# Executive summary

## Graduates from science-related fields are the most employable, though not across the board

In most OECD countries, the most popular tertiary degrees held by adults are in business, administration or law. On average across the OECD, 23% of tertiary-educated 25-64 year-olds hold a degree in one of these three fields of study, compared to 5% in natural sciences, statistics and mathematics; 4% in information and communication technologies; and 17% in engineering, manufacturing, and construction. The share is similar among new entrants to tertiary education, indicating that interest in these fields remains stable.

However, interest in science, technology, engineering and mathematics (STEM) grows with higher levels of education, with almost double the share of students graduating from these fields at doctoral level than at bachelor's level in 2015. These fields are also favoured among international tertiary students, with the highest share, almost one-third of those studying in OECD countries, doing so in a science-related field.

Interest in engineering is higher for upper secondary vocational pathways than at tertiary level due to these programmes' strong ties with the industry sector. Approximately one-third of students graduate from upper secondary vocational programmes with a degree in engineering, manufacturing and construction – more than double the share at tertiary level.

STEM-related fields also benefit from higher employment rates, reflecting the demands of an increasingly innovation-driven society: information and communication technologies (ICT) graduates can expect an employment rate that is 7 percentage points higher than those graduating from arts and humanities, or from social sciences, journalism and information. However, employment rates within science-related fields are unequal: natural sciences, mathematics and statistics graduates are more likely to have similar employment rates as arts and humanities graduates – both lower than the rates enjoyed by engineers or ICT specialists.

Gender parity in graduation rates is still a distant dream for some fields of study, particularly upper secondary vocational education. Gender parity improves at the tertiary level, though women still represent approximately only one in four entrants to engineering, manufacturing and construction. On the other hand they represent close to three out of four entrants in health and welfare fields of study. Other fields – such as business administration and law; and natural sciences, mathematics and statistics – have almost achieved gender parity among new entrants.

## Adults are generally better educated today, but some are still left behind

Since 2000, the workforce has become more highly educated across OECD and partner countries. Whereas in 2000, the majority of young adults had attained upper secondary education as their highest education level, today the largest share of 25-34 year-olds holds a tertiary degree. The share of young adults with below upper secondary education only has also declined in the majority of OECD and partner countries, to 16% in 2016 on average across OECD countries. Although more adults are reaching upper secondary level, completion of the programme still remains problematic. Among countries with available true cohort data, approximately 25% of students who enrolled had not graduated after two years from the theoretical end date of the programme; four out of five of these students are no longer enrolled in education. This is a critical loss: the unemployment rate for young adults (25-34 year-olds) who failed to complete upper secondary education is close to 17%, compared to 9% for those who did.

Adults with a tertiary degree benefit from substantial returns on their investment: they are 10 percentage points more likely to be employed, and will earn 56% more on average than adults who only completed upper secondary education. They are also the first to recover from economic downturns: employment rates for young adults with tertiary degrees have returned to pre-crisis levels, while rates for those who did not complete upper secondary education are still lagging behind. Tertiary-educated adults are also less likely to suffer from depression than their less-educated peers. For these reasons, young adults are increasingly inclined to pursue education that will enhance

their qualifications than to enter the labour market directly at the end of compulsory education. Between 2000 and 2016, the share of 20-24 year-olds still in education increased by 10 percentage points compared to a 9 percentage-point decrease of those in employment.

### Total spending on tertiary education has outpaced student enrolments

Expenditure has been increasing at a much higher rate than student enrolments at all levels, particularly tertiary. Expenditure on primary, secondary, and post-secondary non-tertiary educational institutions increased by 4% between 2010 and 2014, although student enrolments decreased slightly over the same period. In contrast, total expenditure on tertiary institutions increased by more than twice the rate of students over the same period, reflecting the priority given by government and society to higher education.

While public expenditure on primary to tertiary institutions has clearly been rising, it did not keep up with the increase in GDP between 2010 and 2014 on average across OECD countries. This has led to a decrease of 2% in public expenditure on educational institutions as a percentage of GDP over the same period. Similarly, in half of OECD countries, the share of public spending on primary to tertiary education in total government spending declined between 2010 and 2014.

The share of public funding is significantly higher for compulsory than for tertiary education. While the public sector still provides 91% of the funds at primary, secondary and post-secondary non-tertiary levels, it only provides for 70% of total expenditure at tertiary level, leaving households to foot the rest of the bill. However, the share of public funding to education expenditure on institutions has remained generally stable between 2010 and 2014 across all levels.

