federation (85%), Shanghai (China) (90%) and Singapore (84%) are among the high-incidence countries where principals frequently act in this regard.

Finland (60%), Flanders (Belgium) (59%), Japan (61%), Norway (53%) and Sweden (56%) are the countries where more than half of principals report doing this never, rarely or only sometimes. Many principals also take action to ensure that teachers feel responsible for what their students learn. On average, 71% of principals (ranging from 33% in Japan to 100% in Malaysia) say they frequently take action to ensure that teachers feel responsible for their students'learning outcomes. In Abu Dhabi (United Arab Emirates), Bulgaria, Chile, Malaysia, Poland, Romania and Singapore and more than 90% of principals report taking such action frequently. In contrast, more than half of the principals in Denmark, Finland, Japan and Norway report doing so infrequently (Table D6.3).

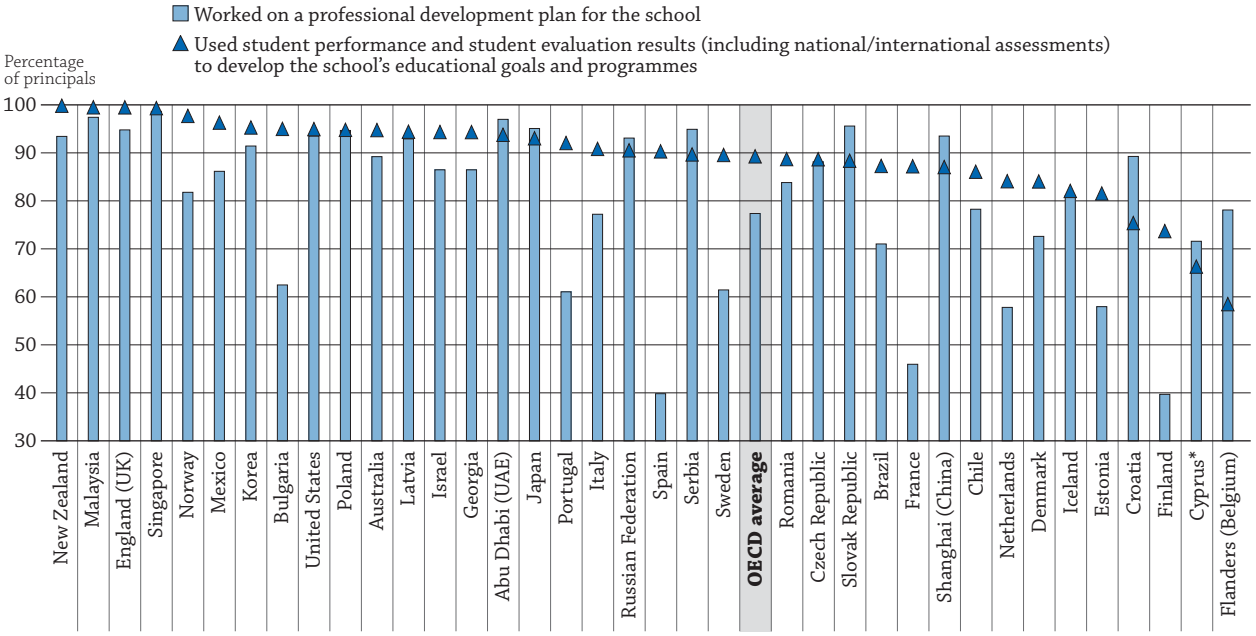
TALIS data show that principals who exert greater instructional leadership work in schools in which teachers are more engaged in collaboration. This suggests that when principals take action to support co-operation among teachers to develop new teaching practices, teachers are indeed more inclined to collaborate. In these schools, teachers more often exchange teaching materials with colleagues, engage in discussions about the development of specific students, work together to ensure common standards in evaluations for assessing student progress, and attend team conferences. This may indicate that the actions principals take to develop co-operation and to promote teachers' responsibility for their instruction affect teachers' collaboration in school. On the other hand, when teachers are already engaged in practices of exchange and co-operation, it is probably much easier for principals to stimulate collaboration among the staff (OECD, 2016)

Participation in school development plans

As data have become more available to principals over the last quarter-century, there has been a transition from relying on a principal's own knowledge to make decisions to using readily available data to inform those choices. This transition has been accompanied by increased demands for accountability (Vanhoof et al., 2014). Today, more than at any time in the past, principals are responsible for the development of the school's educational goals and programmes and for the use of student performance and student evaluation results to develop those goals and programmes. Data about principals' participation in activities related to a school development plan appear in Table D6.4 and Figure D6.3.

Figure D6.3. Principals' participation in school development plans in lower secondary education (TALIS 2013)

Percentage of principals who report having engaged in the following activities related to a school development plan in the 12 months prior to the survey



* See note under Figure D6.1.

Countries and economies are ranked in descending order of the percentage of principals who used student performance and student evaluation results (including national/international assessments) to develop the school's educational goals and programmes.

Source: OECD. Table D6.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933399324

Nearly nine in ten principals on average across TALIS countries report using student performance and student evaluation results (including national or international assessments) to develop the school's educational goals and programmes. The proportions of principals who reported using student performance and student evaluation results to develop the school's educational goals and programmes was lowest in Croatia (75%), Finland (74%) and Flanders (Belgium) (58%), and nearly universal in England (United Kingdom) (99%), Malaysia (99%), New Zealand (100%), Norway (98%) and Singapore (99%) (Table D6.4 and Figure D6.3).

In addition to the development of their school's goals and programmes, principals are increasingly responsible for working on a professional development plan for their school. Although this plan is an important facet of a principal's work, on average the proportion of principals working on such a plan is nearly 10 percentage points lower (77%) than the average proportion of principals who report using student performance and student evaluation results to develop the school's educational goals and programmes. Figure D6.3 shows that this pattern is found in most countries. The proportion of principals who report working on a professional development plan for their school is lower than 50% in Finland, France and Spain, and almost comprehensive in Abu Dhabi (United Arab Emirates) (97%), Malaysia (97%) and Singapore (99%) (Table D6.4 and Figure D6.3).

Professional development for principals

School leaders, as professionals, acknowledge their need for further development of their skills or competencies and actively engage in such endeavours. Table D6.6 provides data about the percentage of principals who participated in a professional network, mentoring or research activity; courses, conferences or observation visits; or other types of professional development activities in the 12 months prior to the survey. On average across TALIS countries, principals spent 15 days participating in a professional network, mentoring or research activity; 11 days in courses, conferences or observation visits; and 10 days in other types of professional development activities (Table D6.6).

The percentages of principals across TALIS countries who have engaged in professional networks, mentoring or research activities during the preceding 12 months, and the average numbers of days spent by those who participated are quite varied. Small proportions of principals in the Czech Republic (28%), Georgia (14%), Portugal (11%), Romania (29%), Serbia (21%) and Spain (28%) reported taking part in a professional network, mentoring or research activity during the preceding 12 months, in contrast to the large proportions of principals in the Netherlands (87%), New Zealand (88%), Shanghai (China) (92%) and Singapore (93%) who reported participating in such activities. The amount of time spent on these activities varies as well. For example, in 11 countries, principals spent fewer than 10 days on such activities. However, the proportions of principals in these 11 countries who were engaged in these activities – even though for a short amount of time – ranged from 42% in Sweden to 84% in Australia. Australia provides an interesting example of developing a standard for the role of the principal that takes into account the overarching goals held for schooling and the cultural context in which schooling occurs. The adoption of such a standard could, over time, help elevate the status of principals and provide guidance for their preparation, conduct and professional development (Table D6.6).

The percentages of principals who participated in courses, conferences or observation visits ranged from 53% in Georgia to 99% in Singapore. For other types of professional development activities, percentages ranged from 15% in Bulgaria to 58% in Malaysia. The range of the average number of days spent in each activity was modest, from an average of 4 days (France) to 37 days (Brazil) in courses, conferences or observation visits, and from 4 days (Australia, Croatia, England [United Kingdom], Finland and Japan) to 37 days (Mexico) for other types of professional development. While participation in professional development is generally supported for school leaders and teachers alike, spending 37 days away from school each year attending courses or conferences or making observation visits may prove to be excessive given a principal's busy schedule (Table D6.6).

Participation in professional development depends upon a variety of factors, including the availability of opportunities that are perceived to be relevant, the availability of time and other resources that would permit someone to take advantage of professional development, employers who are supportive, and the necessary qualifications to be able to benefit from the opportunities available. However, TALIS data show that principals who participate in professional development activities are more often engaged in distributed leadership, although the kind of professional development activities that are related to distributed leadership differs widely across countries. This concerns principals' participation in a professional network, mentoring or research activity, as well as their participation in courses, conferences or observational visits. To what degree each of these activities contributes to a principal's engagement in distributing powers to staff, students and parents or guardians, varies considerably across countries. In most countries, none of the professional development activities are significantly

related to distributed leadership of principals. In some countries, one of the types of professional development is often related to engaging staff, students and parents in the decision-making process. In some countries, such as England (United Kingdom), Iceland, Korea, Shanghai (China) and the Slovak Republic, this involves principals' engagement in a professional network, mentoring or a research activity. In other countries, such as Latvia, Malaysia, Poland and the Russian Federation, it mainly involves a principal's participation in courses, conferences or observational visits (OECD, 2016).

Sharing responsibilities

Because of its complexity, the work of the school and especially the work of the principal are increasingly recognised as responsibilities that are or should be more broadly shared. Distributed leadership reflects the fact that leadership in schools is not exerted only by principals, that others within the organisation also act as leaders. Table D6.5 looks at principals who have significant responsibility for tasks such as appointing, hiring, suspending and dismissing teachers; determining the allocation of the school's resources; approving student admission; establishing the school's disciplinary and assessment policies; and determining which courses the school offers, course content, and instructional resources. Table D6.5 displays the percentage of principals who have significant responsibility for such tasks and who also report shared responsibility. When a principal reports that the responsibility for a task is shared, this indicates that an active role is played in decision making by the principal and other members of the school management team, teachers who are not part of the school management team, a school's governing board, or a local or national authority.

The data reveal a wide variation among countries in the extent to which principals share responsibility for various tasks (Table D6.5). For example, the percentage of principals in Croatia, Denmark, and the Netherlands reporting shared responsibility for the appointment of teachers is 75% or more, and for Bulgaria, France, Japan, Korea, Malaysia, Mexico and the Russian Federation, it is 20% or less (the overall average is 41%). More than half of the principals in Croatia, Denmark, England (United Kingdom), the Netherlands, New Zealand and Serbia report sharing responsibility for dismissing or suspending teachers. Yet, in many countries (Bulgaria, the Czech Republic, France, Japan, Korea, Malaysia, Mexico, Poland, Spain and Sweden), 20% or less of the principals report sharing this responsibility (the overall average is 31%). Fewer principals report shared responsibility for establishing teachers' salaries and pay scales (16% on average) or determining teachers' salary increases (20% on average). In only two countries (England [United Kingdom] and Latvia) do more than half of the principals indicate that they share responsibility for establishing teacher salaries and pay scales. Similarly, only in England (United Kingdom), Estonia and Latvia do half or more of the principals share responsibility for determining salary increases for teachers.

On average, nearly half of the principals (49%) report shared responsibility for deciding on budget allocation within the school. In some countries, however, fewer than one in four principals reports this (Abu Dhabi [United Arab Emirates], Chile, Korea, Malaysia, Mexico and Romania). In contrast, more than three-quarters of principals report this in Denmark and Latvia. Overall, more principals report shared responsibility with regard to the management of student discipline policies (63% on average). Of the principals in Denmark, New Zealand and Singapore, 80% or more report sharing responsibility for establishing student disciplinary policies and procedures, while less than half of the principals in Abu Dhabi (United Arab Emirates), Chile, Georgia, Japan, Korea, Malaysia, Mexico, Romania, Shanghai (China) and Sweden report doing so (Table D6.5).

Many principals report shared responsibility for tasks related to choosing which learning materials are used (48%) and deciding which courses are offered (59%). At least eight of ten principals in Denmark, the Netherlands and New Zealand report sharing responsibility for determining the courses that their schools offer, while less than a quarter of their peers in Croatia, Japan and Korea report sharing this responsibility.

The variations in the extent to which particular responsibilities are shared are likely a reflection of both the policy contexts in which principals work and the individual approach of principals regarding the distribution of their responsibility. As pointed out by this indicator, schools may have autonomy in some areas but not in others. For example, teachers may be appointed by principals in some contexts, but salaries and increases may be determined by collective agreements negotiated outside the context of the local school. Finally, more than a third of principals report shared responsibility for approving students for admission to the school (37%). This is especially common in the Netherlands, where more than 80% of principals report this, while fewer than 20% of principals report this in Georgia, Japan, Korea, Malaysia, Poland and Sweden (Table D6.5).

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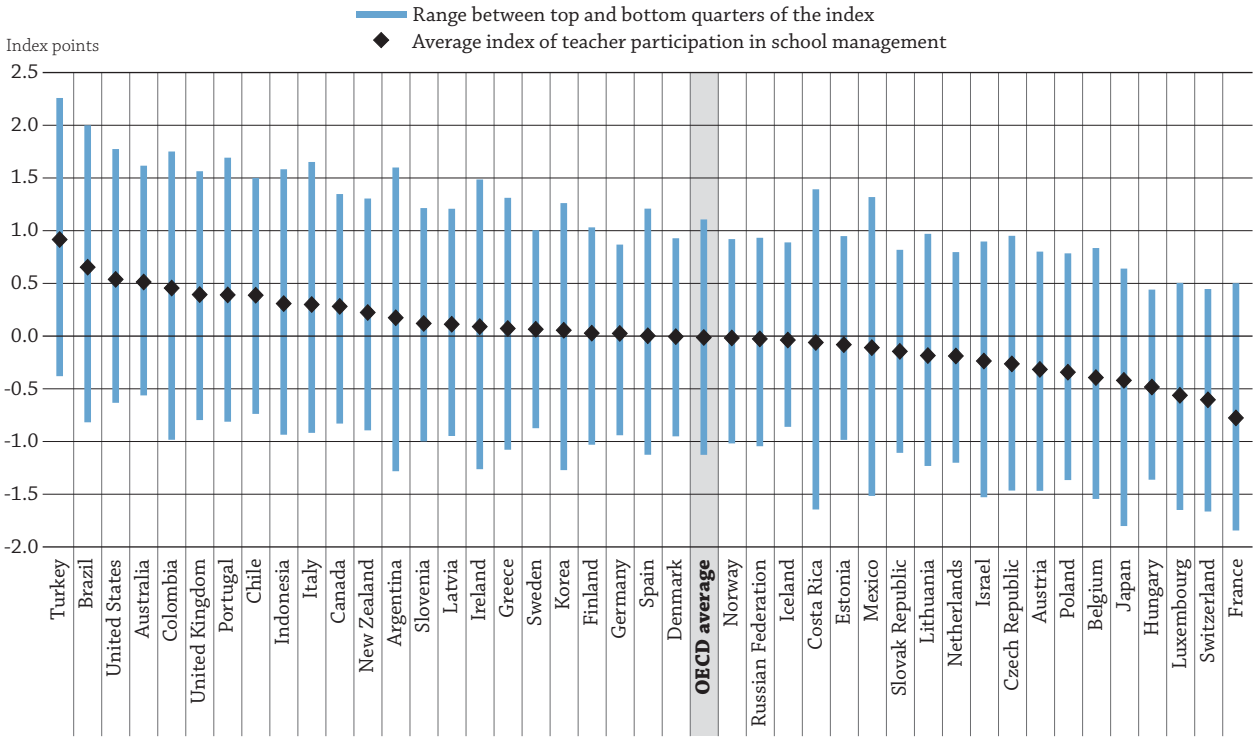
Teacher participation in school management

The relationship between school autonomy and performance in mathematics in the OECD Programme for International Student Assessment (PISA) varies according to the degree to which principals collaborate with teachers throughout the system (OECD, 2013). In systems where teachers and principals collaborate more frequently in managing schools, autonomy is positively related to performance in mathematics. PISA 2012 asked school principals to report how frequently various actions and behaviours related to managing their school (including teacher participation in school management) occurred in the previous academic year (Table D6.7). The results show the following:

- On average across OECD countries, 72% of students are in schools whose principals reported that the school gives staff opportunities to make decisions concerning the school at least once a month (53% are in schools that give these opportunities from once a month to once a week, and 18% are in schools that give these opportunities more than once a week).
- Across OECD countries, an average of 71% of students are in schools whose principal reported that teachers are involved at least once a month in building a culture of continuous improvement in the school (47% of students are in schools where this occurs once a month to once a week, and 23% are in schools where this occurs more than once a week).
- On average across OECD countries, 29% of students are in schools whose principal reported that teachers are asked to review management practices at least once a month (24% are in schools where teachers do so from once a month to once a week, and 5% are in schools where teachers do so more than once a week).

Figure D6.4. Index of teacher participation in school management (PISA 2012)

Based on principals' views on school management



Note: Principals' responded to three questions about their engagement with teachers in school management: providing staff with opportunities to make decisions concerning the school; engaging teachers to help build a culture of continuous improvement in the school; and asking teachers to participate in reviewing management practices. Responses to these three questions are combined to develop a composite index, the index of teacher participation in school management. This index has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater teacher participation. For example, in Turkey and Brazil, principals reported that teachers are involved in managing school a greater extent, while principals in Switzerland and France reported that teachers are involved in this activity to a lesser extent. The figure shows the range between top and bottom quarters of this index.

Countries are ranked in descending order of the average index of teacher participation in school management.

Source: OECD. Table D6.7, available on line. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Principals' responses to these questions are combined to develop a composite index, the *index of school management: teacher participation* (Figure D6.4 and Table D6.7). This index has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater teacher participation in school management (OECD, 2014b). In Brazil, Jordan, Malaysia and Turkey, principals reported that teachers are involved in managing school to a greater extent, while principals in France, Romania and Shanghai (China) reported that teachers are involved in this activity to a lesser extent.

Definitions

Instructional and distributed leadership are regarded as important for creating and sustaining professional learning communities, and creating a climate conducive to student learning.

- Instructional leadership comprises leadership practices that involve the planning, evaluation, co-ordination, and improvement of teaching and learning.
- Distributed leadership reflects the fact that leadership in schools is not exerted only by principals, that others within the organisation also act as leaders.

Methodology

All the data published in this indicator came from the TALIS and PISA surveys.

PISA data are derived from the School Questionnaire. School principals were given a questionnaire to complete that covered the school system and the learning environment. In 2012, the PISA School Questionnaire contained 21 items about school leadership, 13 of which provided data for 4 scaled indices. Principals were asked to indicate the frequency of the listed activities and behaviours in their school during the last academic year. The six response categories were "Did not occur", "1-2 times during the year", "3-4 times during the year", "Once a month", "Once a week", to "More than once a week". PISA 2012 asked school principals to report how frequently various actions and behaviours related to managing their school (including teacher participation in school management) occurred in the previous academic year.

The objective of the TALIS survey in 2013 was to obtain a representative sample of lower secondary teachers in each participating country. Moreover, a representative sample of teachers teaching students of the appropriate age in schools selected for Programme for International Student Assessment (PISA) in 2012 was required for each country that opted to participate in the TALIS-PISA link. TALIS 2013 identified policy issues that encompass the classroom, teachers, schools and school management, so the coverage of TALIS 2013 extends to lower secondary teachers and to the principals of the schools where they teach. The international sampling plan prepared for TALIS 2013 used a stratified two-stage probability sampling design. This means that teachers (second stage units, or secondary sampling units) were to be randomly selected from the list of in-scope teachers in each of the randomly selected schools (first stage units, or primary sampling units). The international target population of TALIS 2013 restricts the survey to those teachers who teach regular classes in ordinary schools and to the principals of those schools.

