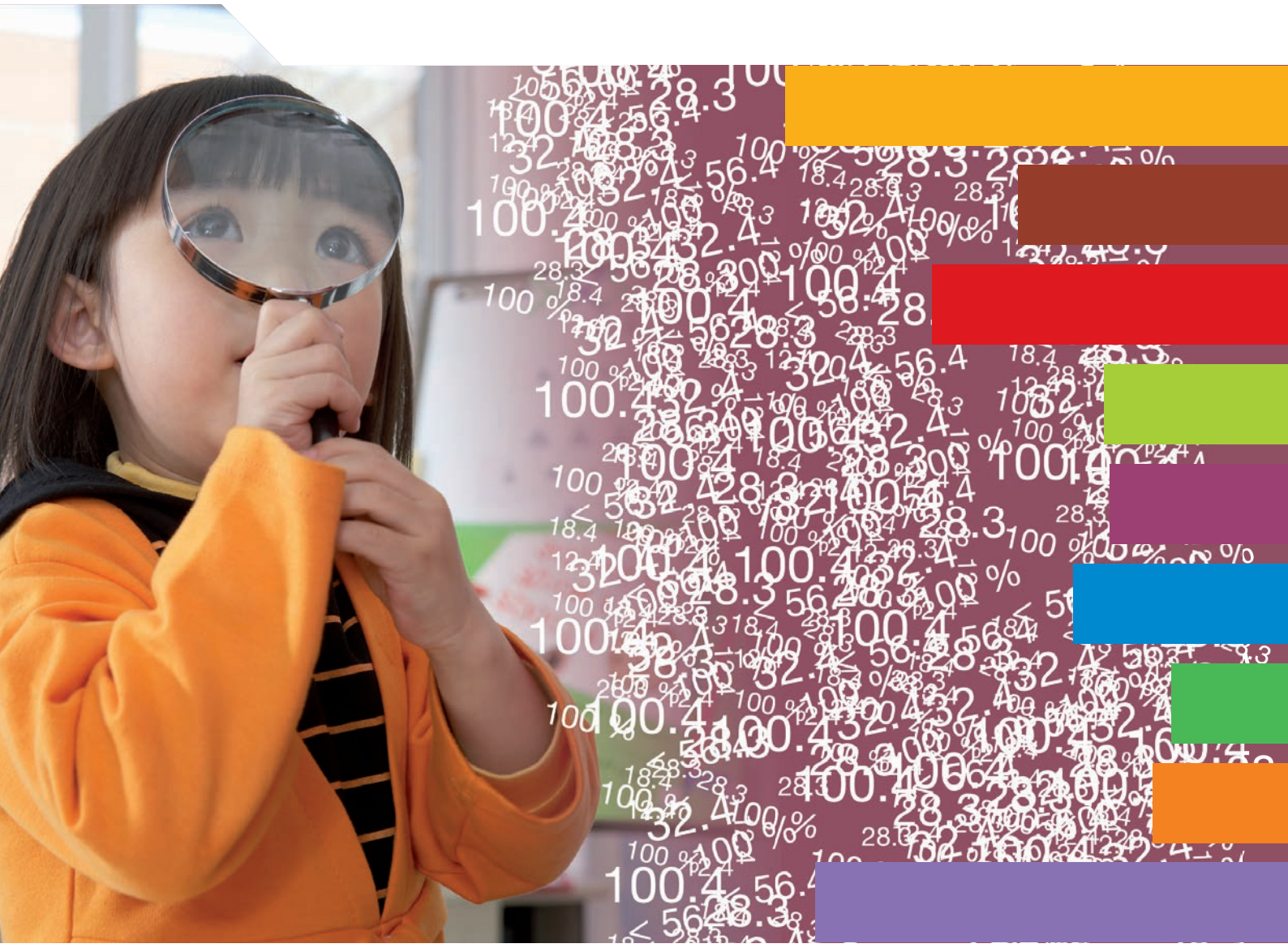
Education at a Glance 2013

HIGHLIGHTS



OECD

Education at a Glance 2013

HIGHLIGHTS

OECD
BETTER POLICIES FOR BETTER LIVES

This work is published on the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Please cite this publication as:
OECD (2013), *Education at a Glance 2013: Highlights*, OECD Publishing.
http://dx.doi.org/10.1787/eag_highlights-2013-en

ISBN 978-92-64-20106-4 (print)
ISBN 978-92-64-20107-1 (HTML)

Series: *Education at a Glance*
ISSN 2076-2631 (print)
ISSN 2076-264X (online)

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.

Photo credits: Cover © Blue Jean images/Getty images.
Images: Chapter 1 © Jeffrey Coolidge/The Image Bank/Getty Images.
Chapter 2 © Wavebreakmedia /Shutterstock.
Chapter 3 © Tom Grill/Photographer's Choice RF/Getty Images.
Chapter 4 © Julia Smith/Riser/Getty Images.
Chapter 5 © Image Source/Getty Images.

Corrigenda to OECD publications may be found on line at: *www.oecd.org/publishing/corrigenda*.

© OECD 2013

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of the source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to *rights@oecd.org*. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at *info@copyright.com* or the Centre français d'exploitation du droit de copie (CFC) at *contact@cfcopies.com*.

Foreword

Education at a Glance 2013: Highlights *offers a reader-friendly introduction to the OECD's collection of internationally comparable data on education.*

As the name suggests, it is derived from Education at a Glance 2013, *the OECD's flagship compendium of education statistics. However, it differs from that publication in a number of ways, most significantly in its structure, which is made up of five sections that explore the following topics:*

- **Education levels and student numbers:** *This section looks at education levels and trends in the general population, early childhood and secondary education systems.*
- **Higher education and work:** *This section looks at how many students enter and successfully complete tertiary education, as well as young people's transition from school to the world of work.*
- **The economic and social benefits of education:** *This section looks at the extent to which education brings economic gains to individuals, in the form of higher incomes and lower unemployment rates, and at how these benefits serve as an incentive for people and societies to invest in education. It also examines the societal benefits related to having a highly educated population.*
- **Paying for education:** *This section looks at how much countries spend on education, the role of private spending, what education money is spent on and whether countries are getting value for money.*
- **The school environment:** *This section looks at how much time teachers spend at work, and how much of that time is spent teaching, class sizes and teachers' salaries.*

In general, this publication uses the terminology employed in Education at a Glance 2013. *However, in one or two places terminology has been simplified. Readers who want to find out more should consult the Reader's Guide.*

Tables and charts in this volume are accompanied by a dynamic hyperlink, or StatLink, that will direct readers to an Internet site where the corresponding data are available in Excel™ format. In addition, reference is sometimes made in the text to charts and tables that appear in Education at a Glance 2013. *This material can generally be accessed via the StatLinks accompanying the tables and charts in the relevant indicator, or at www.oecd.org/edu/eag.htm.*

Readers wishing to find out more about the OECD's work on education should go to www.oecd.org/edu.

Table of contents

Executive summary 7

Reader's Guide 9

1. Education levels and student numbers 13
To what level have adults studied? 14
Who participates in education? 16
What is the role of early childhood education? 18
How many young people finish secondary education? 20

2. Higher education and work 23
How many young people enter tertiary education? 24
How many young people graduate from tertiary education? 26
How many students fail to graduate? 28
How successful are students in moving from education to work? 30
How many students study abroad and where do they go? 32

3. The economic and social benefits of education 35
How much more do tertiary graduates earn? 36
How does education affect employment rates? 38
What are the incentives to invest in education? 40
What are the health benefits of education? 42

4. Paying for education 45
How much is spent per student? 46
What share of national wealth is spent on education? 48
What share of public spending goes to education? 50
What is the role of private spending? 52
How much do tertiary students pay? 54
How much do teachers cost? 56

5. The school environment 59
How long do students spend in the classroom? 60
How many students are in each classroom? 62
How much are teachers paid? 64
How much time do teachers spend teaching? 66

Statistical note 69

Glossary 71

Further reading 75

Follow OECD Publications on:

http://twitter.com/OECD_Pubs

http://www.facebook.com/OECDPublications

http://www.linkedin.com/groups/OECD-Publications-4645871

http://www.youtube.com/oecdilibrary

http://www.oecd.org/oecddirect/

This book has...

StatLinks

A service that delivers Excel® files from the printed page!

Look for the *StatLinks* at the bottom of the tables or graphs in this book. To download the matching Excel® spreadsheet, just type the link into your Internet browser, starting with the *http://dx.doi.org* prefix, or click on the link from the e-book edition.

Executive summary: Education and skills in the midst of the crisis

Between 2008 and 2011 unemployment rates climbed steeply in most countries covered in this edition of *Education at a Glance: Highlights* and have remained high ever since. Young people have been particularly hard-hit by un- and underemployment as a result of the global recession. In 2011, the average proportion of 15-29 year-olds neither in employment nor in education or training (NEET) across the OECD was 16%; among 25-29 year-olds, 20% were NEET. In some countries the figures are much higher, with more than one in three people between the ages of 25 and 29 neither in education nor in work. These young people are forced to pay a very high price for a crisis that was not of their making, with long-lasting effects on their skills, work morale and social integration.

A good education is still valuable

Educational attainment has a huge impact on employability and the crisis only strengthened this impact. On average across OECD countries, 4.8% of individuals with a tertiary degree were unemployed in 2011, while 12.6% of those lacking a secondary education were. Between 2008 and 2011 the unemployment gap between those with low levels of education and those with high levels of education widened: across all age groups, the unemployment rate for low-educated individuals increased by almost 3.8 percentage points, while it increased by only 1.5 percentage points for highly educated individuals.

For young people, a good education provides valuable insurance against a lack of work experience, even during a crisis: across OECD countries, an average of 18.1% of 25-34 year-olds without secondary education were unemployed in 2011, compared with 8.8% of 55-64 year-olds. Among 25-34 year-olds with a tertiary qualification, 6.8%, on average, were unemployed, compared with 4.0% of 55-64 year-olds with a similar level of education.

Though many factors play a role in a country's capacity to contain the rise in youth unemployment in times of crisis, the way institutional arrangements between education and work facilitate transitions into employment is perhaps one of the most important. Countries that have a higher-than-average (32%) proportion of graduates from vocational programmes, such as Austria, the Czech Republic, Germany and Luxembourg, were all able to keep the increases in unemployment rates among this age group to below 8 percentage points. Conversely, countries such as Greece, Ireland and Spain, where less than 25% of young adults graduate from vocational upper secondary education, saw increases in unemployment rates of 12 percentage points or more among 25-34 year-olds with only secondary education.

The link between education and earnings remains strong

Educational attainment not only affects employability, it also has an impact on income from employment. On average, the relative earnings of tertiary-educated adults is over 1.5 times that of adults with upper secondary education, while individuals without an upper secondary education earn 25% less, on average, than their peers who have attained that level of education. The crisis has widened this wage gap: the average difference between earnings from employment between low-educated and highly educated individuals was 75%, on average across OECD countries in 2008, and increased to 90% in 2011.

The wage gap between those with low and high levels of education tends to increase with age – as does the wage premium for tertiary education. Without a secondary education, 25-34 year-olds earn 80% of what their colleagues with a secondary education earn, on average, but 55-64 year-olds who have not attained a secondary education earn only 72% of what their peers with a secondary education earn. Meanwhile, a 25-34 year-old with a tertiary education earns 40% more, on average, than an adult of the same age who has only a secondary education, while a 55-64 year-old earns 76% more. A degree from an institution of higher education clearly pays off in the long run.

Other findings

- In 2011, 84% of 15-19 year-olds were enrolled in education on average across OECD countries; and the proportion of 20-29 year-olds in education climbed from 22% in 2000 to 28% in 2011. As a consequence, the proportion of adults with a tertiary education qualification rose by more than 10 percentage points between 2000 and 2011. Across OECD countries, 39% of 25-34 year-olds had a tertiary level qualification in 2011.
- Teachers, too, were affected by the crisis. Between 2000 and 2011, teachers' salaries rose, in real terms, in most countries with available data. However, in some countries, teachers' salaries were either cut or frozen between 2009 and 2010, as a result of the fiscal constraints imposed in response to the economic downturn. But even in the best of times, most teachers' salaries are not competitive with those of similarly educated workers in other fields.
- Most children in OECD countries now begin their formal education well before they are 5 years old. Eight in ten 4-year-olds (82%) are enrolled in early childhood education across OECD countries, while in Belgium, France, Iceland, Italy, Norway, Spain and Sweden, education is universal (more than 90%) from 3 years old.
- Data also show the popularity of studying abroad, particularly among students from Asia. In 2011, 4.3 million tertiary students were enrolled in programmes outside their country of citizenship. Australia, the United Kingdom, Switzerland, New Zealand and Austria have, in descending order, the highest percentages of international students among their tertiary enrolments. The number of foreign students enrolled in tertiary education in OECD countries was almost three times the number of citizens from an OECD country studying abroad.
- For the first time, *Education at a Glance 2013: Highlights* considers the association between education and two social outcomes: obesity and smoking. Perhaps not surprisingly, the data suggest that more highly educated adults are less likely to be obese and to smoke than those with lower levels of education.

Reader's Guide

This section introduces some of the terminology used in this publication, and explains how readers can use the links provided to get further information.

Levels of education

Education systems vary considerably from country to country, including the ages at which students typically begin and end each phase of schooling, the duration of courses, and what students are taught and expected to learn. These variations greatly complicate the compilation of internationally comparable statistics on education. In response, the United Nations created an International Standard Classification of Education (ISCED), which provides a basis for comparing different education systems and a standard terminology.

The table below introduces this system of classification and explains what is meant by each level of education. Readers should note that this publication uses slightly simplified terminology, which differs from that used in both the ISCED classification and in *Education at a Glance 2013*. The table shows the equivalent terms in the two publications, the ISCED classifications and definitions of what it all means.

Term used to describe levels of education in Education at a Glance 2013 ISCED classification (and subcategories)	**Term generally used in this publication**
Pre-primary education ISCED 0	**Pre-primary education** The first stage of organised instruction designed to introduce very young children to the school atmosphere. Minimum entry age of 3.
Primary education ISCED 1	**Primary education** Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Entry age: between 5 and 7. Duration: 6 years.
Lower secondary education ISCED 2 (subcategories: 2A prepares students for continuing academic education, leading to 3A; 2B has stronger vocational focus, leading to 3B; 2C offers preparation for entering workforce)	**Lower secondary education** Completes provision of basic education, usually in a more subject-oriented way with more specialist teachers. Entry follows 6 years of primary education; duration is 3 years. In some countries, the end of this level marks the end of compulsory education.
Upper secondary education ISCED 3 (subcategories: 3A prepares students for university-level education at level 5A ; 3B for entry to vocationally oriented tertiary education at level 5B; 3C prepares students for workforce or for post-secondary non tertiary education, ISCED 4)	**Upper secondary education** Even stronger subject specialisation than at lower-secondary level, with teachers usually more qualified. Students typically expected to have completed 9 years of education or lower secondary schooling before entry and are generally around the age of 15 or 16.
Post-secondary non-tertiary education ISCED 4 (subcategories: 4A may prepare students for entry to tertiary education, both university-level and vocationally oriented education; 4B typically prepares students to enter the workforce)	**Post-secondary non-tertiary education** Programmes at this level may be regarded nationally as part of upper secondary or post-secondary education, but in terms of international comparison their status is less clear cut. Programme content may not be much more advanced than in upper secondary, and is certainly lower than at tertiary level. Entry typically requires completion of an upper secondary programme. Duration usually equivalent to between 6 months and 2 years of full-time study.

Term used to describe levels of education in Education at a Glance 2013 ISCED classification (and subcategories)	**Term generally used in this publication**
Tertiary education ISCED 5 (subcategories 5A and 5B, see below)	**Tertiary education** ISCED 5 is the first stage of tertiary education (the second – ISCED 6 – involves advanced research). At level 5, it is often more useful to distinguish between two subcategories: 5A, which represent longer and more theoretical programmes; and 5B, where programmes are shorter and more practically oriented. Note, though, that as tertiary education differs greatly between countries, the demarcation between these two subcategories is not always clear cut.
Tertiary-type A ISCED 5A	**University-level education** "Long-stream" programmes that are theory based and aimed at preparing students for further research or to give access to highly skilled professions, such as medicine or architecture. Entry preceded by 13 years of education, students typically required to have completed upper secondary or post-secondary non-tertiary education. Duration equivalent to at least 3 years of full-time study, but 4 is more usual.
Tertiary-type B ISCED 5B	**Vocationally oriented tertiary education** "Short-stream" programmes that are more practically oriented or focus on the skills needed for students to directly enter specific occupations. Entry preceded by 13 years of education; students may require mastery of specific subjects studied at levels 3B or 4A. Duration equivalent to at least 2 years of full-time study, but 3 is more usual.
Advanced research programmes ISCED 6	**Advanced research programmes** The second stage of tertiary education. Programmes are devoted to advanced study and original research.

For fuller definitions and explanations of the ISCED standard, please consult *Classifying Education Programmes: Manual for ISCED-97 Implementation in OECD Countries* (1999).

Country coverage

OECD and partner countries: This publication features data on education from the 34 OECD member countries, two non-OECD countries that participate in the OECD Indicators of Education Systems Programme (INES), namely Brazil and the Russian Federation, and other G20 countries that do not participate in INES (Argentina, China, India, Indonesia, Saudi Arabia and South Africa).

Belgium: Data on Belgium may be applicable only to either the Flemish Community or the French Community. Where this is the case, the text and charts refer to Belgium (Fl) for the Flemish Community and Belgium (Fr) for the French community.

EU21: These are the 21 OECD countries that are also members of the European Union: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, the Slovak Republic, Spain, Sweden and the United Kingdom.

G20: These are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, the Russian Federation, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union (which is not included in the G20 average).

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

Notes to tables and charts

For further details on the data behind any figure, see the relevant indicator in the full publication *Education at a Glance 2013*, or click the hyperlink in the figure's source to download the data and notes.

234

1. EDUCATION LEVELS AND STUDENT NUMBERS

To what level have adults studied?

Who participates in education?

What is the role of early childhood education?

How many young people finish secondary education?

To what level have adults studied?

- *The number of adults with a tertiary education in OECD countries has increased by almost 10 percentage points since 2000.*
- *In most OECD countries, 25-34 year-olds have the highest rate of tertiary attainment among adults, leading other age groups by an average of 7 percentage points.*
- *Gender gaps in educational attainment are not only narrowing; in some cases, they are reversing to put women ahead of men.*

Significance

Education is important both for the present and for the future. The level to which adults have studied is often used as a measure of human capital and the level of an individual's skills – in other words the skills available in the population and labour force. Higher levels of educational attainment are strongly associated with higher employment rates and are seen as a gateway to better jobs and higher earnings. Individuals have strong incentives to pursue more education, and governments have incentives to build on the skills of the population through education, particularly as national economies continue to shift from mass production to knowledge economies.

Findings

The proportion of adults without upper secondary education shrank by about 10 percentage points over the past decade and across almost all OECD countries, upper secondary attainment is now the norm. On average, 82% of younger adults have attained at least upper secondary education compared to 64% of older adults. Italy, Mexico, Portugal, Turkey and Spain are the only countries in which the proportion of people without upper secondary education is larger than the proportion of adults with upper secondary or tertiary education. Gender differences in educational attainment have also evolved over the years. On average, 84% of younger women today have attained at least an upper secondary education compared with 81% of younger men.

Even if tertiary attainment rates have increased by at least 10 percentage points across OECD countries in recent years, less than 35% of men and women attain tertiary education. In most OECD countries, younger adults have higher rates of tertiary education than older adults by about 15 percentage points. In some countries, the difference between generations is significant. In Korea, for example, there is a 51 percentage-point gap between these two age groups in tertiary attainment levels. By contrast, in Germany and the United States, differences between age groups are very small; and in Israel, the proportion of younger adults with a tertiary education is slightly smaller than that for older adults.

In 2000, more adult men had university-level education than adult women. In 2011, the situation was reversed: 33% of women had attained tertiary education compared with 30% of men. In addition, among 30-34 year-olds, more than 40% of women have a tertiary education – about 8 percentage points higher than the rate for men. Tertiary attainment rates among young women have grown strongly in Australia, Canada, Ireland, Israel, New Zealand, Norway and Sweden, where at least 50% of younger women have attained tertiary education, compared with less than 50% of younger men.

Trends

Efforts to raise people's level of education have led to significant changes in attainment rates, particularly at the top and bottom ends of the education spectrum. Between 2000 and 2011 the proportion of adults with below upper secondary education shrank by almost 10 percentage points while tertiary attainment increased by about the same amount. Upper secondary and post-secondary non-tertiary attainment levels have remained stable.

Definitions

"Adults" refers to the 25-64 year-old population; "younger adults" refers to 25-34 year-olds; "older adults" refers to 55-64 year-olds.

Data on population and education attainment for most countries are taken from OECD and Eurostat databases, which are compiled from National Labour Force Surveys.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator A1).

Areas covered include:

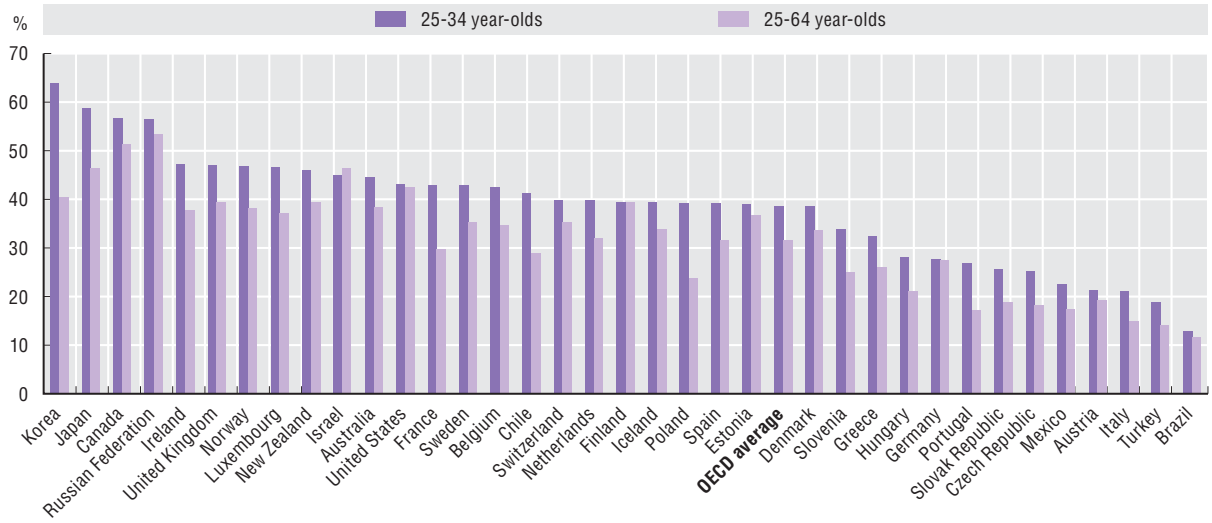
– Educational attainment of adults, by age group and by gender.

Further reading from OECD

Reviews of National Policies for Education (series)

Figure 1.1. **Population that has attained tertiary education, 2011**

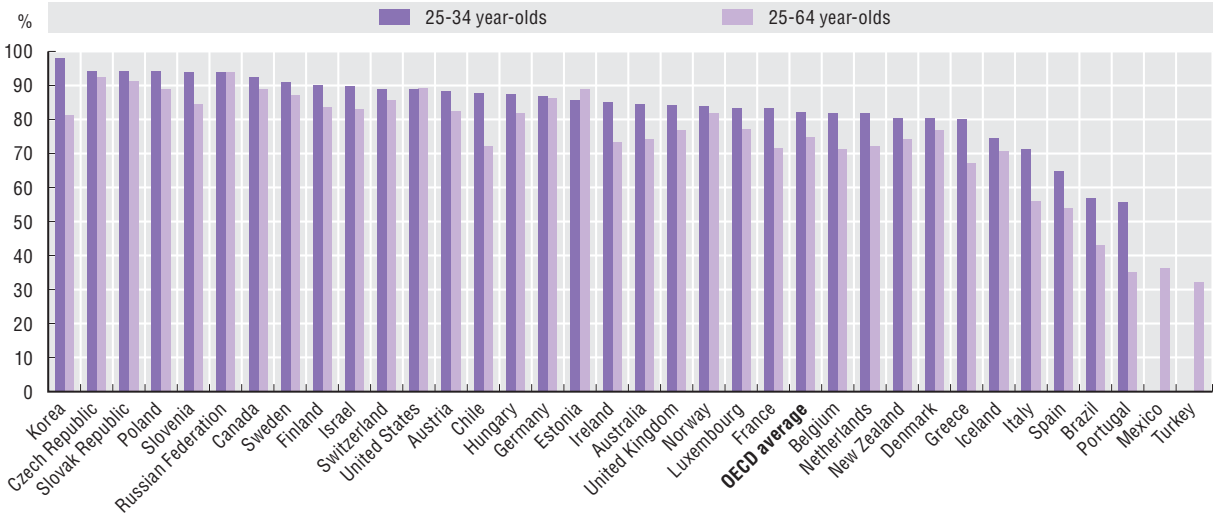
This figure shows the percentage of 25-34 year-olds and 25-64 year-olds who have been through tertiary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart A1.1, available at *http://dx.doi.org/10.1787/888932846215*.

Figure 1.2. **Population that has attained at least upper secondary education, 2011**

This figure shows the percentage of 25-34 year-olds and 25-64 year-olds who have been through at least upper secondary education. The rapid expansion of education in recent decades means younger people tend to have higher levels of education.



Source: OECD (2013), *Education at a Glance 2013*, Table A1.2a, available at *http://dx.doi.org/10.1787/888932848039*.

Who participates in education?

- *Access to education for 5-14 year-olds is universal in all OECD and G20 countries with available data.*
- *Enrolment rates among 15-19 year-olds are above 75% in 31 of the 39 OECD and G20 countries with available data.*
- *Enrolment rates among 20-29 year-olds increased by more than 10 percentage points on average between 1995 and 2011 across OECD countries.*
- *More than 20% of 20-29 year-olds in all OECD countries, except Mexico and the United Kingdom, were enrolled in education in 2011.*

Significance

A well-educated population is essential for economic and social development; societies therefore have a real interest in ensuring that children and adults have access to a wide range of educational opportunities. In times of economic hardship, the advantage of education for labour-market prospects becomes even clearer. This section examines the evolution in access to education from 1995 to 2011, focusing on the number of young people who continue studying once compulsory education has ended.