### Lagging salaries and an ageing workforce are ailing the teaching profession

Teachers are the backbone of the education system, yet the profession is increasingly unattractive to young students and the teaching population is getting older, particularly at higher levels of education. On average across OECD countries, 33% of primary to secondary teachers were at least 50 years old in 2015, up 3 percentage points from 2005. In addition, the profession is still largely dominated by women, who make up seven out of ten teachers on average across OECD countries. However gender parity improves at higher levels of education – while 97% of teachers at the pre-primary level are women, they make up 43% at the tertiary level.

Teachers' salaries are low compared to other similarly educated full-time workers. This is a key obstacle for attracting young people into teaching. While salaries increase with the level of education taught, they still range between 78% and 94% of the salaries of full-time workers with tertiary education. The economic downturn in 2008 had a direct impact on teachers' salaries, which were either frozen or cut in some countries. Between 2005 and 2015 teachers' statutory salaries decreased in real terms in one-third of the countries and economies with available data.

### Other findings

Due to lower public investment in early childhood education, the share of children enrolled in private institutions at this level is considerably larger than in primary and secondary education.

General upper secondary education programmes are more popular than vocational programmes: 37% of 15-19 year-olds are enrolled in general upper secondary education programmes, compared to 25% in vocational programmes though vocational programmes are a strong component in the educational systems of many countries.

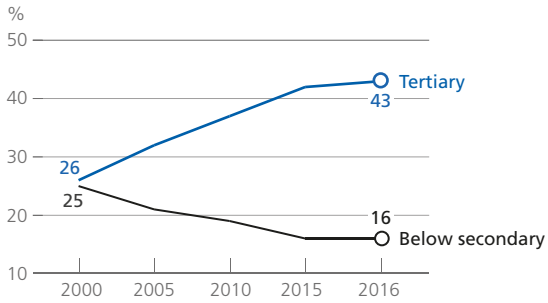
Financial support helps offset the burden of high tuition fees charged by certain tertiary institutions; 75% or more of students in Australia, England (United Kingdom) and the United States benefit from public loans or scholarships/grants.

Open admissions systems to public and/or private tertiary institutions can be found in more than half the countries and economies with available data. National/central examinations taken towards the end of upper secondary education, and entrance examinations administered by tertiary institutions, are most widely used for entry into first-degree tertiary programmes.

# Key findings from *Education at a Glance 2017*

## Young people continue to attain higher levels of education...

Educational attainment rates (%) among 25-34 year-olds, OECD average




## ... as higher education brings better labour and life outcomes...

Adults with a tertiary degree (as compared to adults with upper secondary degree only)

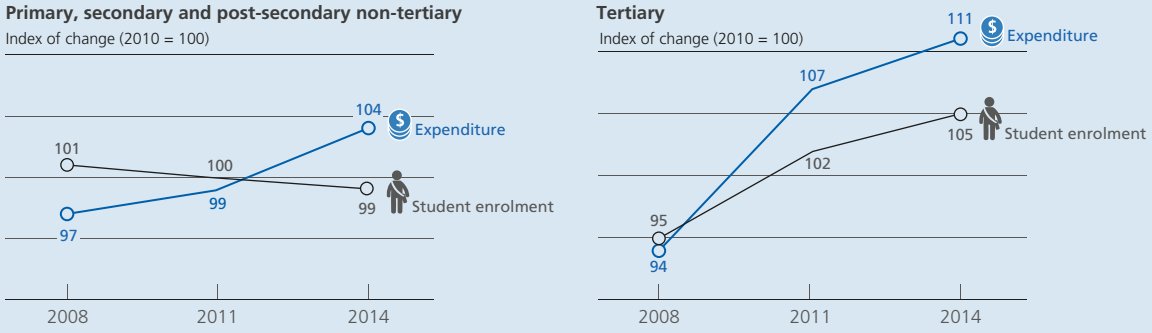
- Are more likely to be employed: **84%** compared to **74%**
- Are **LESS** likely to have suffered from depression
- Earn **56%** more

## ... but some are still left behind

**25%** of upper secondary students did not graduate two years after the end of the programme (true cohort)

**15%** of 18-24 year-olds are neither in employment nor in education or training

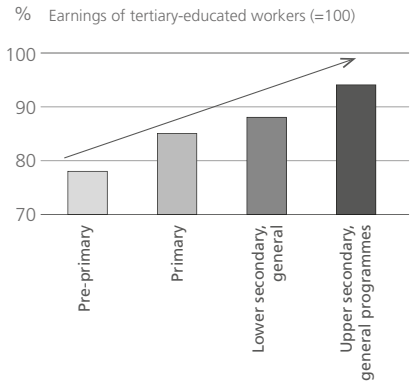
## Yet total spending on educational institutions outpaced student enrolment