Note regarding data from Israel

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

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Indicator D6 Tables

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Table D6.1	Gender and age of principals in lower secondary education (TALIS 2013)
Table D6.2	Employment status of principals in lower secondary education (TALIS 2013)
Table D6.3	Principals' leadership in lower secondary education (TALIS 2013)
Table D6.4	Principals' participation in school development plans in lower secondary education (TALIS 2013)
Table D6.5	Shared responsibility for leadership activities in lower secondary education (TALIS 2013)
Table D6.6	Principals' recent professional development in lower secondary education (TALIS 2013)
Table D6.7	Principal's views on teacher participation in school management (PISA 2012)

Cut-off date for the data: 20 July 2016. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-data-en

Table D6.1. Gender and age of principals in lower secondary education (TALIS 2013)

Percentage of education principals with the following characteristics, and mean age of principals

		Female		Mean age		Percentage of principals in each age group									
						Under 30 years		30-39 years		40-49 years		50-59 years		60 years or more	
		%	S.E.	Average	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD	Australia	38.6	(5.5)	53.2	(1.0)	0.0	(0.0)	4.7	(4.5)	21.8	(5.2)	55.2	(6.3)	18.3	(4.5)
	Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	53.4	(3.9)	53.7	(0.7)	0.0	(0.0)	6.4	(2.1)	24.2	(3.3)	39.3	(3.9)	30.2	(4.0)
	Czech Republic	48.4	(3.6)	50.3	(0.5)	0.0	(0.0)	6.3	(1.8)	38.8	(3.1)	44.6	(3.4)	10.3	(2.2)
	Denmark	32.4	(4.4)	52.9	(0.6)	0.0	(0.0)	4.1	(1.8)	24.3	(3.7)	52.1	(4.9)	19.5	(3.9)
	England (UK)	38.1	(4.1)	49.4	(0.5)	0.0	(0.0)	7.8	(2.4)	43.7	(3.9)	45.7	(3.5)	2.8	(1.2)
	Estonia	60.2	(3.4)	52.2	(0.6)	0.0	(0.0)	5.1	(1.6)	29.4	(3.3)	43.2	(3.5)	22.3	(2.9)
	Finland	40.6	(4.0)	51.2	(0.6)	0.6	(0.6)	8.0	(2.3)	33.0	(3.8)	45.6	(4.1)	12.8	(3.0)
	Flanders (Belgium)	38.8	(5.1)	49.5	(0.6)	1.0	(1.0)	9.8	(2.4)	30.8	(5.0)	53.6	(4.7)	4.8	(2.2)
	France	41.7	(3.7)	52.0	(0.5)	0.0	(0.0)	1.7	(1.0)	32.0	(4.1)	56.0	(4.6)	10.3	(2.3)
	Iceland	54.6	(4.7)	50.9	(0.8)	0.0	(0.0)	7.4	(2.6)	36.1	(4.5)	40.7	(4.5)	15.7	(3.8)
	Israel	52.6	(6.0)	48.9	(0.9)	0.2	(0.2)	11.8	(3.5)	45.5	(6.7)	32.8	(5.8)	9.7	(2.7)
	Italy	55.2	(4.2)	57.0	(0.5)	0.0	(0.0)	1.0	(0.6)	13.2	(2.4)	39.4	(4.8)	46.5	(4.9)
	Japan	6.0	(1.9)	57.0	(0.3)	0.0	(0.0)	0.0	(0.0)	1.6	(1.0)	80.4	(3.0)	18.0	(3.1)
	Korea	13.3	(2.2)	58.8	(0.2)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	54.4	(4.2)	45.6	(4.2)
	Latvia	77.0	(4.2)	52.9	(0.8)	0.0	(0.0)	4.1	(1.7)	26.9	(5.1)	51.9	(4.5)	17.1	(3.4)
	Mexico	40.8	(3.7)	51.9	(0.6)	0.0	(0.0)	8.7	(2.5)	28.2	(3.6)	46.7	(4.3)	16.3	(2.8)
	Netherlands	30.8	(7.7)	52.2	(1.1)	0.0	(0.0)	6.4	(4.2)	26.4	(8.0)	49.2	(7.0)	18.0	(5.1)
	New Zealand	32.0	(6.0)	55.0	(0.7)	0.0	(0.0)	2.7	(1.3)	15.6	(5.4)	54.4	(5.8)	27.3	(5.1)
	Norway	58.2	(8.0)	52.1	(1.0)	0.0	(0.0)	3.7	(1.6)	39.8	(8.1)	35.9	(8.0)	20.6	(5.4)
	Poland	66.6	(4.3)	49.9	(0.6)	0.8	(0.6)	5.6	(2.6)	38.5	(4.5)	48.4	(4.8)	6.8	(2.4)
	Portugal	39.4	(4.3)	52.1	(0.5)	0.0	(0.0)	4.9	(1.6)	24.9	(3.9)	57.4	(3.9)	12.8	(3.1)
	Slovak Republic	60.0	(4.2)	52.5	(0.6)	0.0	(0.0)	9.7	(2.5)	23.3	(3.5)	49.6	(3.7)	17.4	(3.0)
	Spain	44.7	(5.0)	49.4	(0.8)	0.0	(0.0)	13.8	(3.7)	33.7	(4.9)	44.7	(5.1)	7.8	(1.9)
	Sweden	54.9	(4.9)	50.7	(0.7)	0.0	(0.0)	4.2	(1.8)	45.0	(5.0)	38.0	(4.6)	12.9	(3.0)
	United States[1]	48.6	(5.7)	48.3	(1.1)	1.1	(1.1)	19.2	(5.0)	32.9	(4.0)	36.1	(5.7)	10.7	(4.1)
	OECD average	45.1	(0.8)	52.2	(0.1)	0.1	(0.0)	6.3	(0.4)	28.4	(0.7)	47.8	(0.8)	17.4	(0.6)
Partners	Abu Dhabi (United Arab Emirates)	60.9	(3.6)	49.0	(0.8)	0.0	(0.0)	9.2	(2.7)	49.1	(4.3)	27.4	(4.0)	14.3	(3.8)
	Brazil	74.5	(2.1)	45.0	(0.4)	2.0	(0.7)	27.8	(1.9)	39.7	(2.3)	24.3	(1.8)	6.2	(1.4)
	Bulgaria	71.5	(3.5)	51.1	(0.5)	0.0	(0.0)	4.6	(1.6)	35.2	(3.0)	47.2	(3.9)	13.0	(2.6)
	Croatia	59.9	(3.7)	52.0	(0.7)	0.0	(0.0)	8.7	(2.1)	25.5	(3.7)	43.7	(4.0)	22.2	(3.5)
	Cyprus*	53.1	(4.3)	55.2	(0.5)	0.0	(0.0)	3.2	(1.8)	8.5	(2.6)	73.4	(4.3)	14.9	(3.4)
	Georgia	60.0	(3.4)	50.4	(0.7)	0.5	(0.5)	13.9	(2.6)	30.0	(3.3)	36.2	(3.6)	19.3	(2.8)
	Malaysia	49.1	(4.6)	53.5	(0.3)	0.0	(0.0)	0.0	(0.0)	13.1	(3.2)	86.9	(3.2)	0.0	(0.0)
	Romania	63.9	(4.3)	46.7	(0.9)	0.7	(0.7)	30.6	(4.0)	26.9	(3.7)	36.9	(4.6)	5.0	(1.7)
	Russian Federation	77.6	(4.8)	50.4	(0.9)	0.7	(0.7)	3.9	(1.7)	43.0	(5.2)	40.9	(5.1)	11.6	(3.5)
	Serbia	55.3	(3.4)	49.0	(0.6)	0.0	(0.0)	13.8	(2.7)	39.2	(4.3)	35.1	(4.1)	11.9	(2.2)
	Shanghai (China)	41.1	(3.6)	49.2	(0.4)	0.0	(0.0)	3.4	(1.3)	51.7	(3.5)	38.2	(3.5)	6.8	(1.1)
	Singapore	52.5	(4.8)	48.3	(0.5)	0.0	(0.0)	10.7	(2.7)	39.4	(4.5)	47.9	(4.3)	2.0	(1.2)

1. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.

* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D6.2. Employment status of principals in lower secondary education (TALIS 2013)

Percentage of principals with the following characteristics

	Full time without teaching obligations[1]		Full time with teaching obligations[1]		Part time without teaching obligations[2]		Part time with teaching obligations[2]	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD								
Australia	78.9	(5.1)	20.6	(5.1)	0.5	(0.5)	0.0	(0.0)
Canada	m	m	m	m	m	m	m	m
Chile	75.1	(3.5)	20.8	(3.2)	1.3	(0.9)	2.8	(1.4)
Czech Republic	a	a	97.6	(1.0)	a	a	2.4	(1.0)
Denmark	67.2	(3.5)	32.8	(3.5)	0.0	(0.0)	0.0	(0.0)
England (UK)	63.2	(4.9)	34.9	(4.8)	1.6	(0.9)	0.3	(0.3)
Estonia	69.5	(3.1)	25.4	(2.8)	2.0	(1.0)	3.0	(1.3)
Finland	25.2	(3.3)	71.1	(3.5)	1.6	(1.2)	2.1	(1.2)
Flanders (Belgium)	98.0	(1.1)	1.2	(0.9)	0.8	(0.6)	0.0	(0.0)
France	84.6	(2.0)	15.4	(2.0)	0.0	(0.0)	0.0	(0.0)
Iceland	58.3	(3.9)	36.1	(4.1)	0.9	(0.9)	4.6	(2.1)
Israel	24.6	(4.7)	74.6	(4.8)	0.8	(0.8)	0.0	(0.0)
Italy	95.8	(1.1)	4.2	(1.1)	a	a	a	a
Japan	97.8	(1.0)	2.2	(1.0)	0.0	(0.0)	0.0	(0.0)
Korea	98.4	(0.8)	1.6	(0.8)	0.0	(0.0)	0.0	(0.0)
Latvia	28.7	(5.3)	67.0	(6.5)	0.0	(0.0)	4.3	(3.8)
Mexico	71.8	(3.8)	20.7	(3.4)	5.5	(2.1)	2.0	(0.1)
Netherlands	85.5	(6.5)	12.6	(6.5)	1.5	(1.4)	0.4	(0.4)
New Zealand	78.4	(5.3)	21.6	(5.3)	0.0	(0.0)	0.0	(0.0)
Norway	76.3	(7.4)	17.1	(5.7)	0.0	(0.0)	6.6	(5.0)
Poland	20.3	(3.6)	71.4	(4.9)	1.5	(1.5)	6.8	(3.0)
Portugal	87.0	(3.5)	10.4	(3.3)	0.8	(0.6)	1.8	(1.1)
Slovak Republic	5.0	(1.9)	91.3	(2.4)	0.0	(0.0)	3.7	(1.5)
Spain	8.0	(2.2)	71.1	(3.6)	1.6	(1.1)	19.3	(3.7)
Sweden	92.4	(3.8)	7.2	(3.8)	0.0	(0.0)	0.5	(0.5)
United States[3]	93.4	(3.6)	3.5	(3.0)	3.1	(2.2)	0.0	(0.0)
OECD average	66.0	(0.6)	33.3	(0.6)	1.0	(0.2)	2.5	(0.3)
Partners								
Abu Dhabi (United Arab Emirates)	92.5	(2.9)	5.9	(2.4)	1.7	(1.7)	0.0	(0.0)
Brazil	52.5	(2.8)	36.3	(2.7)	7.3	(1.5)	3.8	(0.9)
Bulgaria	8.4	(2.4)	91.6	(2.4)	0.0	(0.0)	0.0	(0.0)
Croatia	99.2	(0.8)	0.8	(0.8)	a	a	a	a
Cyprus*	88.8	(2.7)	11.2	(2.7)	a	a	a	a
Georgia	46.8	(3.8)	33.4	(3.7)	5.0	(1.5)	14.8	(2.6)
Malaysia	5.0	(1.9)	95.0	(1.9)	0.0	(0.0)	0.0	(0.0)
Romania	2.2	(0.9)	68.6	(4.2)	0.2	(0.2)	29.0	(4.3)
Russian Federation	22.3	(4.5)	77.3	(4.5)	0.0	(0.0)	0.4	(0.4)
Serbia	99.2	(0.8)	0.8	(0.8)	0.0	(0.0)	0.0	(0.0)
Shanghai (China)	29.9	(3.1)	66.7	(3.3)	0.6	(0.6)	2.8	(1.3)
Singapore	99.3	(0.7)	0.7	(0.7)	0.0	(0.0)	0.0	(0.0)

1. Full-time employment is defined as 90% or more of full-time hours.
2. Part-time employment is defined as less than 90% of full-time hours.
3. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.
* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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D6

Table D6.3. Principals' leadership in lower secondary education (TALIS 2013)

Percentage of principals who report having engaged "often" or "very often" in the following leadership activities during the 12 months prior to the survey

	Collaborate with teachers to solve classroom discipline problems		Observe instruction in the classroom		Take action to support co-operation among teachers to develop new teaching practices		Take action to ensure that teachers take responsibility for improving their teaching skills		Take action to ensure that teachers feel responsible for their students' learning outcomes	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD										
Australia	35.3	(6.4)	33.1	(6.6)	64.0	(5.6)	76.1	(5.1)	82.5	(5.2)
Canada	m	m	m	m	m	m	m	m	m	m
Chile	80.0	(3.4)	71.8	(3.7)	84.5	(2.8)	87.9	(2.6)	92.9	(2.1)
Czech Republic	69.9	(3.1)	51.7	(3.7)	69.0	(3.5)	70.1	(3.4)	72.6	(3.4)
Denmark	56.0	(4.9)	17.1	(3.3)	43.9	(4.4)	53.6	(4.3)	45.5	(4.5)
England (UK)	39.7	(5.9)	78.4	(4.9)	61.4	(3.9)	75.3	(4.3)	82.9	(4.9)
Estonia	41.3	(3.4)	6.7	(1.5)	41.3	(3.7)	52.0	(3.3)	53.0	(3.5)
Finland	70.2	(3.7)	10.7	(2.8)	56.6	(3.8)	40.0	(3.6)	44.0	(4.4)
Flanders (Belgium)	53.5	(5.4)	21.4	(4.2)	36.5	(4.8)	41.5	(4.8)	57.0	(3.7)
France	67.5	(4.1)	7.7	(2.5)	59.9	(4.1)	51.6	(4.8)	64.2	(4.0)
Iceland	41.5	(4.7)	15.1	(3.7)	56.7	(4.3)	57.5	(5.2)	76.4	(4.4)
Israel	81.1	(3.4)	47.6	(6.2)	67.6	(6.2)	76.0	(4.4)	81.8	(3.5)
Italy	83.6	(3.7)	33.7	(4.2)	64.9	(4.8)	59.8	(5.1)	71.0	(4.4)
Japan	33.2	(4.3)	66.8	(3.4)	33.9	(4.3)	38.9	(4.0)	32.6	(3.5)
Korea	78.3	(4.7)	69.4	(3.8)	73.6	(4.6)	77.8	(3.8)	80.5	(3.9)
Latvia	68.5	(5.6)	45.0	(4.9)	63.4	(5.6)	74.8	(4.6)	83.6	(4.1)
Mexico	75.0	(3.7)	64.3	(4.2)	72.2	(4.1)	75.1	(3.6)	86.1	(2.6)
Netherlands	27.8	(6.0)	43.1	(6.0)	42.8	(7.1)	69.1	(6.6)	86.9	(3.3)
New Zealand	39.2	(5.1)	42.2	(4.3)	60.2	(4.9)	74.8	(5.2)	81.6	(2.9)
Norway	78.2	(3.7)	21.2	(6.5)	55.6	(8.0)	47.5	(7.4)	41.1	(6.8)
Poland	70.7	(3.7)	61.9	(4.9)	62.8	(4.3)	72.0	(4.4)	91.6	(3.0)
Portugal	70.0	(4.2)	5.2	(1.8)	61.0	(4.2)	63.3	(4.4)	74.5	(4.1)
Slovak Republic	78.8	(3.3)	61.8	(4.2)	81.5	(3.3)	79.3	(3.3)	82.7	(3.2)
Spain	82.9	(3.1)	29.5	(4.0)	59.4	(5.1)	55.8	(4.8)	69.3	(4.3)
Sweden	50.3	(4.2)	27.8	(5.0)	53.9	(4.9)	44.1	(4.9)	63.9	(4.5)
United States[1]	79.3	(5.4)	78.5	(5.7)	75.0	(4.9)	78.2	(5.5)	87.0	(4.9)
OECD average	62.1	(0.7)	40.5	(0.7)	60.1	(0.8)	63.7	(0.7)	71.4	(0.6)
Partners										
Abu Dhabi (United Arab Emirates)	86.0	(3.3)	88.0	(3.1)	91.3	(2.9)	93.4	(2.4)	93.2	(2.6)
Brazil	82.6	(1.8)	60.0	(2.6)	75.3	(2.1)	75.3	(2.0)	83.7	(1.9)
Bulgaria	78.6	(3.6)	89.1	(2.5)	69.4	(3.8)	88.3	(2.7)	96.9	(1.3)
Croatia	73.7	(3.1)	51.2	(3.9)	61.7	(3.6)	64.8	(3.7)	72.1	(3.4)
Cyprus*	85.7	(3.2)	63.3	(5.0)	50.0	(5.3)	76.3	(3.7)	82.5	(4.0)
Georgia	85.2	(2.7)	76.4	(3.0)	49.5	(3.7)	82.6	(2.8)	87.3	(2.6)
Malaysia	90.6	(2.6)	88.2	(2.3)	97.9	(1.1)	95.5	(1.6)	99.6	(0.4)
Romania	93.1	(2.6)	82.2	(3.2)	79.8	(3.5)	85.4	(2.5)	90.2	(2.3)
Russian Federation	19.8	(4.4)	69.2	(4.6)	55.3	(5.2)	85.2	(4.0)	84.8	(3.5)
Serbia	80.4	(3.4)	70.4	(3.3)	85.7	(3.0)	81.5	(3.2)	82.1	(2.9)
Shanghai (China)	23.7	(3.5)	91.1	(2.1)	91.0	(2.2)	90.0	(2.0)	88.0	(2.4)
Singapore	63.8	(4.0)	58.5	(4.3)	65.4	(4.4)	84.4	(3.0)	91.1	(2.5)

1. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.

* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D6.4. Principals' participation in school development plans in lower secondary education (TALIS 2013)

Percentage of principals who report having engaged in the following activities related to a school development plan in the 12 months prior to the survey

		Used student performance and student evaluation results (including national/international assessments) to develop the school's educational goals and programmes		Worked on a professional development plan for the school	
		%	S.E.	%	S.E.
		(1)	(2)	(3)	(4)
OECD	Australia	94.7	(2.5)	89.2	(4.6)
	Canada	m	m	m	m
	Chile	86.1	(3.0)	78.3	(3.5)
	Czech Republic	88.7	(2.4)	88.1	(2.5)
	Denmark	84.0	(3.4)	72.6	(4.1)
	England (UK)	99.5	(0.5)	94.8	(2.8)
	Estonia	81.5	(2.7)	58.0	(3.6)
	Finland	73.7	(3.6)	39.7	(4.6)
	Flanders (Belgium)	58.5	(4.6)	78.1	(4.0)
	France	87.2	(2.8)	46.0	(4.1)
	Iceland	82.1	(3.8)	81.1	(4.1)
	Israel	94.3	(2.7)	86.5	(4.9)
	Italy	90.8	(2.3)	77.2	(3.6)
	Japan	93.0	(2.1)	95.1	(2.5)
	Korea	95.3	(2.3)	91.4	(3.1)
	Latvia	94.4	(2.0)	92.9	(2.9)
	Mexico	96.3	(1.5)	86.1	(3.1)
	Netherlands	84.1	(3.7)	57.8	(7.8)
	New Zealand	99.8	(0.2)	93.4	(2.0)
	Norway	97.7	(1.5)	81.8	(4.8)
	Poland	94.8	(2.1)	94.7	(2.2)
	Portugal	92.1	(2.1)	61.0	(4.6)
	Slovak Republic	88.4	(2.5)	95.6	(1.7)
	Spain	90.3	(2.5)	39.8	(4.7)
	Sweden	89.6	(3.3)	61.4	(4.9)
	United States[1]	95.0	(2.8)	93.5	(3.7)
	OECD average	89.3	(0.5)	77.4	(0.6)
Partners	Abu Dhabi (United Arab Emirates)	93.8	(2.1)	97.0	(1.4)
	Brazil	87.3	(1.8)	71.0	(2.2)
	Bulgaria	95.0	(1.6)	62.5	(3.7)
	Croatia	75.4	(3.5)	89.2	(2.7)
	Cyprus*	66.3	(4.8)	71.6	(4.5)
	Georgia	94.3	(1.8)	86.5	(2.5)
	Malaysia	99.5	(0.5)	97.4	(1.2)
	Romania	88.7	(3.0)	83.8	(3.5)
	Russian Federation	90.5	(3.8)	93.1	(2.5)
	Serbia	89.7	(2.6)	94.9	(1.8)
	Shanghai (China)	87.0	(2.3)	93.5	(1.9)
	Singapore	99.3	(0.7)	98.6	(1.0)

1. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.

* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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D6

Table D6.5. Shared responsibility for leadership activities in lower secondary education (TALIS 2013)

Percentage of principals who report a shared responsibility for the following tasks[1]

	Appointing or hiring teachers		Dismissing or suspending teachers from employment		Establishing teachers' starting salaries, including setting payscales		Determining teachers' salary increases		Deciding on budget allocations within the school		Establishing student disciplinary policies and procedures		Approving students for admission to the school		Choosing which learning materials are used		Deciding which courses are offered	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	50.9	(5.7)	26.2	(5.2)	15.3	(4.2)	18.5	(4.8)	55.4	(6.2)	62.5	(6.5)	39.9	(6.2)	34.5	(5.9)	75.8	(4.9)
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	31.3	(3.6)	24.9	(3.2)	10.8	(2.4)	13.5	(2.4)	20.2	(3.1)	48.1	(4.1)	40.5	(4.0)	45.3	(4.2)	47.1	(3.9)
Czech Republic	27.4	(2.8)	19.1	(2.4)	21.9	(2.7)	29.1	(3.2)	63.3	(3.5)	78.4	(2.9)	25.1	(2.8)	72.8	(3.1)	77.9	(3.0)
Denmark	83.7	(3.2)	58.3	(4.1)	22.4	(4.0)	26.7	(3.9)	84.4	(3.6)	88.6	(2.8)	59.2	(4.6)	53.2	(4.5)	80.4	(3.6)
England (UK)	66.0	(4.3)	54.6	(5.0)	51.4	(5.8)	60.6	(5.4)	73.6	(4.2)	72.6	(5.0)	49.4	(4.7)	34.1	(6.2)	66.0	(5.5)
Estonia	63.8	(3.5)	35.9	(3.5)	33.3	(3.3)	55.6	(3.4)	67.7	(3.2)	75.3	(3.2)	50.8	(3.6)	53.6	(3.5)	74.8	(2.9)
Finland	39.5	(4.1)	23.3	(3.6)	6.4	(2.2)	14.3	(3.2)	36.9	(4.0)	58.3	(4.3)	26.0	(3.7)	47.6	(4.0)	59.9	(4.0)
Flanders (Belgium)	33.1	(5.4)	39.6	(5.3)	0.0	(0.0)	0.0	(0.0)	60.5	(4.9)	64.7	(4.3)	50.1	(5.0)	37.0	(4.0)	66.1	(4.7)
France	15.1	(3.0)	11.0	(2.1)	0.9	(0.6)	1.6	(0.8)	52.1	(4.3)	59.0	(3.8)	29.3	(3.9)	62.5	(4.0)	35.6	(4.2)
Iceland	38.7	(4.8)	26.0	(4.4)	6.8	(2.6)	11.8	(3.0)	31.7	(4.3)	75.5	(4.6)	47.2	(5.4)	51.9	(4.9)	76.7	(4.3)
Israel	51.4	(6.6)	36.9	(6.1)	10.1	(5.6)	14.3	(6.0)	43.7	(6.7)	75.3	(4.0)	59.2	(6.3)	64.2	(5.2)	76.8	(3.4)
Italy	35.1	(4.2)	25.2	(3.8)	3.7	(1.4)	2.9	(1.2)	62.9	(4.8)	73.1	(4.0)	32.1	(4.1)	57.0	(4.9)	76.1	(3.6)
Japan	7.0	(2.4)	9.1	(2.8)	1.5	(1.0)	9.2	(2.3)	26.2	(3.7)	43.6	(4.5)	17.5	(3.4)	23.0	(3.4)	23.6	(3.6)
Korea	12.0	(3.0)	7.9	(2.7)	1.3	(0.8)	0.0	(0.0)	20.1	(4.0)	20.8	(4.1)	11.6	(3.0)	18.5	(3.8)	13.8	(3.7)
Latvia	53.1	(5.5)	45.5	(6.3)	52.5	(5.9)	50.4	(5.4)	75.2	(4.5)	73.6	(4.8)	28.0	(3.9)	58.9	(6.1)	64.1	(5.9)
Mexico	16.4	(2.5)	14.2	(2.3)	6.0	(2.2)	8.3	(2.3)	18.0	(3.4)	40.7	(4.3)	33.2	(4.0)	38.5	(3.9)	26.2	(3.7)
Netherlands	77.9	(4.6)	63.0	(7.7)	34.2	(6.8)	46.1	(7.5)	69.3	(5.1)	67.9	(7.9)	82.2	(4.5)	34.4	(7.2)	92.3	(2.6)
New Zealand	69.4	(4.3)	59.6	(4.6)	17.4	(5.1)	30.9	(6.1)	76.7	(3.6)	86.5	(3.3)	54.1	(5.9)	53.6	(5.9)	83.1	(3.5)
Norway	56.3	(7.0)	41.9	(6.3)	15.2	(4.7)	16.1	(5.2)	52.1	(6.5)	75.5	(5.4)	32.8	(7.5)	73.9	(6.1)	65.4	(6.7)
Poland	23.5	(3.7)	11.7	(3.3)	20.5	(4.4)	23.7	(4.4)	50.6	(5.3)	65.4	(4.5)	19.1	(2.5)	59.4	(4.9)	49.0	(4.3)
Portugal	53.2	(4.3)	24.3	(4.3)	4.1	(2.1)	1.8	(0.9)	33.1	(4.2)	49.7	(4.6)	42.5	(4.7)	36.6	(4.2)	49.9	(4.4)
Slovak Republic	42.6	(3.7)	38.1	(3.4)	24.5	(4.0)	33.9	(4.0)	62.9	(3.7)	72.0	(3.4)	27.5	(3.3)	69.2	(4.0)	77.3	(3.1)
Spain	21.9	(4.2)	19.9	(3.4)	2.8	(1.2)	3.2	(1.2)	28.4	(4.6)	62.1	(4.8)	21.2	(3.7)	39.5	(4.4)	28.5	(3.7)
Sweden	23.9	(4.1)	16.5	(2.9)	26.8	(4.3)	29.9	(3.9)	25.7	(4.0)	34.7	(4.1)	19.5	(3.8)	17.2	(3.6)	28.3	(4.1)
United States[2]	43.0	(5.8)	41.2	(6.0)	0.0	(0.0)	0.6	(0.6)	33.8	(6.3)	51.9	(5.5)	35.4	(6.3)	51.2	(6.2)	67.2	(6.0)
OECD average	41.5	(0.7)	31.0	(0.7)	15.6	(0.6)	20.1	(0.6)	49.0	(0.8)	63.0	(0.8)	37.3	(0.7)	47.5	(0.8)	59.3	(0.7)
Partners																		
Abu Dhabi (United Arab Emirates)	33.3	(4.0)	32.6	(4.2)	18.4	(3.7)	20.1	(3.5)	22.6	(3.4)	41.6	(4.4)	43.3	(4.3)	37.6	(4.2)	30.0	(4.1)
Brazil	24.1	(2.1)	22.4	(2.4)	4.8	(1.4)	4.8	(1.4)	32.5	(2.6)	53.1	(2.7)	39.6	(2.8)	52.1	(2.8)	27.4	(2.7)
Bulgaria	19.5	(3.5)	13.6	(3.0)	38.8	(3.8)	37.0	(3.6)	50.2	(3.8)	50.6	(4.0)	34.5	(3.3)	27.0	(3.6)	25.3	(3.2)
Croatia	80.4	(3.4)	70.3	(3.7)	1.9	(1.2)	1.2	(0.9)	58.5	(4.1)	67.3	(3.6)	33.8	(3.7)	25.5	(3.4)	11.2	(2.4)
Cyprus*	19.8	(3.1)	16.7	(2.9)	10.4	(2.6)	7.4	(2.4)	34.4	(5.0)	66.7	(4.7)	28.4	(4.1)	37.2	(4.6)	22.9	(2.6)
Georgia	21.5	(3.1)	24.0	(3.4)	15.5	(2.5)	14.8	(2.3)	50.6	(3.8)	42.4	(3.5)	15.6	(2.8)	28.1	(3.1)	25.5	(3.1)
Malaysia	2.7	(1.2)	4.4	(1.8)	0.0	(0.0)	9.2	(2.6)	25.0	(3.7)	42.1	(4.3)	18.7	(3.7)	43.0	(4.8)	46.8	(4.5)
Romania	36.0	(4.1)	24.1	(4.0)	4.0	(1.8)	4.9	(1.7)	23.0	(3.9)	49.6	(4.5)	31.3	(3.9)	34.1	(3.9)	27.6	(3.3)
Russian Federation	13.4	(4.2)	22.6	(4.8)	32.9	(5.2)	41.7	(5.4)	71.0	(4.2)	79.5	(4.3)	31.1	(5.3)	57.1	(5.8)	64.2	(5.0)
Serbia	66.4	(4.0)	53.5	(3.6)	10.6	(2.7)	7.3	(2.1)	65.4	(4.0)	59.9	(3.7)	31.9	(3.1)	32.7	(4.1)	44.4	(4.6)
Shanghai (China)	39.9	(3.4)	33.2	(3.4)	17.4	(2.6)	18.4	(2.5)	32.9	(3.3)	32.0	(3.1)	26.6	(3.1)	27.8	(3.0)	46.4	(3.5)
Singapore	36.8	(4.0)	31.5	(4.0)	6.0	(1.9)	14.7	(3.0)	69.7	(4.1)	83.9	(3.4)	66.3	(4.0)	40.2	(3.9)	75.8	(4.0)

1. This table displays the percentage of principals who have significant responsibility for such tasks and who also report a shared responsibility. When a principal reports that the responsibility for a task is shared, this indicates that an active role is played in decision making by the principal and other members of the school management team, teachers who are not part of the school management team, a school's governing board or a local or national authority.

2. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.

* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D6.6. Principals' recent professional development in lower secondary education (TALIS 2013)

Participation rates, types and average number of days of professional development reported to be undertaken by principals in the 12 months prior to the survey[1]

	Percentage of principals who did not participate in any professional development[2]		Percentage of principals who participated in a professional network, mentoring or research activity		Average number of days among those who participated		Percentage of principals who participated in courses, conferences or observation visits		Average number of days among those who participated		Percentage of principals who participated in other types of professional development activities		Average number of days among those who participated	
	%	S.E.	%	S.E.	Average	S.E.	%	S.E.	Average	S.E.	%	S.E.	Average	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
OECD														
Australia	3.1	(3.0)	84.2	(3.7)	7.6	(0.6)	93.4	(3.5)	8.1	(0.6)	36.4	(5.1)	4.5	(0.7)
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	23.5	(3.1)	35.0	(3.6)	51.2	(13.7)	64.9	(3.7)	24.8	(5.3)	24.0	(3.5)	31.2	(10.3)
Czech Republic	13.4	(2.4)	28.1	(3.3)	11.8	(2.5)	82.2	(2.7)	9.0	(1.2)	33.7	(3.6)	7.1	(1.8)
Denmark	10.7	(2.9)	54.4	(4.3)	6.5	(0.8)	82.0	(2.9)	6.4	(0.5)	26.1	(4.0)	8.1	(1.9)
England (UK)	3.2	(1.4)	78.7	(3.5)	6.4	(0.6)	94.4	(1.9)	5.3	(0.3)	26.1	(4.0)	4.1	(0.8)
Estonia	5.1	(1.7)	54.1	(3.7)	7.7	(0.8)	93.9	(1.8)	10.2	(0.7)	48.0	(3.7)	6.9	(1.0)
Finland	8.3	(2.4)	48.1	(4.1)	4.4	(0.3)	87.7	(2.9)	5.8	(0.4)	36.2	(3.8)	3.7	(0.4)
Flanders (Belgium)	0.9	(0.9)	67.3	(4.5)	6.2	(0.6)	97.4	(1.3)	8.3	(0.5)	24.3	(4.0)	4.9	(0.7)
France	24.1	(3.6)	46.2	(4.4)	7.2	(1.6)	54.5	(4.3)	3.8	(0.4)	21.8	(3.6)	8.5	(3.3)
Iceland	3.7	(1.8)	37.0	(4.3)	17.4	(9.2)	94.4	(1.7)	7.1	(0.7)	42.6	(4.6)	9.6	(3.9)
Israel	6.2	(1.9)	59.1	(6.6)	13.4	(2.4)	86.2	(2.9)	13.1	(2.1)	26.6	(4.5)	10.6	(2.4)
Italy	5.4	(1.6)	40.2	(4.1)	28.2	(10.7)	93.5	(1.7)	9.0	(0.9)	19.1	(3.4)	8.0	(1.2)
Japan	14.6	(3.3)	56.9	(4.2)	6.1	(0.7)	83.1	(3.4)	9.5	(0.7)	17.7	(2.8)	3.8	(0.7)
Korea	5.6	(2.3)	65.6	(5.2)	11.9	(1.7)	86.6	(3.6)	14.1	(2.3)	48.8	(5.0)	7.6	(1.1)
Latvia	0.7	(0.7)	53.6	(5.3)	12.0	(2.2)	98.0	(1.2)	15.2	(3.1)	52.2	(6.0)	8.6	(1.9)
Mexico	5.3	(1.8)	33.6	(3.7)	56.3	(10.6)	87.2	(2.7)	24.3	(3.0)	27.4	(3.7)	37.3	(11.0)
Netherlands	0.4	(0.4)	87.5	(6.6)	10.8	(2.5)	97.4	(0.9)	7.3	(1.0)	22.9	(6.0)	5.1	(0.9)
New Zealand	5.3	(2.6)	88.1	(3.0)	12.4	(2.1)	92.3	(2.7)	8.5	(1.1)	30.2	(4.5)	7.2	(1.5)
Norway	9.5	(3.8)	54.1	(5.6)	9.2	(0.8)	83.3	(5.1)	8.6	(0.8)	33.0	(4.9)	8.3	(1.1)
Poland	0.7	(0.5)	31.2	(5.1)	14.5	(6.2)	95.6	(2.4)	9.1	(1.4)	51.2	(5.1)	8.0	(1.5)
Portugal	23.5	(4.0)	10.8	(2.7)	m	m	67.1	(4.3)	23.9	(5.9)	24.3	(3.6)	17.6	(6.5)
Slovak Republic	16.4	(3.0)	63.6	(3.5)	10.1	(1.0)	62.2	(4.0)	7.8	(0.9)	28.4	(3.7)	6.2	(1.1)
Spain	22.9	(3.7)	27.8	(3.2)	25.7	(9.6)	67.6	(4.0)	11.8	(2.3)	39.5	(4.4)	10.4	(2.8)
Sweden	3.6	(1.9)	41.6	(4.6)	6.6	(1.2)	93.5	(2.3)	7.7	(0.6)	30.3	(4.0)	7.2	(1.6)
United States[3]	6.0	(4.5)	68.2	(5.4)	23.6	(9.7)	91.0	(4.8)	18.4	(6.8)	42.3	(6.3)	21.8	(14.6)
OECD average	8.9	(0.4)	52.6	(0.7)	15.3	(2.5)	85.2	(0.5)	11.1	(0.5)	32.5	(0.7)	10.2	(0.7)
Partners														
Abu Dhabi (United Arab Emirates)	4.7	(1.9)	64.2	(5.1)	26.5	(11.1)	91.0	(2.4)	17.6	(7.1)	45.1	(5.2)	8.0	(1.2)
Brazil	14.5	(1.8)	39.1	(2.6)	50.5	(6.5)	71.0	(2.2)	37.4	(4.0)	36.8	(2.6)	29.2	(5.6)
Bulgaria	6.0	(2.1)	37.1	(3.6)	13.1	(2.5)	93.5	(2.1)	9.8	(1.5)	15.3	(2.9)	7.8	(1.2)
Croatia	0.8	(0.6)	68.8	(3.5)	4.9	(0.4)	81.0	(3.1)	7.3	(0.6)	39.0	(3.5)	4.2	(0.8)
Cyprus*	32.6	(4.8)	21.1	(3.7)	22.9	(15.0)	51.6	(5.2)	21.9	(9.1)	16.3	(3.6)	14.0	(7.0)
Georgia	22.9	(3.3)	14.2	(2.3)	23.6	(9.2)	53.1	(3.9)	13.4	(2.4)	25.1	(3.0)	8.0	(1.3)
Malaysia	1.5	(0.9)	78.0	(3.3)	12.1	(1.6)	98.1	(1.0)	14.8	(1.8)	58.4	(4.1)	9.8	(1.5)
Romania	12.5	(2.9)	29.4	(3.7)	24.6	(4.0)	75.0	(4.2)	21.9	(2.9)	41.8	(3.7)	14.8	(2.5)
Russian Federation	0.8	(0.1)	48.8	(4.7)	23.3	(3.9)	99.1	(0.1)	20.1	(2.1)	51.2	(4.8)	21.4	(3.7)
Serbia	24.2	(3.9)	20.6	(3.4)	26.3	(12.6)	57.5	(4.6)	11.2	(2.8)	38.4	(4.3)	8.6	(1.8)
Shanghai (China)	2.7	(1.2)	92.4	(2.0)	39.1	(3.8)	94.9	(1.7)	39.5	(4.2)	51.9	(3.7)	23.0	(5.1)
Singapore	0.0	(0.0)	92.5	(2.1)	15.5	(2.6)	99.3	(0.7)	13.4	(1.3)	44.0	(4.2)	14.1	(5.8)

1. Professional development aimed at principals.
2. This represents the percentage of principals who answered that they did not participate in any of the elements surveyed in questions 7a, 7b and 7c of the principal questionnaire.
3. The United States' response rates did not meet international technical standards for TALIS, therefore all estimates for the United States should be interpreted with caution.

* See note under Figure D6.1.

Source: OECD, TALIS 2013 database. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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D6

Table D6.7. [1/2] Principal's views on teacher participation in school management (PISA 2012)

Percentage of students in schools whose principal reported that he/she engaged in the following actions "more than once a week", "once a month to once a week", "3-4 times during the year" or "never or 1-2 times during the year", results based on school principals' reports