Findings

Virtually all people in OECD countries have access to at least 13 years of formal education, and this is increasing – a 5-year-old in an OECD country in 2011 could expect to participate in more than 17 years of education, on average, before reaching the age of 40. The expected duration of education ranged from 14 years in Luxembourg to more than 19 years in Denmark, Finland, Iceland and Sweden. Women can expect to be enrolled in full-time education for 16.7 years while men can expect to be enrolled for 16.3 years, on average.

Compulsory education comprises primary and lower secondary programmes in all OECD countries, and upper secondary education in most of these countries. Between ages 5 and 14, enrolment rates are higher than 90%, i.e. there is universal coverage of basic education in all OECD and other G20 countries with available data.

Based on 2011 data, enrolment rates among 15-19 year-olds were above 75% in most OECD and G20 countries with available data and higher than 90% in Belgium, the Czech Republic, Germany, Hungary, Ireland, the Netherlands, Poland and Slovenia.

In 2011, an average of 28% of 20-29 year-olds in OECD countries were enrolled in some type of education. The highest proportions of this age group enrolled in education (more than 40%) are found in Denmark, Finland and Greece. The only OECD countries with less than 20% are Mexico and the United Kingdom. Among other G20 countries, in Indonesia and Saudi Arabia, less than 15% of adults in this age group were enrolled. Among 20-29 year-olds, 29% of women and 26% of men participate in education in OECD countries.

Trends

Between 2000 and 2011, enrolment rates for 15-19 year-olds increased steadily by around 8 percentage points, from an average 76% in 2000 to 84% in 2011, in nearly all OECD countries. These increases may reveal the general awareness of the benefits of participating in education in a restricted labour market. France is the only exception, with an enrolment rate decreasing from 87% to 84% during this period. There has been growth, too, in enrolment for 20-29 year-olds. Over the past 16 years, the enrolment rate for this segment of the population has grown by close to 10 percentage points on average across OECD countries. In the Czech Republic, Greece, Hungary, Iceland, Korea and Sweden, these rates have increased by more than 15 percentage points, while they have grown by less than five percentage points in Canada, France, Mexico, Norway and Portugal.

Definitions

Data for the 2010-11 school year are based on the UOE data collection on education statistics, administered annually by the OECD. Except where otherwise noted, figures are based on head counts and do not distinguish between full-time and part-time study.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

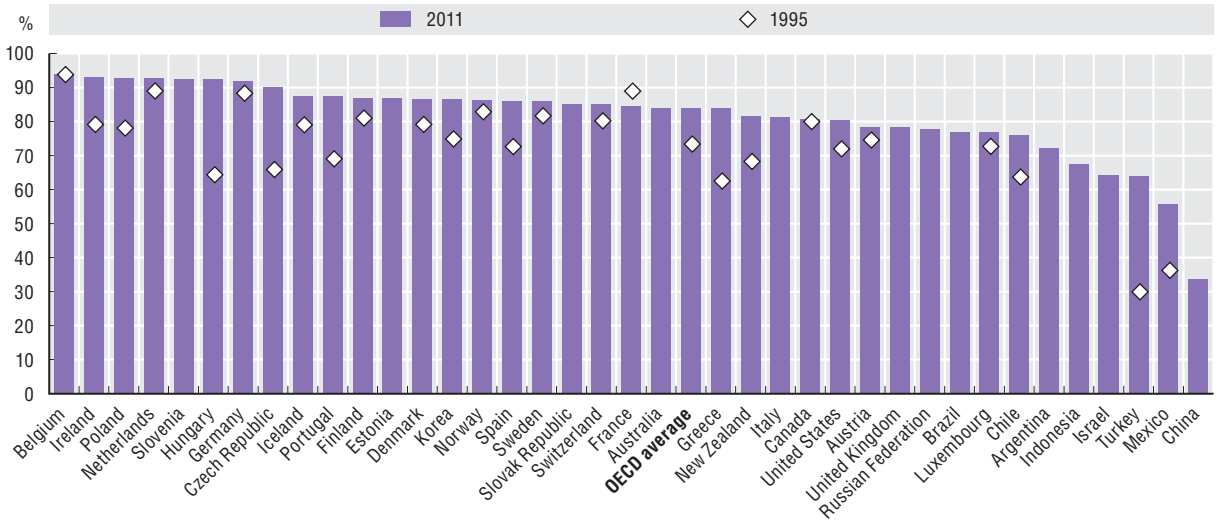
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator C1).

Areas covered include:

- Students in primary, secondary and tertiary education, by type of institution or mode of enrolment.
- Proportion of young adults in education.
- Expected number of years in education.

Figure 1.3. **Enrolment rates of 15-19 year-olds (1995, 2011)**

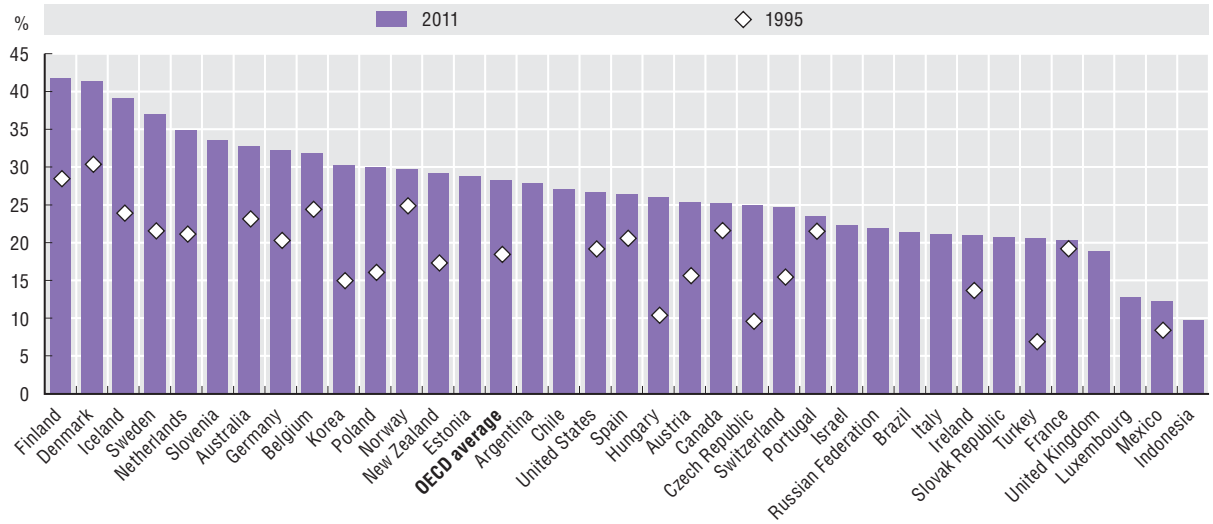
This figure shows the increase or decrease in the percentage of 15-19 year-olds enrolled in full-time and part-time education.



Source: OECD (2013), *Education at a Glance 2013*, Chart C1.2, available at *http://dx.doi.org/10.1787/888932847336*.

Figure 1.4. **Enrolment rates of 20-29 year-olds (1995, 2011)**

This figure shows the trend in the percentage of 20-29 year-olds enrolled in full-time and part-time education.



Source: OECD (2013), *Education at a Glance 2013*, Chart C1.1, available at *http://dx.doi.org/10.1787/888932847317*.

What is the role of early childhood education?

- *Fifteen-year-olds who had at least one year of pre-primary education tend to perform better at school.*
- *Early childhood education has grown alongside the increase in women working in many OECD countries, but improving access without improving the quality of these services will not ensure good results.*
- *Education now begins for most children in OECD countries well before they are 5 years old. In Belgium, France, Iceland, Italy, Norway, Spain and Sweden, more than 90% of 3-year-olds are enrolled in early childhood education.*
- *More than three-quarters of 4-year-olds (82%) are enrolled in early childhood education across OECD countries; the figure is 86% for OECD countries that are part of the European Union.*

Significance

Early childhood education plays a key role in the cognitive and emotional development of the young. Enrolling pupils in early childhood education can also mitigate social inequalities. As a result, ensuring the quality of early childhood education and care has become a policy priority in many countries.

As countries continue to expand their early childhood programmes,they need to consider parents' needs and expectations regarding accessibility, cost, programme and staff quality and accountability.

Findings

Results from the OECD's PISA assessment of students at age 15 show that in most countries pupils who have attended pre-primary education programmes tend to perform better than those who have not.

An increase in women working outside the home, and having children later in life, have gone hand in hand with an increase in early childhood education. The average age at which mothers have their first child has risen across all OECD countries over the past 40 years. In Germany and the United Kingdom the average age at first birth is 30 years. In contrast, Mexico has the lowest average age at just over 21 years.

Spending on pre-primary education accounts for an average of 0.6% of gross domestic product (GDP) in OECD countries, although there are significant differences between countries. While 0.1% or less of GDP is spent on pre-primary education in Australia and Turkey, 0.8% or more is spent in Denmark, Iceland, Israel, Luxembourg, the Russian Federation and Spain.

Publicly-funded pre-primary education tends to be more strongly developed in the European countries than elsewhere in the OECD. Private funding varies widely between countries, ranging from 5% or less in Belgium, Estonia, Luxembourg and Sweden, to 25% or more in Argentina, Australia, Austria, Japan, Korea, Spain and the United States.

Public spending on pre-primary education is mainly used to support public institutions, but it also funds private institutions. On average across OECD countries, the level of public expenditure on public pre-primary institutions, at USD 6 275 per pupil, is around twice the level of public spending on private pre-primary institutions (USD 3 494).

The ratio of pupils to teaching staff is also an important indicator of the resources devoted to pre-primary education. The pupil-teacher ratio excluding non-professional staff (e.g. teachers' aides) ranges from more than 20 pupils per teacher in Chile, China, France, Israel, Mexico and Turkey, to fewer than 10 in Estonia, Iceland, New Zealand, Slovenia and Sweden.

Trends

Enrolment in early childhood education programmes rose from 64% of 3-year-olds in 2005 to 70% in 2011 on average for OECD countries, and from 78% of 4-year-olds in 2005 to 84% in 2011. In Brazil, Mexico and Poland, enrolment rates of 4-year-olds increased by 20 percentage points during this period.

Definitions

Early childhood education, or pre-primary education, is defined as the initial stage of organised instruction, designed primarily to introduce very young children to a school-like environment.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator C2).

Areas covered include:

- Enrolment rates in pre-primary programmes
- Public and private spending on pre-primary education
- Influence of pre-primary education policies on Programme for International Student Assessment (PISA) results

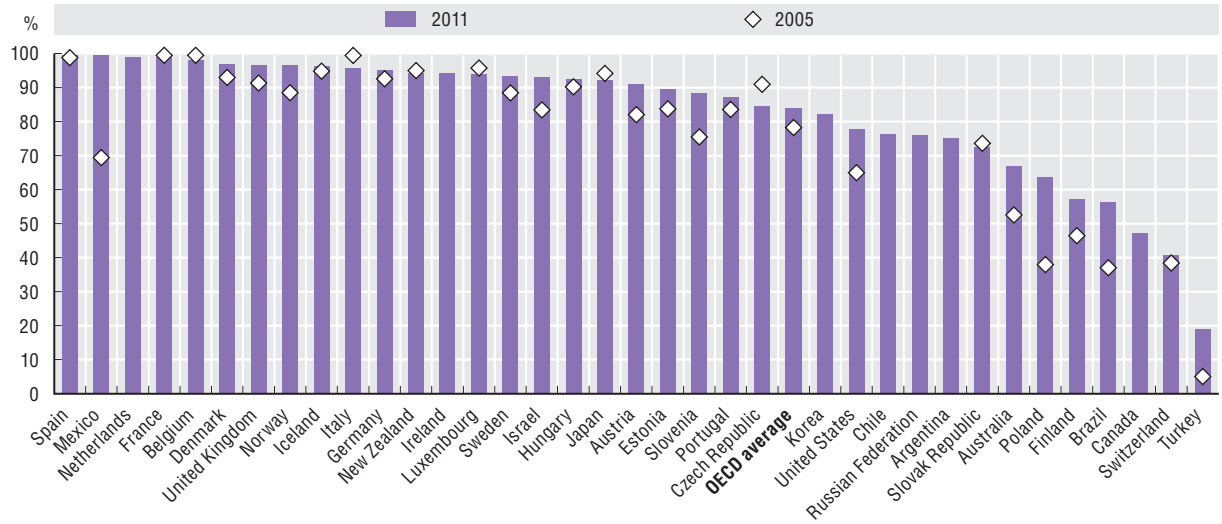
Further reading from OECD

PISA Volume II.

Starting Strong II and III: Early Childhood Education and Care, 2006, and 2011.

Figure 1.5. **Enrolment rates at age 4 in education (2005, 2011)**

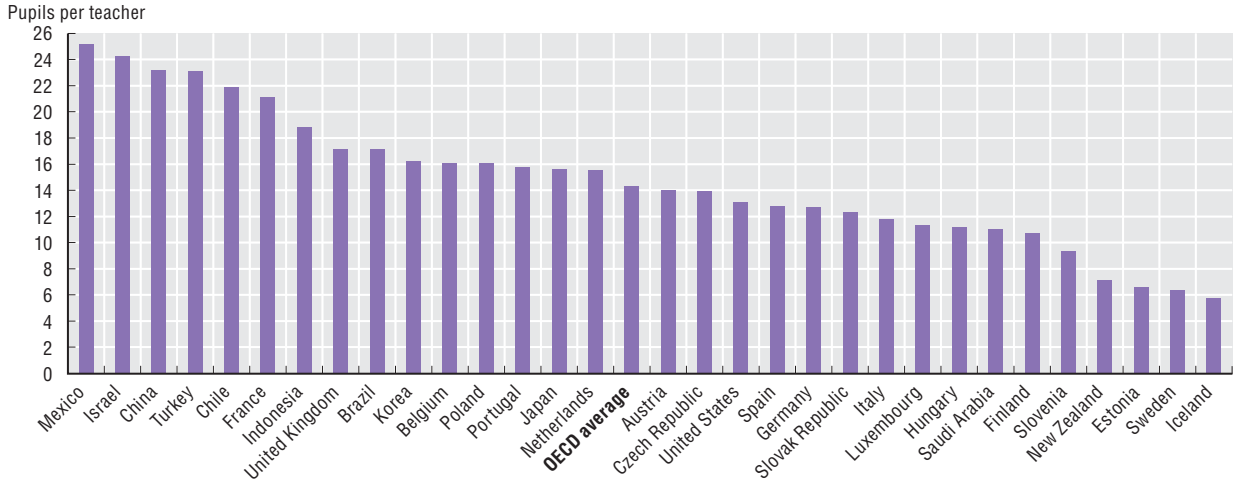
This figure compares the 2005 and 2011 enrolment rates of full-time and part-time pupils aged 4 in public and private institutions.



Source: OECD (2013), *Education at a glance 2013*. Chart C2.1 available at *http://dx.doi.org/10.1787/888932847393*.

Figure 1.6. **Ratio of pupils to teaching staff in early childhood education, 2011**

This figure shows the number of pupils per teacher in early childhood education.



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 daycare" programmes. In some countries, the staff requirements in these two types of provision are very different.
Source: OECD (2013), *Education at a glance 2013*. Chart C2.4 available at *http://dx.doi.org/10.1787/888932847450*.

How many young people finish secondary education?

- *It is estimated that an average of 83% of today's young people in OECD countries will complete upper secondary education over their lifetimes, based on current patterns of graduation. For G20 countries, the level is 79%.*
- *Young women are now more likely than young men to graduate from upper secondary programmes in almost all OECD countries, a reversal of the historical pattern.*
- *Around 10% of upper secondary graduates in Denmark, Finland, the Netherlands and Norway are 25 or older while in Iceland the proportion is almost 20% and in Portugal it is almost 30%.*

Significance

This section shows how many students are expected to finish secondary education. Upper secondary education aims to equip students with the basic skills and knowledge necessary to enter the labour market or tertiary education and to become engaged citizens. 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 as workers are progressively required to adapt to the uncertainties of a rapidly changing global economy. Young people in OECD countries who do not finish secondary education face severe difficulties when it comes to finding work. 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 show how many students are not completing these programmes – can assist efforts to that end.

Findings

First-time upper secondary graduation rates equal or exceed 75% in 23 of 29 countries with available data. In Denmark, Finland, Germany, Japan, Korea, the Netherlands, Norway, Slovenia and the United Kingdom, graduation rates equal or exceed 90%. Graduation rates for women now average 86% compared with 79% for men.

On average across OECD countries, students graduate for the first time at upper secondary level at the age of 20. However, this age varies between countries: from 17 years-old in Israel, Turkey and the United States to 22 or older in Finland, Iceland, Norway and Portugal.

Traditionally, more men have graduated from pre-vocational and vocational programmes than women and this is still true today. On average, graduation rates from these programmes are higher for men than for women by 4 percentage points with a graduation rate of 49% for men compared with 45% for women. Yet, more young women are graduating from vocational programmes than ever before. In Australia, Belgium, Brazil, Chile, China, Finland, Iceland, Ireland, the Netherlands, Portugal and Spain, graduation rates for women are now higher than those for men.

Gender differences are also apparent in young people's choice of field of study when pursuing vocational education. Engineering, manufacturing and construction are by far the most popular fields of study for boys, as 49% of boys in vocational programmes at the upper secondary level choose these topics; this figure reaches 70% in the Czech Republic, Estonia, Hungary and Norway. Girls on the other hand tend to be more dispersed among social sciences, business and law (26% all together), health and welfare (17%) and services (17%)

Trends

Since 1995, upper secondary graduation rates have increased by an average of eight percentage points among OECD countries with comparable data. The greatest increase occurred in Mexico, which showed an annual growth rate of 4% between 2000 and 2011.

Definitions

Data refer to the 2010-11 academic year and are based on the UOE data collection on education statistics administered by the OECD in 2012.

Data on trends in graduation rates at upper secondary level for the years 1995 and 2000 through 2004 are based on a special survey carried out in January 2007.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

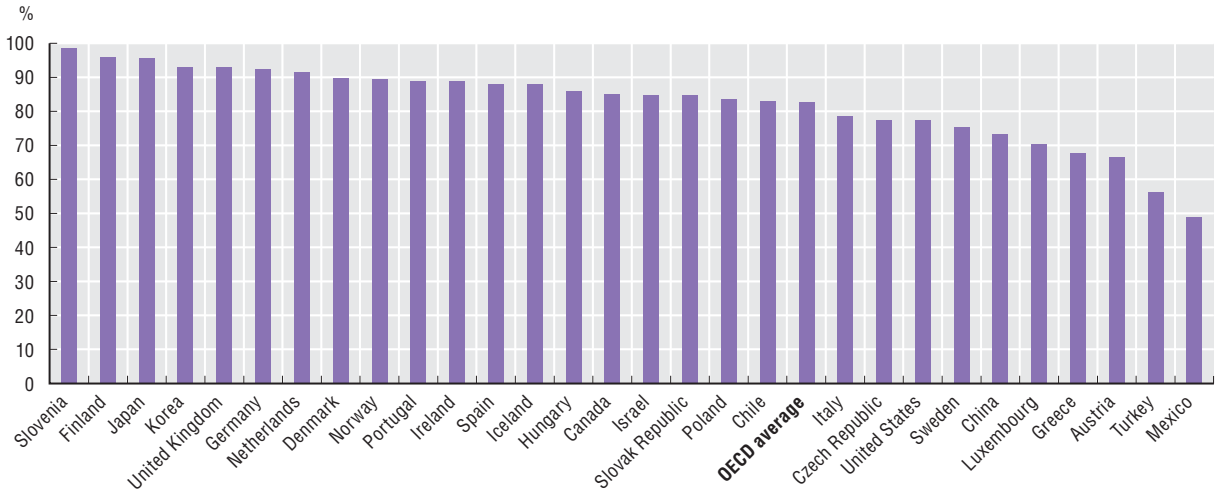
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator A2).

Areas covered include:

– Current upper secondary graduation rates and trends.

Figure 1.7. **Upper secondary graduation rates, 2011**

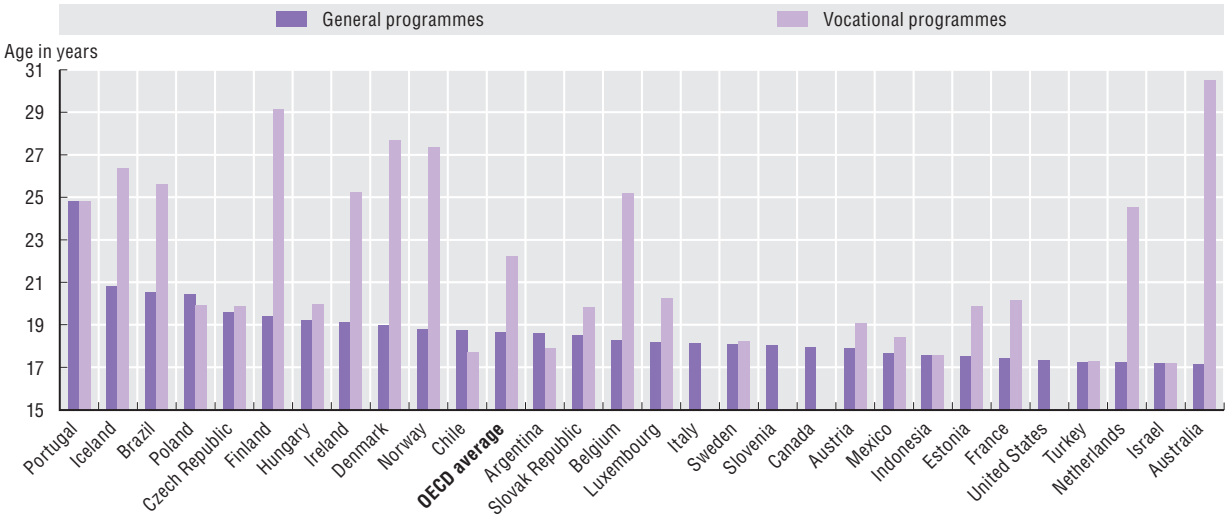
This figure shows the percentage of students who enter an upper secondary programme for the first time and who graduate from it in the amount of time normally allocated for completing the programme.



Source: OECD (2013), *Education at a Glance 2013*, Table A2.1a, available at *http://dx.doi.org/10.1787/888932848210*.

Figure 1.8. **Average age of upper secondary graduates, 2011**

This figure shows the average age of students who successfully complete an upper secondary programme.



Source: OECD (2013), *Education at a Glance 2013*, Chart A2.2, available at *http://dx.doi.org/10.1787/888932846329*.

2. HIGHER EDUCATION AND WORK

How many young people enter tertiary education?

How many young people graduate from tertiary education?

How many students fail to graduate?

How successful are students in moving from education to work?

How many students study abroad and where do they go?

How many young people enter tertiary education?

- *Some 60% of young adults in OECD countries are expected to enter university-level programmes over their lifetimes; however only 3% are expected to enter advanced research programmes.*
- *Almost half of young adults in OECD countries will enter university-level programmes before the age of 25.*
- *Entry rates into university-level programmes are still higher for women (67%) than for men (53%) on average across OECD countries. But in advanced research programmes the gender gap almost disappears.*

Significance

This section shows how many students are expected to enter a specific type of tertiary education programme during their lifetimes. It also sheds light on the accessibility and perceived value of tertiary programmes, and provides some indication of the degree to which a population is acquiring the high-level skills and knowledge valued by today's labour market. High entry and enrolment rates in tertiary education imply that a highly educated labour force is being developed and maintained.

Findings

It is estimated that 60% of young adults in OECD countries will enter university-level programmes during their lifetimes if current patterns of entry continue. In several countries, at least 70% of young adults are expected to enter these programmes, while less than 35% are expected to do so in Belgium and Mexico. This is also true of China and Indonesia among other G20 countries.

However, the numbers are somewhat different if international students who come to a country to study are excluded, with a gap as high as 27 percentage points in the case of Australia. Only in Poland and Slovenia does the entry rate remain at around 70% if international students are excluded.

Roughly 3% of today's young adults in OECD countries are expected to enter advanced research programmes during their lifetimes. The proportions range from less than 1% in, Chile, Mexico, Spain and Turkey, to around 5% in Germany, Slovenia and Switzerland.

It is estimated that an average of 19% of today's young adults (20% of women and 18% of men) will enter vocational programmes over their lifetimes. Proportions range from less than 5% in Iceland, Indonesia, Mexico, Poland and the Slovak Republic, to more than 35% in Belgium, Korea and New Zealand, and above 50% in Argentina and Chile.

On average across OECD countries, 81% of all first-time entrants into university-level programmes and 62% of first-time entrants into vocationally oriented programmes in 2011 were under 25 years of age. In addition, 56% of students who entered advanced research programmes in 2011 were under 30 years of age.

The most popular fields of education chosen by new entrants into tertiary programmes are social sciences, business and law in all countries except Finland and Korea, and Saudi Arabia among other G20 countries.

Trends

The proportion of students entering university-level education increased by more than 20 percentage points, on average in OECD countries between 1995 and 2011, while entry rates into vocationally oriented tertiary programmes remained stable. This rise is due to the increased accessibility of tertiary education in many countries, but also because of structural changes in the education systems of some countries. Entry rates for tertiary programmes have also increased because the source of applicants has expanded to include many more international and older students.

Definitions

Data refer to the academic year 2010-11 and are based on the UOE data collection on education statistics administered by the OECD in 2012. Data on trends in entry rates for the years 1995, 2000 through 2004 are based on a special survey carried out in OECD countries in January 2007. Data on the impact of international students on tertiary entry rates are based on a special survey carried out by the OECD in December 2012. The net entry rate for a specific age is obtained by dividing the number of entrants of that age to each type of tertiary education by the total population in the corresponding age group.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

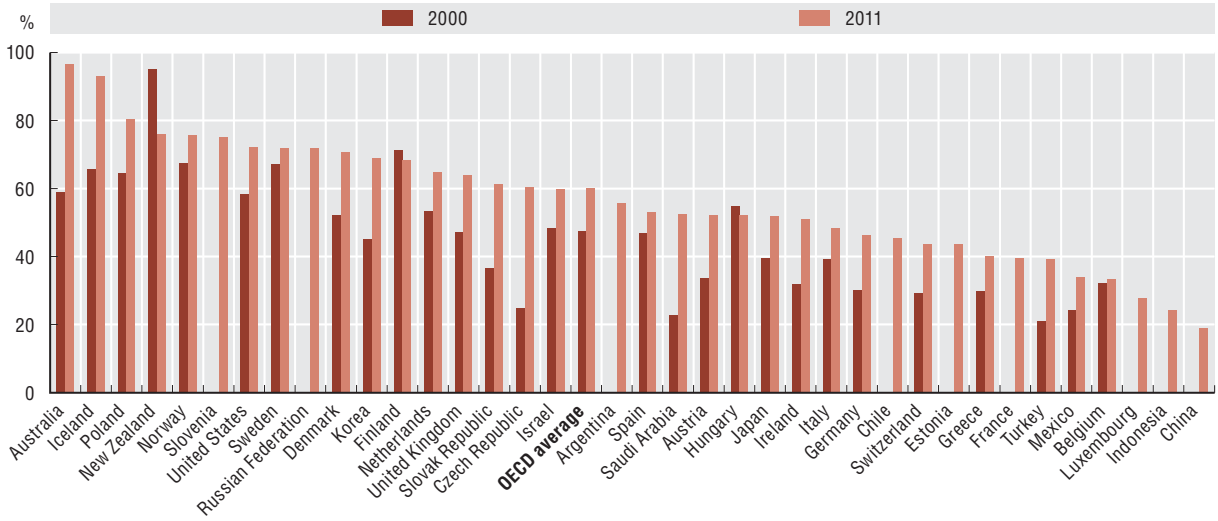
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator C3).