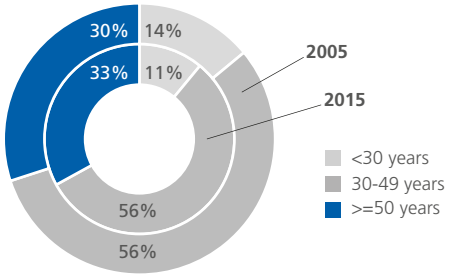

**91%** of expenditure on primary and secondary education – but only **70%** of expenditure on tertiary education – from public funds

## Teacher salaries are not competitive

Teachers' salaries relative to other tertiary-educated workers (2015)




## The teaching force continues to age...

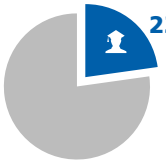



## ... and the teaching profession attracts few men

**7** out of **10** teachers are women

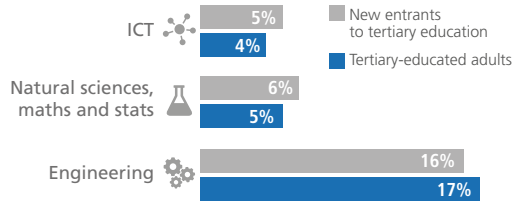
# Which careers do students go for?

## The most popular degrees: business, administration and law



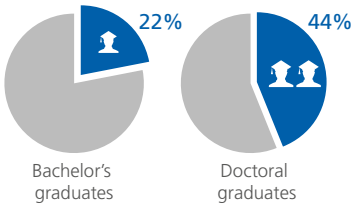
**23%** of tertiary-educated adults

## Overall, interest in scientific fields remains stable across generations

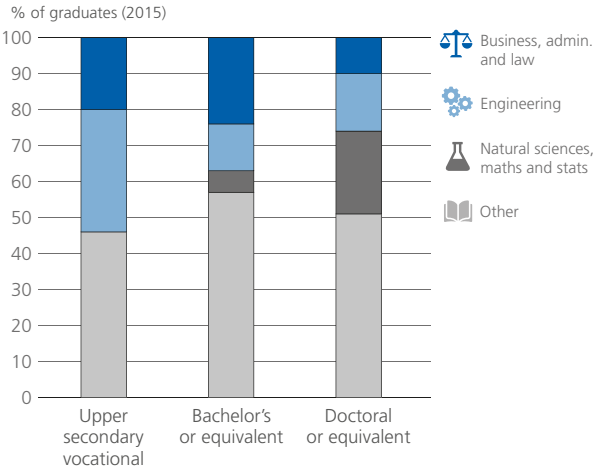



**S**cience
**T**echnology
**E**ngineering
**M**athematics

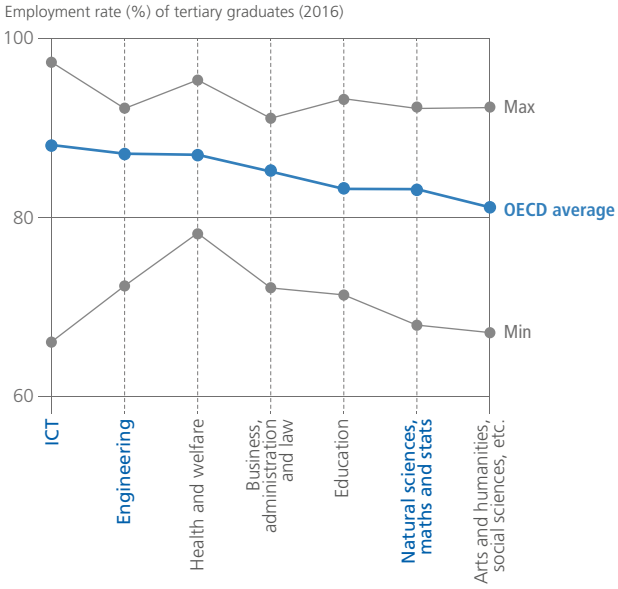
## STEM are more popular at higher levels of education




## Engineering is most popular among upper secondary vocational graduates, doctoral students favour natural sciences




## STEM graduates have better employment prospects, though not across the board




## Gender parity across disciplines: still a long way to go

% of women entering tertiary-level studies (2015)