	Provide staff with opportunities to make decisions concerning the school								Engage teachers to help build a culture of continuous improvement in the school							
	Never or 1-2 times during the year		3-4 times during the year		Once a month to once a week		More than once a week		Never or 1-2 times during the year		3-4 times during the year		Once a month to once a week		More than once a week	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	2.1	(0.6)	12.0	(1.3)	61.6	(1.9)	24.3	(1.8)	1.7	(0.5)	11.0	(1.3)	49.2	(2.1)	38.1	(2.0)
Austria	7.8	(2.0)	26.6	(3.5)	46.3	(4.4)	19.4	(3.1)	11.2	(2.7)	23.8	(3.4)	49.7	(4.0)	15.2	(2.9)
Belgium	6.2	(1.7)	30.3	(2.9)	49.5	(3.0)	14.0	(1.9)	14.1	(2.2)	31.1	(3.1)	36.0	(3.3)	18.8	(2.6)
Canada	1.5	(0.5)	8.3	(1.4)	67.3	(2.1)	22.9	(2.0)	4.7	(1.0)	13.0	(1.4)	46.1	(2.7)	36.1	(2.3)
Chile	2.1	(1.0)	13.2	(3.0)	53.3	(3.6)	31.3	(3.5)	2.4	(1.0)	8.5	(1.9)	57.3	(3.8)	31.8	(3.4)
Czech Republic	8.8	(2.2)	36.5	(3.4)	38.7	(3.3)	16.0	(3.1)	8.5	(2.3)	26.9	(3.4)	46.2	(3.4)	18.4	(3.3)
Denmark	3.2	(1.3)	12.3	(2.3)	71.6	(3.3)	12.8	(2.6)	3.9	(1.4)	14.7	(2.5)	58.1	(3.5)	23.3	(3.2)
Estonia	4.2	(1.0)	34.6	(2.8)	44.0	(3.0)	17.3	(2.6)	4.1	(1.0)	22.1	(2.5)	51.0	(2.8)	22.7	(2.7)
Finland	3.6	(1.4)	9.1	(1.9)	70.4	(3.3)	16.8	(2.8)	6.7	(1.6)	18.6	(2.9)	53.9	(3.7)	20.9	(2.9)
France	8.7	(1.9)	46.9	(3.4)	36.6	(3.1)	7.8	(2.0)	17.3	(2.5)	46.7	(3.4)	25.8	(3.1)	10.3	(2.2)
Germany	0.6	(0.6)	15.4	(2.3)	52.8	(3.3)	31.3	(3.1)	1.9	(1.0)	14.5	(2.6)	51.7	(3.5)	31.9	(3.3)
Greece	4.3	(1.3)	21.1	(3.2)	56.8	(3.3)	17.9	(2.8)	2.5	(1.2)	20.0	(3.2)	48.4	(3.7)	29.2	(3.6)
Hungary	5.1	(1.7)	29.7	(3.4)	59.9	(3.6)	5.3	(1.7)	19.6	(3.7)	23.5	(3.2)	44.4	(3.6)	12.4	(2.6)
Iceland	1.0	(0.1)	13.0	(0.2)	68.1	(0.2)	17.9	(0.2)	5.6	(0.1)	18.7	(0.2)	62.8	(0.2)	12.8	(0.2)
Ireland	3.0	(1.5)	25.7	(4.1)	48.9	(4.1)	22.4	(3.8)	7.0	(2.2)	25.4	(3.8)	37.7	(4.3)	29.9	(3.9)
Israel	7.6	(2.3)	25.1	(3.6)	51.9	(4.2)	15.4	(2.8)	10.8	(2.6)	23.6	(3.1)	46.3	(3.3)	19.3	(3.2)
Italy	4.6	(1.0)	30.9	(2.3)	42.9	(2.4)	21.6	(1.6)	3.2	(0.7)	20.5	(2.0)	38.4	(2.0)	38.0	(2.0)
Japan	19.5	(2.7)	13.5	(2.7)	59.5	(3.5)	7.5	(1.7)	23.8	(3.0)	34.9	(3.4)	36.5	(3.6)	4.8	(1.5)
Korea	9.2	(2.5)	16.6	(2.9)	62.4	(3.9)	11.8	(2.1)	13.9	(3.1)	21.2	(3.3)	58.5	(4.2)	6.4	(1.9)
Latvia	6.1	(1.9)	25.2	(3.2)	49.5	(3.6)	19.1	(3.2)	3.7	(1.4)	15.8	(2.5)	54.0	(3.5)	26.5	(3.3)
Luxembourg	4.7	(0.0)	46.8	(0.1)	36.8	(0.1)	11.7	(0.1)	21.8	(0.1)	43.4	(0.1)	20.9	(0.1)	14.0	(0.1)
Mexico	17.8	(1.4)	27.7	(1.8)	34.4	(1.7)	20.1	(1.3)	7.8	(0.8)	27.5	(1.7)	41.8	(1.8)	23.0	(1.5)
Netherlands	4.5	(1.6)	35.9	(4.5)	45.2	(4.5)	14.3	(3.6)	6.4	(1.9)	22.3	(3.2)	56.8	(4.3)	14.5	(3.5)
New Zealand	2.5	(0.8)	12.6	(2.6)	67.3	(3.3)	17.6	(3.1)	5.4	(1.8)	14.5	(3.0)	57.8	(4.0)	22.3	(3.7)
Norway	3.9	(1.7)	11.1	(2.5)	67.8	(3.6)	17.2	(3.0)	7.6	(1.9)	18.4	(2.9)	58.7	(3.8)	15.3	(2.9)
Poland	13.1	(2.9)	42.5	(4.2)	33.3	(4.1)	11.0	(2.5)	14.7	(2.7)	33.4	(3.5)	39.8	(4.1)	12.0	(2.5)
Portugal	5.8	(2.3)	7.0	(2.1)	56.9	(4.6)	30.3	(4.1)	2.5	(1.1)	17.3	(3.5)	38.9	(4.1)	41.3	(4.4)
Slovak Republic	8.6	(2.5)	27.8	(3.7)	55.2	(3.6)	8.5	(2.1)	3.3	(1.2)	25.4	(3.6)	54.8	(4.2)	16.5	(3.2)
Slovenia	6.6	(0.7)	21.8	(0.4)	53.4	(0.8)	18.2	(0.5)	3.7	(0.6)	13.3	(0.4)	57.3	(0.8)	25.8	(0.5)
Spain	4.2	(1.1)	22.4	(2.3)	54.7	(2.6)	18.7	(2.0)	4.4	(1.1)	31.0	(2.1)	43.3	(2.4)	21.3	(2.5)
Sweden	1.8	(1.0)	10.2	(2.5)	70.7	(3.3)	17.3	(2.6)	3.0	(1.2)	15.9	(2.6)	55.5	(3.9)	25.6	(3.4)
Switzerland	10.7	(2.1)	34.7	(3.2)	48.8	(3.4)	5.8	(1.9)	13.3	(2.0)	34.1	(3.0)	41.0	(3.5)	11.6	(2.4)
Turkey	2.1	(1.0)	13.6	(2.8)	40.7	(3.7)	43.6	(3.4)	2.8	(1.0)	9.2	(2.3)	42.3	(4.3)	45.6	(3.9)
United Kingdom	3.4	(1.4)	22.8	(3.0)	53.0	(3.9)	20.8	(3.3)	1.8	(0.8)	13.6	(2.7)	41.9	(3.2)	42.7	(3.5)
United States	3.5	(1.5)	8.9	(2.4)	58.9	(4.5)	28.6	(4.1)	1.9	(1.1)	4.5	(1.7)	53.9	(4.4)	39.6	(4.5)
OECD average	5.8	(0.3)	22.6	(0.5)	53.4	(0.6)	18.2	(0.5)	7.6	(0.3)	21.7	(0.5)	47.3	(0.6)	23.4	(0.5)
Partners																
Argentina	11.5	(2.2)	21.7	(3.3)	36.1	(3.8)	30.7	(4.0)	4.2	(1.2)	17.5	(3.4)	32.0	(3.7)	46.3	(3.9)
Brazil	3.0	(0.8)	11.6	(1.6)	38.0	(2.4)	47.4	(2.5)	5.6	(0.9)	11.8	(1.5)	36.8	(2.2)	45.8	(2.7)
Colombia	5.6	(1.6)	9.6	(1.9)	47.3	(3.7)	37.5	(3.5)	6.9	(1.9)	14.4	(2.6)	37.6	(3.7)	41.0	(3.6)
Costa Rica	14.1	(2.3)	19.8	(3.3)	48.0	(3.6)	18.0	(2.7)	11.8	(2.3)	20.0	(3.4)	44.2	(3.6)	24.0	(3.2)
Indonesia	11.3	(2.3)	20.3	(3.3)	49.4	(4.1)	19.0	(3.2)	5.7	(1.6)	11.9	(2.6)	49.5	(4.5)	32.9	(4.0)
Lithuania	6.1	(1.5)	29.3	(3.1)	50.0	(3.7)	14.6	(2.6)	11.8	(2.3)	26.1	(2.9)	39.5	(3.3)	22.6	(2.6)
Russian Federation	2.7	(1.4)	36.1	(3.9)	52.6	(3.9)	8.6	(2.0)	12.7	(2.2)	19.6	(2.8)	53.0	(3.7)	14.8	(2.0)

1. Principals' responses to these three questions are combined to develop a composite index, the index of teacher participation in school management. This index has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater teacher participation.The table shows the range between top and bottom quarters of this index.

Source: OECD, *PISA 2012 Results: What Makes a School Successful? (Volume IV)* (http://dx.doi.org/10.1787/9789264201156-en), Tables IV.4.8 and IV.4.12. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table D6.7. [2/2] Principal's views on teacher participation in school management (PISA 2012)

Percentage of students in schools whose principal reported that he/she engaged in the following actions "more than once a week", "once a month to once a week", "3-4 times during the year" or "never or 1-2 times during the year", results based on school principals' reports

		Ask teachers to participate in reviewing management practices								Index of teacher participation in school management, by national quarters[1]					
		Never or 1-2 times during the year		3-4 times during the year		Once a month to once a week		More than once a week		All students		Bottom quarter		Top quarter	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	Mean index	S.E.	Mean index	S.E.	Mean index	S.E.
		(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
OECD	Australia	22.4	(1.8)	26.0	(1.6)	41.7	(2.0)	9.9	(1.3)	0.5	(0.0)	-0.6	(0.1)	1.6	(0.1)
	Austria	75.4	(3.4)	10.7	(2.6)	12.6	(2.5)	1.3	(0.9)	-0.3	(0.1)	-1.5	(0.1)	0.8	(0.1)
	Belgium	69.9	(3.0)	15.9	(2.1)	12.0	(2.3)	2.2	(0.9)	-0.4	(0.1)	-1.5	(0.1)	0.8	(0.1)
	Canada	35.5	(2.0)	20.9	(1.7)	38.5	(2.3)	5.1	(1.1)	0.3	(0.0)	-0.8	(0.1)	1.3	(0.1)
	Chile	41.0	(3.9)	16.8	(3.0)	35.5	(3.8)	6.8	(1.9)	0.4	(0.1)	-0.7	(0.1)	1.5	(0.1)
	Czech Republic	52.1	(4.3)	27.0	(3.2)	17.5	(3.1)	3.4	(1.5)	-0.3	(0.1)	-1.5	(0.2)	1.0	(0.1)
	Denmark	62.2	(3.6)	18.9	(3.1)	16.5	(2.8)	2.3	(1.0)	0.0	(0.1)	-1.0	(0.1)	0.9	(0.1)
	Estonia	71.1	(2.9)	12.0	(2.0)	13.2	(1.9)	3.6	(1.5)	-0.1	(0.1)	-1.0	(0.0)	0.9	(0.1)
	Finland	62.8	(3.6)	17.7	(2.5)	15.8	(2.5)	3.6	(1.6)	0.0	(0.1)	-1.0	(0.1)	1.0	(0.1)
	France	74.2	(3.4)	19.6	(3.0)	3.6	(1.1)	2.6	(1.3)	-0.8	(0.1)	-1.8	(0.1)	0.5	(0.2)
	Germany	78.9	(3.1)	10.0	(2.5)	10.2	(2.3)	0.9	(0.6)	0.0	(0.1)	-0.9	(0.1)	0.9	(0.1)
	Greece	51.1	(3.9)	19.1	(3.1)	23.9	(3.4)	5.9	(1.6)	0.1	(0.1)	-1.1	(0.1)	1.3	(0.1)
	Hungary	82.4	(2.8)	11.3	(2.4)	6.2	(1.9)	0.1	(0.1)	-0.5	(0.1)	-1.4	(0.1)	0.4	(0.1)
	Iceland	68.1	(0.2)	16.5	(0.2)	14.1	(0.1)	1.2	(0.0)	0.0	(0.0)	-0.9	(0.0)	0.9	(0.0)
	Ireland	37.7	(4.0)	29.6	(4.0)	21.6	(3.2)	11.0	(2.4)	0.1	(0.1)	-1.3	(0.1)	1.5	(0.1)
	Israel	59.8	(4.3)	20.8	(3.3)	15.8	(3.0)	3.5	(1.4)	-0.2	(0.1)	-1.5	(0.1)	0.9	(0.1)
	Italy	21.0	(1.8)	32.7	(2.1)	33.8	(2.2)	12.5	(1.3)	0.3	(0.0)	-0.9	(0.1)	1.7	(0.1)
	Japan	35.0	(3.6)	18.7	(3.0)	44.2	(3.5)	2.1	(1.0)	-0.4	(0.1)	-1.8	(0.2)	0.6	(0.1)
	Korea	28.7	(4.1)	19.6	(3.1)	43.1	(4.3)	8.7	(2.3)	0.1	(0.1)	-1.3	(0.2)	1.3	(0.1)
	Latvia	43.7	(3.8)	27.6	(3.7)	24.0	(3.5)	4.7	(1.5)	0.1	(0.1)	-0.9	(0.1)	1.2	(0.1)
	Luxembourg	64.8	(0.1)	29.7	(0.1)	2.3	(0.0)	3.2	(0.0)	-0.6	(0.0)	-1.6	(0.0)	0.5	(0.0)
	Mexico	42.3	(1.9)	22.9	(1.9)	27.6	(1.6)	7.1	(0.7)	-0.1	(0.0)	-1.5	(0.0)	1.3	(0.0)
	Netherlands	56.9	(4.4)	23.9	(3.8)	17.7	(3.3)	1.4	(1.0)	-0.2	(0.1)	-1.2	(0.1)	0.8	(0.1)
	New Zealand	30.5	(3.7)	26.0	(3.9)	38.1	(3.9)	5.4	(2.1)	0.2	(0.1)	-0.9	(0.1)	1.3	(0.1)
	Norway	64.6	(3.5)	21.4	(2.9)	11.9	(2.6)	2.1	(1.2)	0.0	(0.1)	-1.0	(0.1)	0.9	(0.1)
	Poland	35.6	(3.8)	41.9	(4.0)	20.0	(3.2)	2.4	(1.3)	-0.3	(0.1)	-1.4	(0.1)	0.8	(0.1)
	Portugal	26.5	(3.5)	27.7	(4.1)	33.4	(4.0)	12.4	(3.0)	0.4	(0.1)	-0.8	(0.1)	1.7	(0.2)
	Slovak Republic	35.1	(3.2)	32.7	(3.7)	30.2	(3.3)	2.0	(1.0)	-0.1	(0.1)	-1.1	(0.1)	0.8	(0.1)
	Slovenia	40.1	(0.8)	24.6	(0.8)	30.2	(0.7)	5.1	(0.3)	0.1	(0.0)	-1.0	(0.0)	1.2	(0.0)
	Spain	38.5	(2.6)	36.7	(3.1)	19.0	(2.0)	5.8	(1.5)	0.0	(0.0)	-1.1	(0.1)	1.2	(0.1)
	Sweden	64.5	(3.6)	17.1	(2.8)	16.1	(2.7)	2.3	(1.2)	0.1	(0.1)	-0.9	(0.1)	1.0	(0.1)
	Switzerland	81.9	(2.6)	10.6	(2.2)	7.1	(1.8)	0.4	(0.3)	-0.6	(0.1)	-1.7	(0.1)	0.4	(0.1)
	Turkey	6.5	(2.5)	19.1	(3.0)	45.4	(4.3)	29.1	(3.3)	0.9	(0.1)	-0.4	(0.1)	2.3	(0.0)
	United Kingdom	22.3	(2.9)	27.5	(2.6)	39.8	(3.5)	10.3	(2.2)	0.4	(0.1)	-0.8	(0.1)	1.6	(0.1)
	United States	26.2	(4.0)	18.7	(3.9)	43.5	(4.9)	11.5	(2.8)	0.5	(0.1)	-0.6	(0.2)	1.8	(0.1)
	OECD average	48.8	(0.6)	22.1	(0.5)	23.6	(0.5)	5.5	(0.3)	0.0	(0.0)	-1.1	(0.0)	1.1	(0.0)
Partners	Argentina	45.9	(3.5)	21.7	(2.8)	18.7	(2.9)	13.6	(2.4)	0.2	(0.1)	-1.3	(0.1)	1.6	(0.1)
	Brazil	23.4	(2.1)	19.0	(1.8)	38.7	(2.5)	18.9	(2.0)	0.7	(0.1)	-0.8	(0.1)	2.0	(0.1)
	Colombia	33.8	(3.6)	19.8	(3.1)	32.8	(3.3)	13.6	(2.6)	0.5	(0.1)	-1.0	(0.1)	1.8	(0.1)
	Costa Rica	34.8	(3.5)	22.4	(3.0)	31.3	(4.0)	11.5	(2.2)	-0.1	(0.1)	-1.6	(0.1)	1.4	(0.1)
	Indonesia	16.0	(3.3)	23.1	(3.4)	48.5	(4.0)	12.3	(2.5)	0.3	(0.1)	-0.9	(0.1)	1.6	(0.1)
	Lithuania	61.2	(3.5)	24.6	(2.6)	10.0	(2.3)	4.2	(1.5)	-0.2	(0.1)	-1.2	(0.1)	1.0	(0.1)
	Russian Federation	16.9	(2.6)	39.2	(3.2)	42.1	(3.3)	1.8	(0.8)	0.0	(0.1)	-1.0	(0.1)	0.9	(0.1)

1. Principals' responses to these three questions are combined to develop a composite index, the index of teacher participation in school management. This index has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater teacher participation.The table shows the range between top and bottom quarters of this index.

Source: OECD, *PISA 2012 Results: What Makes a School Successful? (Volume IV)* (http://dx.doi.org/10.1787/9789264201156-en), Tables IV.4.8 and IV.4.12. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Annex

1

Characteristics of Education Systems

All tables in Annex 1 are available on line at:

StatLink http://dx.doi.org/10.1787/888933399345

Note regarding data from Israel

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

Table X1.1a. [1/2] Typical graduation ages, by level of education (2014)

The typical age refers to the age of the students at the beginning of the school year; students will generally be one year older than the age indicated when they graduate at the end of the school year. The typical age is used for the gross graduation rate calculation.

		Upper secondary level		Post-secondary non-tertiary level		Tertiary level	
						Short-cycle tertiary (ISCED 5)	
		General programmes	Vocational programmes	General programmes	Vocational programmes	General programmes	Vocational programmes
		(1)	(2)	(3)	(4)	(5)	(6)
OECD	Australia	17-18	18-30	a	18-37	19-24	18-30
	Austria	17-18	16-18	a	19-32	a	18-19
	Belgium	18-18	18-19	a	20-21	a	21-24
	Canada	17-18	18-30	m	m	a	20-24
	Chile	17-17	17-17	a	a	a	21-26
	Czech Republic	19-20	19-20	20-22	19-20	a	21-23
	Denmark	18-19	19-24	a	24-37	a	21-23
	Estonia	18-18	18-19	a	19-25	a	a
	Finland	19-19	19-23	a	32-46	a	a
	France	17-18	16-19	m	m	m	m
	Germany	18-20	19-20	22-22	22-22	a	22-23
	Greece	m	m	a	20-22	a	a
	Hungary	17-19	17-19	a	19-20	a	19-21
	Iceland	m	m	m	m	m	m
	Ireland	18-19	18-24	a	20-25	20-35	20-35
	Israel	17-17	17-17	m	a	m	m
	Italy	18-19	18-19	a	20-20	a	21-22
	Japan	17-17	17-17	18-18	18-18	19-19	19-19
	Korea	18-18	18-18	m	m	a	20-22
	Latvia	18-18	20-20	a	20-23	a	21-25
	Luxembourg	17-19	17-20	a	20-25	a	21-23
	Mexico	17-18	17-18	a	a	a	20-24
	Netherlands	16-18	18-21	a	24-36	a	21-27
	New Zealand	17-18	16-29	17-26	17-26	18-24	18-24
	Norway	18-18	18-22	a	19-29	21-32	20-25
	Poland	19-19	19-20	a	21-25	a	22-23
	Portugal	17-17	17-19	a	19-21	a	a
	Slovak Republic	18-19	18-19	a	19-21	a	20-22
	Slovenia	18-18	17-19	a	a	a	21-28
	Spain	17-17	17-21	a	m	a	19-22
	Sweden	18-19	18-19	a	19-30	21-27	22-28
	Switzerland	19-20	19-20	21-23	a	a	21-24
	Turkey	17-17	17-17	a	a	a	20-22
	United Kingdom	16-17	16-19	a	a	a	19-29
	United States	17-17	17-17	19-22	19-22	20-21	20-21
Partners	Argentina	17-17	17-17	m	m	20-24	24-24
	Brazil	16-17	16-18	a	18-26	a	20-28
	China	17-17	17-17	19-19	19-19	20-20	20-20
	Colombia	16-18	17-18	18-21	m	18-18	18-18
	Costa Rica	m	m	m	m	m	m
	India	17-17	17-17	18-18	18-18	20-20	22-22
	Indonesia	17-22	17-22	m	m	m	m
	Lithuania	18-18	19-19	a	19-22	a	a
	Russian Federation	17-17	17-18	a	18-19	a	19-21
	Saudi Arabia	m	m	m	m	20-20	20-20
	South Africa	15-15	15-15	18-18	18-18	20-20	20-20

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X1.1a. [2/2] **Typical graduation ages, by level of education (2014)**

The typical age refers to the age of the students at the beginning of the school year; students will generally be one year older than the age indicated when they graduate at the end of the school year. The typical age is used for the gross graduation rate calculation.

		Tertiary level						
		Bachelor's or equivalent (ISCED 6)			Master's or equivalent (ISCED 7)			
		First degree (3-4 years)	Long first degree (more than 4 years)	Second or further degree, (following a bachelor's or equivalent programme)	Long first degree (at least 5 years)	Second or further degree, (following a bachelor's or equivalent programme)	Second or further degree, (following a master's or equivalent programme)	Doctoral or equivalent (ISCED 8)
		(7)	(8)	(9)	(10)	(11)	(12)	(13)
OECD	Australia	20-23	22-25	22-32	a	22-30	m	26-35
	Austria	21-24	a	a	24-28	23-28	a	27-32
	Belgium	21-22	a	22-24	m	22-24	23-27	27-30
	Canada	22-24	23-25	23-28	24-27	24-29	26-29	29-34
	Chile	23-27	23-28	23-26	25-26	26-36	28-35	30-37
	Czech Republic	22-24	a	24-26	25-26	24-26	26-28	29-33
	Denmark	22-25	a	37-49	a	25-28	a	28-32
	Estonia	21-23	a	a	23-24	23-26	a	28-33
	Finland	23-26	a	a	25-27	25-29	32-38	30-37
	France	m	m	m	m	m	m	26-30
	Germany	22-26	a	24-30	24-27	24-27	24-27	28-32
	Greece	22-26	24-26	m	a	25-31	25-31	33-40
	Hungary	21-24	a	25-39	23-27	23-25	a	27-32
	Iceland	m	m	m	m	m	m	m
	Ireland	21-23	m	23-28	22-28	m	m	27-32
	Israel	24-28	m	25-33	m	27-34	a	31-37
	Italy	22-24	22-24	m	24-27	24-27	m	28-31
	Japan	21-21	m	m	23-23	m	m	26-26
	Korea	22-25	m	a	a	25-31	a	29-38
	Latvia	22-24	23-25	24-33	25-37	24-27	a	28-36
	Luxembourg	22-24	a	a	a	24-26	25-27	27-29
	Mexico	20-24	m	a	a	23-26	a	24-28
	Netherlands	21-23	a	a	a	23-26	24-27	28-31
	New Zealand	20-23	22-24	21-27	a	23-30	a	27-35
	Norway	20-25	a	25-34	24-26	23-29	24-29	28-35
	Poland	22-23	a	25-34	24-25	24-25	a	29-32
	Portugal	21-23	a	23-29	23-24	23-27	26-40	27-35
	Slovak Republic	22-23	22-23	a	25-26	23-25	24-28	26-30
	Slovenia	21-23	22-24	a	24-25	23-27	a	27-32
	Spain	21-23	a	a	22-24	22-26	29-32	28-34
	Sweden	22-26	a	a	24-27	24-29	a	28-34
	Switzerland	23-26	24-26	28-37	27-32	25-28	26-33	29-32
	Turkey	22-24	a	a	23-25	25-31	a	30-35
	United Kingdom	20-22	22-25	a	m	23-28	m	25-32
	United States	21-23	21-23	21-23	24-31	24-31	24-31	26-32
Partners	Argentina	21-24	23-24	m	20-24	m	m	25-29
	Brazil	21-27	a	m	a	25-31	a	29-37
	China	22-22	23-23	m	25-25	m	a	28-28
	Colombia	22-22	22-22	m	25-25	m	m	30-30
	Costa Rica	m	m	m	m	m	m	m
	India	21-21	21-21	m	22-22	m	m	27-27
	Indonesia	22-26	m	m	24-27	m	m	25-28
	Lithuania	21-22	a	22-26	m	24-25	26-29	27-31
	Russian Federation	21-21	a	a	22-23	22-23	a	25-27
	Saudi Arabia	21-21	21-21	m	24-24	m	m	27-27
	South Africa	21-21	22-22	m	23-23	m	m	25-25

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X1.1b. Typical age of entry by level of education (2014)

The typical age refers to the age of the students at the beginning of the school year; students will generally be one year older than the age indicated when they graduate at the end of the school year. The typical age is used for the gross graduation rate calculation.