Areas covered include:

- Entry rates by level of education.
- Age of new entrants in tertiary education.
- Distribution by gender of new entrants.

Figure 2.1. **Entry rates into university-level education (2000, 2011)**

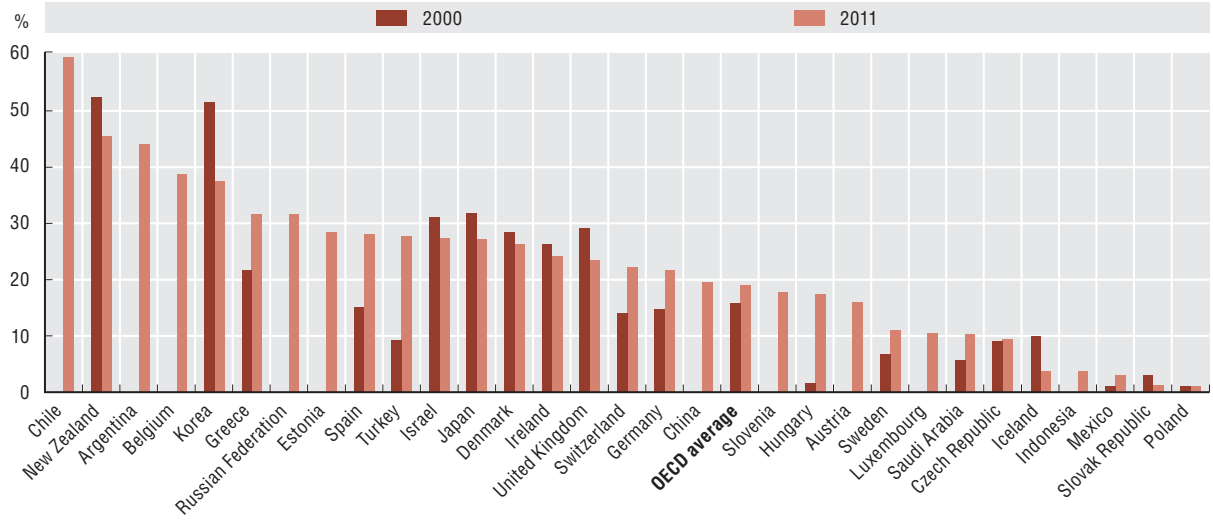
These figures show the growth – or otherwise – in the percentage of young people entering university-level education. Entry rates have risen in most OECD countries.



Source: OECD (2013), *Education at a Glance 2013*, Chart C3.2 , available at *http://dx.doi.org/10.1787/888932847488*.

Figure 2.2. **Entry rates into vocationally oriented tertiary education (2000, 2011)**

These figures show the percentage of young people entering vocationally oriented tertiary education in 2000 and 2011.



Source: OECD (2013), *Education at a Glance 2012*, Chart C3.2, available at *http://dx.doi.org/10.1787/888932847488*.

How many young people graduate from tertiary education?

- *Some 40% of today's young adults in OECD countries are expected to complete university-level education over their lifetimes, based on current patterns of graduation.*
- *About 11% of today's young adults in OECD countries are expected to complete vocationally oriented education over their lifetimes.*
- *A student in an OECD country obtains his/her first university-level degree at the age of 27 on average, with ages ranging from 24 in the United Kingdom to 29 or more in Finland, Iceland, Israel and Sweden.*

Significance

Tertiary education rates indicate a country's capacity to equip future workers with advanced and specialised knowledge and skills. People have strong incentives to obtain a tertiary education in OECD countries, including higher salaries and better employment prospects. Tertiary education varies widely in structure and scope between countries, and graduation rates are influenced both by the ease of access to these programmes, flexibility in completing them and the demand for higher skills in the labour market. Expanding access to and improving the quality of tertiary education are vital to knowledge-based economies, but these objectives are even more difficult to achieve when budgets are tight.

Findings

Some 40% of young people, on average across the 28 OECD countries with comparable data, will graduate from university-level programmes during their lifetimes, based on 2011 patterns of graduation. The proportion ranges from less than 25% in Chile, Mexico and Turkey, to 50% or more in Australia, Denmark, Iceland, New Zealand, Poland and the United Kingdom.

Most graduates at all levels of tertiary education are women, except at the doctoral level. An estimated 48% of today's young women and 32% of today's young men on average in OECD countries will complete university-level education over their lifetimes, based on current patterns of graduation.

Some 1.6% of young people today are expected to complete advanced research programmes on average across OECD countries, up from 1.0% in 2000. Countries with the highest increase in advanced research graduation rates are Denmark, Ireland, New Zealand, the Slovak Republic and the United Kingdom, where graduation rates increased by at least 1 percentage point from 2000 to 2011. China had a graduation rate of 2.2% in 2011 – above the OECD average.

International students represent a significant share of tertiary graduates in a number of countries. In Australia, Austria, New Zealand, Switzerland and the United Kingdom, at least 10% of students graduating with a first degree in tertiary education are international students.

Trends

University-level graduation rates have risen by 20 percentage points on average across OECD countries with available data over the past 16 years, while rates for vocationally oriented tertiary programmes have remained stable. Doctorates represent only a small proportion of tertiary programmes but the graduation rate has doubled over the past 16 years.

Definitions

Data are for the 2010-11 academic year and are based on the UOE data collection on education statistics administered by the OECD in 2012. Data on the impact of international students on tertiary graduation rates are based on a special survey conducted by the OECD in December 2012.

Tertiary graduates are those who obtain a university degree, vocational qualifications, or advanced research degrees of doctorate standard. Net graduation rates represent the estimated percentage of an age group that will complete tertiary education over their lifetimes, based on current patterns of graduation.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator A3).

Areas covered include:

– Graduation rates by qualification level and by gender.

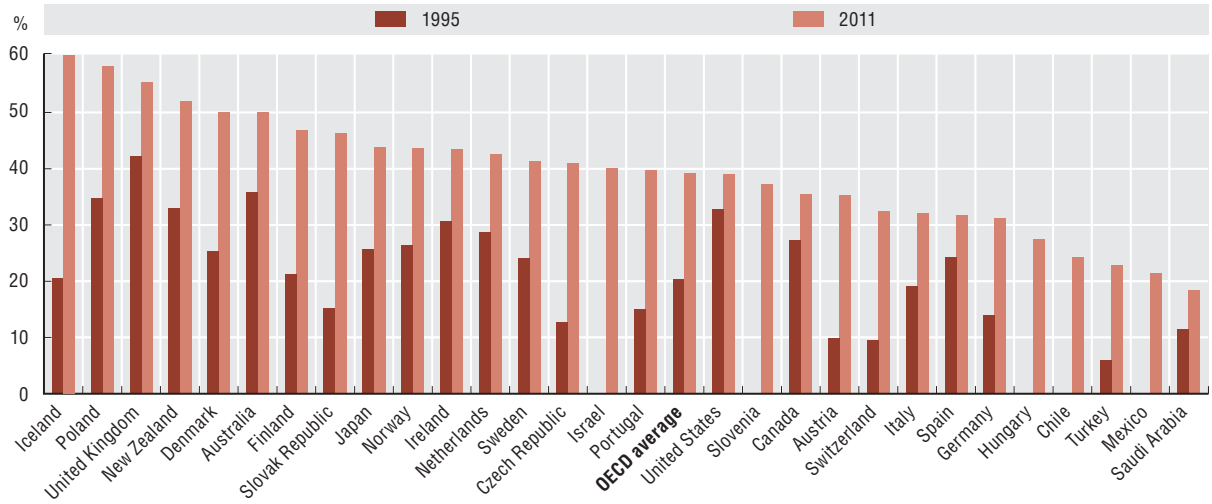
Further reading from OECD

Higher Education Management and Policy (journal)

OECD Reviews of Tertiary Education (series of national reviews)

Figure 2.3. **First-time graduation rates from university-level education (1995, 2011)**

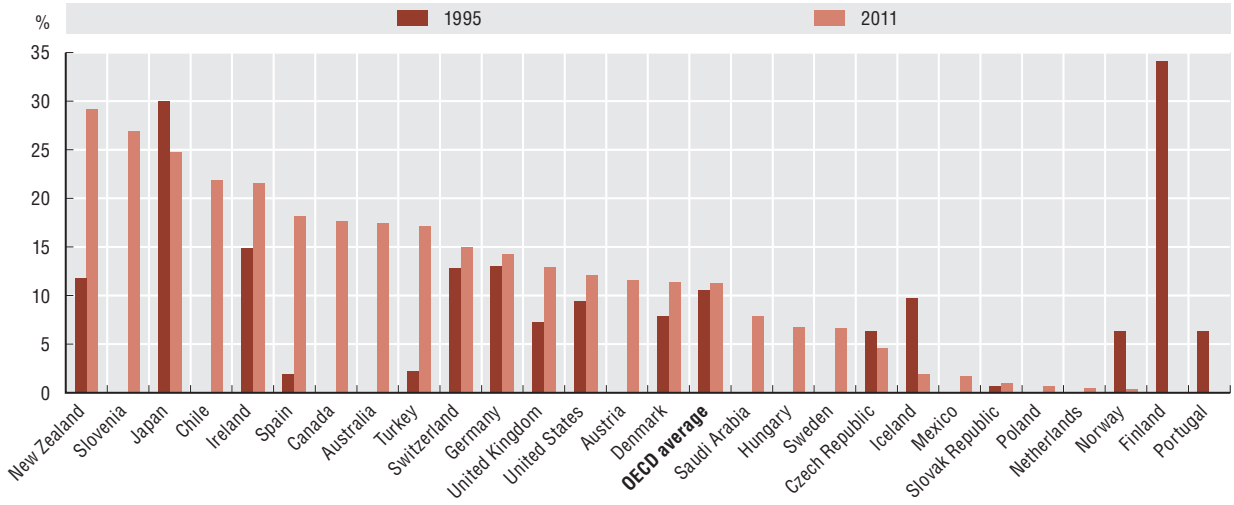
These figures show the growth in the percentage of first-time graduates from university-level education.



Source: OECD (2013), *Education at a Glance 2013*, Chart A3.2, available at *http://dx.doi.org/10.1787/888932846386*.

Figure 2.4. **First-time graduation rates from vocationally oriented education (1995, 2011)**

These figures show the growth or decline in the percentage of first-time graduates from vocationally oriented tertiary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart A3.2, available at *http://dx.doi.org/10.1787/888932846386*.

How many students fail to graduate?

- *About 70% of students who enter a tertiary programme graduate with a first degree at this level on average across OECD countries with available data.*
- *Women enrolled in university-level programmes are more likely than men to earn a tertiary degree at the end of the programme: their completion rate is on average 10 percentage points higher than men's.*
- *Full-time students have a better chance of graduating than part-time students, but there is no clear relationship between the level of tuition fees and the number of students who complete their degree.*

Significance

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 inefficiency, as students may leave a tertiary programme for a variety of reasons: they may realise that they have chosen a subject or programme that is not a good fit for them; they may fail to meet the standards set by their educational institution; or they may find attractive employment opportunities before completing the programme. Low completion rates (i.e. high drop-out rates) may indicate, on the other hand, that the education system is not meeting students' needs.

Findings

On average across the OECD, some 70% of students who enter a university programme complete a first degree, although there are differences between countries. In Hungary, New Zealand, Norway, Sweden and the United States, less than 60% of students who enter a tertiary programme graduate with a first degree at this level; while in Australia, Denmark, Finland, France, Japan and Spain, more than 75% do.

Average vocational programme completion rates (61%) are somewhat lower than average university-level completion rates, but range from 75% or higher in Germany, Japan and the Slovak Republic to 18% in the United States.

Full-time students have a better chance of graduating from their programmes than part-time students. The largest difference between full-time and part-time students is observed in New Zealand, where completion rates for full-time students who enter university-level programmes are 34 percentage points higher than those for students with part-time status.

Students may choose to leave the education system before graduating because, in some countries, they will be offered attractive job opportunities after just one year of study. Similarly, some mature students who enter tertiary education, such as those in New Zealand and Sweden, do not intend to graduate from a specific programme, but rather choose to study a few courses as part of lifelong learning or upskilling.

There is no clear relationship between the amount of tuition fees charged by university-level institutions and completion rates. Tuition fees in Australia, Japan, the Netherlands and the United Kingdom amount to more than USD 1 500 and completion rates score significantly higher than the OECD average of 70%. Denmark and Finland do not charge tuition fees and provide a high level of public subsidies for students, but they also have completion rates of more than 75%.

Definitions

Data on completion rates were collected through a special survey undertaken in 2012. Completion rates are the proportion of new entrants into a specified level of education who graduate with at least a first degree at this level. The completion rates are calculated as the proportion of graduates among a given entry cohort. Non-completion rates refer to the number of students who leave the specified level of education without graduating with a first qualification at that level.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator A4).

Areas covered include:

- Consequences of non-completion.
- Interaction between entry, graduation and completion rates.

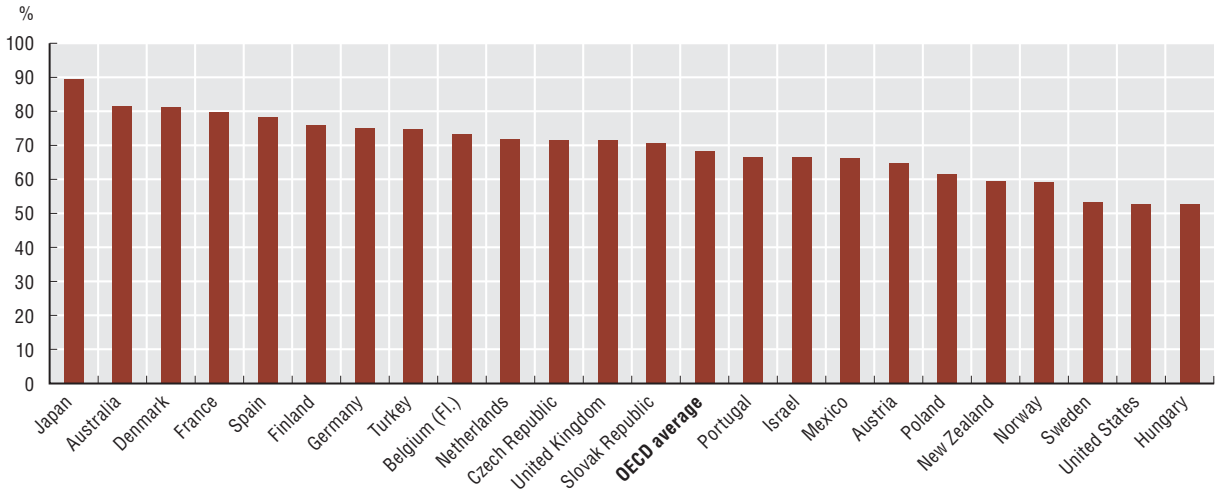
Further reading from OECD

Higher Education Management and Policy (journal)

OECD Reviews of Tertiary Education (series of national reviews)

Figure 2.5. **Successful completion of tertiary programmes, 2011**

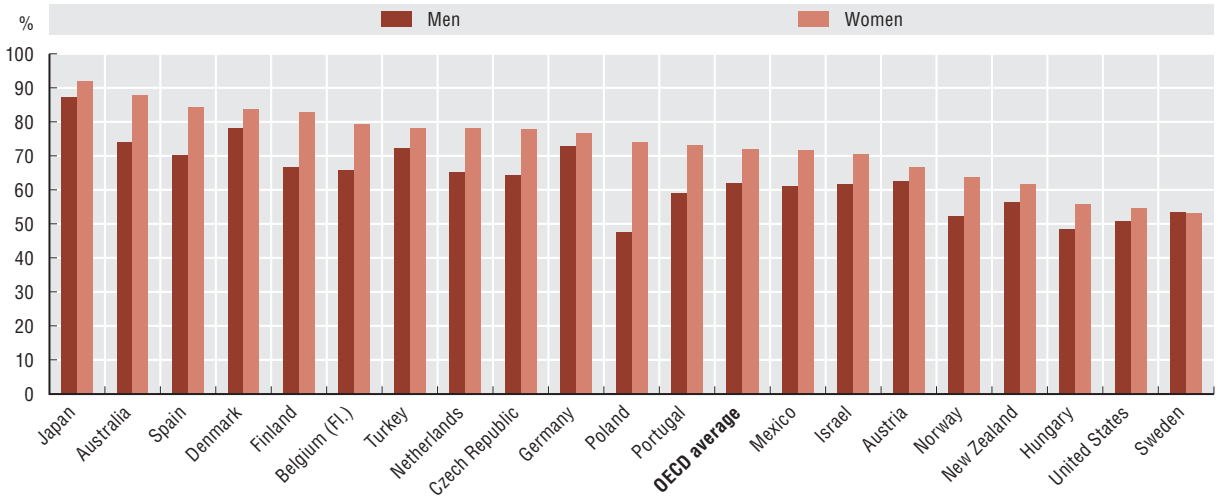
These figures show the percentage of students who enter tertiary education programmes and graduate with at least a first degree at this level, in the amount of time normally allocated for completing the programme.



Source: OECD (2013), *Education at a Glance 2013*, Chart A4.1, available at *http://dx.doi.org/10.1787/888932846424*.

Figure 2.6. **Successful completion of tertiary programmes by gender, 2011**

These figures show the percentage of students who enter and successfully complete a tertiary programme, by gender.



Source: OECD (2013), *Education at a Glance 2013*, Chart A4.1, available at *http://dx.doi.org/10.1787/888932846424*.

How successful are students in moving from education to work?

- *On average across OECD countries, 16% of people aged 15-29 are not employed or in education and training (NEET); women are more likely to be NEET than men.*
- *The proportion of 15-29 year-olds no longer in education who had a job shrank from 41% in 2008 to 37% in 2011, on average across OECD countries.*
- *On average across OECD countries, almost 30% of 15-29 year-olds working part time would like to work more.*

Significance

This section illustrates the difficulty of moving from education to work for the younger generation today. During recessionary periods, high general unemployment rates make the transition from school to work substantially more difficult for young people, as those with more work experience are favoured over new entrants into the labour market. This section looks at the number of years young people can be expected to spend in education, employment and non-employment. To improve the transition of young people from school to work, regardless of the economic climate, education systems should work to ensure that people have skills that match the requirements of the labour market, and to minimise the proportion of young adults who are neither in school nor in work.

Findings

On average across OECD countries in 2011, 47% of 15-29 year-olds were in education. Of the remaining 53%, 37% held a job, 7% were unemployed, and 9% were outside of the labour force. Unemployment levels are particularly worrying in Greece (14.6%) and Spain (17.0%), as is inactivity among young people in those countries (7.1% for Greece and 7.5% for Spain).

A typical 15-year-old in an OECD country in 2011 could expect to spend about 7.1 additional years in formal education, compared to 6.8 years in 2007. In addition, before turning 30, he/she could expect to hold a job for 5.6 years, to be unemployed for a total of 1 year, and to be inactive – that is, neither in education nor seeking work – for 1.4 years.

Women between 15 and 29 years old were twice as likely as men of that age to be inactive. During that period, they could expect to be completely out of the labour force for 1.9 years, compared to 0.9 years for men.

On average across OECD countries, in 2011, 14% of 25-29 year-olds who had not completed upper secondary education were unemployed, compared with 8% of those who had completed upper secondary or post-secondary non-tertiary education, and 6% of 25-29 year-olds who had completed tertiary education.

Trends

Efforts by governments to raise people's level of education have led to significant changes in educational participation. In 2000, an average of 41% of 15-29 year-olds in OECD countries were in education; by 2011, that proportion had risen to 47%. While the percentage of individuals in education increased steadily between 2000 and 2011, trends in youth employment have been marked by two periods of large drops: between 2000 and 2003 (-3.3 percentage points) and between 2008 and 2011 (-3.7 percentage points). These decreases in youth employment coincided with the burst of the so-called "Internet bubble" (2000-03) and the burst of the real estate bubble in 2008. The proportion of 15-29 year-olds neither employed nor in education or training (NEET) remained stable at around 15% between 2000 and 2011.

Definitions

Data are collected as part of the annual OECD Labour Force Survey, and usually refer to the first quarter, or the average of the first three months of the calendar year, thereby excluding summer employment. For certain European countries, the data come from the annual European Labour Force Survey.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (indicator C5).

Areas covered include:

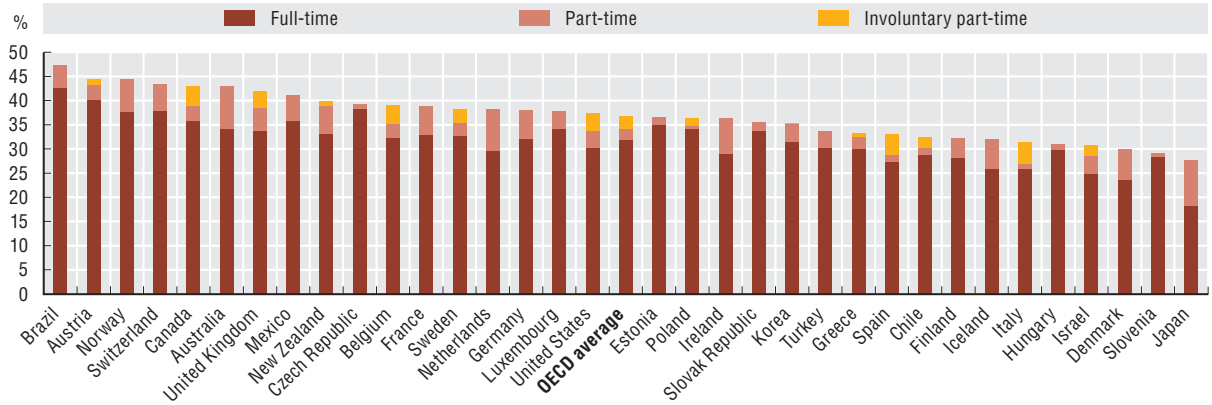
- Expected years in education and not in education for 15-29 year-olds, as well as trends and gender differences.
- Transition from school to work for different age groups.
- Voluntary/involuntary part-time work.

Further reading from OECD

Better Skills, Better Jobs, Better Lives (2012)

Figure 2.7. **Full-time and part-time work for young people not in education, 2011**

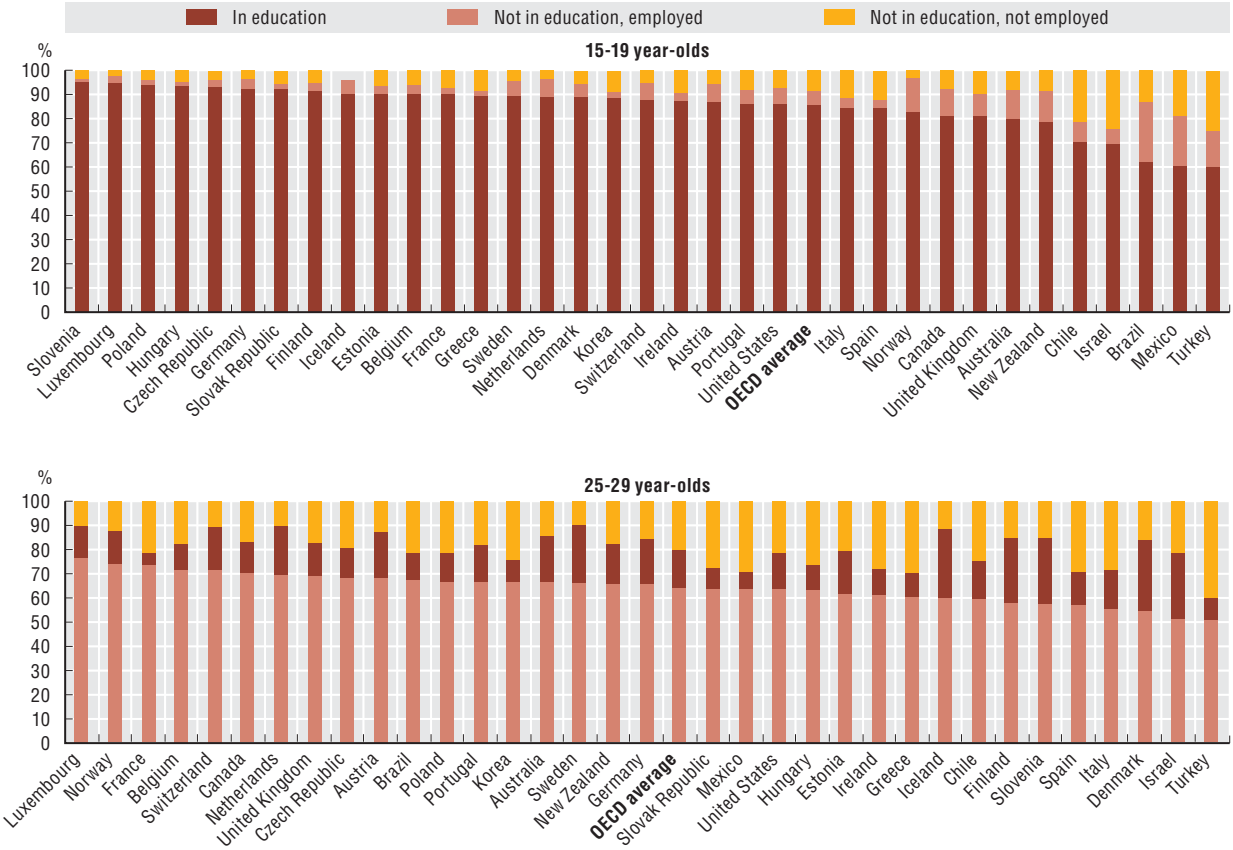
This figure shows the proportion of 15-29 year-olds no longer in education in full-time and part-time work, and how many would rather work full-time.



Source: OECD (2013), *Education at a Glance 2013*, Chart C5.1, available at *http://dx.doi.org/10.1787/888932847640*.

Figure 2.8. **Education and employment among young people, 2011**

These figures show the distribution of education and work status among young adults, by age group. Young adults leaving school and entering a difficult labour market are more likely to become unemployed or fall outside the labour force entirely.



Source: OECD (2013), *Education at a Glance 2013*, Table C5.4a, available at *http://dx.doi.org/10.1787/888932851117*.

How many students study abroad and where do they go?

- *Nearly 4.3 million students are enrolled in university-level education outside their home country. Australia, the United Kingdom, Switzerland, New Zealand and Austria have, in descending order, the highest percentage of international students.*
- *Asian students represent 53% of foreign students enrolled worldwide. The largest numbers of foreign students are from China, India and Korea.*
- *OECD countries receive more international students than they send abroad for tertiary education. Almost three times as many foreign students are enrolled in tertiary education in OECD countries as there are OECD citizens studying abroad.*
- *Some 83% of all foreign students are enrolled in G20 countries, while 77% are enrolled in OECD countries. These proportions have remained stable during the past decade.*

Significance

This section looks at the extent to which students are studying abroad and their preferred destinations. Pursuing higher-level education in a foreign country allows students to expand their knowledge of other societies and languages, and thus improve their prospects in globalised sectors of the labour market. Beyond its social and educational effects, studying abroad has a considerable economic impact. For host countries, enrolling international students can not only help raise revenues from higher education, but can also be part of a broader strategy to recruit highly skilled immigrants.

Findings

OECD countries attract three out of four students studying abroad, with Australia, Canada, France, Germany, the United Kingdom and the United States together receiving more than 50% of all foreign students worldwide.

In terms of geographical area, Europe is the top destination for tertiary level students enrolled outside their country of origin, hosting 48% of these students, followed by North America, which hosts 21% of all international students. The number of international students in Oceania has tripled since 2000, although this region hosts less than 10% of all foreign students. Other regions, such as Asia, Latin America and the Caribbean, are also seeing growing numbers of international students, reflecting the internationalisation of universities in an increasing number of countries.

International students from OECD countries mainly come from Canada, France, Germany, Italy, Japan, Korea, the Slovak Republic, Turkey and the United States. In the 21 European countries that are members of the OECD, there were 2.7 foreign students per European citizen enrolled abroad.

International students represent 10% or more of the enrolments in tertiary education in Australia, Austria, New Zealand, Switzerland and the United Kingdom. They also account for more than 30% of enrolments in advanced research programmes in Australia, the Netherlands, New Zealand, Switzerland, and the United Kingdom.

Trends

Over the past three decades, the number of students enrolled outside their country of citizenship has risen dramatically, from 0.8 million worldwide in 1975 to 4.3 million in 2011, a more than fivefold increase. During the 2000-11 period, the number of foreign tertiary students enrolled worldwide more than doubled, with an average annual growth rate of almost 7%. In OECD countries, the number of foreign students enrolled at the tertiary level mirrored the global trend.

Definitions

Data on international and foreign students refer to the academic year 2010-11 unless otherwise indicated and are based on the UOE data collection on education statistics administered by the OECD in 2012. Additional data from the UNESCO Institute for Statistics are also included, although the year of reference is 2010. Students are classified as "international" if they left their country of origin and moved to another country to study. Students are classified as "foreign" if they are not citizens of the country in which they are studying. This latter category includes some students who are permanent residents, albeit not citizens, of the countries in which they are studying (for example, young people from immigrant families).

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

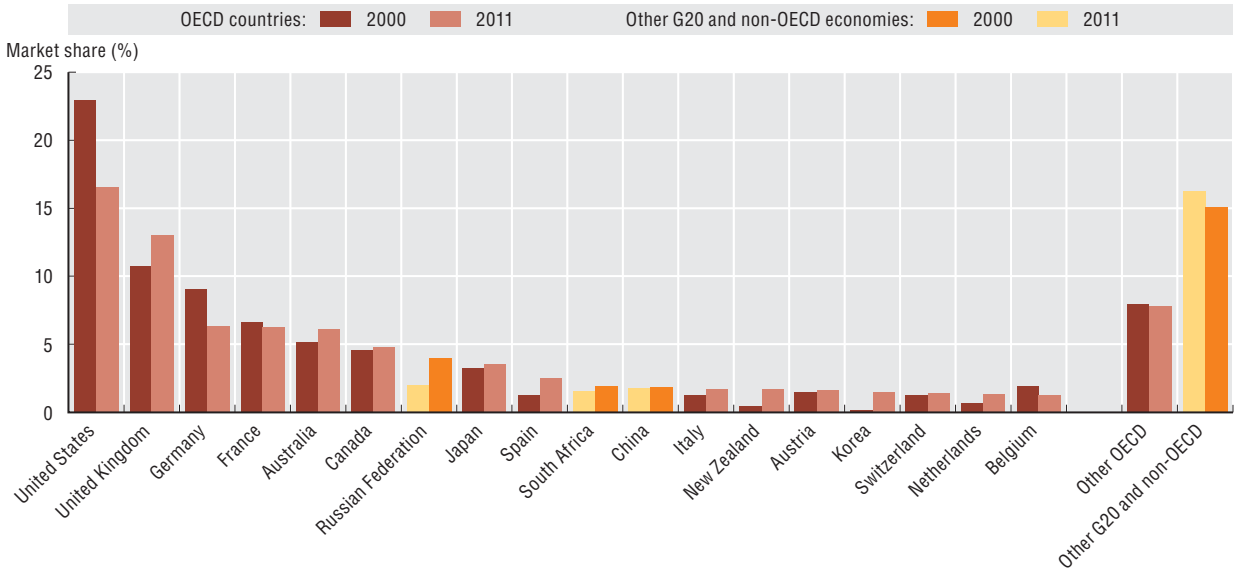
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator C4).

Areas covered include:

- Distribution of students by country of origin and destination.
- Trends in the numbers of students studying abroad.

Figure 2.9. **Trends in international education market shares (2000, 2011).**

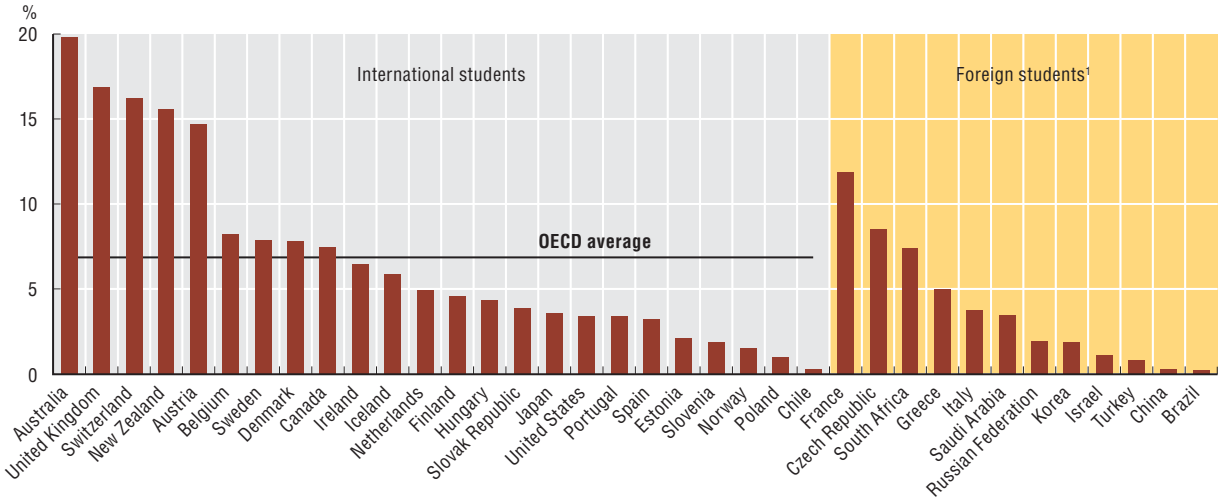
This figure shows the distribution of foreign and international students in tertiary education, by destination.



Source: OECD (2013), *Education at a Glance 2013*, Chart C4.3, available at *http://dx.doi.org/10.1787/888932847583*.

Figure 2.10. **Student mobility in tertiary education, 2011**

This figure shows the percentage of international students at the tertiary level in each country.



1. 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 chart.

Source: OECD (2013), *Education at a Glance 2013*, Chart C4.4 available at *http://dx.doi.org/10.1787/888932847602*.

3. THE ECONOMIC AND SOCIAL BENEFITS OF EDUCATION

How much more do tertiary graduates earn?

How does education affect employment rates?

What are the incentives to invest in education?

What are the health benefits of education?

How much more do tertiary graduates earn?

- *Earnings tend to rise in line with people's level of education, in all OECD countries.*
- *People with higher (tertiary) education in OECD countries can expect to earn 1.5 times as much as a person with only an upper secondary or post-secondary non-tertiary education.*
- *The difference in earnings between younger and older workers increases with educational attainment, on average across OECD countries, benefitting more educated older workers.*
- *Men earn more than women at all levels of education, but the largest gap is among individuals with tertiary education, where women earn 72% as much as men.*

Significance

This section examines the relative earnings of workers with different levels of education. Higher levels of skills usually translate into better chances of employment and higher earnings. Differences in pre-tax earnings between educational groups provide a good indication of supply and demand for education. Combined with data on earnings over time, these differences provide a strong signal of whether education systems are meeting the demands of the labour market.

Findings

Educational attainment is strongly linked to average earnings. Adults with university-level education earn more than twice as much as adults with upper secondary or post-secondary non-tertiary education in Brazil, Chile and Hungary. At the other end of the education scale, individuals with below upper secondary education face large earnings disadvantages in all countries. In Brazil, Greece and the United States they generally earn less than 65% of what people with upper secondary or post-secondary non-tertiary education earn.

More education does little to narrow the gender gap in earnings. The gap is smallest among those with upper secondary and post-secondary non-tertiary education, and largest among those with tertiary education. Women with tertiary education earn 75% or more of men's earnings in only six countries: Austria, Belgium, Finland, New Zealand, Slovenia and Spain; in Brazil, Chile and Estonia, women who have obtained a tertiary degree earn 65% or less of what tertiary-educated men earn.

The earnings advantage from education increases with age; relative earnings for tertiary-educated 55-64 year-olds are 16 percentage points higher than those of all adults with tertiary education (25-64 year-olds) on average. At the other end of the educational scale, the earnings disadvantage for those with below upper secondary education increases with age in all countries except Australia, Denmark, Estonia, Finland, Germany, Luxembourg, Norway, the Slovak Republic, Sweden and the United Kingdom.

Age also narrows the gender gap in wages for women with an upper secondary or post-secondary non-tertiary education. These women can expect to earn 79% as much as a man in the same age group when they are 55 to 64 years old.

Trends

Between 2000 and 2011, the relative earnings of adults with below upper secondary education decreased in most OECD countries with a few exceptions – Germany, Hungary and Switzerland. On the other hand, in most OECD countries, including Belgium, Germany, Hungary, Switzerland and the United States, relative earnings for adults with tertiary education increased. These differences suggest that the demand for young professionals with tertiary education has kept up with the increasing supply from higher educational institutions in most OECD countries – and that individuals with lower levels of skills are more vulnerable today.

Definitions

Earnings data differ across countries in a number of ways, including whether they are reported annually, monthly or weekly. Thus results shown here should be interpreted with caution. 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.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator A6).

Areas covered include:

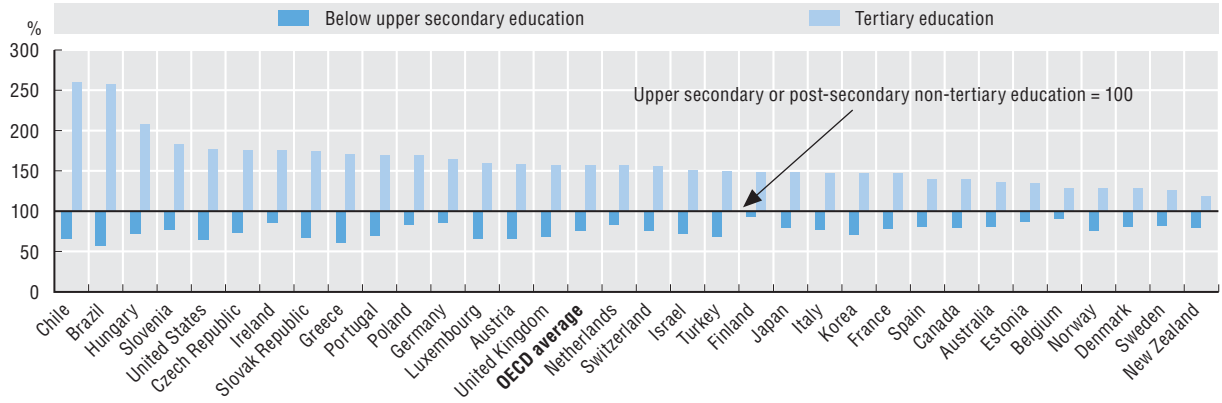
- Trends in relative earnings of the population.
- Differences in earnings by gender and age.
- Differences in earnings distribution according to educational attainment.

Further reading from OECD

Better Skills, Better Jobs, Better Lives (2012).

Figure 3.1. **Relative earnings by level of education, 2011**

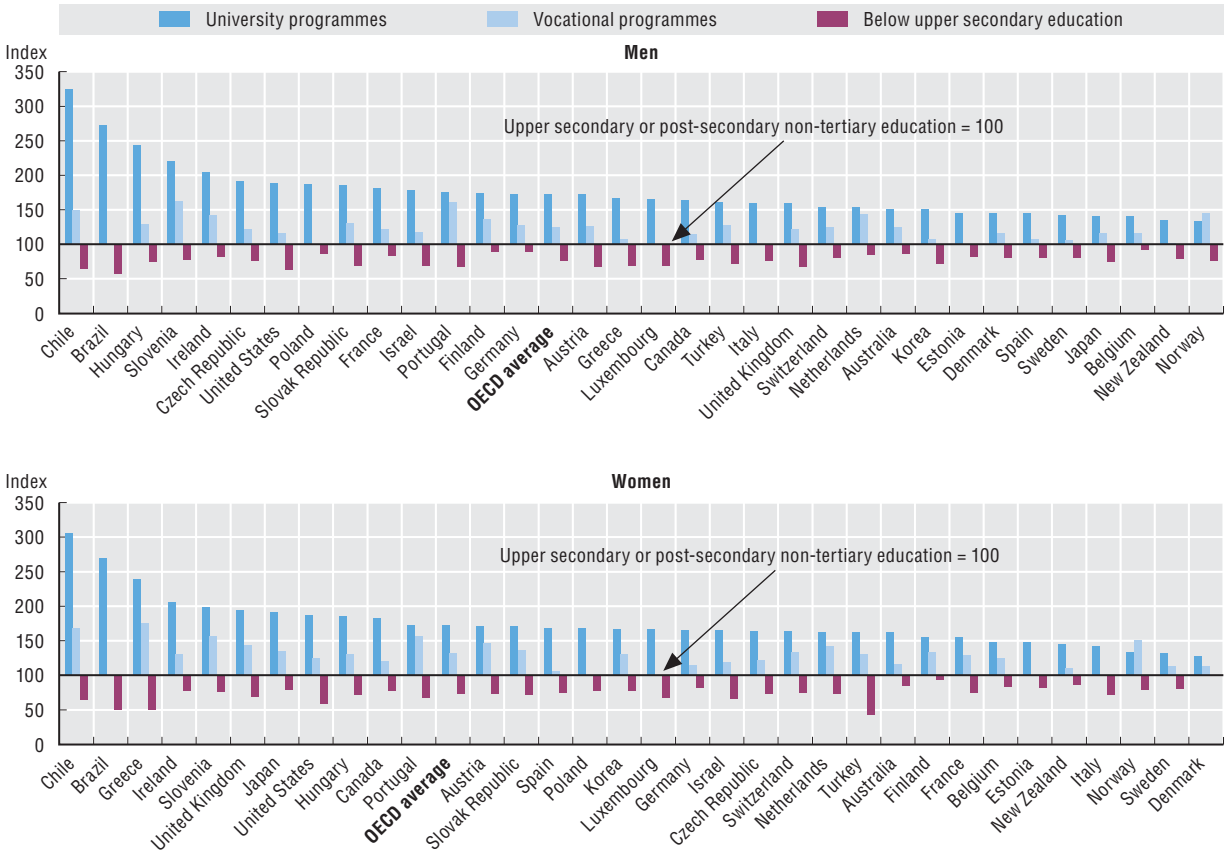
This figure compares earnings between the different levels of educational attainment among 25-64 year-old workers, using upper secondary and post-secondary non-tertiary education as a baseline (the line labelled 100 in the left-hand scale on the graph).



Source: OECD (2013), *Education at a Glance 2013*, Chart A6.1, available at *http://dx.doi.org/10.1787/888932846557*.

Figure 3.2. **Relative earnings by level of education and gender, 2011**

This figure compares earnings between the different levels of educational attainment among 25-64 year-old men and women, using upper secondary and post-secondary non-tertiary education as a baseline (the line labelled 100 in the left-hand scale on the graph).



Source: OECD (2013), *Education at a Glance 2013*, Chart A6.2, available at *http://dx.doi.org/10.1787/888932846576*.

How does education affect employment rates?

- *Across OECD countries, people with a tertiary education are more likely to have a job, and to be working full-time, than those without.*
- *Unemployment rates are nearly three times higher among people who do not have an upper secondary education (13% on average across OECD countries) than among those who have a tertiary education (5%).*
- *People with at least an upper secondary education are more likely to have a job than those without this level of education.*
- *Men generally have higher employment rates than women, although the gap is narrowest among tertiary-educated individuals and widest among those without an upper secondary education.*

Significance

This section examines the relationship between education and working life. OECD countries depend upon a sufficient supply of well-educated workers to promote economic development. Data on employment and unemployment rates thus carry important information for policy makers about how well the supply of skills matches demand. These data also help governments better understand how economies may evolve in the coming years and help them ensure that the students of today are better prepared for the jobs of tomorrow.

Findings

Education has a substantial impact on employment prospects. On average across OECD countries, over 80% of the population with tertiary education is employed. The OECD average falls to over 70% for people with upper secondary or post-secondary non-tertiary education and to less than 60% for those without an upper secondary education. The probability of working full time also increases with the level of education. Some 64% of people with below upper secondary education work full time, compared with 75% of people with a tertiary education.

Differences in employment rates between tertiary-educated individuals and those with lower secondary education are particularly large in the Czech Republic, Hungary, Poland, the Slovak Republic, Slovenia and the United Kingdom, where they amount to 40 percentage points or more. Across all OECD countries and education levels, the employment rate of women is far below that of men at all levels of education: only 65% of women are employed compared with 80% of men. Although the gender gap narrows as educational attainment increases, the employment rate among tertiary-educated women across OECD countries is still considerably lower than that of men – despite the fact that in 2011 a slightly higher proportion of women (33%) than men (30%) in OECD countries had received a tertiary education.

Across OECD countries, individuals with a vocationally oriented upper secondary education are more likely to be employed (76%) than those who have a general upper secondary degree (70%). They are also less likely to be unemployed (7.4%) than those with a general upper secondary degree (8.4%).

Trends

Education is generally good insurance against unemployment, even in difficult economic times. Over the past 15 years, employment rates for men and women with tertiary education have consistently been higher than for those without. Conversely, unemployment rates among lower-educated men and women have been higher than among those with tertiary education. The economic crisis only widened these gaps. People without an upper secondary or post-secondary non-tertiary education were hit hardest: between 2008 and 2011 the unemployment rate among them increased by almost 4 percentage points, from 8.8% to 12.6%.

Definitions

The employment rate refers to the number of persons in employment as a percentage of the population of working age. The unemployment rate refers to unemployed persons as a percentage of the labour force. The unemployed are defined as people without work but actively seeking employment and currently available to start work. The employed are defined as those who work for pay or profit for at least one hour a week, or who have a job but are temporarily not at work due to illness, leave or industrial action.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

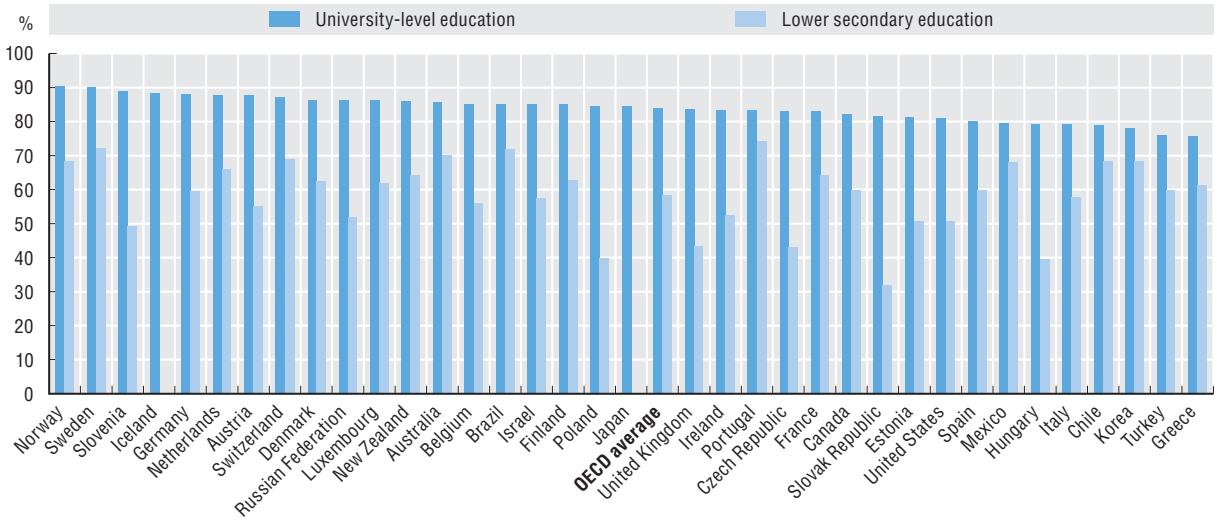
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator A5).

Areas covered include:

- Trends in employment and unemployment rates, by gender and educational attainment.
- Employment rates of individuals with vocational and general education.
- Part-time and involuntary part-time work.

Figure 3.3. **Employment rate of 25-64 year-olds, by education level, 2011**

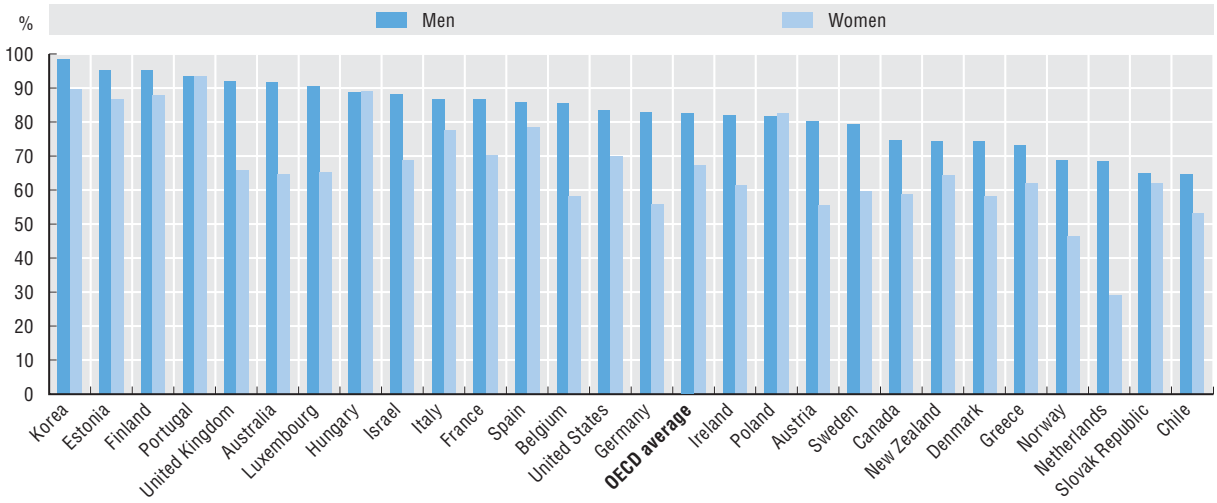
This figure shows the differences in employment rates of people according to their educational attainment.



Source: OECD (2013), *Education at a Glance 2013*, Chart A5.1 at *http://dx.doi.org/10.1787/888932846481*.

Figure 3.4. **Employment rate of 25-64 year-olds with tertiary education, by gender, 2011**

This figure shows the differences in full-time employment rates of men and women with higher levels of educational attainment.



Source: OECD (2013), *Education at a Glance 2013*, Table A5.6 at *http://dx.doi.org/10.1787/888932848837*.

What are the incentives to invest in education?

- *People invest about USD 55 000 to obtain a tertiary degree in OECD countries, but men can expect to earn USD 330 000 more in their lifetime than those without this level of education, and women USD 240 000 more.*
- *Education does not only pay off for individuals; it also contributes to the public good in the form of greater tax revenues and social contributions.*
- *The net public return on an investment in tertiary education is over USD 100 000 for men on average across OECD countries – nearly three times the amount of public investment – and around USD 60 000 for women.*

Significance

Higher educational achievement benefits both individuals and society, not only financially, but in the well-being with which it is associated. The efforts people make to continue education after compulsory schooling can be thought of as an investment with the potential to bring rewards in the form of future financial returns. Society, in turn, profits through reduced public expenditure on social welfare programmes and revenues earned through taxes paid once individuals enter the labour market.

Findings

Rewards are typically higher for those with higher levels of education. Gross earning benefits for a person with an upper secondary or post-secondary non-tertiary degree, compared to benefits for a person who has not attained this level of education, are particularly high in Austria, Norway and the United States. They amount to at least USD 250 000 for a man and USD 150 000 for a woman.

Higher education generates gross earnings benefits, compared with the income of a person with an upper secondary or post-secondary non-tertiary education, of USD 330 000 for men and USD 240 000 for women across OECD countries.

Individuals invest about USD 55 000 to obtain a tertiary degree in OECD countries. In Japan, the Netherlands, the United Kingdom and the United States, average investment exceeds USD 100 000 when direct costs such as tuition fees and indirect costs such as loss of earnings while studying are taken into account.