		Upper secondary (ISCED 3)	Post-secondary non-tertiary (ISCED 4)	Short-cycle tertiary (ISCED 5)	Bachelor's or equivalent (ISCED 6)	Master's or equivalent (ISCED 7)	Doctoral or equivalent (ISCED 8)
		(1)	(2)	(3)	(4)	(5)	(6)
OECD	Australia	m	m	m	18-20	21-26	22-30
	Austria	14-15	17-22	17-18	19-21	19-24	24-28
	Belgium	14-16	18-22	18-19	18-19	21-23	23-26
	Canada	m	m	m	m	m	m
	Chile	14-14	a	18-21	18-19	24-34	24-33
	Czech Republic	15-16	20-29	19-21	19-20	22-24	24-26
	Denmark	16-17	a	19-27	20-22	23-25	25-29
	Estonia	16-19	19-24	a	19-22	22-26	24-28
	Finland	16-16	31-43	a	19-20	22-29	25-30
	France	15-15	m	m	m	m	23-26
	Germany	15-18	19-21	21-25	19-21	19-24	25-29
	Greece	15-15	18-18	a	18-18	22-22	22-22
	Hungary	15-15	19-20	19-20	19-20	19-24	24-27
	Iceland	16-16	20-20	20-20	20-20	23-23	25-25
	Ireland	m	18-20	18-19	18-19	20-21	20-23
	Israel	15-15	20-25	18-23	21-25	24-31	26-32
	Italy	14-14	17-18	20-21	20-20	20-20	26-29
	Japan	15-15	18-18	18-18	18-18	22-22	24-24
	Korea	15-15	m	18-18	18-18	22-27	23-32
	Latvia	15-16	19-21	19-22	19-20	21-23	24-31
	Luxembourg	15-19	m	20-22	20-21	24-29	25-28
	Mexico	15-15	a	18-19	18-19	24-28	24-34
	Netherlands	16-19	22-36	19-26	18-20	22-24	24-26
	New Zealand	15-16	17-24	17-25	18-20	21-28	22-30
	Norway	16-16	19-28	19-23	19-20	19-24	25-31
	Poland	16-16	19-23	19-20	19-20	22-24	24-26
	Portugal	15-15	18-20	a	18-20	18-23	23-31
	Slovak Republic	15-18	18-20	19-20	19-21	22-23	24-26
	Slovenia	15-15	a	19-25	19-20	22-24	24-26
	Spain	15-15	m	18-20	18-18	18-23	m
	Sweden	16-16	19-25	19-25	19-21	19-24	26-33
	Switzerland	15-17	18-24	18-23	19-22	22-25	25-28
	Turkey	14-14	a	18-19	18-19	23-25	26-27
	United Kingdom	16-18	a	18-27	18-21	21-30	22-27
	United States	15-15	18-25	18-22	18-19	m	22-27
Partners	Argentina	15-18	18-18	18-20	18-18	23-25	24-32
	Brazil	m	m	m	m	m	m
	China	15-15	18-18	18-18	18-18	23-23	26-26
	Colombia	m	m	m	m	m	m
	Costa Rica	m	a	m	m	m	m
	India	14-14	16-16	m	18-18	21-22	23-23
	Indonesia	15-18	a	18-20	18-18	23-25	24-32
	Lithuania	17-17	19-22	a	19-19	23-25	25-27
	Russian Federation	15-16	17-18	17-18	17-18	21-22	23-24
	Saudi Arabia	15-18	18-18	18-20	18-18	23-25	24-32
	South Africa	15-18	18-18	18-20	18-18	23-25	24-32

Sources: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X1.2a. School year and financial year used for the calculation of indicators, OECD countries

Sources: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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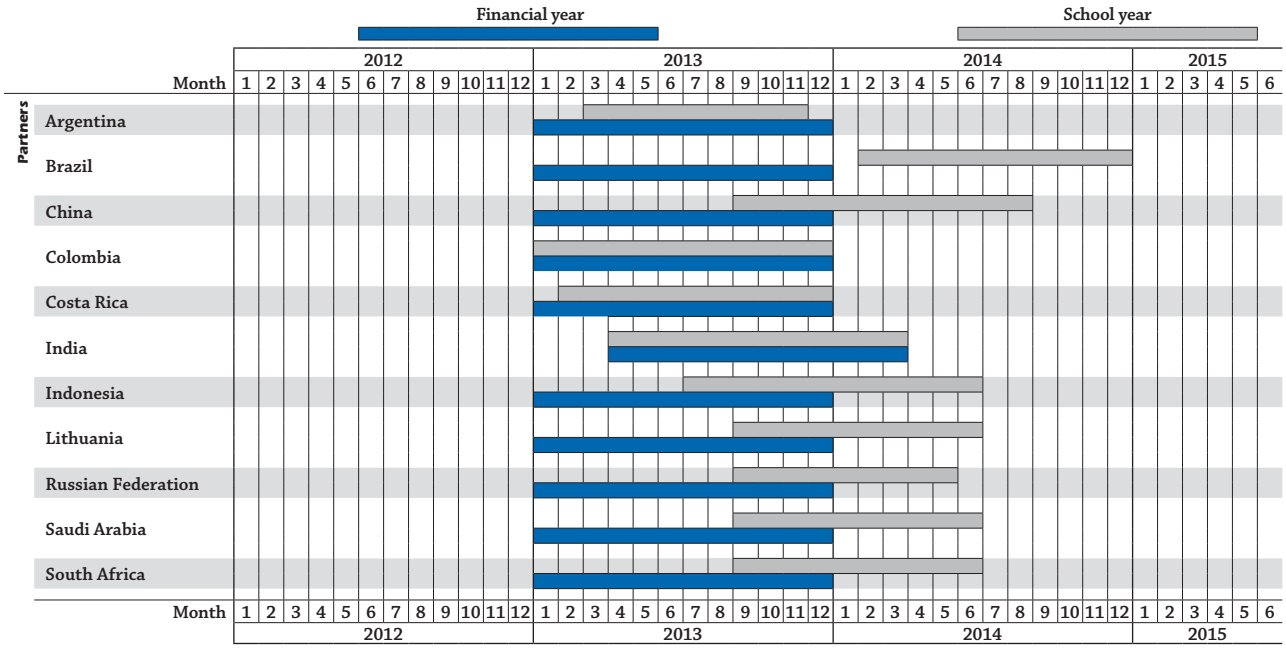
Table X1.2b. School year and financial year used for the calculation of indicators, partner countries



Sources: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Table X1.3. Starting and ending age for students in compulsory education (2014)

		Compulsory education	
		Starting age	Ending age
		(1)	(2)
OECD	Australia	6	17
	Austria	6	15
	Belgium	6	18
	Canada[1]	6	16-18
	Chile	6	18
	Czech Republic	6	15
	Denmark	6	16
	Estonia	7	16
	Finland	7	16
	France	6	16
	Germany	6	18
	Greece	5	14-15
	Hungary	5	16
	Iceland	6	16
	Ireland	6	16
	Israel	5	17
	Italy	6	16
	Japan	6	15
	Korea	6	14
	Latvia	5	16
	Luxembourg	4	16
	Mexico	4	15
	Netherlands	5	18
	New Zealand	5	16
	Norway	6	16
	Poland	5	16
	Portugal	6	18
	Slovak Republic	6	16
	Slovenia	6	14
	Spain	6	16
	Sweden	7	16
	Switzerland	5	15
	Turkey	5-6	17
	United Kingdom	4-5	16
	United States	4-6	17
	OECD average	6	16
	EU21 average	6	16
Partners	Argentina[1]	5	17
	Brazil	4	17
	China	m	m
	Colombia	5	15
	Costa Rica	m	m
	India	m	m
	Indonesia	7	15
	Lithuania	m	m
	Russian Federation	7	17
	Saudi Arabia	6	11
	South Africa[1]	7	15
	G20 average	~	~

Note: Ending age of compulsory education is 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.

1. Year of reference 2013.

Sources: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Annex

2

Reference Statistics

All tables in Annex 2 are available on line at:

StatLink http://dx.doi.org/10.1787/888933399403

Note regarding data from Israel

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

Table X2.1. Basic reference statistics (reference period: calendar year 2013, 2014)

		2013							2014
		Total public expenditure (in millions of local currency, current prices)	Gross domestic product (in millions of local currency, current prices)[1]	Gross domestic product (adjusted to financial year)[2]	Deflator (2008 = 100, constant prices)	Total population in thousands (mid-year estimates)	Purchasing power parity for GDP (PPP) (USD = 1)	Purchasing power parity for GDP (PPP) (Euro area = 1)	Gross domestic product per capita (in equivalent USD converted using PPPs)[3]
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	Australia	546 417	1 584 578	1 584 578	111	23 130.93	1.45	1.91	46 652
	Austria	164 347	322 878	322 878	109	8 451.86	0.80	1.06	47 901
	Belgium	218 304	392 699	392 699	108	11 161.64	0.82	1.07	43 541
	Canada[4]	674 622	1 822 808	1 822 808	105	34 492.65	1.24	1.64	45 543
	Chile[5]	35 342 752	137 028 983	137 028 983	120	17 631.58	364.11	479.24	22 001
	Czech Republic	1 736 515	4 077 109	4 077 109	104	10 516.13	12.91	16.99	31 224
	Denmark	1 076 273	1 903 520	1 903 520	109	5 602.63	7.42	9.77	46 129
	Estonia	7 274	19 015	19 015	115	1 321.86	0.53	0.70	28 113
	Finland	116 922	203 338	203 338	111	5 426.67	0.91	1.20	40 770
	France	1 207 492	2 116 565	2 116 565	104	65 560.72	0.82	1.08	39 556
	Germany	1 255 570	2 820 820	2 820 820	107	82 020.58	0.78	1.02	46 517
	Greece	m	180 389	180 389	101	10 991.40	0.61	0.81	26 767
	Hungary	14 838 082	30 065 005	30 065 005	116	9 908.80	126.43	166.40	25 033
	Iceland	830 530	1 878 700	1 878 700	124	321.86	135.85	178.80	44 225
	Ireland	70 958	179 448	179 448	97	4 591.09	0.82	1.08	49 502
	Israel	437 748	1 055 828	1 055 828	114	7 984.46	3.92	5.17	34 040
	Italy	819 759	1 604 478	1 604 478	107	59 685.23	0.75	0.98	35 423
	Japan[6]	203 502 700	479 083 700	476 269 700	94	127 515.00	102.74	135.23	36 529
	Korea	453 991 400	1 429 445 400	1 429 445 400	111	50 219.67	871.41	1 146.94	33 395
	Latvia	8 391	22 763	22 763	100	2 023.83	0.50	0.66	23 458
	Luxembourg	20 145	46 541	46 541	117	537.04	0.89	1.18	99 649
	Mexico	4 206 351	16 082 510	16 082 510	119	117 053.75	8.02	10.55	18 247
	Netherlands	302 073	650 857	650 857	104	16 779.58	0.81	1.06	48 356
	New Zealand	71 174	229 172	229 172	113	4 464.07	1.41	1.86	37 679
	Norway[7]	1 352 224	2 418 801	2 418 801	115	5 051.28	9.05	11.91	52 949
	Poland	702 166	1 656 341	1 656 341	113	38 062.54	1.78	2.34	25 257
	Portugal	85 032	170 269	170 269	103	10 487.29	0.58	0.77	28 687
	Slovak Republic	30 284	73 835	73 835	103	5 410.84	0.50	0.65	28 341
	Slovenia	21 642	35 907	35 907	105	2 058.82	0.60	0.79	30 416
	Spain	465 437	1 031 272	1 031 272	101	46 727.89	0.67	0.89	33 603
	Sweden	1 973 692	3 769 909	3 769 909	107	9 555.89	8.71	11.47	45 538
	Switzerland	204 785	634 854	634 854	101	8 039.06	1.32	1.74	59 894
	Turkey	m	1 567 289	1 567 289	137	75 627.38	1.08	1.42	19 598
	United Kingdom	780 101	1 734 949	1 717 515	111	63 905.30	0.69	0.91	40 408
	United States	6 457 823	16 663 160	16 282 231	108	314 549.42	1.00	1.32	54 765
	Euro area					0.76			
Partners	Argentina	m	3 406 265	3 406 265	216	41 660.42	3.60	4.74	21 727
	Brazil	1 772 570	m	5 157 569	m	201 467.08	1.61	2.11	m
	China	m	58 801 876	58 801 876	121	1 385 567.00	3.55	4.68	12 925
	Colombia	m	710 257 000	710 257 000	120	47 121.00	1 180.26	1 553.44	m
	Costa Rica	m	2 477 626	2 477 626	m	4 711.99	m	m	m
	India	m	m	m	m	1 252 140.00	16.72	22.01	m
	Indonesia	m	9 524 736 500	9 524 736 500	133	249 866.00	3 792.55	4 991.71	10 585
	Lithuania	12 398	34 962	34 962	108	2 971.91	0.45	0.59	27 573
	Russian Federation	25 290 909	66 190 120	66 190 120	152	143 347.06	20.48	26.95	23 377
	Saudi Arabia	m	2 791 259	2 791 259	110	29 195.90	1.83	2.40	m
	South Africa	m	3 534 327	3 534 327	136	52 776.00	5.17	6.80	13 258

1. GDP calculated for the fiscal year in Australia and GDP, and total public expenditure calculated for the fiscal year in New Zealand.
2. 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 Chapter B for Canada, Japan, the United Kingdom and the United States.
3. These data are used in Indicator B7 in order to calculate salary cost of teacher per student in percentage of GDP per capita.
4. Year of reference 2012 for all columns except Column 8.
5. Year of reference 2014.
6. Total public expenditure adjusted to financial year.
7. The GDP Mainland market value is used for Norway.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399417

Table X2.2. Basic reference statistics (reference period: calendar year 2005, 2008, 2010, 2011, 2012 current prices)

		Gross domestic product (in millions of local currency, current prices)					Total public expenditure (in millions of local currency, current prices)				
		2005	2008	2010	2011	2012	2005	2008	2010	2011	2012
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	997 534	1 258 459	1 409 795	1 491 046	1 524 383	309 431	409 934	473 579	498 406	515 094
	Austria	253 009	291 930	294 628	308 630	317 056	128 980	145 373	155 410	156 831	162 075
	Belgium	311 481	354 066	365 101	379 106	387 419	160 200	177 958	194 547	206 265	216 130
	Canada	1 417 028	1 652 923	1 662 130	1 769 921	1 822 808	m	583 933	641 141	664 791	674 622
	Chile	68 882 768	93 847 932	110 998 729	121 319 462	129 027 553	15 312 072	24 069 788	27 837 792	30 050 204	31 845 115
	Czech Republic	3 257 972	4 015 346	3 953 651	4 022 511	4 041 610	1 362 401	1 612 529	1 698 794	1 726 619	1 797 123
	Denmark	1 586 537	1 797 547	1 798 649	1 833 404	1 882 625	812 682	908 135	1 026 310	1 042 167	1 098 247
	Estonia	11 262	16 517	14 718	16 668	18 006	3 827	6 566	5 962	6 238	7 036
	Finland	164 387	193 711	187 100	196 869	199 793	81 002	93 483	102 446	107 066	112 291
	France	1 771 978	1 995 850	1 998 481	2 059 284	2 086 929	936 988	1 057 610	1 128 017	1 151 537	1 185 375
	Germany	2 300 860	2 561 740	2 580 060	2 703 120	2 754 860	1 062 999	1 116 223	1 219 219	1 208 565	1 224 500
	Greece	199 242	241 990	226 031	207 029	191 204	m	m	m	m	m
	Hungary	22 459 200	27 038 115	27 051 695	28 133 826	28 627 889	11 129 682	13 180 198	13 405 571	13 997 173	13 911 198
	Iceland	1 054 900	1 541 784	1 618 101	1 700 507	1 775 490	437 351	858 162	799 305	777 342	807 229
	Ireland	169 978	187 547	166 157	173 940	174 844	56 624	78 485	108 940	79 008	72 954
	Israel	641 012	777 736	876 129	936 619	1 001 044	294 461	329 089	364 697	384 370	415 229
	Italy	1 489 725	1 632 151	1 604 515	1 637 463	1 613 265	702 315	780 664	800 494	804 735	819 860
	Japan	503 903 000	501 209 300	482 676 900	471 578 700	475 331 700	183 659 700	188 578 700	195 897 100	198 844 000	199 331 800
	Korea	919 797 300	1 104 492 200	1 265 308 000	1 332 681 000	1 377 456 700	271 192 000	353 493 900	392 264 100	431 075 500	450 811 900
	Latvia	13 582	24 314	17 921	20 244	21 811	4 647	9 053	8 003	7 896	8 065
	Luxembourg	29 734	37 647	39 526	42 227	43 574	12 799	14 923	17 470	18 283	19 416
	Mexico	9 424 602	12 256 864	13 266 858	14 527 337	15 600 077	1 979 808	2 894 807	3 355 288	3 655 757	3 942 261
	Netherlands	545 609	639 163	631 512	642 929	645 164	230 867	278 419	304 107	302 010	303 865
	New Zealand	163 422	187 704	201 630	210 299	214 940	49 084	63 711	70 099	68 939	69 962
	Norway[1]	1 464 974	1 862 873	1 987 362	2 157 835	2 295 395	836 625	1 048 572	1 165 722	1 223 268	1 273 054
	Poland	984 919	1 277 322	1 445 060	1 566 557	1 628 992	437 790	567 418	659 198	683 102	693 475
	Portugal	158 653	178 873	179 930	176 167	168 398	74 054	81 093	93 237	88 112	81 719
	Slovak Republic	50 251	68 323	67 387	70 444	72 420	19 902	25 047	28 282	28 525	29 077
	Slovenia	29 227	37 951	36 252	36 896	35 988	13 127	16 649	17 858	18 445	17 480
	Spain	930 566	1 116 207	1 080 913	1 070 413	1 042 872	356 470	459 294	493 106	488 618	500 071
	Sweden	2 907 352	3 387 599	3 519 994	3 656 577	3 684 800	1 531 903	1 705 183	1 801 094	1 848 385	1 903 854
	Switzerland	507 463	597 381	606 146	618 325	623 943	172 625	186 144	199 492	203 433	207 431
	Turkey	648 932	950 534	1 098 799	1 297 713	1 416 798	m	345 392	442 178	485 001	m
	United Kingdom	1 330 418	1 519 597	1 555 548	1 619 480	1 665 213	568 498	707 647	758 020	757 083	777 515
	United States	13 093 726	14 718 582	14 964 372	15 517 926	16 155 255	4 772 092	5 808 889	6 425 237	6 492 089	6 466 040
Partners	Argentina	647 257	1 283 906	1 810 830	2 312 009	2 765 575	m	m	m	m	m
	Brazil	2 171 736	3 107 531	3 886 835	4 374 765	4 713 096	605 877	939 831	1 211 373	1 308 035	1 453 358
	China	18 589 580	31 675 170	40 890 295	48 412 350	53 412 304	m	m	m	m	m
	Colombia	340 156 000	480 087 000	544 924 000	619 894 000	664 240 000	m	m	m	m	m
	Costa Rica	m	m	m	m	2 395 294	m	m	m	m	m
	India	36 924 856	55 826 225	m	m	m	m	m	m	m	m
	Indonesia	3 035 611 121	5 414 841 900	6 864 133 100	7 831 726 000	8 615 704 500	m	m	m	m	m
	Lithuania	21 002	32 696	28 028	31 263	33 335	7 161	12 461	11 855	13 279	12 029
	Russian Federation	21 609 766	41 276 849	46 308 541	55 967 227	62 176 495	6 820 645	13 991 800	17 616 656	19 994 645	23 174 718
	Saudi Arabia	1 230 771	1 949 238	1 975 543	2 510 650	2 752 334	m	m	m	m	m
	South Africa	1 639 254	2 369 063	2 748 008	3 024 951	3 262 545	m	m	m	m	m

1. The GDP Mainland market value is used for Norway.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.3. Basic reference statistics (reference period: calendar year 2005, 2008, 2010, 2011, 2012 in constant prices of 2013)