With few exceptions, rewards are higher for individuals who attain tertiary education than those without. Only in Denmark and Sweden does upper secondary or post-secondary non-tertiary education bring higher returns to both men and women. In Norway and Korea, upper secondary or post-secondary non-tertiary education returns exceed tertiary education returns for men; in New Zealand, the same is true for women.

Investing in upper secondary or post-secondary non-tertiary education generates a net public return of USD 38 000 for men and USD 22 000 for women across their working life, on average across the 28 OECD countries with available data. The public benefits are twice as large as the overall public costs of upper secondary or post-secondary non-tertiary education, for both men and women. In the United Kingdom, public benefits are six times larger than the public costs for a man with this level of education and eight times larger for a woman.

On average across OECD countries, public investment in a person's tertiary education is USD 39 000 higher than that for an individual's upper secondary or post-secondary education. Public investment in an individual's tertiary education is highest in Austria, Denmark, Germany, the Netherlands, Norway and Sweden.

Definitions

The economic returns to education are measured by the net present value or NPV. In the calculations, private investment costs include after-tax foregone earnings adjusted for the probability of finding a job (unemployment rate) and direct private spending on education. Public costs include lost income tax receipts during the school years, and public spending.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, as well as a technical explanation of how the NPV is derived, see *Education at a Glance 2013* (Indicator A7).

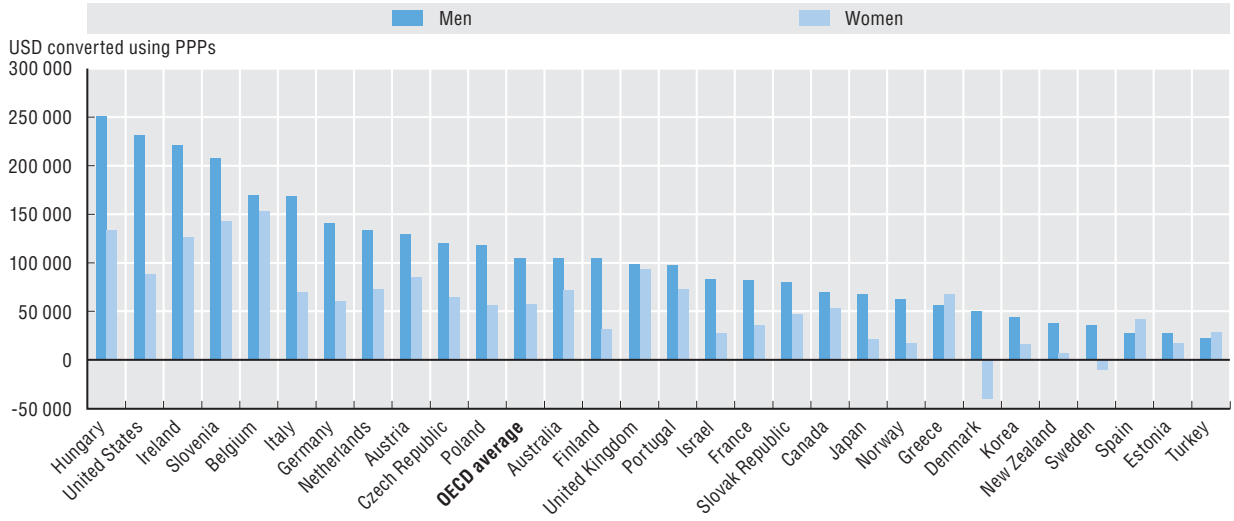
Areas covered include:

– Private costs and benefits of education, by education level and gender.

– Public costs and benefits of education, by education level and gender.

Figure 3.5. **Public return on tertiary education, by gender, 2009**

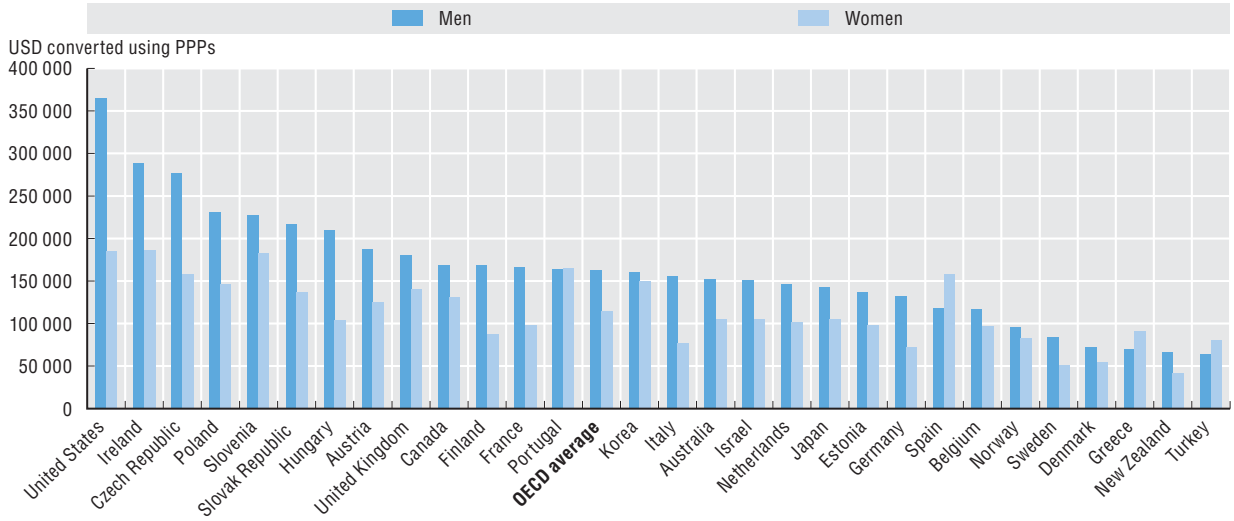
This figure shows the difference between public benefits (increased tax revenues and lower need for social transfers, among others) and public costs (direct spending and foregone tax revenues) for men and women obtaining tertiary education, as compared to those with upper secondary or post-secondary non-tertiary education.



Source: OECD (2013), *Education at a Glance 2013*, Tables A7.4a and A7.4b, available at *http://dx.doi.org/10.1787/888932849217* and *http://dx.doi.org/10.1787/888932849236*.

Figure 3.6. **Private return on tertiary education, by gender, 2009**

This figure shows the difference between private benefits (increased lifetime earnings) and private costs (tuition fees and foregone earnings) for men and women who successfully complete tertiary education, as compared to those with upper secondary or post-secondary non-tertiary education.



Source: OECD (2013), *Education at a Glance 2013*, Tables A7.3a and A7.3b, available at *http://dx.doi.org/10.1787/888932849179* and *http://dx.doi.org/10.1787/888932849198*.

What are the health benefits of education?

- *Adults with tertiary education are likely to live longer than those without.*
- *Adults with a tertiary education are half as likely to be obese as those with only below upper secondary education, on average in OECD countries.*
- *Adults with a tertiary education are 16 percentage points less likely to smoke, on average, than those with below upper secondary education in OECD countries.*

Significance

Raising health standards is a major concern for OECD governments, in spite of rapid increases in life expectancy over the last decades. There have been significant changes in the nature of health problems, with a sharp rise in chronic debilitating conditions and increased health problems linked to diet, exercise and drinking. This section focuses on the relationship between educational attainment and two health indicators: obesity and smoking. Education can have an impact on the incidence of both, since childhood through adolescence is an important time for developing healthy behaviours and lifestyles.

Findings

Education is good for your health. On average, among 15 OECD countries with available data, a 30-year-old tertiary-educated man can expect to live eight years longer than a 30-year-old man who has not completed upper secondary education.

Why should this be? One answer is healthier lifestyle – more educated adults are less likely to be obese or to smoke, and both obesity and smoking are major health concerns. Obesity has reached epidemic proportions, according to the World Health Organization and is associated with serious chronic diseases, disability, reduced quality of life, and shortened life expectancy. It also affects mental health and social life. Smoking meanwhile is still responsible for about 10% of adult deaths worldwide and is the leading cause of circulatory disease and cancer, although smoking rates have decreased by about one-fifth over the past ten years.

Around 19% of adults are obese, on average across the 24 OECD countries with available data. The incidence of obesity is particularly high among those with below upper secondary education (25%) and relatively low among those with tertiary education (13%).

The reduction in obesity rates by educational attainment is much greater among women than among men. There is a 16 percentage point difference in obesity rates between women with tertiary education and those with below upper secondary education, more than double the 7 percentage point difference for men.

The higher your education level, the less likely you are to smoke. Around 30% of adults smoke daily across the 23 OECD countries for which data are available. But the incidence of daily smoking is particularly high among those with below upper secondary education (37%) and low among those with tertiary education (21%).

When it comes to smoking, the reduction by educational attainment is much greater among men than women, with a 20 percentage-point difference in the incidence of daily smoking for men compared with a 13 percentage-point difference for women. The reduction is also greater in some Central European and predominantly English-speaking countries than in other OECD countries.

The relationship between educational attainment and health indicators (obesity and daily smoking) remains strong even after taking into account differences in individuals' gender, age and income.

Definitions

Developmental work for this indicator was carried out by INES Network on Labour Market, Economic and Social Outcomes of Learning (LSO) in collaboration with the OECD's Centre for Educational Research and Innovation (CERI). The conceptual framework for the indicators was developed by CERI's Social Outcomes of Learning project (OECD, 2007; OECD, 2010), and the empirical strategies were developed by the INES LSO Network. Data from all the countries are based on self-reported survey data.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator A8).

Areas covered include:

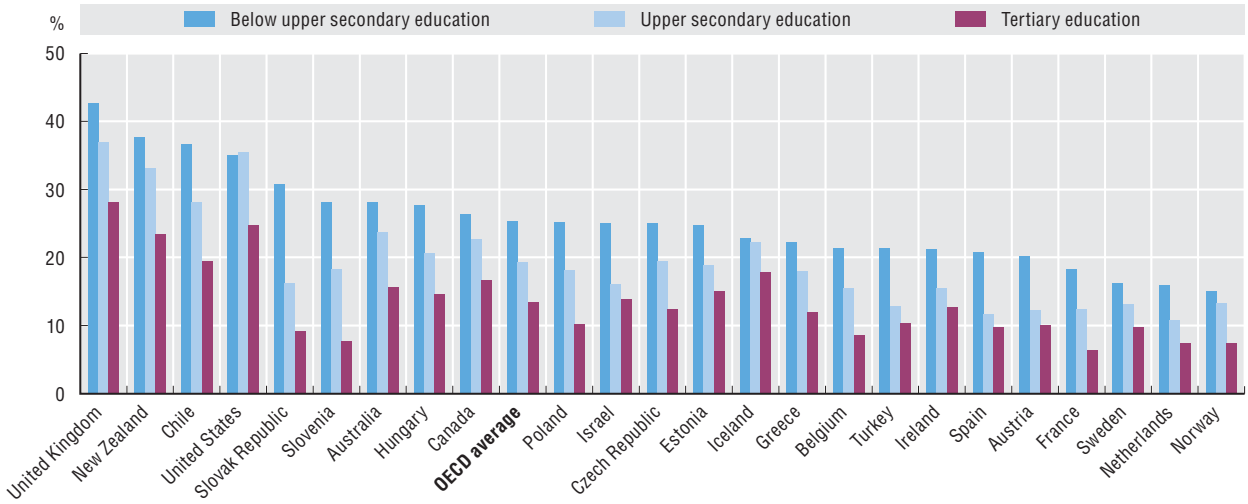
– Relationship between education and obesity rates
– Relationship between education and smoking rates

Further reading from OECD

Improving Health and Social Cohesion through Education (2010).

Figure 3.7. **Adult obesity rates by educational attainment, 2011**

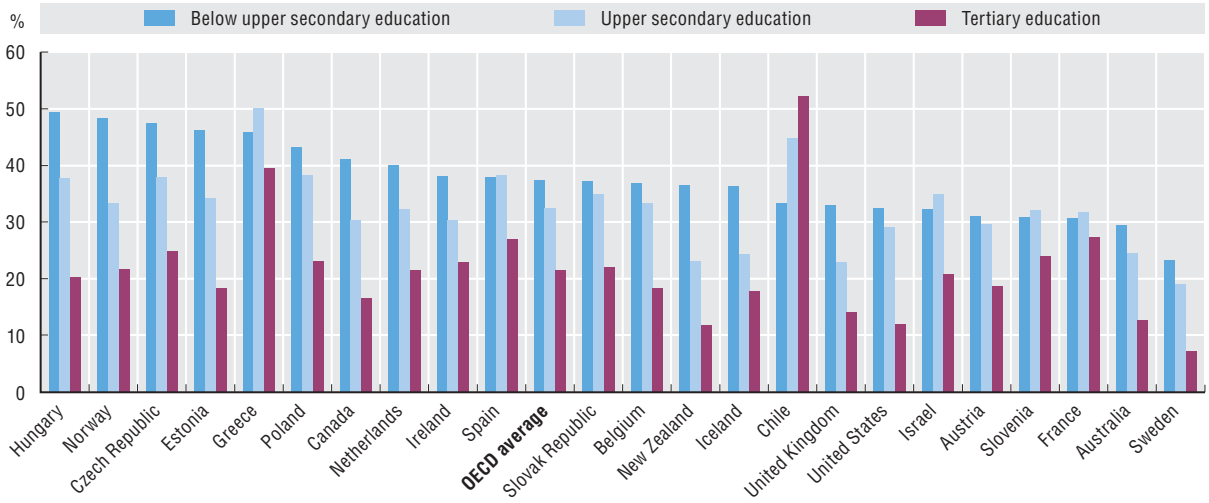
This figure shows the percentage of adults who are obese, according to their education level.



Source: OECD (2013), *Education at a Glance 2013*, Chart A8.1, available at *http://dx.doi.org/10.1787/888932846709*.

Figure 3.8. **Adult smoking rates by educational attainment, 2011**

This figure shows the percentage of adults who smoke, according to their education level.



Source: OECD (2013), *Education at a Glance 2013*, Chart A8.2, available at *http://dx.doi.org/10.1787/888932846728*.

4. PAYING FOR EDUCATION

How much is spent per student?

What share of national wealth is spent on education?

What share of public spending goes to education?

What is the role of private spending?

How much do tertiary students pay?

How much do teachers cost?

How much is spent per student?

- *OECD countries on average spend USD 9 313 per student each year between primary and tertiary education: USD 7 974 per primary student, USD 9 014 per secondary student, and USD 13 528 per tertiary student.*
- *Some 94% of total spending per student in primary and secondary education is devoted to core educational services. Greater differences are seen at the tertiary level, partly because expenditure on research and development (R&D) represents an average of 31% of total spending per student*
- *Spending per student on primary, secondary and post-secondary non-university-level education increased by 17 percentage points on average across OECD countries between 2005 and 2010. However between 2009 and 2010, investment in education fell in around one-third of OECD countries as a result of the economic crisis.*

Significance

This section shows the levels of combined public and private spending on education. Demand for high-quality education, which may mean spending more per student, must be balanced against other demands on public spending and the desire to keep taxes low. This issue is all the more important at a time of economic crisis and tight public spending. While it is difficult to determine the level of spending needed to prepare a student for work and life, international comparisons can provide reference points for comparisons of education resources.

Findings

Spending per student is largely affected by teachers' salaries. Indeed, teachers' salaries and low student-teacher ratios are the main elements raising spending in the 10 countries with the highest levels of spending per student at the secondary level.

There is a strong relationship between spending per student and GDP per capita at the primary and secondary levels – poorer countries tend to spend less than richer ones. The relationship is weaker at the tertiary level, mainly because financing mechanisms and enrolment patterns differ more at this level.

Once R&D activities and ancillary services such as welfare services to students are excluded, spending on educational core services from primary through tertiary education in OECD countries falls from an average USD 9 313 to an average USD 7 637. This results mainly from the much lower level of spending per student at the tertiary level (USD 8 889) when peripheral activities are not taken into account.

On average, OECD countries spend nearly twice as much per student at the tertiary level than at the primary level. At tertiary level, however, other services, particularly research and development activities, also constitute a large slice of expenditure. When these are excluded, spending per student on core educational services at the tertiary level is still, on average, 10% higher than at the primary, secondary and post-secondary non-tertiary levels.

Trends

Spending per primary, secondary and post-secondary non-tertiary student increased in every country with available data, and by an average of more than 61% between 1995 and 2010, a period of relatively stable student enrolment in most countries.

Between 2005 and 2010, spending per tertiary student fell in 8 of the 31 countries with available data. Spending in Austria, Iceland, Israel, the United Kingdom and the United States, did not increase at the same pace as enrolment rates. In New Zealand, the Russian Federation and Switzerland, public spending per student (data on private expenditure are not available) decreased during this period.

Definitions

Data refer to the financial year 2010 and are based on the UOE data collection on education statistics administered by the OECD in 2012. Spending per student at a particular level of education is calculated by dividing the total expenditure by educational institutions at that level by the corresponding full-time equivalent enrolment.

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.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

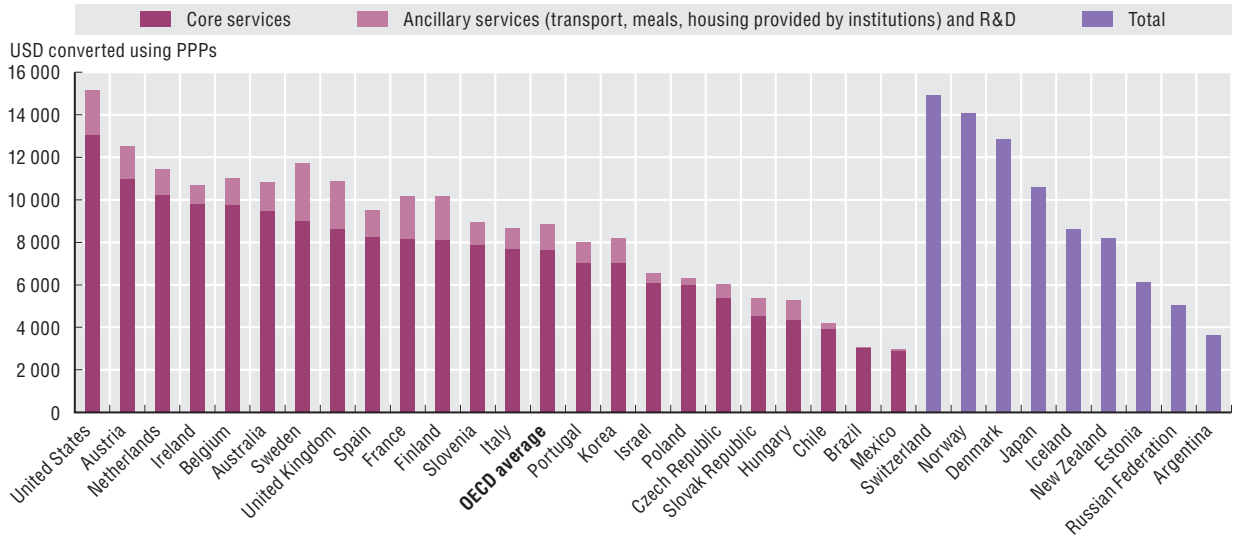
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B1).

Areas covered include:

- Annual expenditure by educational institutions per student for all services, and compared to GDP per capita.
- Cumulative expenditure by educational institutions per student.

Figure 4.1. **Annual spending per student, 2010**

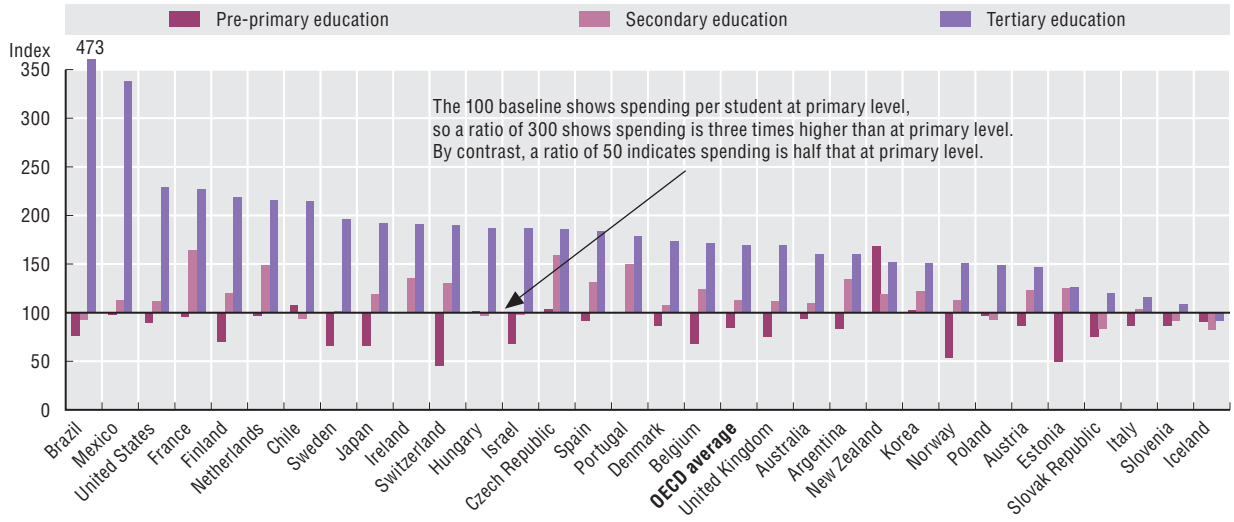
This figure shows how much is spent annually per student; these data give a sense of the cost per student of formal education.



Source: OECD (2013), *Education at a Glance 2013*, Chart B1.1, available at *http://dx.doi.org/10.1787/888932846747*.

Figure 4.2. **Primary education spending in relation to other education spending, 2010**

This figure shows annual spending per student for different levels of education compared with spending at primary level.



Source: OECD (2013), *Education at a Glance 2013*, Chart B1.3, available at *http://dx.doi.org/10.1787/888932846785*.

What share of national wealth is spent on education?

- *OECD countries spend 6.3% of their GDP on educational institutions on average.*
- *Spending on all levels of education combined increased at a faster rate than GDP growth between 2000 and 2010 in almost all countries for which data are available.*
- *GDP rose in most countries between 2009 and 2010, but public spending on educational institutions fell in one-third of OECD countries during that time, probably as a consequence of fiscal consolidation policies.*

Significance

Countries invest in educational institutions to help foster economic growth, enhance productivity, contribute to personal and social development, and reduce social inequality. This section examines the proportion of a nation's wealth that is invested in education. The level of spending depends on how a country – including its government, private enterprise, individual students and their families – prioritises education in relation to overall spending. Education spending largely comes from public budgets and is closely scrutinised by governments. During times of financial crisis, even core sectors like education can be subject to budget cuts.

Findings

Spending on pre-primary education accounts for nearly one-tenth of spending on educational institutions, or 0.6% of GDP, on average across OECD countries. There are large differences among countries. For instance, spending on pre-primary education represents less than 0.2% of GDP in Australia and Turkey, but about 1% or more in Denmark and Iceland.

Nearly two-thirds of combined OECD spending on educational institutions, or 3.9% of GDP, are devoted to primary, secondary and post-secondary non-tertiary education. New Zealand and Norway spend more than 5% of their GDP on these levels of education, while the Czech Republic, Hungary, Japan, the Russian Federation and Turkey spend 3% or less.

Tertiary education accounts for one-quarter of spending on educational institutions, or 1.6% of GDP, on average across OECD countries. Canada, Chile, Korea and the United States spend between 2.4% and 2.8% of their GDP on tertiary institutions. Three countries devote less than 1% of GDP to tertiary education: Brazil (0.9%), Hungary (0.8%) and the Slovak Republic (0.9%).

Private spending on educational institutions as a percentage of GDP is highest in tertiary education. It represents between 1.7% and 1.9% of GDP in Chile, Korea and the United States.

Trends

The global economic crisis that began in 2008 had – and is still having – major adverse effects on different sectors of the economy. The annual rate of growth of public spending on educational institutions slowed from 4% between 2008 and 2009 to 1% between 2009 and 2010 on average across OECD countries. More than one-third of the countries with available data reported a slowdown in the annual growth of public spending on educational institutions between 2008 and 2010: Austria, Ireland, New Zealand, Norway, Portugal, Spain and the United States reported an increase between 2008 and 2009 then a drop between 2009 and 2010, while Estonia, Hungary, Iceland and Italy reported decreases between both 2008-09 and 2009-10.

Definitions

Data refer to the 2010 financial year and are based on the UOE data collection on education statistics administered by the OECD in 2012. Expenditure on educational institutions includes expenditure on both instructional institutions (those that provide teaching to individuals in an organized group setting or through distance education) and non-instructional institutions (those that provide administrative, advisory or professional services to other educational institutions, but do not enrol students themselves).

Information on data for Israel:
http://dx.doi.org/ 10.1787/888932315602.

Going further

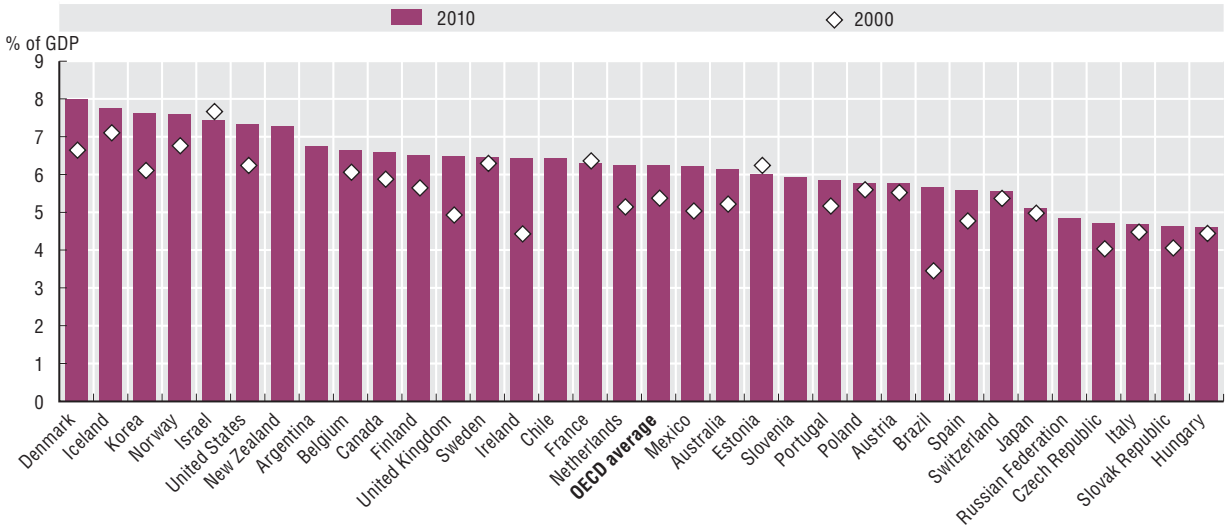
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B2).

Areas covered include:

- Expenditure on educational institutions as a percentage of GDP.
- Change in expenditure, 1995, 2000, and 2008-10.

Figure 4.3. **Trends in education spending as a percentage of GDP (2000, 2010)**

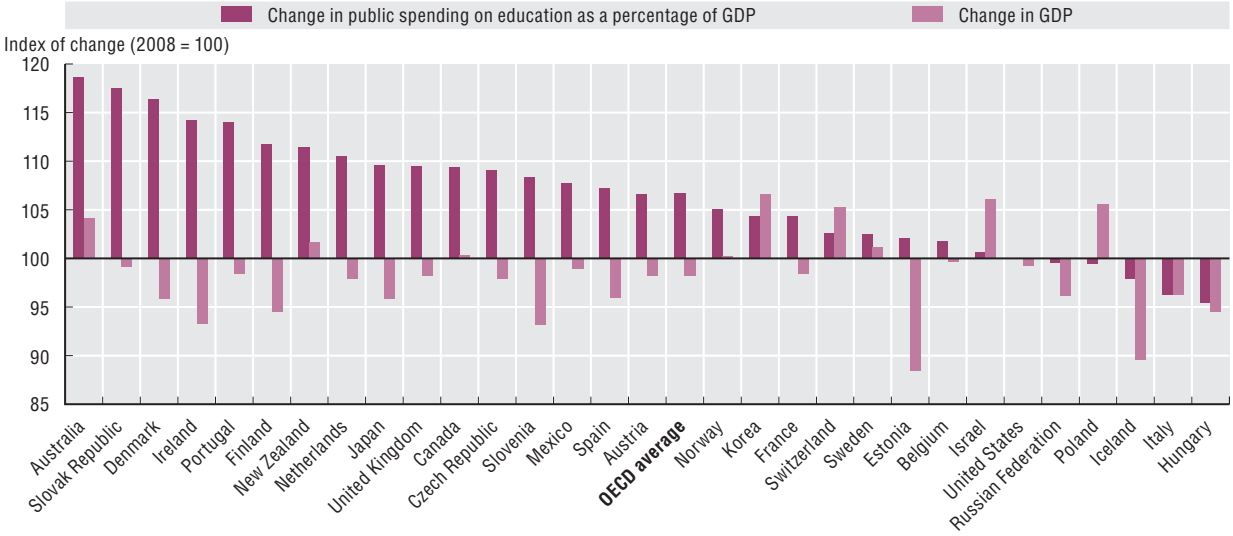
This figure shows the share of national income that countries devote to spending on educational institutions, and how that share has changed over time.



Source: OECD (2013), *Education at a Glance 2013*, Table B2.1, available at *http://dx.doi.org/10.1787/888932849578*.

Figure 4.4. **Impact of the economic crisis on education spending**

This figure shows how the economic crisis has affected public spending on education.



Source: OECD (2013), *Education at a Glance 2013*, Chart B2.3, available at *http://dx.doi.org/10.1787/888932846918*.

What share of public spending goes to education?

- *Education accounts for 13% of total public spending, on average in OECD countries, ranging from less than 10% in the Czech Republic, Hungary, Ireland, Italy and Japan, to more than 20% in Mexico and New Zealand.*
- *The proportion of public spending devoted to education increased slightly between 1995 and 2010 in most countries.*
- *Public spending on education grew faster than public spending on all other services between 2008 and 2010 in almost half of the OECD countries, although there was no clear global trend.*
- *Most OECD countries spend more than twice as much on primary, secondary and post-secondary non-tertiary education as on tertiary education.*

Significance

Public spending on education, as a percentage of total public spending, indicates the importance placed on education relative to that of other areas of public spending, such as health care, social security and national security. Since the second half of the 1990s, most OECD countries have sought to consolidate public budgets, and education has had to compete with other sectors for public financial support. More recently, the economic crisis has put further pressure on public budgets to the extent that fewer public resources may be allocated to education. This section evaluates the change in spending on education both in absolute terms and relative to changes in the size of public budgets.

Findings

Education is a priority for governments. The proportion of public spending devoted to education increased between 1995 and 2005 in most countries with available data. Only Canada, France, Israel, Japan, New Zealand and Portugal show a different pattern.

The share of public spending devoted to education decreased in around two-thirds of countries between 2005 and 2010, as total public spending grew faster than spending on education.

While there was no clear global trend in how the proportion of public spending on education evolved during the economic crisis, in 14 out of the 30 countries with available data, public spending on education grew at a faster rate than public spending on all other services between 2008 and 2010.

Public funding is more decentralised at the primary, secondary and post-secondary non-tertiary levels than at the tertiary level. On average, more than 50% of the initial public funds for these levels of education comes from the central government in OECD countries, compared with 87% for tertiary education.

At the primary, secondary and post-secondary non-tertiary levels of education, only New Zealand has an entirely centralised public funding system, while nine countries (Chile, Estonia, Hungary, Iceland, Ireland, the Netherlands, New Zealand, Norway and the Slovak Republic) have an entirely centralised funding system for tertiary education.

Trends

Over the past 15 years (1995-2010), public spending on all levels of education has increased slightly in two-thirds of countries with available data. But in the period between 2005 and 2010, public spending on education as a percentage of total public spending decreased in just under two-thirds of countries with available data. The decrease was especially substantial (1 percentage point or more) in Hungary, Iceland, Ireland, Mexico, Norway, Poland, Slovenia and the United States.

Definitions

Data refer to the financial year 2010 and are based on the UOE data collection on education statistics administered by the OECD in 2012. 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 spending 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).

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

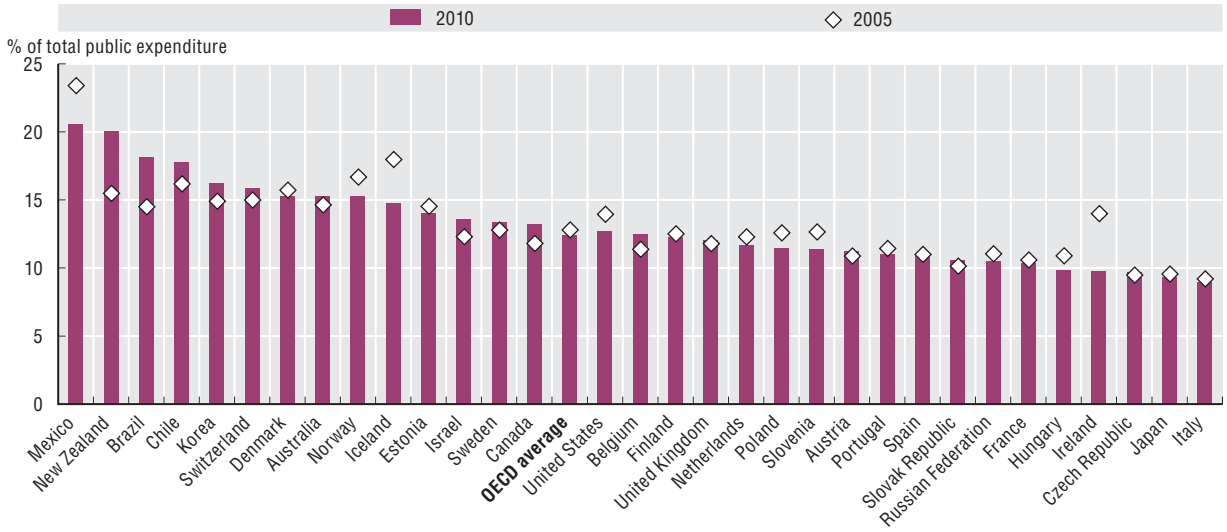
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B4).

Areas covered include:

– Distribution of total public spending on education.
– Initial sources of public educational funds and final purchasers of educational resources by level of government (online).

Figure 4.5. **Trends in public spending on education as a percentage of total public spending (2005, 2010)**

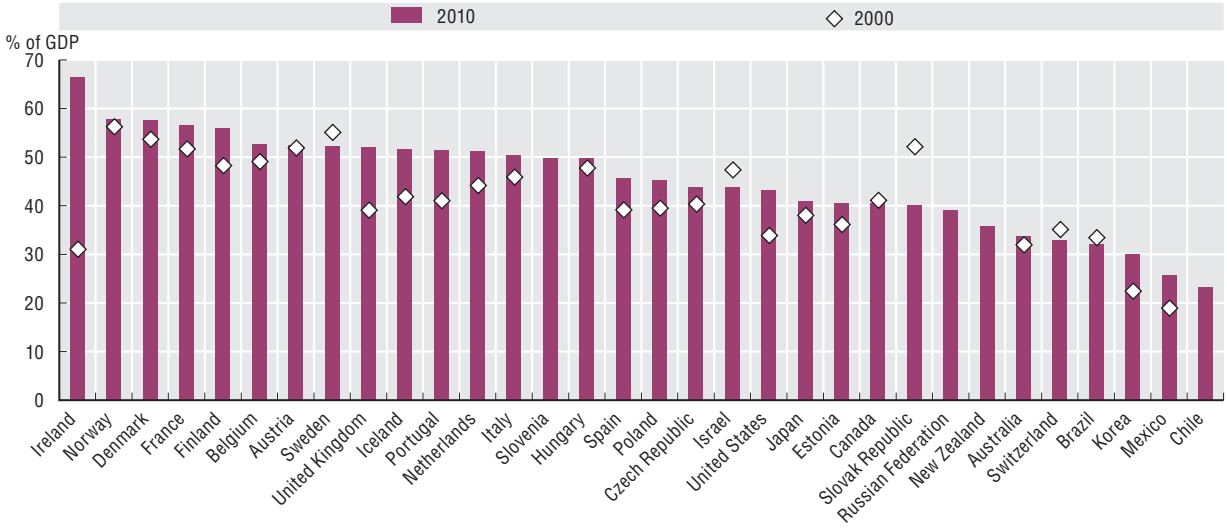
This figure shows total public spending on education (which includes spending on educational institutions and spending such as public subsidies to households), as a percentage of total public spending, and how it has evolved.



Source: OECD (2013), *Education at a Glance 2013*, Chart B4.1, available at *http://dx.doi.org/10.1787/888932847032*.

Figure 4.6. **Total public spending as a percentage of GDP (2000, 2010)**

This figure shows the size of public spending as a percentage of the overall economy. These data provide context for examining the proportion of public spending that is devoted to education.



Source: OECD (2013), *Education at a Glance 2013*, Chart B4.2, available at *http://dx.doi.org/10.1787/888932847051*.

What is the role of private spending?

- *Public funding accounts for 84% of all funds for educational institutions, on average in OECD countries.*
- *Some 92% of funds for primary, secondary and post-secondary non-tertiary education come from public sources, on average across OECD countries; only in Chile, Korea and the United Kingdom is this share less than 80%.*
- *Tertiary institutions obtain the largest proportions of funds from private sources, with 32%. Pre-primary institutions come second with 18%.*
- *Public funding for education increased between 2000 and 2010 in all countries. However, with more households sharing the cost of education, private funding increased at an even greater rate in more than three-quarters of countries.*

Significance

This section shows how the financing of educational institutions is shared between the public and private sectors, particularly at tertiary level. More people are participating in a wider range of educational programmes. 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. While public funding provides a very large part of investment in education, the role of private sources is becoming increasingly prominent. Some stakeholders are concerned that this balance should not become so tilted that it discourages potential students from attending tertiary education. Thus, it is important to examine changes in public/private funding shares.

Findings

While public spending mainly funds public institutions, it can also play a role in funding private institutions. On average among OECD countries, and across all levels of education, governments spend nearly twice as much per student on public institutions as on private ones. The ratio varies, however, across education levels, from less than twice for primary, secondary and post-secondary non-tertiary education (1.7) and at the pre-primary level (1.8), to three times (3.0) at the tertiary level.

The proportion of spending on tertiary institutions covered by private entities ranges from 5% or less in Denmark, Finland and Norway, to more than 40% in Australia, Canada, Israel, Japan and the United States, and to over 70% in Chile, Korea and the United Kingdom.

The countries with the lowest amounts of public spending per student in public and private tertiary institutions are also those with the fewest students enrolled in public tertiary institutions, except for Poland.

Individual households account for most of the private spending on tertiary education, in most countries for which data are available. The only exceptions are Austria, Belgium, Canada, the Czech Republic, the Slovak Republic and Sweden. Private spending from private businesses and non-profit organisations in these countries is more significant than private spending from households, mainly because tuition fees charged by tertiary institutions are low or negligible, with the exception of Canada.

Trends

The share of public funding for tertiary institutions decreased from 77% to 68% between 1995 and 2010, on average across OECD countries for which trend data are available for all years. This trend is mainly influenced by non-European countries, where tuition fees are generally higher and enterprises participate more actively in providing grants to finance tertiary institutions.

Between 2000 and 2010, the share of private funding for tertiary education increased in more than three-quarters of the countries for which comparable data are available.

Definitions

Data refer to the 2010 financial year and are based on the UOE data collection on education statistics, administered by the OECD in 2012. Private spending includes all direct expenditure on educational institutions, whether partially covered by public subsidies or not.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B3).

Areas covered include:

- Relative proportions and trends of public and private spending on educational institutions for all levels of education.
- Annual public spending on educational institutions per student by type of institution.

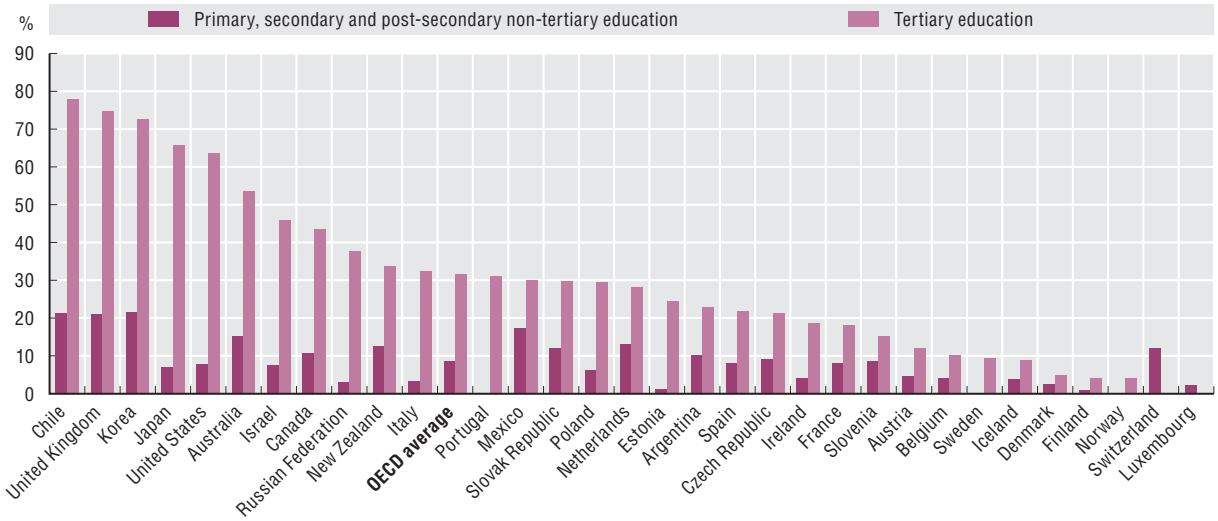
Further reading from OECD

OECD Reviews of Tertiary Education (ongoing).

Higher Education Management and Policy (journal).

Figure 4.7. **Share of private spending on educational institutions, 2010**

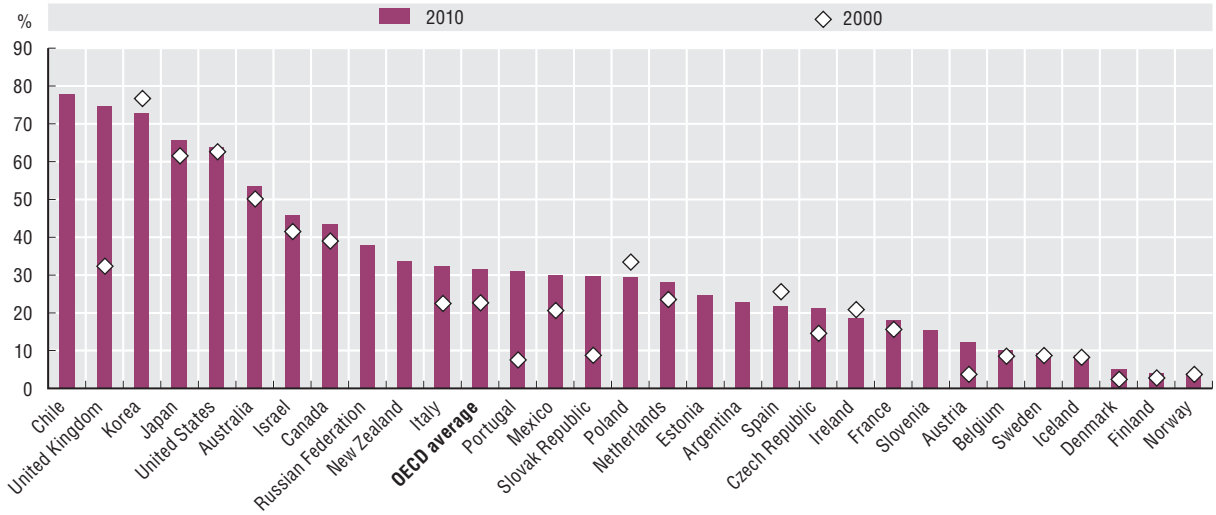
This figure shows the percentage of spending on educational institutions that comes from private funding.



Source: OECD (2013), *Education at a Glance 2013*, Chart B3.1, available at *http://dx.doi.org/10.1787/888932846956*.

Figure 4.8. **Trends in the share of private spending on tertiary education (2000, 2010)**

This figure shows the increase – or otherwise – in private spending as a percentage of total expenditure on tertiary education from 2000 to 2010.



Source: OECD (2013), *Education at a Glance 2013*, Chart B3.3, available at *http://dx.doi.org/10.1787/888932846994*.

How much do tertiary students pay?

- *Tuition fees vary widely in OECD countries. University students pay more than USD 1 500 in tuition fees for public institutions in their own country in a third of OECD countries, while in eight countries they pay nothing.*
- *Countries with high levels of tuition fees tend to be those where private sources such as companies also contribute the most to funding tertiary institutions.*
- *An increasing number of OECD countries charge higher tuition fees for international students than for national students.*
- *An average of 22% of public spending on tertiary education is devoted to supporting students, households and other private entities.*

Significance

This section examines the relationships between annual tuition fees, direct and indirect public spending on education, and public subsidies for student living costs. Governments can address issues of access to and equality of education opportunities by covering part of the cost of education and related expenses, particularly for low-income students. But how this aid is given – whether through grants, scholarships or loans – is a subject of debate in many countries.

Findings

Tuition fees for first-degree programmes vary by field of education in around half of the 26 OECD countries with available data. There is no common pattern across these countries between the level of tuition fees charged and the field of education students pursue. The main criteria for differentiating fees are the public cost of the field of study and labour-market opportunities.

Tuition fees for second and further degree programmes are generally not much higher than those for first-degree programmes for public institutions and government-dependant private institutions, across OECD countries. Exceptions to this pattern are found in Australia, Chile and the United Kingdom.

Countries where students pay tuition fees but can benefit from sizeable financial support do not have below-average levels of access to university education. Highly developed financial support systems can also help explain the high entry rates into tertiary education of some countries that charge no tuition fees.

Loans with income-contingent repayment combined with means-tested grants can help to promote access to higher education and equity while sharing the costs between the state and students.

Trends

Tuition fees continue to spark lively debate, and over the past decades there have been substantial reforms in OECD countries. Since 1995, 14 of the 25 countries with available information implemented reforms to tuition fees. These reforms were combined with a change in the level of public support available to students in all 14 countries except Iceland and the Slovak Republic.

Since 2009, further changes have been made to tuition fees and public support systems in various countries. In the United Kingdom, tuition fees doubled in 2012, as part of a government plan to stabilise university finances. Similarly, in 2011, Korea implemented reforms to increase the level of public support available to students for higher education, with the goal of expanding access to and improving equity in university-level education.

Definitions

Data refer to the financial year 2010 and are based on the UOE data collection on education statistics administered by the OECD in 2012. Data on tuition fees charged by educational institutions, financial aid to students and on reforms implemented since 1995 were collected through a special survey undertaken in 2012 and refer to the academic year 2010-11. Public subsidies to households include grants/scholarships, public student loans, family or child allowances contingent on student status, public support in cash or in kind for housing, transport, medical expenses, books and supplies, social, recreational and other purposes, and interest-related subsidies for private loans.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B5).

Areas covered include:

- Average tuition fees charged by university-level educational institutions.
- Distribution of financial aid to students.
- Governance of tertiary institutions.

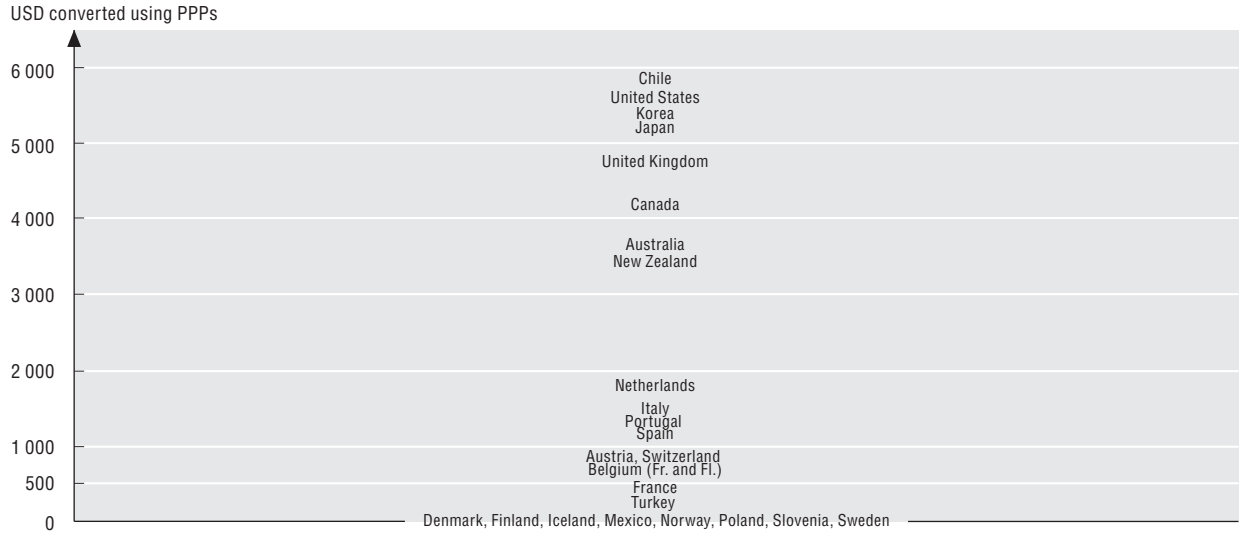
Further reading from OECD

OECD Reviews of Tertiary Education (ongoing).

Higher Education Management and Policy (journal).

Figure 4.9. **Tuition fees for university, 2010-11**

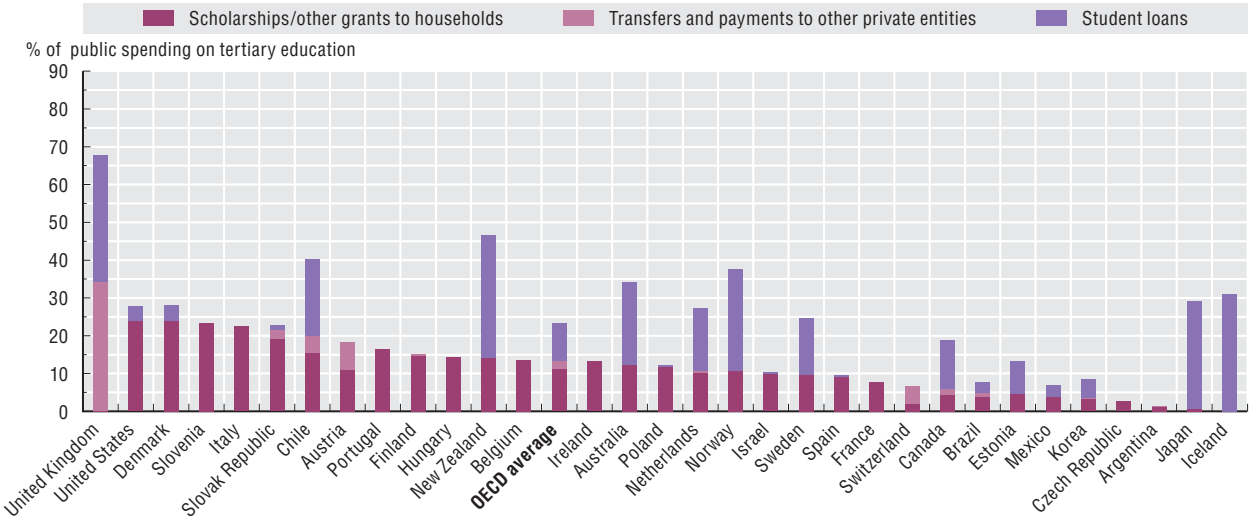
This figure shows the average annual tuition fees charged to full-time national students in public institutions for university-level education.



Source: OECD (2013), *Education at a Glance 2013*, Chart B5.2, available at *http://dx.doi.org/10.1787/888932847127*.

Figure 4.10. **Public subsidies for tertiary education, 2010**

This figure shows the public subsidies for tertiary education given to households and other private entities as a percentage of total public spending on education, broken down by subsidy type.



Source: OECD (2013), *Education at a Glance 2013*, Chart B5.4, available at *http://dx.doi.org/10.1787/888932847165*.

How much do teachers cost?

- *Four factors influence the cost of teachers per student: how many hours students spend in the classroom, teachers' teaching hours, estimated class size and teachers' salaries.*
- *The cost of teachers per student varies significantly between countries; in most countries, the salary cost of teachers per student increases with the level of education taught.*
- *The cost of teachers per student increased substantially in most countries at the primary and lower secondary levels between 2005 and 2011. On average, it increased by more than 10%: from USD 2 398 to USD 2 627 at the primary level, and from USD 3 473 to USD 3 818 at the lower secondary level.*

Significance

The relationship between resources devoted to education and student learning outcomes has been the focus of much education policy debate in recent years, as governments seek to ensure value for money in public spending while satisfying the educational needs of society and the economy. Indeed, various reforms implemented during the last decade in primary and secondary education have had important impacts in this area. Consequently, there is considerable interest in international comparisons of how various school systems allocate resources. Since teachers account for a major part of spending, their costs are of particular interest.