		Gross domestic product (in millions of local currency, 2013 constant prices)					Total public expenditure (in millions of local currency, 2013 constant prices)				
		2005	2008	2010	2011	2012	2005	2008	2010	2011	2012
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD	Australia	1 272 512	1 394 253	1 456 177	1 509 016	1 545 935	394 727	454 168	489 159	504 412	522 377
	Austria	291 388	316 869	310 714	319 444	321 847	148 545	157 792	163 895	162 326	164 524
	Belgium	359 425	383 753	385 109	392 040	392 630	184 858	192 879	205 208	213 302	219 037
	Canada	1 666 731	1 763 240	1 764 019	1 819 466	1 851 240	m	622 905	680 443	683 401	685 145
	Chile	98 026 543	112 545 401	117 791 851	124 667 583	131 468 112	2 179 049 324	2 886 524 921	2 954 146 487	3 087 951 630	3 244 746 619
	Czech Republic	3 597 023	4 166 846	4 056 051	4 135 793	4 098 742	1 504 183	1 673 370	1 742 793	1 775 244	1 822 527
	Denmark	1 883 743	1 957 163	1 887 862	1 909 637	1 908 260	964 923	988 775	1 077 215	1 085 500	1 113 201
	Estonia	16 851	18 936	16 545	17 800	18 722	5 726	7 527	6 702	6 662	7 316
	Finland	194 566	214 506	202 648	207 866	204 901	95 873	103 518	110 959	113 047	115 162
	France	1 978 930	2 077 631	2 056 237	2 099 066	2 102 871	1 046 420	1 100 946	1 160 617	1 173 783	1 194 430
	Germany	2 541 332	2 750 856	2 702 097	2 801 007	2 812 326	1 174 097	1 198 626	1 276 888	1 252 330	1 250 043
	Greece	224 909	244 589	221 240	201 032	186 349	m	m	m	m	m
	Hungary	29 807 098	31 334 213	29 497 168	30 016 755	29 507 373	14 770 941	15 274 405	14 617 435	14 933 970	14 338 567
	Iceland	1 646 751	1 906 804	1 752 242	1 787 150	1 808 218	682 727	1 061 334	865 567	816 948	822 109
	Ireland	165 568	181 759	172 189	176 650	176 910	55 155	76 062	112 894	80 239	73 815
	Israel	765 275	885 632	946 395	994 042	1 022 628	351 544	374 743	393 946	407 935	424 183
	Italy	1 697 211	1 738 323	1 670 781	1 680 388	1 633 025	800 132	831 447	833 554	825 831	829 902
	Japan	458 736 287	471 786 675	466 700 295	464 563 877	472 691 783	167 197 593	177 508 513	189 412 906	195 886 158	198 224 743
	Korea	1 070 700 736	1 221 288 534	1 309 846 842	1 358 132 872	1 389 266 539	315 684 199	390 874 691	406 071 796	439 308 287	454 677 006
	Latvia	20 460	24 271	20 002	21 244	22 096	7 000	9 037	8 932	8 286	8 170
	Luxembourg	38 824	43 861	43 857	44 984	44 603	16 711	17 386	19 385	19 476	19 874
	Mexico	13 322 193	14 634 627	14 665 185	15 240 124	15 853 935	2 798 567	3 456 383	3 708 935	3 835 127	4 006 413
	Netherlands	610 402	666 410	650 268	661 098	654 121	258 283	290 288	313 139	310 545	308 084
	New Zealand	203 277	211 595	214 111	218 852	223 638	61 055	71 820	74 438	71 743	72 793
	Norway[1]	1 917 820	2 149 503	2 150 226	2 283 067	2 369 170	1 095 239	1 209 910	1 261 253	1 294 261	1 313 970
	Poland	1 218 008	1 440 925	1 533 642	1 610 410	1 635 619	541 397	640 094	699 607	702 224	696 296
	Portugal	177 291	184 897	182 791	179 452	172 229	82 754	83 824	94 720	89 756	83 578
	Slovak Republic	55 261	70 202	69 719	71 698	72 793	21 886	25 736	29 261	29 033	29 226
	Slovenia	34 018	39 707	37 064	37 305	36 290	15 279	17 419	18 258	18 649	17 626
	Spain	1 032 082	1 128 088	1 087 939	1 077 048	1 048 812	395 358	464 183	496 311	491 647	502 919
	Sweden	3 362 571	3 619 837	3 637 562	3 734 638	3 723 716	1 771 761	1 822 083	1 861 251	1 887 844	1 923 961
	Switzerland	542 811	601 411	605 964	616 905	623 818	184 649	187 400	199 432	202 966	207 389
	Turkey	1 157 277	1 303 375	1 354 050	1 472 805	1 504 196	m	473 602	544 896	550 439	m
	United Kingdom	1 614 135	1 691 959	1 646 081	1 678 486	1 698 273	689 732	787 913	802 137	784 667	792 951
	United States	15 220 304	15 857 940	15 808 363	16 062 255	16 419 484	5 547 137	6 258 552	6 787 620	6 719 815	6 571 796
Partners	Argentina	2 294 258	2 767 243	3 030 243	3 284 308	3 310 619	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	27 152 780	38 303 912	46 287 814	50 677 622	54 603 746	m	m	m	m	m
	Colombia	488 930 595	577 486 242	610 314 880	650 502 464	676 809 316	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	6 048 943 479	7 195 342 497	8 013 875 394	8 507 993 026	9 021 376 685	m	m	m	m	m
	Lithuania	28 922	35 419	30 665	32 517	33 767	9 861	13 498	12 970	13 811	12 185
	Russian Federation	50 900 063	62 891 188	60 580 834	63 166 531	65 317 025	16 065 480	21 318 510	23 046 109	22 566 642	24 345 271
	Saudi Arabia	1 767 429	2 144 631	2 346 155	2 579 727	2 718 682	m	m	m	m	m
	South Africa	2 813 553	3 230 713	3 277 549	3 382 896	3 457 956	m	m	m	m	m

1. The GDP Mainland market value is used for Norway.

Source: OECD. Argentina, China, Colombia, Costa Rica, India, Indonesia, Saudi Arabia and South Africa: UNESCO Institute for Statistics. Lithuania: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4a. [1/2] Teachers' statutory salaries at different points in their careers, for teachers with typical qualification (2014)

Annual salaries in public institutions for teachers with typical qualification, in national currency

		Pre-primary education				Primary education			
		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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	Australia[1]	62 282	88 786	88 786	89 206	61 544	88 479	88 479	88 802
	Austria	m	m	m	m	28 466	33 485	37 523	55 784
	Belgium (Fl.)	30 820	38 708	43 609	53 409	30 820	38 708	43 609	53 409
	Belgium (Fr.)	30 132	37 681	42 425	51 914	30 132	37 681	42 425	51 914
	Canada	m	m	m	m	51 046	81 634	84 677	84 677
	Chile	7 172 177	9 646 085	10 830 665	15 158 489	7 172 177	9 646 085	10 830 665	15 158 489
	Czech Republic	240 000	243 000	248 160	264 600	247 200	254 400	265 200	301 800
	Denmark[2]	343 210	389 555	389 555	389 555	389 649	434 058	445 429	445 429
	England (UK)	21 804	34 523	37 124	37 124	21 804	34 523	37 124	37 124
	Estonia	a	a	a	a	m	m	m	m
	Finland[1, 2, 3]	27 674	29 887	29 887	29 887	32 283	37 368	39 610	41 987
	France[4]	24 595	28 124	30 140	44 254	24 595	28 124	30 140	44 254
	Germany	m	m	m	m	43 097	51 108	53 438	56 811
	Greece	13 104	15 000	17 592	24 756	13 104	15 000	17 592	24 756
	Hungary	1 922 004	2 594 705	2 786 906	3 651 808	1 922 004	2 594 705	2 786 906	3 651 808
	Iceland	m	m	m	m	m	m	m	m
	Ireland	m	m			30 702	51 762	57 390	64 277
	Israel	97 531	126 131	143 037	269 055	84 573	111 198	129 297	227 771
	Italy	23 051	25 358	27 845	33 884	23 051	25 358	27 845	33 884
	Japan[2]	m	m	m	m	3 105 000	4 612 000	5 456 000	6 842 000
	Korea	27 252 240	41 063 400	47 953 320	76 254 000	27 252 240	41 063 400	47 953 320	76 254 000
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg[2]	67 129	88 894	106 536	120 282	67 129	88 894	106 536	120 282
	Mexico	158 045	205 415	262 114	335 997	158 045	205 415	262 114	335 997
	Netherlands	32 476	40 348	48 172	48 172	32 476	40 348	48 172	48 172
	New Zealand	m	m	m	m	46 117	69 099	69 099	69 099
	Norway	354 000	405 100	405 100	405 100	408 050	441 250	441 250	482 150
	Poland	29 044	39 004	47 645	49 669	29 044	39 004	47 645	49 669
	Portugal	21 398	23 636	25 577	40 910	21 398	23 636	25 577	40 910
	Scotland (UK)	21 651	34 542	34 542	34 542	21 651	34 542	34 542	34 542
	Slovak Republic	5 922	6 518	6 814	7 346	6 624	7 958	9 324	10 054
	Slovenia	16 864	20 030	24 607	28 343	16 864	20 805	25 550	30 583
	Spain	27 791	30 055	32 016	39 164	27 791	30 055	32 016	39 164
	Sweden[5]	306 000	328 356	338 100	354 864	302 400	337 470	349 920	399 600
	Switzerland[6]	70 825	87 893	m	108 336	78 588	98 025	m	120 242
	Turkey	37 094	38 171	39 538	42 458	37 094	38 171	39 538	42 458
	United States[7]	43 255	52 076	59 111	72 087	42 256	54 639	60 266	67 983
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m
	Colombia	21 392 142	39 013 113	39 013 113	43 554 998	21 392 142	39 013 113	39 013 113	43 554 998
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4a. [2/2] Teachers' statutory salaries at different points in their careers, for teachers with typical qualification (2014)

Annual salaries in public institutions for teachers with typical qualification, in national currency

		Lower secondary education, general programmes				Upper secondary education, 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
		(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia[1]	61 520	88 551	88 551	88 837	61 764	87 213	87 213	87 651
	Austria	29 779	36 173	40 624	57 743	31 252	38 434	43 794	64 628
	Belgium (Fl.)	30 820	38 708	43 609	53 409	38 509	49 146	56 078	67 631
	Belgium (Fr.)	30 132	37 681	42 425	51 914	37 488	47 787	54 499	65 685
	Canada	51 046	81 634	84 677	84 677	51 260	82 048	85 052	85 052
	Chile	7 172 177	9 646 085	10 830 665	15 158 489	7 582 322	10 185 674	11 432 222	15 986 486
	Czech Republic	247 200	254 400	265 200	301 800	247 200	254 400	265 200	301 800
	Denmark[2]	392 020	439 875	451 755	451 755	390 708	494 968	494 968	494 968
	England (UK)	21 804	34 523	37 124	37 124	21 804	34 523	37 124	37 124
	Estonia	m	m	m	m	m	m	m	m
	Finland[1, 2, 3]	34 866	40 358	42 779	45 346	36 972	44 403	46 179	48 949
	France[4]	26 947	30 476	32 492	46 761	27 202	30 731	32 747	47 042
	Germany	47 731	55 682	58 008	63 013	50 383	58 766	61 518	70 277
	Greece	13 104	15 000	17 592	24 756	13 104	15 000	17 592	24 756
	Hungary	2 105 922	2 594 705	2 786 906	3 651 808	2 105 922	2 842 995	3 053 587	4 001 252
	Iceland	m	m	m	m	m	m	m	m
	Ireland	30 702	53 709	57 981	64 868	30 702	53 709	57 981	64 868
	Israel	85 047	122 006	141 623	223 900	86 455	101 168	113 626	178 819
	Italy	24 849	27 527	30 340	37 211	24 849	28 196	31 189	38 901
	Japan[2]	3 105 000	4 612 000	5 456 000	6 842 000	3 105 000	4 612 000	5 456 000	7 029 000
	Korea	27 156 240	40 967 400	47 857 320	76 158 000	27 156 240	40 967 400	47 857 320	76 158 000
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg[2]	77 897	97 371	111 118	135 403	77 897	97 371	111 118	135 403
	Mexico	203 041	262 812	336 559	429 566	379 789	444 212	477 886	520 443
	Netherlands	34 268	51 269	59 708	59 708	34 268	51 269	59 708	59 708
	New Zealand	47 700	71 780	71 780	71 780	49 282	74 460	74 460	74 460
	Norway	408 050	441 250	441 250	482 150	451 800	498 300	498 300	559 300
	Poland	29 044	39 004	47 645	49 669	29 044	39 004	47 645	49 669
	Portugal	21 398	23 636	25 577	40 910	21 398	23 636	25 577	40 910
	Scotland (UK)	21 651	34 542	34 542	34 542	21 651	34 542	34 542	34 542
	Slovak Republic	6 624	7 958	9 324	10 054	6 624	7 958	9 324	10 054
	Slovenia	16 864	20 805	25 550	30 583	16 864	20 805	25 550	30 583
	Spain	31 117	33 670	35 776	43 725	31 117	33 670	35 776	43 725
	Sweden[5]	306 000	343 200	356 124	406 968	318 000	357 456	373 368	426 840
	Switzerland[6]	89 541	111 942	m	137 154	100 322	128 631	m	153 837
	Turkey	38 388	39 464	40 832	43 751	38 388	39 464	40 832	43 751
	United States[7]	44 001	54 598	61 918	67 053	43 362	55 700	60 884	68 062
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m
	Colombia	21 392 142	39 013 113	39 013 113	43 554 998	21 392 142	39 013 113	39 013 113	43 554 998
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4b. [1/2] Teachers' statutory salaries at different points in their careers, for teachers with minimum qualification (2014)

Annual salaries in public institutions for teachers with minimum qualification, in national currency

		Pre-primary education				Primary education			
		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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OECD	Australia[1]	61 664	86 381	87 653	89 206	58 930	86 633	87 610	88 802
	Austria	m	m	m	m	28 466	33 485	37 523	55 784
	Belgium (Fl.)	30 820	38 708	43 609	53 409	30 820	38 708	43 609	53 409
	Belgium (Fr.)	30 095	36 601	40 420	48 057	30 095	36 601	40 420	48 057
	Canada	m	m	m	m	47 801	71 858	75 301	75 301
	Chile	7 172 177	9 217 301	10 032 905	13 295 309	7 172 177	9 217 301	10 032 905	13 295 309
	Czech Republic	180 000	187 200	195 000	213 600	244 200	248 400	255 360	279 000
	Denmark[2]	343 210	389 555	389 555	389 555	389 649	434 058	445 429	445 429
	England (UK)	15 976	a	a	25 267	15 976	a	a	25 267
	Estonia	a	a	a	a	9 260	m	m	m
	Finland[1, 2, 3]	27 674	29 887	29 887	29 887	32 283	37 368	39 610	41 987
	France[4]	24 595	28 124	30 140	44 254	24 595	28 124	30 140	44 254
	Germany	m	m	m	m	43 097	51 108	53 438	56 811
	Greece	13 104	15 000	17 592	24 756	13 104	15 000	17 592	24 756
	Hungary	1 922 004	2 594 705	2 786 906	3 651 808	1 922 004	2 594 705	2 786 906	3 651 808
	Iceland	m	m	m	m	m	m	m	m
	Ireland	a	m	m	m	30 702	48 686	54 314	61 201
	Israel	97 531	122 083	138 353	215 521	84 573	111 180	129 254	181 682
	Italy	23 051	25 358	27 845	33 884	23 051	25 358	27 845	33 884
	Japan[2]	m	m	m	m	3 105 000	4 612 000	5 456 000	6 842 000
	Korea	26 696 520	39 837 960	46 598 640	76 254 000	27 252 240	41 063 400	47 953 320	76 254 000
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg[2]	67 129	88 894	106 536	120 282	67 129	88 894	106 536	120 282
	Mexico	158 045	158 879	205 415	262 114	158 045	158 879	205 415	262 114
	Netherlands	32 476	40 348	48 172	48 172	32 476	40 348	48 172	48 172
	New Zealand	m	m	m	m	46 117	69 099	69 099	69 099
	Norway	354 000	405 100	405 100	405 100	358 200	394 100	394 100	438 500
	Poland	22 800	30 082	36 520	38 060	22 800	30 082	36 520	38 060
	Portugal	21 398	23 636	25 577	36 251	21 398	23 636	25 577	36 251
	Scotland (UK)	21 651	34 542	34 542	34 542	21 651	34 542	34 542	34 542
	Slovak Republic	5 922	6 518	6 814	7 346	6 624	7 985	8 318	8 968
	Slovenia	16 864	a	a	a	16 864	a	a	a
	Spain	27 791	30 055	32 016	39 164	27 791	30 055	32 016	39 164
	Sweden[5]	306 000	328 356	338 100	354 864	302 400	337 470	349 920	399 600
	Switzerland[6]	70 825	87 893	m	108 336	78 588	98 025	m	120 242
	Turkey	37 094	38 171	39 538	42 458	37 094	38 171	39 538	42 458
	United States[7]	37 122	47 616	46 773	62 968	37 515	46 459	47 494	60 705
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	22 632	m	m	m	22 632	m	m	m
	China	m	m	m	m	m	m	m	m
	Colombia	16 997 150	34 624 015	34 624 015	34 624 015	16 997 150	34 624 015	34 624 015	34 624 015
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4b. [2/2] Teachers' statutory salaries at different points in their careers, for teachers with minimum qualification (2014)

Annual salaries in public institutions for teachers with minimum qualification, in national currency

		Lower secondary education, general programmes				Upper secondary education, 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
		(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Australia[1]	59 069	86 951	87 797	88 837	58 033	84 764	86 060	87 651
	Austria	29 779	36 173	40 624	57 743	31 252	38 434	43 794	64 628
	Belgium (Fl.)	30 820	38 708	43 609	53 409	38 509	49 146	56 078	67 631
	Belgium (Fr.)	30 095	36 601	40 420	48 057	30 095	36 601	40 420	48 057
	Canada	47 801	71 858	75 301	75 301	47 989	72 191	75 603	75 603
	Chile	7 172 177	9 217 301	10 032 905	13 295 309	7 582 322	9 734 450	10 592 726	14 025 818
	Czech Republic	244 200	248 400	255 360	279 000	244 200	248 400	255 360	279 000
	Denmark[2]	392 020	439 875	451 755	451 755	390 708	494 968	494 968	494 968
	England (UK)	15 976	a	a	25 267	15 976	a	a	25 267
	Estonia	9 260	m	m	m	9 260	m	m	m
	Finland[1, 2, 3]	34 866	40 358	42 779	45 346	36 972	44 403	46 179	48 949
	France[4]	26 947	30 476	32 492	46 761	27 202	30 731	32 747	47 042
	Germany	47 731	55 682	58 008	63 013	50 383	58 766	61 518	70 277
	Greece	13 104	15 000	17 592	24 756	13 104	15 000	17 592	24 756
	Hungary	1 922 004	2 594 705	2 786 906	3 651 808	2 105 922	2 842 995	3 053 587	4 001 252
	Iceland	m	m	m	m	m	m	m	m
	Ireland	30 702	50 633	54 905	61 792	30 702	50 633	54 905	61 792
	Israel	85 047	121 981	137 183	180 270	86 455	100 431	112 913	166 787
	Italy	24 849	27 527	30 340	37 211	24 849	28 196	31 189	38 901
	Japan[2]	3 105 000	4 612 000	5 456 000	6 842 000	3 105 000	4 612 000	5 456 000	7 029 000
	Korea	27 156 240	40 967 400	47 857 320	76 158 000	27 156 240	40 967 400	47 857 320	76 158 000
	Latvia	m	m	m	m	m	m	m	m
	Luxembourg[2]	77 897	97 371	111 118	135 403	77 897	97 371	111 118	135 403
	Mexico	203 041	208 056	262 812	336 559	379 789	379 789	408 278	477 886
	Netherlands	34 268	51 269	59 708	59 708	34 268	51 269	59 708	59 708
	New Zealand	46 043	69 790	69 790	69 790	45 969	70 481	70 481	70 481
	Norway	358 200	394 100	394 100	438 500	399 000	427 700	427 700	466 700
	Poland	25 688	34 120	41 626	43 388	29 044	39 004	47 645	49 669
	Portugal	21 398	23 636	25 577	36 251	21 398	23 636	25 577	36 251
	Scotland (UK)	21 651	34 542	34 542	34 542	21 651	34 542	34 542	34 542
	Slovak Republic	6 624	7 985	8 318	8 968	6 624	7 985	8 318	8 968
	Slovenia	16 864	a	a	a	16 864	a	a	a
	Spain	30 915	33 429	35 511	43 357	31 117	33 670	35 776	43 725
	Sweden[5]	306 000	343 200	356 124	406 968	318 000	357 456	373 368	426 840
	Switzerland[6]	89 541	111 942	m	137 154	100 322	128 631	m	153 837
	Turkey	38 388	39 464	40 832	43 751	38 388	39 464	40 832	43 751
	United States[7]	38 197	45 185	48 576	58 790	39 683	46 277	51 442	58 789
Partners	Argentina	m	m	m	m	m	m	m	m
	Brazil	22 632	m	m	m	22 632	m	m	m
	China	m	m	m	m	m	m	m	m
	Colombia	16 997 150	34 624 015	34 624 015	34 624 015	16 997 150	34 624 015	34 624 015	34 624 015
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m
	Saudi Arabia	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.
2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
5. Actual base salaries for 2013.
6. Salaries after 11 years of experience for Columns 2, 6, 10 and 14.
7. Actual base salaries.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4c. [1/2] Trends in teachers' salaries between 2000 and 2014, for teachers with typical qualification[1]

Annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and typical qualification, by level of education, in national currency

		Pre-primary education					Primary education				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(1)	(2)	(7)	(9)	(11)	(12)	(13)	(18)	(20)	(22)
OECD	Australia	m	62 240	74 125	80 207	88 786	m	62 240	75 382	80 730	88 479
	Austria[2, 3]	m	31 050	35 526	36 653	m	25 826	31 050	35 526	36 653	37 523
	Belgium (Fl.)	m	35 417	40 042	41 968	43 609	29 579	35 417	40 042	41 968	43 609
	Belgium (Fr.)	28 485	33 427	38 610	40 785	42 425	28 485	33 427	38 610	40 785	42 425
	Canada	m	m	m	m	m	m	m	m	m	84 677
	Chile	m	m	9 154 829	9 947 847	10 830 665	m	m	9 154 829	9 947 847	10 830 665
	Czech Republic	m	m	m	m	248 160	m	m	m	m	265 200
	Denmark	269 948	334 577	375 122	382 384	389 555	315 530	367 323	428 628	429 083	445 429
	England (UK)	30 018	33 978	35 929	36 756	37 124	30 018	33 978	35 929	36 756	37 124
	Estonia	m	m	m	m	a	3 068	4 379	7 728	7 728	m
	Finland	19 956	23 333	28 331	29 191	29 887	24 961	30 791	37 769	38 850	39 610
	France	27 288	28 395	29 674	29 888	30 140	27 288	28 395	29 674	29 888	30 140
	Germany	m	m	m	m	m	m	43 320	47 647	50 991	53 438
	Greece	16 292	21 237	25 001	20 056	17 592	16 292	21 237	25 001	20 056	17 592
	Hungary[4]	751 668	1 739 076	1 780 884	1 778 004	2 786 906	897 168	1 944 576	1 916 568	1 890 288	2 786 906
	Iceland	m	2 821 586	3 901 395	4 258 019	m	m	3 100 440	4 264 973	4 321 578	m
	Ireland	m	m	m	m	m	33 370	48 206	57 390	57 390	57 390
	Israel	72 174	82 076	99 707	129 950	143 037	75 912	82 179	115 299	129 562	129 297
	Italy	m	25 234	27 645	27 845	27 845	20 849	25 234	27 645	27 845	27 845
	Japan	m	m	m	m	m	m	6 236 000	5 555 000	5 456 000	5 456 000
	Korea	m	38 608 000	42 003 257	45 800 400	47 953 320	m	39 712 000	42 003 257	45 800 400	47 953 320
	Latvia	1 321	2 321	4 069	4 341	m	1 321	2 321	4 069	4 341	m
	Luxembourg	m	62 139	93 182	97 902	106 536	m	62 139	93 182	97 902	106 536
	Mexico	110 833	159 128	208 871	235 139	262 114	110 833	159 128	208 871	235 139	262 114
	Netherlands	m	m	m	m	48 172	m	m	m	m	48 172
	New Zealand	m	m	m	m	m	m	57 803	68 980	71 900	69 099
	Norway	m	287 000	353 700	381 500	405 100	m	327 500	386 000	415 650	441 250
	Poland	m	31 216	40 120	45 785	47 645	m	31 216	40 120	45 785	47 645
	Portugal	m	24 759	27 038	24 326	25 577	m	24 759	27 038	24 326	25 577
	Scotland (UK)	14 022	29 827	33 666	34 200	34 542	22 743	29 827	33 666	34 200	34 542
	Slovak Republic	m	m	6 136	6 236	6 814	m	m	7 492	7 614	9 324
	Slovenia	m	m	26 635	26 412	24 607	14 123	21 465	27 164	26 936	25 550
	Spain	m	28 122	33 889	32 652	32 016	m	28 122	33 889	32 652	32 016
	Sweden[4]	m	261 000	m	m	m	m	283 200	m	m	m
	Switzerland	m	m	m	m	m	m	m	m	m	m
	Turkey	4 560	16 464	27 701	32 049	39 538	4 560	16 464	27 701	32 049	39 538
	United States[4, 5]	36 758	41 501	m	57 249	59 111	38 046	51 413	52 742	58 367	60 266
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	39 013 113	m	m	m	m	39 013 113
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	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

Note: Years 2006, 2007, 2008, 2009, 2011 and 2013 (i.e. Columns 3-6; 8; 10; 14-17; 19; 21; 25-28; 30; 32; 36-39; 41 and 43) are available for consultation on line (see *StatLink* below).

1. Data on salaries for countries now in the Euro area are shown in euros.
2. Break in time series following methodological changes in 2007 for upper secondary education.
3. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
4. Actual base salaries.
5. The typical qualification for pre-primary and primary teachers in 2000 was a bachelor's degree (ISCED 6) while the typical qualification for later years was a master's degree (ISCED 7).

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4c. [2/2] Trends in teachers' salaries between 2000 and 2014, for teachers with typical qualification[1]

Annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and typical qualification, by level of education, in national currency

		Lower secondary education, general programmes					Upper secondary education, general programmes				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(23)	(24)	(29)	(31)	(33)	(34)	(35)	(40)	(42)	(44)
OECD	Australia	m	62 384	75 382	81 366	88 551	m	62 384	75 382	81 366	87 213
	Austria[2, 3]	26 916	33 635	38 451	39 748	40 624	29 728	34 265	41 381	42 749	43 794
	Belgium (Fl.)	31 191	35 417	40 042	41 968	43 609	39 886	45 301	51 454	53 968	56 078
	Belgium (Fr.)	30 327	33 802	38 610	40 785	42 425	39 040	43 519	49 764	52 390	54 499
	Canada	m	m	m	m	84 677	m	m	m	m	85 052
	Chile	m	m	9 154 829	9 947 847	10 830 665	m	m	9 700 782	10 534 021	11 432 222
	Czech Republic	m	m	m	m	265 200	m	m	m	m	265 200
	Denmark	315 530	367 323	434 802	435 268	451 755	395 558	402 580	459 745	461 176	494 968
	England (UK)	30 018	33 978	35 929	36 756	37 124	30 018	33 978	35 929	36 756	37 124
	Estonia	3 068	4 379	7 728	7 728	m	3 068	4 379	7 728	7 728	m
	Finland	28 293	34 677	40 791	41 958	42 779	31 115	36 550	43 168	45 292	46 179
	France	29 456	30 667	32 258	32 588	32 492	29 456	30 895	32 472	32 843	32 747
	Germany	m	46 842	52 784	55 534	58 008	m	53 096	57 150	59 549	61 518
	Greece	16 292	21 237	25 001	20 056	17 592	16 292	21 237	25 001	20 056	17 592
	Hungary[4]	897 168	1 944 576	1 916 568	1 890 288	2 786 906	1 128 996	2 432 388	2 262 636	2 184 756	3 053 587
	Iceland	m	3 100 440	4 264 973	4 321 578	m	m	3 198 000	4 104 000	4 393 240	m
	Ireland	33 729	48 725	57 981	57 981	57 981	33 729	48 725	57 981	57 981	57 981
	Israel	76 995	83 744	104 947	116 754	141 623	75 873	81 353	95 187	110 075	113 626
	Italy	22 836	27 487	30 121	30 340	30 340	23 518	28 259	30 966	31 190	31 189
	Japan	m	6 236 000	5 555 000	5 456 000	5 456 000	m	6 237 000	5 555 000	5 456 000	5 456 000
	Korea	m	39 616 000	41 907 257	45 704 400	47 857 320	m	39 616 000	41 907 257	45 704 400	47 857 320
	Latvia	1 321	2 321	4 069	4 341	m	1 321	2 321	4 069	4 341	m
	Luxembourg	m	81 258	99 782	104 831	111 118	m	81 258	99 782	104 831	111 118
	Mexico	141 093	203 399	268 456	305 373	336 559	m	m	m	m	477 886
	Netherlands	m	m	m	m	59 708	m	m	m	m	59 708
	New Zealand	m	57 803	68 980	72 645	71 780	m	57 803	68 980	71 900	74 460
	Norway	m	327 500	386 000	415 650	441 250	m	364 000	434 700	466 900	498 300
	Poland	m	31 216	40 120	45 785	47 645	m	31 216	40 120	45 785	47 645
	Portugal	m	24 759	27 038	24 326	25 577	m	24 759	27 038	24 326	25 577
	Scotland (UK)	22 743	29 827	33 666	34 200	34 542	22 743	29 827	33 666	34 200	34 542
	Slovak Republic	m	m	7 492	7 614	9 324	m	m	7 492	7 614	9 324
	Slovenia	14 123	21 465	27 164	26 936	25 550	14 123	21 465	27 164	26 936	25 550
	Spain	m	32 293	38 613	36 199	35 776	m	32 293	38 613	36 199	35 776
	Sweden[4]	m	290 400	m	m	m	m	313 600	m	m	m
	Switzerland	m	m	m	m	m	m	m	m	m	m
	Turkey	4 813	17 402	28 883	33 197	40 832	4 813	17 402	28 883	33 197	40 832
	United States[4, 5]	43 834	47 215	55 919	59 967	61 918	43 918	49 467	55 724	58 966	60 884
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	39 013 113	m	m	m	m	39 013 113
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	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

Note: Years 2006, 2007, 2008, 2009, 2011 and 2013 (i.e. Columns 3-6; 8; 10; 14-17; 19; 21; 25-28; 30; 32; 36-39; 41 and 43) are available for consultation on line (see *StatLink* below).

1. Data on salaries for countries now in the Euro area are shown in euros.
2. Break in time series following methodological changes in 2007 for upper secondary education.
3. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
4. Actual base salaries.
5. The typical qualification for pre-primary and primary teachers in 2000 was a bachelor's degree (ISCED 6) while the typical qualification for later years was a master's degree (ISCED 7).

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4d. [1/2] Trends in teachers' salaries between 2000 and 2014, for teachers with minimum qualification[1]

Annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and minimum qualification, by level of education, in national currency

		Pre-primary education					Primary education				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(1)	(2)	(7)	(9)	(11)	(12)	(13)	(18)	(20)	(22)
OECD	Australia	m	62 240	71 956	78 095	87 653	50 995	62 240	73 706	78 619	87 610
	Austria[2, 3]	m	31 050	35 526	36 653	m	25 826	31 050	35 526	36 653	37 523
	Belgium (Fl.)	m	35 417	40 042	41 968	43 609	29 579	35 417	40 042	41 968	43 609
	Belgium (Fr.)	28 485	32 188	36 757	38 857	40 420	28 485	32 188	36 757	38 857	40 420
	Canada	m	m	m	m	m	m	m	71 608	74 981	75 301
	Chile	m	m	8 493 461	9 224 259	10 032 905	m	m	8 493 461	9 224 259	10 032 905
	Czech Republic[4]	m	279 001	257 418	195 000	195 000	125 501	250 559	310 711	255 360	255 360
	Denmark	269 948	334 577	375 122	382 384	389 555	315 530	367 323	428 628	429 083	445 429
	England (UK)	23 958	27 123	30 842	31 552	a	23 958	27 123	30 842	31 552	a
	Estonia	m	m	m	m	a	3 068	4 379	7 728	7 728	m
	Finland	19 956	23 333	28 331	29 191	29 887	24 961	30 791	37 769	38 850	39 610
	France	27 288	28 395	29 674	29 888	30 140	27 288	28 395	29 674	29 888	30 140
	Germany	m	m	m	m	m	m	43 320	47 647	50 991	53 438
	Greece	16 292	21 237	25 001	20 056	17 592	16 292	21 237	25 001	20 056	17 592
	Hungary[4]	751 668	1 739 076	1 780 884	1 778 004	2 786 906	897 168	1 944 576	1 916 568	1 890 288	2 786 906
	Iceland	m	2 257 836	3 409 863	3 721 409	m	1 884 000	2 573 556	3 987 224	4 047 201	m
	Ireland	m	m	m	m	m	32 251	46 591	53 620	52 472	54 314
	Israel	68 894	74 610	89 297	126 521	138 353	68 421	73 496	112 005	125 606	129 254
	Italy	m	25 234	27 645	27 845	27 845	20 849	25 234	27 645	27 845	27 845
	Japan	m	m	m	m	m	6 645 000	6 236 000	5 555 000	5 456 000	5 456 000
	Korea	m	38 608 000	40 831 708	44 515 200	46 598 640	26 757 000	39 712 000	42 003 257	45 800 400	47 953 320
	Latvia	1 321	2 321	4 069	4 341	m	1 321	2 321	4 069	4 341	m
	Luxembourg	m	62 139	93 182	97 902	106 536	m	62 139	93 182	97 902	106 536
	Mexico	86 748	124 082	163 419	183 981	205 415	86 748	124 082	163 419	183 981	205 415
	Netherlands	m	m	m	m	48 172	m	m	m	m	48 172
	New Zealand	m	m	m	m	m	49 450	54 979	65 609	68 074	69 099
	Norway	m	298 812	353 700	381 500	405 100	m	302 000	349 000	377 000	394 100
	Poland	m	23 328	30 785	35 101	36 520	m	23 328	30 785	35 101	36 520
	Portugal	m	22 775	27 038	24 326	25 577	17 180	22 775	27 038	24 326	25 577
	Scotland (UK)	14 022	29 827	33 666	34 200	34 542	22 743	29 827	33 666	34 200	34 542
	Slovak Republic	m	m	6 136	6 236	6 814	m	m	7 492	7 614	8 318
	Slovenia	a	a	a	a	a	a	a	a	a	a
	Spain	m	28 122	33 889	32 652	32 016	22 701	28 122	33 889	32 652	32 016
	Sweden[5]	m	261 000	m	m	m	248 300	283 200	m	m	m
	Switzerland[6]	m	77 925	86 049	87 198	m	85 513	90 341	96 251	97 436	m
	Turkey	4 560	16 464	27 701	32 049	39 538	4 560	16 464	27 701	32 049	39 538
	United States[5]	36 758	41 500	m	45 300	46 773	38 040	41 114	45 214	45 998	47 494
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	34 624 015	m	m	m	m	34 624 015
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	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

Note: Years 2006, 2007, 2008, 2009, 2011 and 2013 (i.e. Columns 3-6; 8; 10; 14-17; 19; 21; 25-28; 30; 32; 36-39; 41 and 43) are available for consultation on line (see *StatLink* below).

1. Data on salaries for countries now in the Euro area are shown in euros.
2. Break in time series following methodological changes in 2007 for upper secondary education.
3. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
4. Break in time series: in the Czech Republic, following a methodological change in 2012; in Hungary, following a change in the regulation in 2014.
5. Actual base salaries.
6. Salaries after 11 years of experience.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399470

Table X2.4d. [2/2] Trends in teachers' salaries between 2000 and 2014, for teachers with minimum qualification[1]

Annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and minimum qualification, by level of education, in national currency

		Lower secondary education, general programmes					Upper secondary education, general programmes				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(23)	(24)	(29)	(31)	(33)	(34)	(35)	(40)	(42)	(44)
OECD	Australia	51 016	62 384	73 706	79 834	87 797	51 016	62 384	73 706	79 834	86 060
	Austria[2, 3]	26 916	33 635	38 451	39 748	40 624	29 728	34 265	41 381	42 749	43 794
	Belgium (Fl.)	31 191	35 417	40 042	41 968	43 609	39 886	45 301	51 454	53 968	56 078
	Belgium (Fr.)	28 879	32 188	36 757	38 857	40 420	28 879	32 188	36 757	38 857	40 420
	Canada	m	m	71 608	74 981	75 301	m	m	71 886	75 281	75 603
	Chile	m	m	8 493 461	9 224 259	10 032 905	m	m	9 004 818	9 772 573	10 592 726
	Czech Republic[4]	125 501	250 559	314 897	255 360	255 360	152 941	255 125	334 084	255 360	255 360
	Denmark	315 530	367 323	434 802	435 268	451 755	395 558	402 580	459 745	461 176	494 968
	England (UK)	23 958	27 123	30 842	31 552	a	23 958	27 123	30 842	31 552	a
	Estonia	3 068	4 379	7 728	7 728	m	3 068	4 379	7 728	7 728	m
	Finland	28 293	34 677	40 791	41 958	42 779	31 115	36 550	43 168	45 292	46 179
	France	29 456	30 667	32 258	32 588	32 492	29 456	30 895	32 472	32 843	32 747
	Germany	m	46 842	52 784	55 534	58 008	m	53 096	57 150	59 549	61 518
	Greece	16 292	21 237	25 001	20 056	17 592	16 292	21 237	25 001	20 056	17 592
	Hungary[4]	897 168	1 944 576	1 916 568	1 890 288	2 786 906	1 128 996	2 432 388	2 262 636	2 184 756	3 053 587
	Iceland	1 884 000	2 573 556	3 987 224	4 047 201	m	2 220 000	3 014 000	4 012 000	4 294 829	m
	Ireland	32 251	46 591	53 620	52 472	54 905	32 251	46 591	53 620	52 472	54 905
	Israel	75 608	82 030	102 514	114 923	137 183	74 657	80 052	93 450	109 467	112 913
	Italy	22 836	27 487	30 121	30 340	30 340	23 518	28 259	30 966	31 190	31 189
	Japan	6 645 000	6 236 000	5 555 000	5 456 000	5 456 000	6 649 000	6 237 000	5 555 000	5 456 000	5 456 000
	Korea	26 661 000	39 616 000	41 907 257	45 704 400	47 857 320	26 661 000	39 616 000	41 907 257	45 704 400	47 857 320
	Latvia	1 321	2 321	4 069	4 341	m	1 321	2 321	4 069	4 341	m
	Luxembourg	m	81 258	99 782	104 831	111 118	m	81 258	99 782	104 831	111 118
	Mexico	109 779	157 816	209 350	237 759	262 812	m	m	m	m	408 278
	Netherlands	m	m	m	m	59 708	m	m	m	m	59 708
	New Zealand	49 450	54 979	67 295	70 700	69 790	49 450	54 979	68 980	71 900	70 481
	Norway	m	302 000	349 000	377 000	394 100	m	321 000	376 400	405 000	427 700
	Poland	m	26 935	35 071	40 010	41 626	m	31 216	40 120	45 785	47 645
	Portugal	17 180	22 775	27 038	24 326	25 577	17 180	22 775	27 038	24 326	25 577
	Scotland (UK)	22 743	29 827	33 666	34 200	34 542	22 743	29 827	33 666	34 200	34 542
	Slovak Republic	m	m	7 492	7 614	8 318	m	m	7 492	7 614	8 318
	Slovenia	a	a	a	a	a	a	a	a	a	a
	Spain	24 528	31 561	38 232	35 923	35 511	26 366	32 293	38 613	36 199	35 776
	Sweden[5]	248 300	290 400	m	m	m	264 700	313 600	m	m	m
	Switzerland[6]	102 409	103 100	109 320	111 019	m	121 629	120 546	128 139	128 748	m
	Turkey	4 813	17 402	28 883	33 197	40 832	4 813	17 402	28 883	33 197	40 832
	United States[5]	37 989	41 327	45 046	47 046	48 576	37 997	41 172	48 438	49 822	51 442
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	34 624 015	m	m	m	m	34 624 015
	Costa Rica	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	m	m	m	m	m	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

Note: Years 2006, 2007, 2008, 2009, 2011 and 2013 (i.e. Columns 3-6; 8; 10; 14-17; 19; 21; 25-28; 30; 32; 36-39; 41 and 43) are available for consultation on line (see *StatLink* below).