Findings

Similar levels of spending among countries can mask a variety of contrasting policy choices. For example, at the upper secondary level of education, Germany and Portugal showed similar levels of salary costs of teachers per student in 2011, both higher than average. In Germany, this mainly results from significantly higher salaries, while in Portugal, this results mostly from below-average class size.

Teachers' salaries are most often the main driver of the difference from the average cost of teachers per student at each level of education. Estimated class size is the second main driver of the difference at each level. Naturally, teachers' salaries vary according to countries' relative level of wealth. The impact of teachers' salaries on the average cost of teachers per student is weaker when differences in countries' wealth are accounted for.

There are large differences in the cost of teachers per student between education levels. The average salary cost of teachers per student in 2011 was USD 2 757 per primary student, USD 3 456 per lower secondary student and USD 3 420 per upper secondary student. However, in some countries, mainly Finland, the Netherlands and Slovenia, the salary cost of teachers is lower at the upper secondary level than at the lower secondary level.

Trends

Most OECD countries simultaneously increased teachers' salaries and decreased estimated class sizes at the primary and lower secondary levels of education, between 2005 and 2011. During this period, teachers' salaries increased, on average, by more than 14% at the primary level and by nearly 11% at the lower secondary level, while estimated class size decreased, by 18% at the primary level and by 6% at the lower secondary level, in countries with available data for both years. These changes resulted in an increase in the salary cost of teachers. Hungary and Italy are the only two countries where the salary cost of teachers per student decreased significantly between 2005 and 2011 at both primary and lower secondary levels.

Definitions

Data referring to the 2011 school year are based on the UOE data collection on education statistics, as well as on the Survey on Teachers and the Curriculum, which were both administered by the OECD in 2012. Data referring to the 2000 and 2005 school years 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 2013 edition (for trend data on teaching time and salary of teachers) and 2002 and 2007 editions (ratio of student to teaching staff and instruction time) of *Education at a Glance*.

Going further

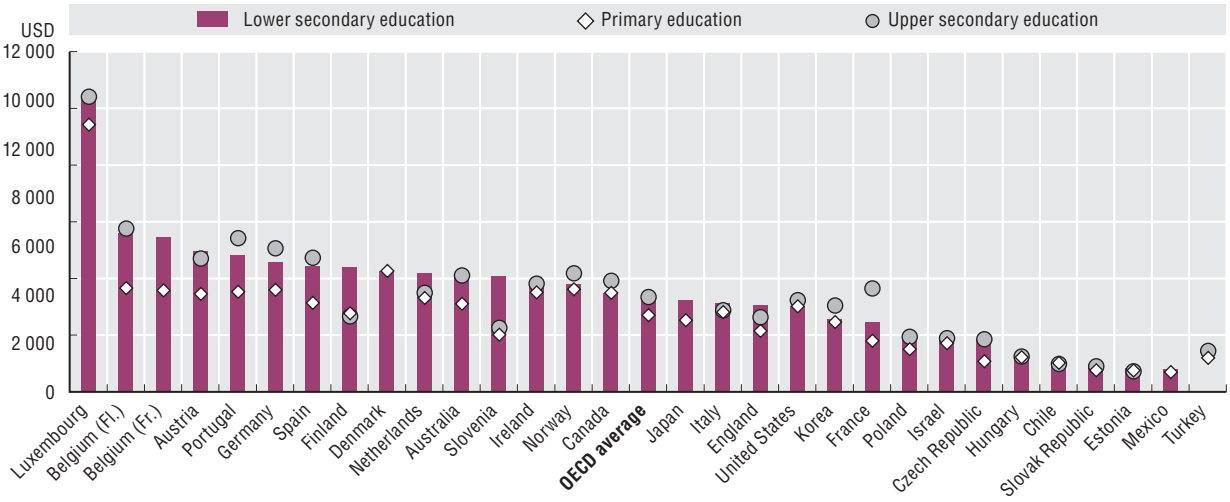
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator B7).

Areas covered include:

- Salary cost per student by level of education.
- Salary cost per student as a percentage of GDP per capita.

Figure 4.11. **Salary cost of teachers per student, by level of education, 2011**

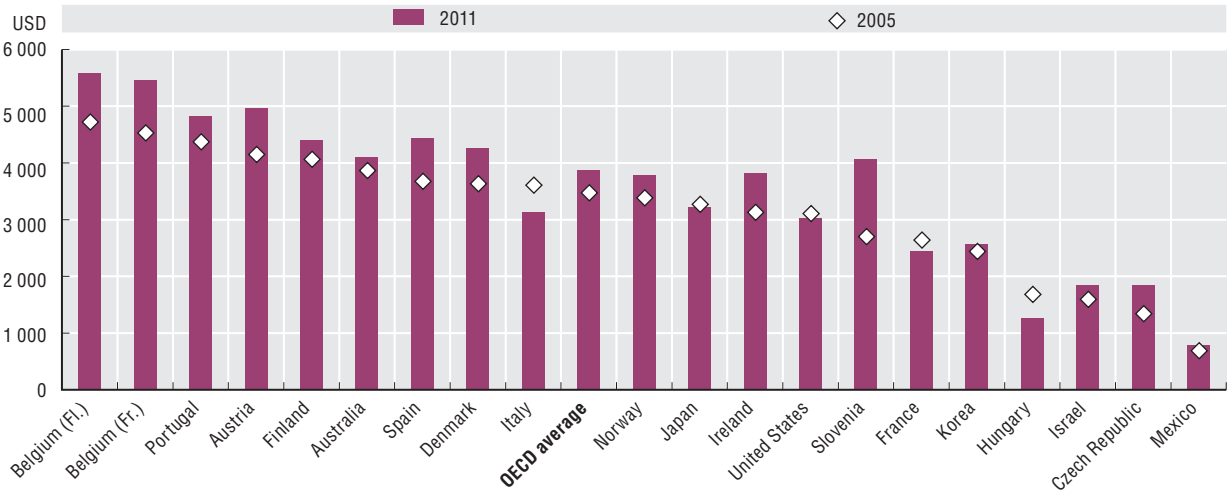
This figure compares the salary costs of teachers per student, according to educational levels.



Source: OECD (2013), *Education at a Glance 2013*, Chart B7.1, available at *http://dx.doi.org/10.1787/888932847222*.

Figure 4.12. **Salary cost of teachers per student at lower secondary level (2005, 2011)**

This figure compares the salary costs of teachers per student in 2005 and 2011, in lower secondary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart B7.2, available at *http://dx.doi.org/10.1787/888932847241*.

5. THE SCHOOL ENVIRONMENT

How long do students spend in the classroom?

How many students are in each classroom?

How much are teachers paid?

How much time do teachers spend teaching?

How long do students spend in the classroom?

- *It is expected that students in OECD countries will receive an average of 7 751 hours of instruction during their primary and lower secondary education, and most of that instruction time is compulsory.*
- *Reading, writing and literature, mathematics and science account for 51% of compulsory instruction time for primary school students, on average in OECD countries, and 41% of compulsory instruction time for lower secondary school students.*
- *In OECD countries, an average of 6% of compulsory instruction time for primary students and 7% for lower secondary students is devoted to the flexible part of the curriculum.*

Significance

This section examines the amount of time students spend in formal education during their primary and lower secondary education. The choices that countries make about how much time should be devoted to education and which subjects should be compulsory reflect national and/or regional education priorities. Since a large part of public investment in education goes to instruction time in formal classroom settings, the length of time students spend in school is an important factor in determining the amount of funding that should be devoted to education.

Findings

Compulsory instruction time is dedicated to teaching the compulsory curriculum. In OECD countries, primary students receive an average of 802 hours of instruction per year, of which 791 hours are compulsory. Lower secondary students receive an average of 122 more hours of instruction per year than primary students, of which 116 hours are compulsory.

The proportion of the compulsory curriculum that is devoted to reading, writing and literature varies widely across OECD and G20 countries. It ranges from 15% in Indonesia to 38% in Hungary for primary students; for lower secondary students, it ranges from 11% in Japan and Portugal to 24% in Ireland.

The largest portion of the curriculum for primary students, 26%, is devoted to reading and writing in all reporting OECD countries and in some G20 countries. In most OECD and G20 countries the second largest share of time, 17%, is spent studying mathematics, followed by the arts, with 11%. Together with physical education (9%), science (7%) and social studies (7%), these six study areas form the major part of the curriculum for this education level.

For lower secondary school students in around one-third of the countries with available data, the proportion of compulsory instruction time devoted to reading, writing and literature is also the largest, when compared with other fields of instruction; but in 9 countries, students spend the largest proportion of the compulsory core curriculum studying modern foreign languages. In Luxembourg and Denmark, lower secondary students spend more than 20% of compulsory instruction time studying modern foreign languages.

On average among OECD countries, the flexible part of the curriculum accounts for some 6% of compulsory instruction time for primary students and 7% for lower secondary students. While the Czech Republic and the Netherlands allow complete flexibility within the compulsory curriculum at the primary and lower secondary levels, in Greece, Hungary, Luxembourg and Mexico, the flexible part of the curriculum is negligible at both levels of education.

Definitions

Data on instruction time distinguish between "compulsory" and "intended" instruction time. Compulsory instruction time refers to the minimum amount of instruction that schools are expected to provide and students must attend. Intended instruction time is an estimate of the number of hours per year during which students are taught both compulsory and non-compulsory parts of the curriculum. It does not, however, indicate the quality of the education provided nor the level or quality of the human and material resources involved. Data on instruction time are from the 2012 OECD-INES Survey on Teachers and the Curriculum and refer to the 2010-11 school year.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator D1).

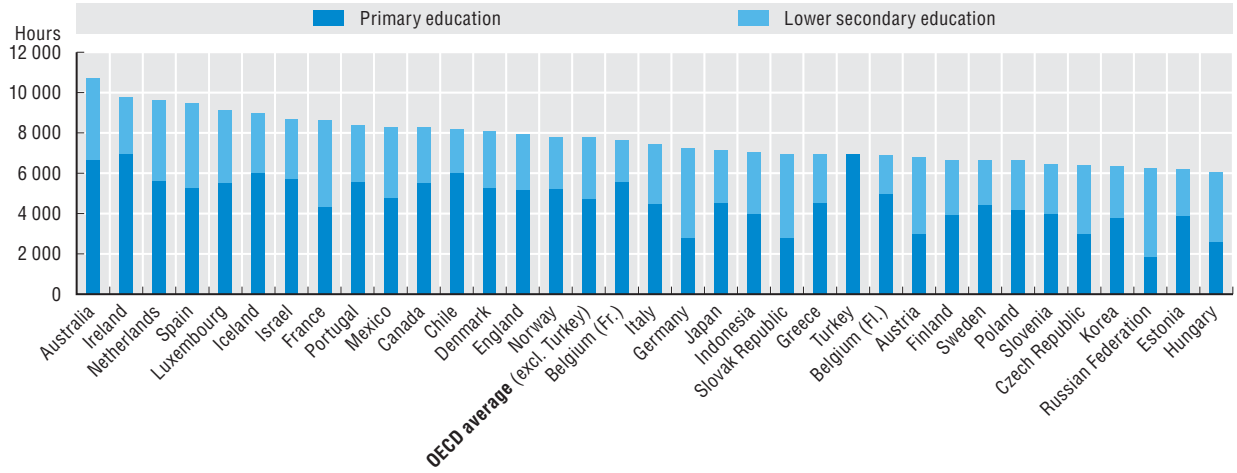
Areas covered include:

– Compulsory and intended instruction time in public institutions.

– Instruction time per subject.

Figure 5.1. **Instruction hours in public institutions, 2011**

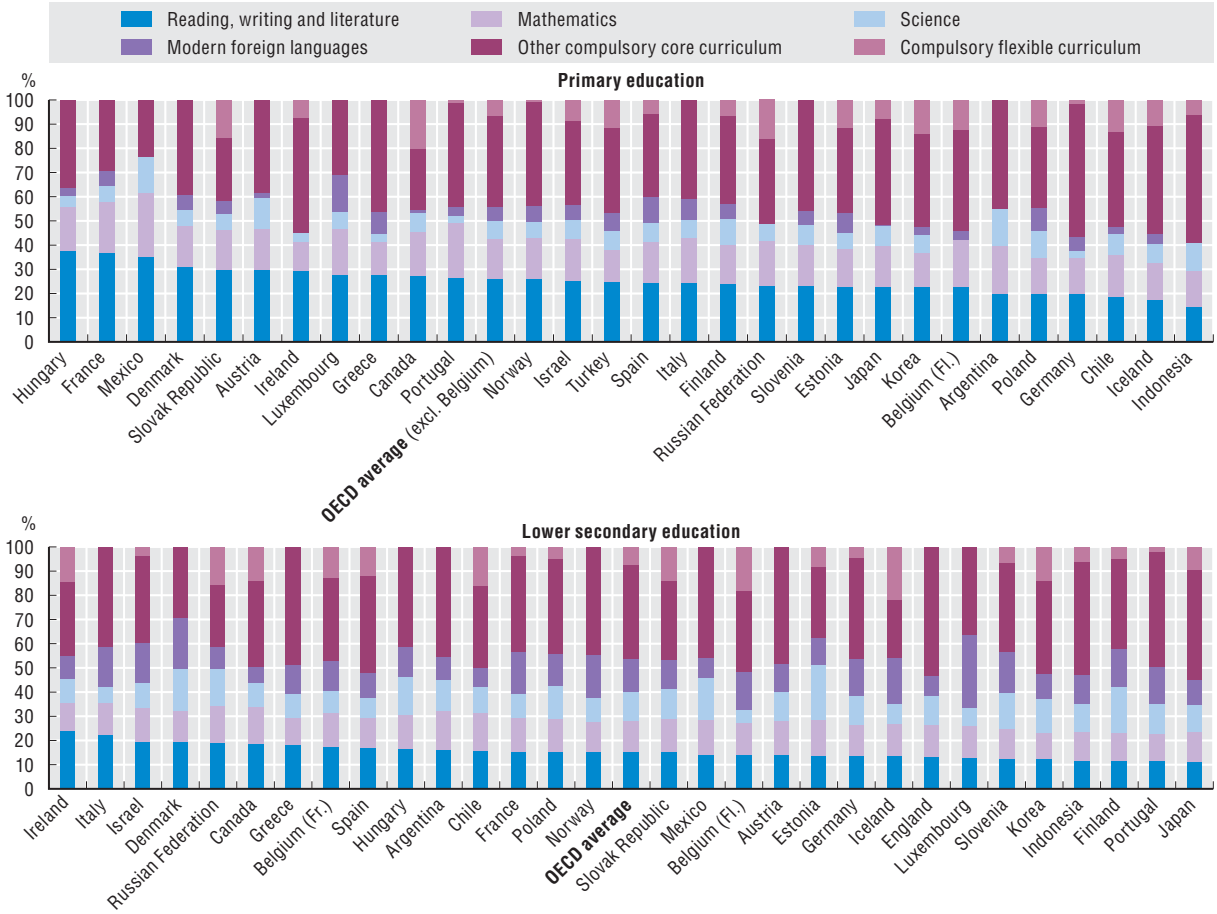
This figure shows the hours of intended instruction that students receive in primary and lower secondary education (this represents the compulsory instruction time public schools are required to deliver as well as the time devoted to non-compulsory instruction).



Source: OECD (2013), *Education at a Glance 2013*, Chart D1.1, available at *http://dx.doi.org/10.1787/888932847754*.

Figure 5.2. **Instruction time by subject, 2011**

These figures show the percentage of compulsory instruction time devoted to each subject in primary and lower secondary education.



Source: OECD (2013), *Education at a Glance 2013*, Charts D1.2a and D1.2b, available at *http://dx.doi.org/10.1787/888932847773* and *http://dx.doi.org/10.1787/888932847792*.

How many students are in each classroom?

- *There are about 21 students per class at primary level in OECD countries, on average, but numbers are larger in other G20 countries.*
- *The number of students per class increases by two or more students between primary and lower secondary education, on average in OECD countries.*
- *The average class size at primary level decreased between 2000 and 2011, especially in countries that had relatively large classes, such as Korea and Turkey.*

Significance

This section examines the number of students per class at the primary and lower secondary levels, in both public and private institutions. Class size is a hotly debated topic in many OECD countries and has a considerable impact on the level of current spending on education. While smaller classes are often perceived as enabling a higher quality of education, particularly among pupils from disadvantaged backgrounds, overall evidence of the effect of differences in class size on student performance is weak.

Findings

The average primary school class in OECD and G20 countries numbers around 21 pupils, ranging from fewer than 16 pupils in Luxembourg to more than 30 in Chile and China. The number of students per class tends to increase between primary and lower secondary education. In lower secondary education, the average class size in all countries with available data is more than 23 students, ranging from fewer than 20 students in Estonia, Iceland, Luxembourg, the Russian Federation, Slovenia, and the United Kingdom, to 34 students per class in Korea and almost 53 students in China.

The student-teacher ratio decreases between the primary and lower secondary levels in 27 of the 30 OECD and G20 countries with available data. This decrease in the student-teacher ratio reflects differences in annual instruction time for students, which tends to increase with the level of education.

The student-teacher ratio in secondary education is slightly more favourable in private than in public institutions, on average across OECD countries. This is most striking in Mexico where, at the secondary level, there are nearly 17 more students per teacher in public than in private institutions. On average across OECD countries, there is at most one student more per class in public than in private institutions at the primary and lower secondary levels.

Class size varies significantly within countries. The difference between the smallest and largest classes is as large as 30 students in Brazil, Iceland, Malaysia, Mexico and Turkey. This may result partly from differences in the size of the community to which the school belongs or from differences between public and private schools.

Trends

From 2000 to 2011, the average class size in countries with available data for both years decreased by one student at both the primary and lower secondary levels, and the range of class size among OECD countries narrowed. The slight decrease in average primary class size can be partly explained by reforms on class size during that period. Primary class sizes decreased most notably (by more than four students) in countries that had relatively large class sizes in 2000, such as Korea and Turkey. By contrast, class size has grown in some countries that had relatively small classes in 2000, most notably Denmark and Iceland.

Definitions

Data refer to the 2010-11 school year, and are based on the UOE data collection on education statistics administered by the OECD in 2012. Class sizes have been calculated by dividing the number of students enrolled by the number of classes.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator D2).

Areas covered include:

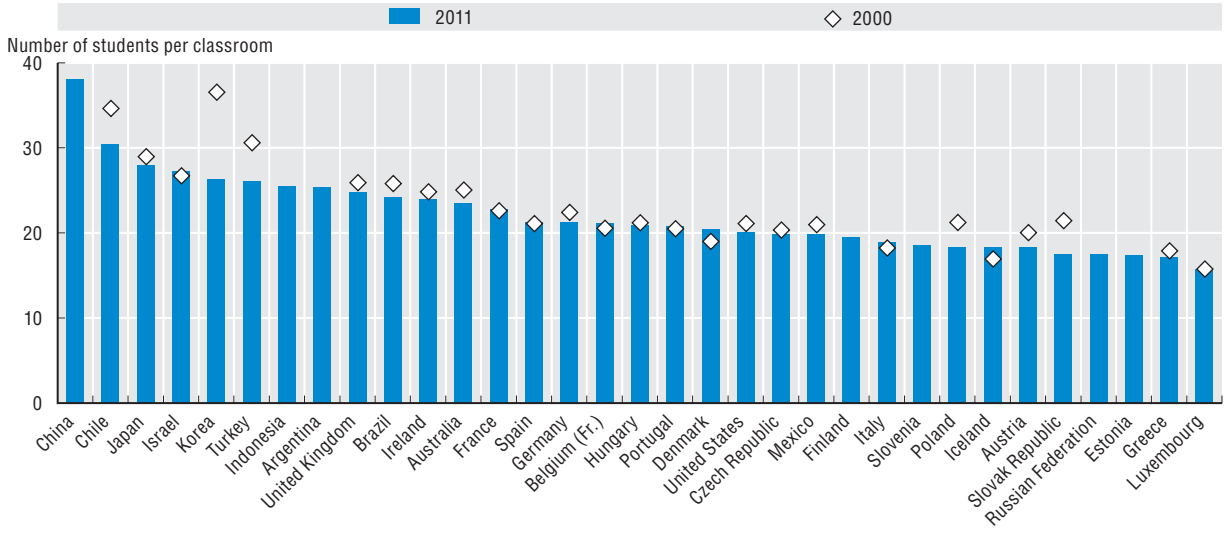
- Average class size, by type of institution and level of education.
- Ratio of students to teaching staff.
- Teaching staff and non-teaching staff employed in educational institutions.

Further reading from OECD

Improving School Leadership (Vol. 1: Policy and Practice) (2008).

Figure 5.3. **Trends in average class size in primary education (2000, 2011)**

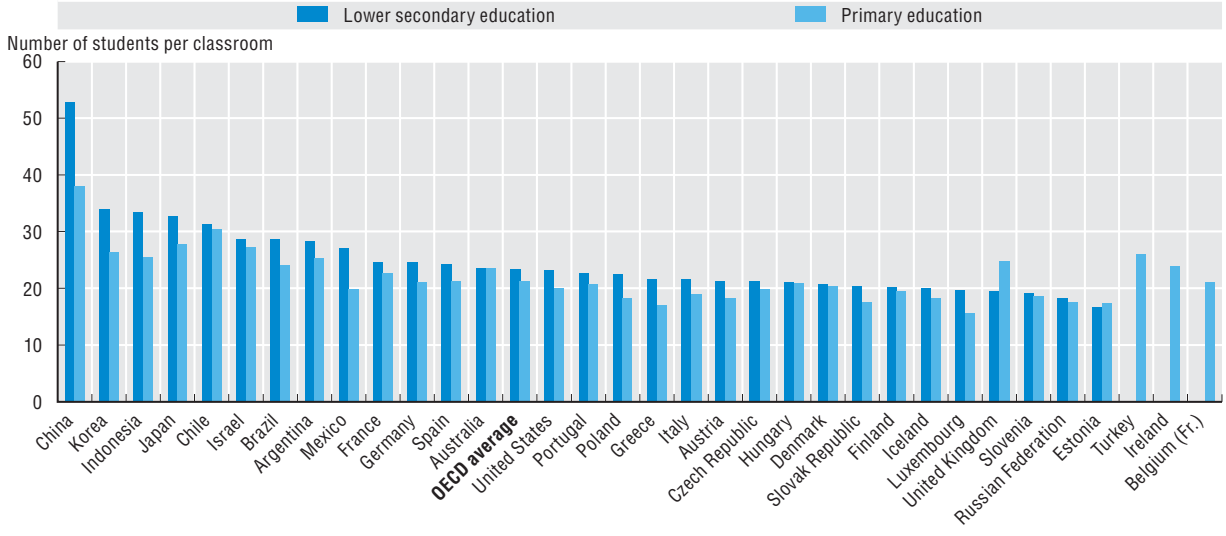
This figure shows the average number of students in primary classes, and whether these numbers have risen or fallen.



Source: OECD (2013), *Education at a Glance 2013*, Chart D2.1, available at *http://dx.doi.org/10.1787/888932851668*.

Figure 5.4. **Average class size, by level of education, 2011**

This figure shows how class sizes differ between primary and lower secondary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart D2.2, available at *http://dx.doi.org/10.1787/888932851687*.

How much are teachers paid?

- *Salaries for teachers in OECD countries with at least 15 years of experience average USD 36 135 at the pre-primary level, USD 38 136 at the primary level, USD 39 934 at the lower secondary level and USD 41 665 at the upper secondary level.*
- *Teachers' salaries at primary-school level represent 82% of average earnings for 25-64 year-olds with a tertiary education, against 89% at upper secondary level on average in OECD countries*
- *Salaries at the top of the scale are, on average, 58% higher than starting salaries at pre-primary level and 62% higher at upper secondary level.*

Significance

This section shows the starting, mid-career and maximum statutory salaries of teachers in public pre-primary, primary and secondary education. Since teachers' salaries are the largest single cost in education, teacher compensation is a critical consideration for policy makers seeking to maintain both the quality of teaching and a balanced education budget.

Findings

In most OECD and other G20 countries, teachers' salaries rise with the level of education they teach. For example, in Belgium, Denmark, Finland, Hungary, Indonesia, Poland and Switzerland, the salary of an upper secondary teacher with at least 15 years of experience is at least 25% higher than that of a pre-primary teacher with the same amount of experience.

Salaries at the top of the scale in pre-primary education are, on average, 58% higher than starting salaries. This figure reaches 59% in primary education, 61% in lower secondary education, and 62% 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 the top of the scale are on average 78% higher than starting salaries.

Teachers with maximum qualifications at the top of their salary scales earn, on average, USD 47 243 at the pre-primary level, USD 49 609 at the primary level, USD 52 697 at the lower secondary level, and USD 53 449 at the upper secondary level. However, the salary premium for higher qualifications varies. Primary teachers who hold the maximum qualification earn at least 30% more than primary teachers with similar experience, but who hold the minimum qualification, in Israel, Mexico, Poland and Slovenia, for example. However, in around 40% of countries there is no difference.

Trends

Teachers' salaries increased in real terms in most countries between 2000 and 2011. In Denmark, Estonia, Ireland and Portugal, salaries increased at all levels of education by at least 20%. In the Czech Republic (primary and lower secondary levels) and in Turkey (upper secondary level), salaries doubled over the past decade. Notable exceptions are France and Japan, where there was a decline in teachers' salaries in real terms during that period.

In some countries, the economic downturn in 2008 also had a direct impact on teachers' salaries. Teachers' salaries decreased, for the first time since 2000, by around 2% at all levels of education between 2009 and 2011, on average across OECD countries with available data.

Definitions

Data are from the 2012 OECD-INES Survey on Teachers and the Curriculum and refer to the 2010-11 school year. Gross teachers' salaries were converted using purchasing power parities (PPPs) for private consumption from the OECD National Accounts database. Starting salaries refer to the average scheduled gross salary per year for a fully qualified full-time teacher, at the beginning of a teaching career. Earnings for workers with tertiary education are average earnings for full-time, full-year workers aged 25 to 64 with university-level, vocational tertiary or post-tertiary education.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator D3).

Areas covered include:

– Teachers' salaries and trends.

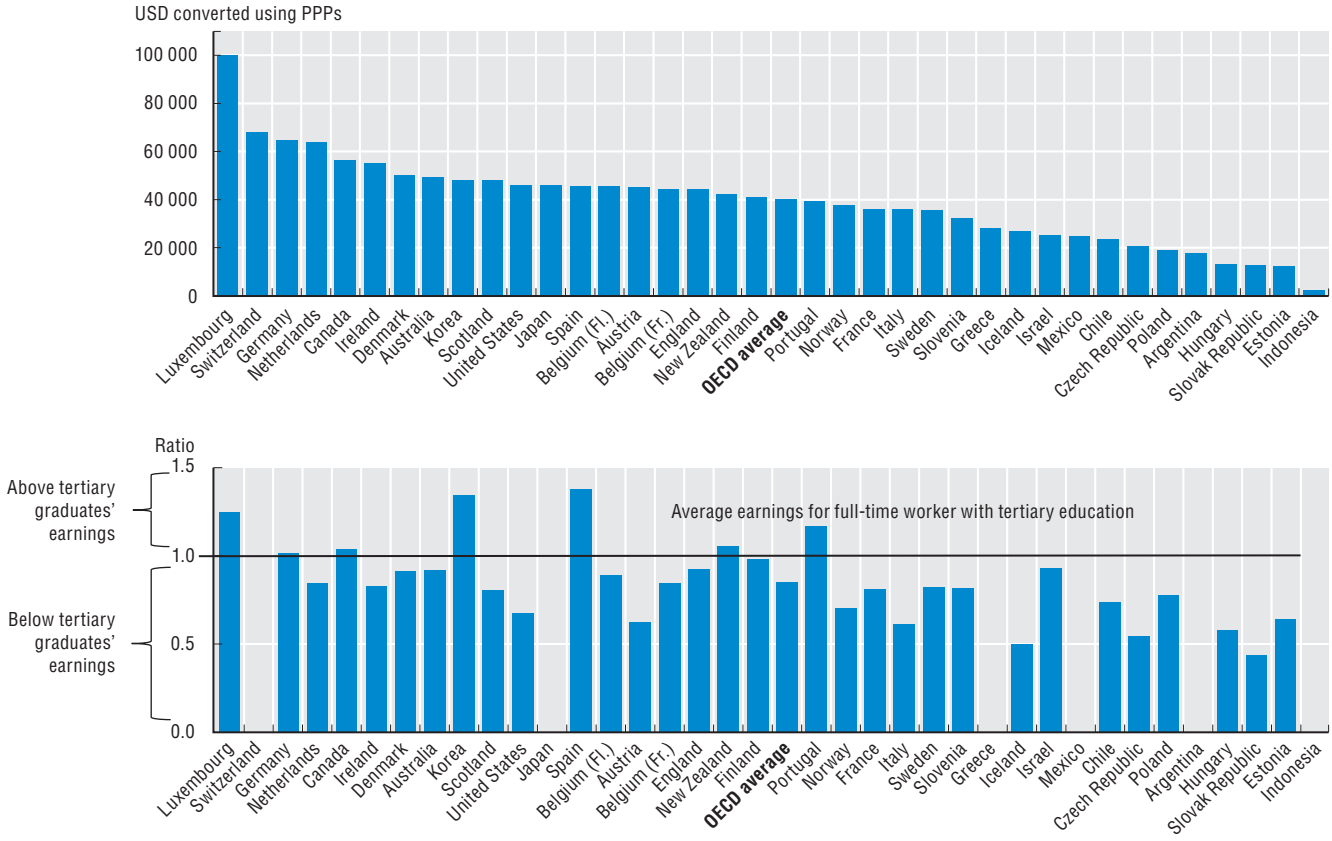
– Additional payments for teachers.

Further reading from OECD

Education Today 2013: The OECD Perspective (2013)

Figure 5.5. **Teachers' salaries in lower secondary education, 2011**

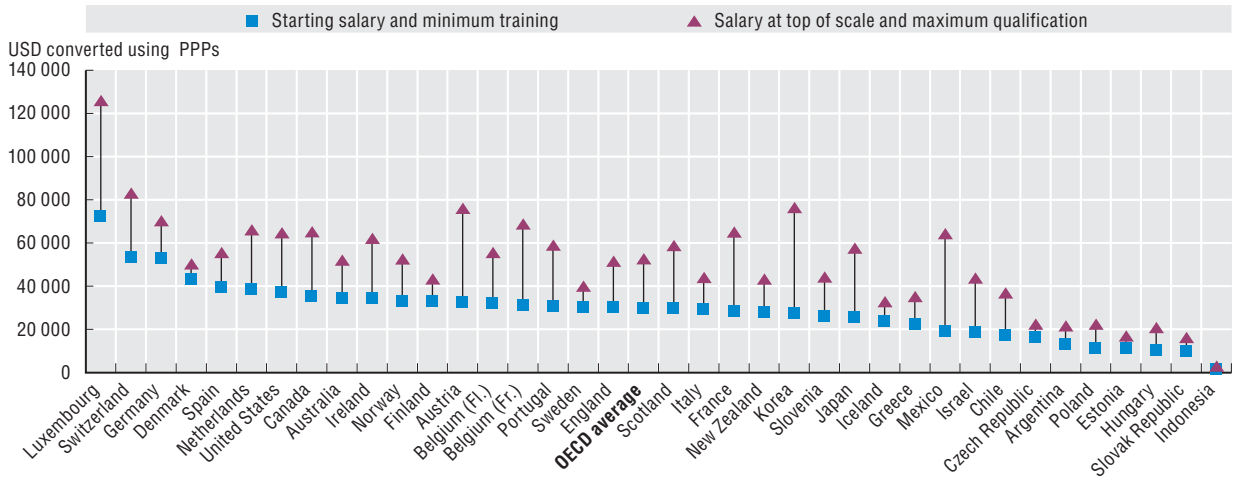
The upper chart in this figure shows how much teachers are paid after 15 years of experience. The lower chart compares teachers' salaries with the earnings of other full-time workers with tertiary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart D3.1 available at *http://dx.doi.org/10.1787/888932847811*.

Figure 5.6. **Minimum and maximum teachers' salaries in lower secondary education, 2011**

This figure shows the gap between teachers' salaries at the start of their career, with minimum training and at the top of the scale with maximum qualification, in lower secondary education.



Source: OECD (2013), *Education at a Glance 2013*, Chart D3.2 available at *http://dx.doi.org/10.1787/888932847830*.

How much time do teachers spend teaching?

- *The number of teaching hours per teacher in public schools averages 994 hours per year in pre-primary education, 790 hours per year in primary education, 709 hours in lower secondary education, and 664 hours in upper secondary education.*
- *Average teaching time increased or decreased by at least 10% between 2000 and 2011 in primary, lower secondary and/or upper secondary education in almost half of the countries with available data.*
- *The way teachers' working time is regulated varies significantly among countries, from hours per year to number of lessons per week.*

Significance

This section examines the time teachers spend teaching and doing non-teaching work, such as preparing lessons and assessing students. Although working time and teaching time only partly determine teachers' actual workload, they do provide valuable insights into differences in what is required of teachers in different countries. Teaching hours and the extent of non-teaching duties may also affect the attractiveness of teaching as a profession. The amount of time that teachers spend teaching is also one of the factors that affect the financial resources countries need to allocate to education.

Findings

The average number of teaching hours in public pre-primary schools in OECD and other G20 countries is 994 hours per year, but ranges from 450 hours in Indonesia to over 1 500 hours in Iceland, Norway and Sweden. Public primary school teachers teach an average of 790 hours per year, but teaching time ranges from less than 600 hours in Greece and the Russian Federation to over 1 000 hours in Chile and the United States. The number of teaching hours in public lower secondary schools averages 709 hours per year, but ranges from 415 hours in Greece to over 1 000 hours in Argentina, Chile, Mexico and the United States. Teachers in public upper secondary schools teach an average of 664 hours per year, but this figure ranges from 369 hours in Denmark to 1 448 hours in Argentina.

Pre-primary teachers are required to teach almost 30% more hours than primary school teachers, on average; but the actual time during which teachers are required to be working at school, or their total working time, is often equivalent for these two levels of education.

Trends

Teaching time varied by at least 10% for at least one level of education between 2000 and 2011 in almost half of the countries with available data. In most countries with a significant change, teaching time increased over this period. The number of teaching hours changed dramatically in a few countries: it increased by more than 25% in Portugal and Spain at the secondary level. In contrast, net teaching time dropped by around 10% between 2000 and 2011 in Mexico (lower secondary level), in the Netherlands (lower and upper secondary levels) and in Scotland (primary level).

Definitions

Data are from the 2012 OECD-INES Survey on Teachers and the Curriculum and refer to the 2010-11 school year. Teaching time is defined as the scheduled number of hours per year that a full-time teacher teaches a group or class of students as set by policy. Working time refers to the normal working hours of a full-time teacher and includes time directly associated with teaching as well as the hours devoted to teaching-related activities, such as preparing lessons, counselling students, correcting assignments and tests, and meeting with parents and other staff.

Information on data for Israel:
http://dx.doi.org/10.1787/888932315602.

Going further

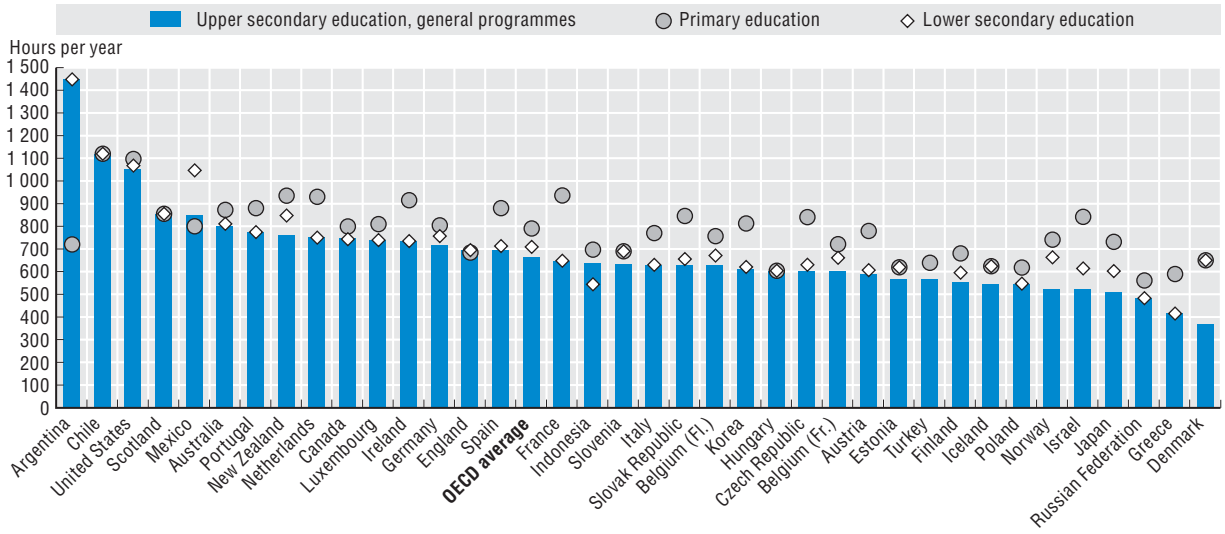
For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance 2013* (Indicator D4).

Areas covered include:

– Organisation of teachers' working time.
– Number of teaching hours per year, by level of education.

Figure 5.7. **Annual teaching hours by education level, 2011**

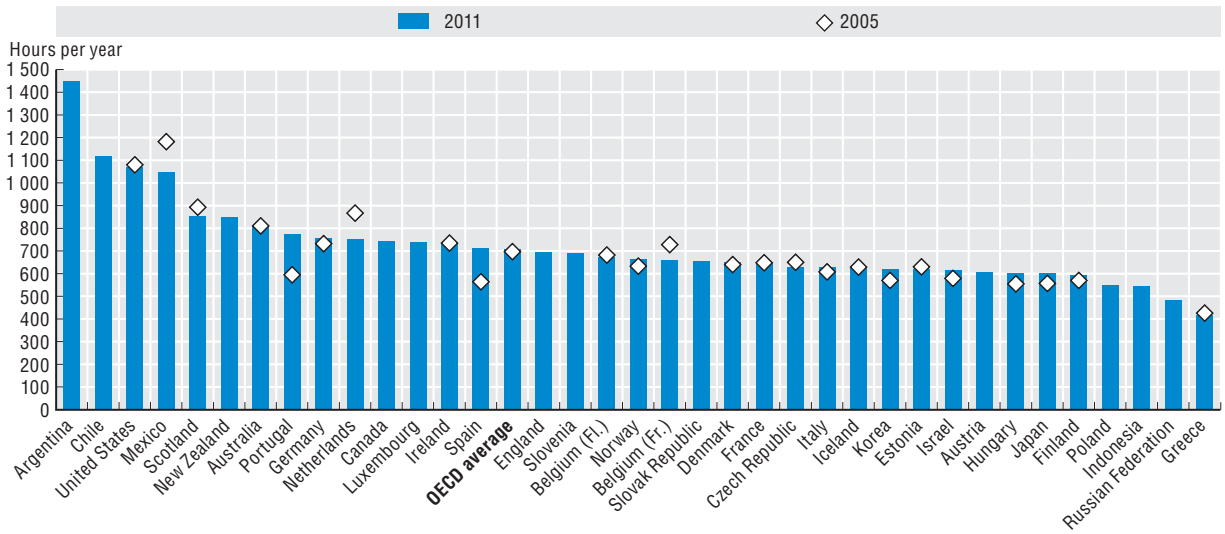
This figure shows the variation in annual teaching hours for teachers in different levels of education.



Source: OECD (2013), *Education at a Glance 2013*, Chart D4.2, available at *http://dx.doi.org/10.1787/888932847887*.

Figure 5.8. **Trends in annual teaching hours in lower secondary education (2005, 2011)**

This figure shows the trends in the number of hours teachers actually spent teaching, between 2005 and 2011. Contact time with students is a major part of teachers' workloads, but duties also include preparing classes and correcting assignments.



Source: OECD (2013), *Education at a Glance 2013*, Chart D4.1, available at *http://dx.doi.org/10.1787/888932847868*.

Statistical note

Coverage of 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 the ownership or sponsorship of the institutions concerned and regardless of education delivery mechanisms. With one exception described below, all types of students and all age groups are meant to be included: children (including students with special needs), adults, nationals, foreigners, as well as students in open distance learning, in special education programmes or in educational programmes organised by ministries other than the Ministry of Education, provided the main aim of the programme is the educational development of the individual. However, vocational and technical training in the workplace, with the exception of combined school and work-based programmes that are explicitly deemed to be parts 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 studies or have a subject matter content similar to "regular" education studies or that the underlying programmes lead to potential qualifications similar to corresponding regular educational programmes. Courses for adults that are primarily for general interest, personal enrichment, leisure or recreation are excluded.

Calculation of international means

For many indicators an OECD average is presented.

OECD average: This 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.

Glossary

Ancillary services: Ancillary services are services provided by educational institutions that are peripheral to the main educational mission. The two main components of ancillary services are student welfare services and services for the general public.

Class size: Class size is the average number of students per class, calculated by dividing the number of students enrolled by the number of classes.

Completion rates: Completion rates are based on the proportion of new entrants into a specified level of education who graduate with at least a first degree at this level, in the amount of time normally allocated for completing the programme.

Compulsory education: Compulsory education refers to the legal age from which children are no longer compelled to attend school (*e.g.*, 15th birthday).

Current expenditure: Current expenditure corresponds to education spending on goods and services consumed within the current year, which needs to be made recurrently to sustain the production of educational services.

Dropout rate: Dropout rates correspond to the proportion of students who leave a specified level in the educational system without obtaining a first qualification.

Educational attainment: Educational attainment is expressed by the highest completed level of education, defined according to the International Standard Classification of Education (ISCED).

Educational personnel: The classification is based on four main functional categories *i)* Instructional personnel; *ii)* Professional support for students; *iii)* Management/Quality control/Administration; and *iv)* Maintenance and operations personnel. Teaching staff (teachers) and teachers' aides make up the category instructional personnel.

Education expectancy: Education expectancy is the average duration of formal education in which a five-year-old child can expect to enrol over his or her lifetime.

Employment rate: Employment rates represent the number of persons in employment as a percentage of the working-age population.

Enrolment rates: Enrolment rates represent the number of students of a particular age group enrolled in all levels of education as a percentage of the total population of that age group.

Expenditure on educational core services: Expenditure on educational core services includes all expenditure that is directly related to instruction and education. This should cover all expenditure on teachers, school buildings, teaching materials, books, tuition outside schools, and administration of schools.

First-generation students: First-generation students are those students who reported in PISA that they were born in the country of assessment but whose parents were born in another country.

Foreign students: Foreign students are students who do not hold the citizenship of the country for which the data are collected.

General programmes: General programmes are programmes that are not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational or technical education programmes.

Gross Domestic Product (GDP): Gross Domestic Product (GDP) is the standard measure of the value of final goods and services produced by a country during a period minus the value of imports.

Human capital: Human capital is productive wealth embodied in labour, skills and knowledge.

Intended instruction time: Intended instruction time refers to the number of hours per year for which students ought to receive instruction in both the compulsory and non-compulsory parts of the curriculum.

Lower secondary education: Lower secondary education completes the provision of basic education, usually in a more subject-oriented way with more specialist teachers. Entry follows 6 years of primary education; duration is 3 years. In some countries, the end of this level marks the end of compulsory education.

Net graduation rates: Net graduation rates refer to the estimated percentage of people from a specific age group who will complete tertiary education over their lifetimes, based on current patterns of graduation.

PISA or Programme for International Student Assessment: The Programme for International Student Assessment is an international study conducted by the OECD which measures how well young adults, at age 15 and therefore approaching the end of compulsory schooling, are prepared to meet the challenges of today's knowledge societies.

Post-secondary non-tertiary level of education: Programmes at this level may be regarded nationally as part of upper secondary or post-secondary education, but in terms of international comparison their status is less clear cut. Programme content may not be much more advanced than in upper secondary, and is certainly lower than at tertiary level. Entry typically requires completion of an upper secondary programme. Duration is usually equivalent to between 6 months and 2 years of full-time study.

Pre-primary education: Pre-primary education is the first stage of organised instruction designed to introduce very young children to the school atmosphere (minimum entry age of 3).

Primary education: Primary education is designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects (entry age: between 5 and 7). Duration is of 6 years.

Private expenditure: Private expenditure refers to expenditure funded by private sources, i.e. households and other private entities. “Households” refers to students and their families. “Other private entities” include private business firms and non-profit organisations, including religious organisations, charitable organisations, and business and labour associations.

Private institution: An institution is classified as private if it is controlled and managed by a non-governmental organisation (e.g., a Church, Trade Union or business enterprise), or if its Governing Board consists mostly of members not selected by a public agency.

Private internal rate of return: The rate of return represents a measure of the returns obtained, over time, relative to the costs of the initial investment in education.

Public institution: An institution is classified as public if it is controlled and managed directly by a public education authority or agency; or is controlled and managed either by a government agency directly or by a governing body (Council, Committee etc.), most of whose members are appointed by a public authority or elected by public franchise.

Teaching time: Teaching time is defined as the scheduled number of hours per year that a full-time teacher teaches a group or class of students as set by policy.

University-level education: "Long-stream" programmes that are theory based and aimed at preparing students for further research or to give access to highly skilled professions, such as medicine or architecture. Entry is preceded by 13 years of education, and students are typically required to have completed upper secondary or post-secondary non-tertiary education. Duration is equivalent to at least 3 years of full-time study, but 4 is more usual.

Upper secondary education: Upper secondary education corresponds to the final stage of secondary education in most OECD countries. Instruction is based on even stronger subject specialisation than at lower-secondary level, and teachers are usually more qualified. Students are typically expected to have completed 9 years of education or lower secondary schooling before entry and are generally around the age of 15 or 16.

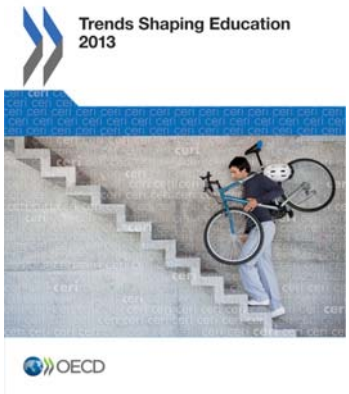
Vocationally oriented tertiary education: "Short-stream" programmes that are more practically oriented or focus on the skills needed for students to directly enter specific occupations. Entry is preceded by 13 years of education; duration is equivalent to at least 2 years of full-time study, but 3 is more usual.

Vocational programmes: Vocational education prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour-market relevant vocational qualification.

Further reading

Education Today 2013

This book summarises what OECD has to say about the state of education today in eight key areas: early childhood education, schooling, transitions beyond initial education, higher education, adult learning, outcomes and returns, equity, and innovation.



Trends Shaping Education 2013

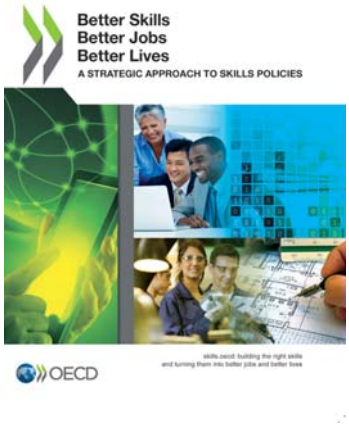
What does it mean for education that our societies are increasingly diverse? How is global economic power shifting towards new countries? In what ways are working patterns changing? *Trends Shaping Education 2013* brings together international evidence to address questions like these.

OECD Reviews of Vocational Education and Training

What type of training is needed to meet the needs of changing economies? How should the programmes be funded? How should they be linked to academic and university programmes? How can employers and unions be engaged? The country reports in this series look at these and other questions. They form part of *Skills beyond School*, the OECD policy review of post-secondary vocational education and training.

Art for Art's Sake? The Impact of Arts Education

Arts education is often said to be a means of developing critical and creative thinking. This report examines the state of empirical knowledge about the impact of arts education on these kinds of outcomes.



Better Skills, Better Jobs, Better Lives

This book presents a strategy that will help countries reach the goal of having and making the best use of a high-quality pool of skills.

Education at a Glance country-specific material :

Country notes with key fact tables and multilingual summaries for 34 OECD member countries, 8 non-OECD member countries, as well as the European Union.

Related OECD publications

Teachers for the 21st Century: Using Evaluation to Improve Teaching (2013), *http://dx.doi.org/10.1787/9789264193864-en*.

PISA 2012 Assessment and Analytical Framework : Mathematics, Reading, Science, Problem Solving and Financial Literacy (2013), *http://dx.doi.org/10.1787/9789264190511-en*.

OECD Factbook (2013), *http://dx.doi.org/10.1787/factbook-2013-en*.

Equity and Quality in Education: Supporting Disadvantaged Students and Schools (2012), *http://dx.doi.org/10.1787/9789264130852-en*.

Health at a Glance 2011: OECD Indicators (2011), *http://dx.doi.org/10.1787/health_glance-2011-en*.

How's Life?: Measuring Well-being (2011), *http://dx.doi.org/10.1787/9789264121164-en*.

PISA 2009 Results: Students On Line: Digital Technologies and Performance (Volume VI) (2011), *http://dx.doi.org/10.1787/9789264112995-en*.

PISA 2009 Results: Learning Trends: Changes in Student Performance Since 2000 (Volume V) (2010), *http://dx.doi.org/10.1787/9789264091580-en*.

PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV) (2010), *http://dx.doi.org/10.1787/9789264091559-en*.

PISA 2009 Results: Learning to Learn: Student Engagement, Strategies and Practices (Volume III) (2010), *http://dx.doi.org/10.1787/9789264083943-en*.

PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II) (2010), *http://dx.doi.org/10.1787/9789264091504-en*.

PISA 2009 Results: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science (Volume I) (2010), *http://dx.doi.org/10.1787/9789264091450-en*.

Improving Health and Social Cohesion through Education (2010), *http://dx.doi.org/10.1787/9789264086319-en*.

Starting Strong III: A Quality Toolbox for Early Childhood Education and Care (2011), *http://dx.doi.org/10.1787/9789264123564-en*.

Learning for Jobs: OECD Reviews of Vocational Education and Training (2010), *http://dx.doi.org/10.1787/9789264087460-en*.

Creating Effective Teaching and Learning Environments: First Results from TALIS (2009), *http://dx.doi.org/10.1787/9789264072992-en*.

Forthcoming:

PISA

Launched in 1997 by the OECD, the Programme for International Student Assessment (PISA) is an international study which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students.

To date, students from more than 70 countries and economies have participated in the assessment.

Since the year 2000, every three years, a randomly selected group of fifteen-year-olds take tests in key subjects: reading, mathematics and science, with focus given to one subject in each year of assessment.

The 2012 data collection focussed on mathematics and included an optional computer-based assessment of mathematics and reading involving some 30 countries as well as an optional area of assessment: financial literacy, which 19 countries took up. Results of the 2012 data collection will be published on 3 December 2013.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(96 2013 04 1 P) ISBN 978-92-64-20106-4 – No. 60497 2013

Education at a Glance 2013

HIGHLIGHTS

Education at a Glance 2013: Highlights summarises the OECD's flagship compendium of education statistics, *Education at a Glance*. It provides easily accessible data on key topics in education today, including:

- Education levels and student numbers: How far have adults studied, and how does early childhood education affect student performance later on?
- Higher education and work: How many young people graduate from tertiary education, and how easily do they enter the world of work?
- Economic and social benefits of education: How does education affect people's job prospects, and what is its impact on incomes?
- Paying for education: What share of public spending goes on education, and what is the role of private spending?
- The school environment: How many hours do teachers work, and how does class size vary?
- Each indicator is presented on a two-page spread. The left-hand page explains the significance of the indicator, discusses the main findings, examines key trends and provides readers with a roadmap for finding out more in the OECD education databases and in other OECD education publications. The right-hand page contains clearly presented charts and tables, accompanied by dynamic hyperlinks (*StatLinks*) that direct readers to the corresponding data in Excel™ format.

Consult this publication on line at ***http://dx.doi.org/10.1787/eag_highlights-2013-en.***

This work is published on the OECD iLibrary, which gathers all OECD books, periodicals and statistical databases. Visit ***www.oecd-ilibrary.org*** for more information.

2013

OECD*publishing*
www.oecd.org/publishing

ISBN 978-92-64-20106-4
96 2013 04 1 P

9 789264 201064