1. Data on salaries for countries now in the Euro area are shown in euros.
2. Break in time series following methodological changes in 2007 for upper secondary education.
3. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
4. Break in time series: in the Czech Republic, following a methodological change in 2012; in Hungary, following a change in the regulation in 2014.
5. Actual base salaries.
6. Salaries after 11 years of experience.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.4e. Reference statistics used in calculating teachers' salaries (2000, 2005-14)

		Purchasing power parity for private consumption (PPP)[1]			Private consumption deflators (2005 = 100)											Reference year for 2014 salary data
		2013	2014	Jan 2014	Jan 2000	Jan 2005	Jan 2006	Jan 2007	Jan 2008	Jan 2009	Jan 2010	Jan 2011	Jan 2012	Jan 2013	Jan 2014	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Australia	1.54	1.55	1.55	88	100	103	106	110	113	116	118	121	125	128	2014
	Austria	0.87	0.87	0.87	91	100	102	105	107	108	110	112	115	118	120	2013/2014
	Belgium (Fl.)[2]	0.90	0.89	0.89	90	100	103	106	109	111	111	114	117	119	120	2014
	Belgium (Fr.)[2]	0.90	0.89	0.89	90	100	103	106	109	111	111	114	117	119	120	2013/2014
	Canada	1.29	1.29	1.29	91	100	102	103	105	106	106	108	110	112	113	2013/2014
	Chile	409.10	422.49	415.79	86	100	104	107	113	118	121	125	129	132	138	2014
	Czech Republic	14.59	14.35	14.47	90	100	101	104	108	111	112	113	115	117	118	2013/2014
	Denmark	8.49	8.49	8.49	92	100	102	104	106	109	111	113	116	118	119	2013/2014
	England (UK)[3]	0.80	0.80	0.80	94	100	102	105	109	112	116	120	124	126	129	2013/2014
	Estonia	0.62	0.62	0.62	82	100	105	112	122	127	129	134	140	145	148	2013/2014
	Finland	1.01	1.00	1.00	93	100	101	103	106	108	110	113	116	119	121	2014
	France	0.88	0.88	0.88	92	100	102	104	107	107	107	109	111	112	112	2013/2014
	Germany	0.84	0.83	0.84	93	100	101	103	104	105	106	108	110	111	113	2013/2014
	Greece	0.72	0.70	0.71	87	100	103	107	111	114	116	120	122	121	119	2013/2014
	Hungary	145.27	145.32	145.30	73	100	103	109	115	121	126	130	137	142	145	2013/2014
	Iceland	148.46	149.54	149.00	81	100	105	112	122	137	145	149	156	163	168	m
	Ireland	0.99	1.00	1.00	83	100	102	105	107	104	100	100	101	102	103	2013/2014
	Israel	4.59	4.55	4.57	93	100	102	104	107	111	114	118	120	122	124	2013/2014
	Italy	0.85	0.84	0.84	87	100	102	105	108	109	110	112	115	117	118	2013/2014
	Japan	109.65	111.34	110.49	105	100	100	99	99	98	96	95	94	93	94	2013/2014
	Korea	1008.71	1016.71	1012.71	84	100	102	104	107	111	114	117	121	122	124	2014
	Latvia	0.58	0.57	0.57	78	100	110	122	137	143	139	141	148	150	151	m
	Luxembourg	0.99	0.99	0.99	90	100	103	105	107	109	110	112	114	116	117	2013/2014
	Mexico	9.45	9.10	9.27	80	100	104	109	115	121	127	132	137	142	146	2013/2014
	Netherlands	0.90	0.90	0.90	88	100	102	105	107	108	108	109	111	113	115	2013/2014
	New Zealand	1.63	1.61	1.62	92	100	102	105	107	111	113	115	117	118	119	2014
	Norway	9.98	10.01	10.00	91	100	101	103	106	109	111	113	114	116	119	2013/2014
	Poland	1.93	1.91	1.92	85	100	102	104	107	111	114	119	123	126	126	2013/2014
	Portugal	0.67	0.67	0.67	85	100	104	107	111	111	111	113	115	116	117	2013/2014
	Scotland (UK)[3]	0.80	0.80	0.80	94	100	102	105	109	112	116	120	124	126	129	2013/2014
	Slovak Republic	0.56	0.55	0.56	76	100	104	108	112	114	115	117	122	125	125	2013/2014
	Slovenia	0.69	0.67	0.68	76	100	102	106	111	114	116	117	119	121	121	2013/2014
	Spain	0.77	0.76	0.76	85	100	104	107	111	112	113	115	118	120	121	2013/2014
	Sweden	9.37	9.35	9.36	93	100	101	102	105	108	110	111	112	113	114	2013
	Switzerland	1.49	1.48	1.49	97	100	101	103	104	105	105	105	105	104	103	2013/2014
	Turkey	1.33	1.42	1.38	28	100	109	118	128	138	147	160	174	186	199	2013/2014
	United States	1.00	1.00	1.00	90	100	103	105	108	110	111	113	115	117	119	2013/2014
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	1.79	1.88	1.83	65	100	106	111	118	127	135	144	154	164	176	m
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	1216.6	1231.63	1224.11	72	100	104	109	115	120	124	128	133	136	140	2014
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	21.55	22.57	22.06	m	m	m	m	m	m	m	m	m	m	m	2014
	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

1. Data on PPPs and GDP for countries now in the Euro area are shown in euros.
2. Data on PPPs and deflators refer to Belgium.
3. Data on PPPs and deflators refer to the United Kingdom.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399487

Table X2.4f. [1/2] Trends in average teachers' actual salaries, in national currency (2000, 2005, 2010-14)

Average annual actual salary of teachers aged 25-64

		Pre-primary level					Primary level				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(1)	(2)	(3)	(5)	(7)	(8)	(9)	(10)	(12)	(14)
OECD	Australia	m	m	77 641	77 818	78 416	m	m	78 352	80 719	79 716
	Austria[1]	m	m	m	m	m	m	m	m	m	48 003
	Belgium (Fl.)	m	m	41 046	43 169	44 445	m	m	41 543	43 557	45 263
	Belgium (Fr.)	m	m	m	40 182	42 475	m	m	m	40 099	42 277
	Canada	m	m	m	m	m	m	m	m	m	m
	Chile	m	m	m	10 089 163	10 941 820	m	m	m	11 054 061	11 410 289
	Czech Republic	m	m	228 603	258 289	273 204	m	m	290 682	307 720	316 764
	Denmark[2]	m	m	372 336	383 412	397 408	m	m	452 337	465 153	472 201
	England (UK)	22 968	29 418	33 680	33 374	33 546	22 968	29 418	33 680	33 374	33 546
	Estonia	m	m	m	7 069	8 086	m	m	m	9 751	11 961
	Finland[3]	m	m	29 759	31 055	32 519	28 723	35 654	40 458	42 263	44 061
	France	m	m	31 490	32 350	m	m	m	31 200	32 066	m
	Germany	m	m	m	m	m	m	m	m	48 862	51 113
	Greece	m	m	m	17 325	16 301	m	m	m	17 325	16 301
	Hungary	m	m	2 217 300	2 101 524	3 184 440	m	m	2 473 800	2 339 304	3 418 224
	Iceland	m	m	m	m	m	m	m	m	m	m
	Ireland	m	m	m	m	m	m	m	m	m	m
	Israel	m	m	110 959	130 435	157 367	m	m	123 151	141 696	160 152
	Italy	m	m	25 774	28 336	28 057	m	m	25 774	28 336	28 057
	Japan	m	m	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m	m	m
	Latvia	m	m	m	m	m	m	m	m	m	m
	Luxembourg	m	m	88 315	91 420	93 705	m	m	88 315	91 420	93 705
	Mexico	m	m	m	m	m	m	m	m	m	m
	Netherlands	m	m	43 374	44 170	44 448	m	m	43 374	44 170	44 448
	New Zealand	m	m	m	m	m	m	m	m	m	67 230
	Norway	m	289 548	368 580	398 540	428 811	m	348 877	422 930	454 291	485 251
	Poland	m	m	40 626	47 001	49 631	m	m	46 862	54 092	56 983
	Portugal	m	m	m	m	m	m	m	m	m	m
	Scotland (UK)[4]	m	m	31 884	32 353	32 944	m	m	31 884	32 353	32 944
	Slovak Republic	m	m	m	m	8 449	m	m	m	m	11 537
	Slovenia[5]	m	m	m	18 558	17 445	m	m	m	24 261	23 871
	Spain	m	m	m	m	m	m	m	m	m	m
	Sweden[6]	204 516	252 268	296 997	303 500	323 474	239 887	288 154	323 621	329 100	350 680
	Switzerland	m	m	m	m	m	m	m	m	m	m
	Turkey	m	m	m	m	m	m	m	m	m	m
	United States	38 028	40 268	48 103	48 985	50 578	38 746	41 059	49 133	50 494	52 136
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	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
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation[7]	m	m	m	320 671	418 112	m	m	m	320 671	473 195
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m

Note: Years 2011 and 2013 (i.e. Columns 4, 6, 11, 13, 18, 20, 25 and 27) are available for consultation on line (see *StatLink* below).

1. Includes also data on actual salaries of headmasters, deputies and assistants.
2. Includes also data on actual salaries of teachers in early childhood educational development programmes for pre-primary education.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes all teachers, irrespective of their age.
5. Includes also data on actual salaries of pre-school teacher assistants for pre-primary education.
6. Average actual teachers' salaries, not including bonuses and allowances.
7. Average actual teachers' salaries for all teachers, irrespective of the level of education they teach.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

StatLink http://dx.doi.org/10.1787/888933399496

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Table X2.4f. [2/2] **Trends in average teachers' actual salaries, in national currency (2000, 2005, 2010-14)**

Average annual actual salary of teachers aged 25-64

		Lower secondary level					Upper secondary level				
		2000	2005	2010	2012	2014	2000	2005	2010	2012	2014
		(15)	(16)	(17)	(19)	(21)	(22)	(23)	(24)	(26)	(28)
OECD	Australia	m	m	78 221	81 131	81 048	m	m	78 225	81 181	81 079
	Austria[1]	m	m	m	m	55 224	m	m	m	m	60 339
	Belgium (Fl.)	m	m	41 277	42 514	43 995	m	m	54 381	55 089	57 127
	Belgium (Fr.)	m	m	m	40 015	41 660	m	m	m	m	51 838
	Canada	m	m	m	m	m	m	m	m	m	m
	Chile	m	m	m	11 017 369	11 392 833	m	m	m	11 497 710	12 036 013
	Czech Republic	m	m	289 771	307 443	316 068	m	m	313 534	326 150	329 592
	Denmark[2]	m	m	457 728	471 093	478 008	m	m	m	525 364	546 961
	England (UK)	25 347	32 355	36 173	35 668	36 050	25 347	32 355	36 173	35 668	36 050
	Estonia	m	m	m	9 751	11 961	m	m	m	9 751	11 961
	Finland[3]	32 919	39 519	44 421	46 259	48 428	37 728	44 051	49 808	51 812	54 478
	France	m	m	37 227	37 909	m	m	m	40 636	41 604	m
	Germany	m	m	m	53 737	56 108	m	m	m	58 535	60 236
	Greece	m	m	m	18 040	18 129	m	m	m	18 040	18 129
	Hungary	m	m	2 473 800	2 339 304	3 418 224	m	m	2 814 100	2 616 792	3 534 408
	Iceland	m	m	m	m	m	m	m	5 172 300	5 456 481	m
	Ireland	m	m	m	m	m	m	m	m	m	m
	Israel	m	m	126 309	137 625	173 314	m	m	133 790	142 569	153 290
	Italy	m	m	27 170	30 646	29 948	m	m	28 986	32 542	31 507
	Japan	m	m	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m	m	m
	Latvia	m	m	m	m	m	m	m	m	m	m
	Luxembourg	m	m	101 471	104 049	106 650	m	m	101 471	104 049	106 650
	Mexico	m	m	m	m	m	m	m	m	m	m
	Netherlands	m	m	52 831	54 766	55 459	m	m	52 831	54 766	55 459
	New Zealand	m	m	m	m	69 003	m	m	m	m	73 931
	Norway	m	348 877	422 930	454 291	485 251	m	372 694	449 704	482 909	515 043
	Poland	m	m	47 410	54 911	57 903	m	m	46 147	53 673	56 821
	Portugal	m	m	m	m	m	m	m	m	m	m
	Scotland (UK)[4]	m	m	31 884	32 353	32 944	m	m	31 884	32 353	32 944
	Slovak Republic	m	m	m	m	11 537	m	m	m	m	11 457
	Slovenia[5]	m	m	m	24 744	24 309	m	m	m	26 721	26 208
	Spain	m	m	m	m	m	m	m	m	m	m
	Sweden[6]	247 793	290 058	324 639	329 900	357 721	265 488	315 592	347 967	352 300	375 937
	Switzerland	m	m	m	m	m	m	m	m	126 406	m
	Turkey	m	m	m	m	m	m	m	m	m	m
	United States	39 500	41 873	50 158	51 487	53 161	41 124	43 588	52 188	53 198	54 928
Partners	Argentina	m	m	m	m	m	m	m	m	m	m
	Brazil	m	m	m	m	m	m	m	m	m	m
	China	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
	India	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	m	m	m	m	m	m	m	m	m
	Russian Federation[7]	m	m	m	320 671	473 195	m	m	m	320 671	473 195
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m

Note: Years 2011 and 2013 (i.e. Columns 4, 6, 11, 13, 18, 20, 25 and 27) are available for consultation on line (see *StatLink* below).

1. Includes also data on actual salaries of headmasters, deputies and assistants.
2. Includes also data on actual salaries of teachers in early childhood educational development programmes for pre-primary education.
3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.
4. Includes all teachers, irrespective of their age.
5. Includes also data on actual salaries of pre-school teacher assistants for pre-primary education.
6. Average actual teachers' salaries, not including bonuses and allowances.
7. Average actual teachers' salaries for all teachers, irrespective of the level of education they teach.

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.5. Teachers with 15 years of experience, by level of qualification (2014)

Teachers with 15 years of experience that have either minimum or typical qualification level

	Pre-primary			Primary			Lower secondary			Upper secondary		
	Is there a difference between "minimum" and "typical" qualification of teachers?	Percentage of teachers with minimum qualification	Percentage of teachers with typical qualification	Is there a difference between "minimum" and "typical" qualification of teachers?	Percentage of teachers with minimum qualification	Percentage of teachers with typical qualification	Is there a difference between "minimum" and "typical" qualification of teachers?	Percentage of teachers with minimum qualification	Percentage of teachers with typical qualification	Is there a difference between "minimum" and "typical" qualification of teachers?	Percentage of teachers with minimum qualification	Percentage of teachers with typical qualification
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD												
Australia	No	m	m	No	m	m	No	m	m	No	m	m
Austria	m	m	m	No	x(6)	100	No	x(9)	100	No	x(12)	100
Belgium (Fl.)	Yes	1	99	Yes	8	92	Yes	12	88	Yes	21	79
Belgium (Fr.)	Yes	0	100	Yes	0	99	Yes	1	96	Yes	1	87
Canada	m	m	m	Yes	m	m	Yes	m	m	Yes	m	m
Chile	Yes	m	m	Yes	m	m	Yes	m	m	Yes	m	m
Czech Republic	Yes	7	87	Yes	5	94	Yes	3	94	Yes	3	95
Denmark	Yes	x(3)	100	Yes	x(6)	100	Yes	x(9)	100	Yes	x(12)	100
England (UK)	Yes	m	m	Yes	m	m	Yes	m	m	Yes	m	m
Estonia	Yes	14	46	Yes	10	70	Yes	10	73	Yes	9	80
Finland	No	m	m	No	m	m	No	m	m	No	m	m
France	No	m	m	No	m	m	No	m	m	No	m	m
Germany	No	m	m	Yes	x(6)	100	Yes	x(9)	100	Yes	x(12)	100
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	Yes	m	m	Yes	m	m	Yes	m	m	Yes	m	m
Israel	Yes	m	75	Yes	m	62	Yes	m	52	Yes	m	53
Italy	Yes	a	m	Yes	a	m	Yes	a	m	Yes	a	m
Japan	m	m	m	No		m	No		m	No		m
Korea	Yes	5	95	No	x(6)	63	No	x(9)	61	No	x(12)	52
Latvia	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg	a	a	a	a	a	a	a	a	a	a	a	a
Mexico	Yes	m	m	Yes	m	m	Yes	m	m	Yes	m	m
Netherlands	No	m	m	No	m	m	No	m	m	No	m	m
New Zealand	m	m	m	Yes	m	m	a	a	a	Yes	m	m
Norway	No	m	m	Yes	5-10	75-80	Yes	35-40	75-80	Yes	9	50-55
Poland	Yes	1	93	Yes	0	98	Yes	1	98	Yes	98	98
Portugal	No	a	a	No	a	a	No	a	a	No	a	a
Scotland (UK)	No	m	m	No	m	m	No	m	m	No	m	m
Slovak Republic	No	m	m	No	m	m	No	m	m	No	m	m
Slovenia	Yes	a	m	Yes	a	m	Yes	a	m	Yes	a	m
Spain	No	x(3)	100	No	x(6)	100	No	x(9)	88	No	x(12)	100
Sweden	No	m	m	No	m	m	No	m	m	No	m	m
Switzerland	No	m	m	No	m	m	Yes	m	m	No	m	m
Turkey	No	x(3)	90-95	No	x(6)	90-95	No	x(9)	90-95	No	x(12)	80-85
United States	Yes	37	55	Yes	37	53	Yes	33	55	Yes	32	56
Partners												
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
China	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	Yes	0	0	Yes	0	0	Yes	0	0	No	x(8)	x(9)
Costa Rica	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
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation	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

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table X2.6. Percentage of pre-primary, primary, lower secondary and upper secondary teachers, by level of attainment (2014)

		Pre-primary			Primary			Lower secondary			Upper secondary		
		Attainment at ISCED level 5 or lower	Attainment at ISCED level 6	Attainment at ISCED level 7 or 8	Attainment at ISCED level 5 or lower	Attainment at ISCED level 6	Attainment at ISCED level 7 or 8	Attainment at ISCED level 5 or lower	Attainment at ISCED level 6	Attainment at ISCED level 7 or 8	Attainment at ISCED level 5 or lower	Attainment at ISCED level 6	Attainment at ISCED level 7 or 8
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	m	m	m	m	85	11	m	m	m	m	m	m
	Austria	m	m	m	m	m	m	m	m	m	m	m	m
	Belgium (Fl.)	0	99	0	1	98	0	0	100	0	0	0	100
	Belgium (Fr.)	0	99	1	1	96	3	2	84	15	1	12	87
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	1	99	x(2)	1	99	x(5)	1	99	x(8)	1	99	x(11)
	Czech Republic	81	12	7	10	5	86	8	5	87	4	3	93
	Denmark	0	100	0	0	100	0	0	100	0	0	0	100
	England (UK)	m	m	m	m	m	m	m	m	m	m	m	m
	Estonia	37	41	22	7	18	75	5	16	78	2	13	85
	Finland	31	63	6	3	12	85	3	8	89	0	1	99
	France	28	64	8	28	64	8	9	70	21	9	70	21
	Germany	m	m	m	0	0	100	0	0	100	0	0	100
	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	13	71	17	7	64	30	4	51	45	11	47	42
	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	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
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	x(2)	77	9	x(5)	89	7	x(8)	80	5	x(11)	95	5
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	m	m	m	50	50	0	55	45	0	52	48	0
	Norway	4	95	1	3	91	5	3	91	5	4	64	32
	Poland	4	8	88	1	3	97	0	2	97	0	1	99
	Portugal	13	82	5	9	85	6	4	86	10	6	81	13
	Scotland (UK)	0	100	x(2)	0	100	x(5)	0	100	x(8)	0	100	x(11)
	Slovak Republic	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
	Spain	0	76	24	0	76	24	0	12	88	0	5	95
	Sweden	m	m	m	m	m	m	m	m	m	m	m	m
	Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United States	3	44	53	3	41	56	4	40	56	5	35	60
Partners	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
	China	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
	Costa Rica	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
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	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

Source: OECD. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Annex

3

Sources, Methods and Technical Notes

Annex 3 on sources and methods is available in electronic form only. It can be found at:

www.oecd.org/education/education-at-a-glance-19991487.htm

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Many people have contributed to the development of this publication.
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Education Indicators in Focus is a series of OECD briefs that highlight specific indicators in Education at a Glance that are of particular interest to policy makers and practitioners. These briefs provide a detailed look into current issues in pre-primary, primary and secondary education, higher education, and adult outcomes from a global perspective.

They contain an engaging mix of text, tables and charts that describe the international context of the most pressing questions in education policy and practice.

The complete series is available at:

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Education at a Glance 2016

OECD INDICATORS

Education at a Glance: OECD Indicators is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in the 35 OECD countries and a number of partner countries.

With more than 125 charts and 145 tables included in the publication and much more data available on the educational database, *Education at a Glance 2016* provides key information on the output of educational institutions; the impact of learning across countries; the financial and human resources invested in education; access, participation and progression in education; and the learning environment and organisation of schools.

New material in the 2016 edition includes:

- a new indicator (A9) analysing the completion rate of tertiary students (i.e. how many students who enter a tertiary education programme actually graduate within a given number of years)
- another new indicator (D6) providing insights on who are the school leaders and how they work
- trend data and analysis on teachers' salaries; graduation rates; expenditure on education, from public and private sources; enrolment rates from upper secondary to tertiary education and for first-time new entrants in tertiary education; young adults who are neither employed nor in education or training; class size; and teaching hours
- analysis of gender imbalance in education, from differences in earnings and fields of education to over-representation of women in the teaching profession and their under-representation among school leaders
- a focus on the profile of students who attend and graduate from vocational education.

The Excel™ spreadsheets used to create the tables and charts in Education at a Glance are available via the *StatLinks* provided throughout the publication. Tables and charts, as well as the complete OECD education database, are available via the OECD education website at http://www.oecd.org/edu/education-at-a-glance-19991487.htm. Updated data can be found online at http://dx.doi.org/10.1787/eag-data-en.

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Chapter A. The output of educational institutions and the impact of learning
Chapter B. Financial and human resources invested in education
Chapter C. Access to education, participation and progression
Chapter D. The learning environment and organisation of schools

Consult this publication on line at: ***http://dx.doi.org/10.187/eag-2016-en***

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