

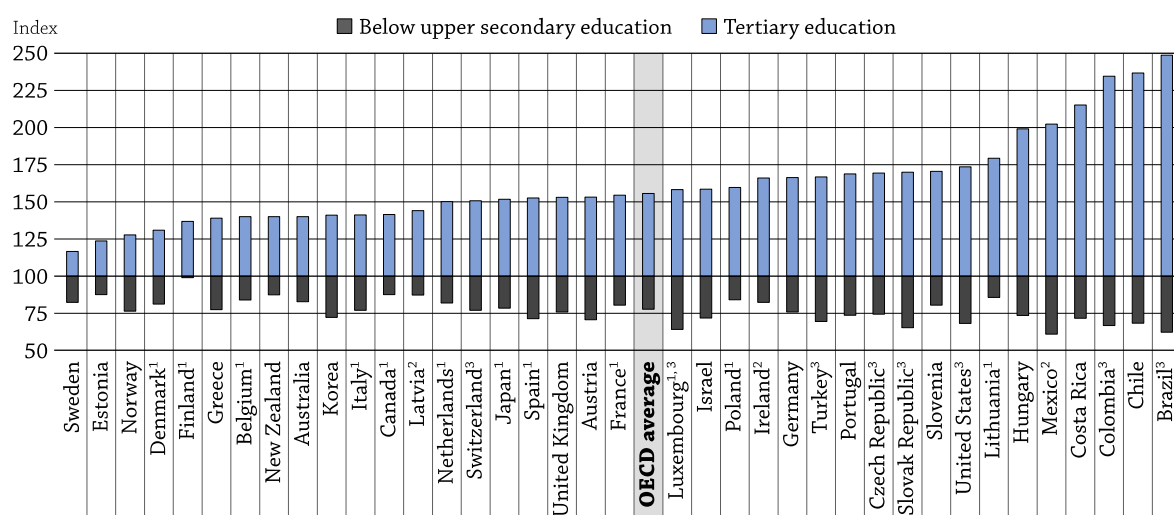
## EDUCATION AT A GLANCE 2017

*Education at a Glance: OECD Indicators* is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in the 35 OECD countries and a number of partner countries.

### Denmark

- **Health and welfare are popular fields of study in Denmark, in both tertiary and secondary vocational programmes**, which is unusual for OECD countries. At doctoral level, science, technology, engineering and mathematics (STEM) fields attract a large share of international students.
- **Equity is widespread in Denmark, across the education system and also in the labour market**, both in terms of employment rates and earnings across levels of educational attainment.
- Few young Danes suffer from unemployment and **many keep on studying after they have turned 25**.
- **Denmark has one of the best-developed early childhood education and care systems of all OECD countries**. This has positive effects on parents' lives, allowing them to take part in their own continuing education.

**Figure 1. Relative earnings of adults, by educational attainment (2015)**  
25-64 year-olds with income from employment; upper secondary education=100



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

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

2. Earnings net of income tax.

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

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

**Source:** OECD (2017), Table A6.1. See Source section for more information and Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

**StatLink**  <http://dx.doi.org/10.1787/888933557375>

## Health and welfare are the most popular fields of study for Danes, while science-related fields attract international doctoral students

- The most popular fields in Denmark among tertiary graduates were health and welfare (22% in 2015), followed by business, administration and law, studied by 20% of tertiary graduates. When it comes to the science, technology, engineering and mathematics (STEM) fields, 5% of tertiary graduates completed a degree in natural sciences, mathematics and statistics; 4% in information and communication technologies (ICT); and 11% in engineering, manufacturing and construction. .
- Denmark is one of the few countries where a larger share of upper secondary vocational students graduated in health and welfare (30%) than in engineering, manufacturing and construction (26%) – a difference of 4 percentage points. On average across OECD countries, 34% of graduates from vocational programmes specialised in engineering, manufacturing and construction, against 12% in health and welfare.
- Across OECD countries, about one-third of internationally mobile students at all tertiary levels are enrolled in STEM fields. The lower language skills needed to study STEM fields could partly explain this internationalisation. However, the central role played by science, engineering and business management in innovation processes and value creation are probably of greater importance, along with the wage premiums and better career opportunities associated with these disciplines. At doctoral level, international students' preferences for STEM fields become even more pronounced: 24% of international students enrolled in OECD countries are pursuing advanced research programmes in engineering, manufacturing and construction. This trend is even stronger in Denmark, where international students make up 35% of doctoral enrolments in these fields, the highest share across OECD countries.

## Equity is a hallmark of the Danish system

- In most countries, there is a substantial difference in attainment of tertiary-type A or advanced research qualifications between those without a tertiary-educated parent and those with at least one tertiary-educated parent – up to 50 percentage points in Italy and Turkey. In contrast, the difference in tertiary attainment among 30-44 year-olds in Denmark is only 24 percentage points, demonstrating genuine intergenerational mobility in tertiary education. Denmark is one of a handful of countries (Austria, Estonia, Finland, Japan and Sweden), where tertiary attainment seems to be less influenced by their parents' educational attainment, at 25 percentage points or lower.
- Employment rates by educational attainment also demonstrate equity in Denmark. For 25-34 year-olds in most countries, the higher their educational attainment, the higher their employment rates. However, in Denmark, young adults with an upper secondary or post-secondary non-tertiary vocational qualification have a slightly higher employment rate than tertiary graduates. Denmark has vocational programmes with a strong and integrated work-based learning component. Most vocational students participate in combined school- and work-based programmes in which students are paid for at least part of their work periods (work-study programmes). In Denmark, all secondary vocational programmes are combined school- and work-based ones.
- For other levels of educational attainment in Denmark, the employment rates for young adults are fairly compressed, starting at 61% for those who didn't graduate from upper secondary education – another sign of equity.
- Earnings in Denmark are similarly compressed across levels of educational attainment. In all OECD countries, the difference in earnings between adults with a tertiary education and those with an upper secondary education are generally larger than between adults with and without an upper secondary education as their highest attainment. On average across OECD countries, 25-64 year-old adults without an upper secondary education earn on average 22% less than those who do, for part-time or full-time employment, while the earnings advantage of a tertiary degree is 56% more (Figure 1). The same pattern applies in Denmark but to a much lesser extent, especially for tertiary graduates, whose relative earnings are only 31% higher.

- Consequently, Denmark has the lowest private and public net financial returns on tertiary education. For instance, for a Danish woman, the difference between the private net financial returns from short-cycle tertiary education (USD 64 600) and from bachelor's, master's, doctorate or equivalent level (USD 94 300) is the smallest across OECD countries. This can be explained by Denmark's more even distribution of net earnings across levels of educational attainment.

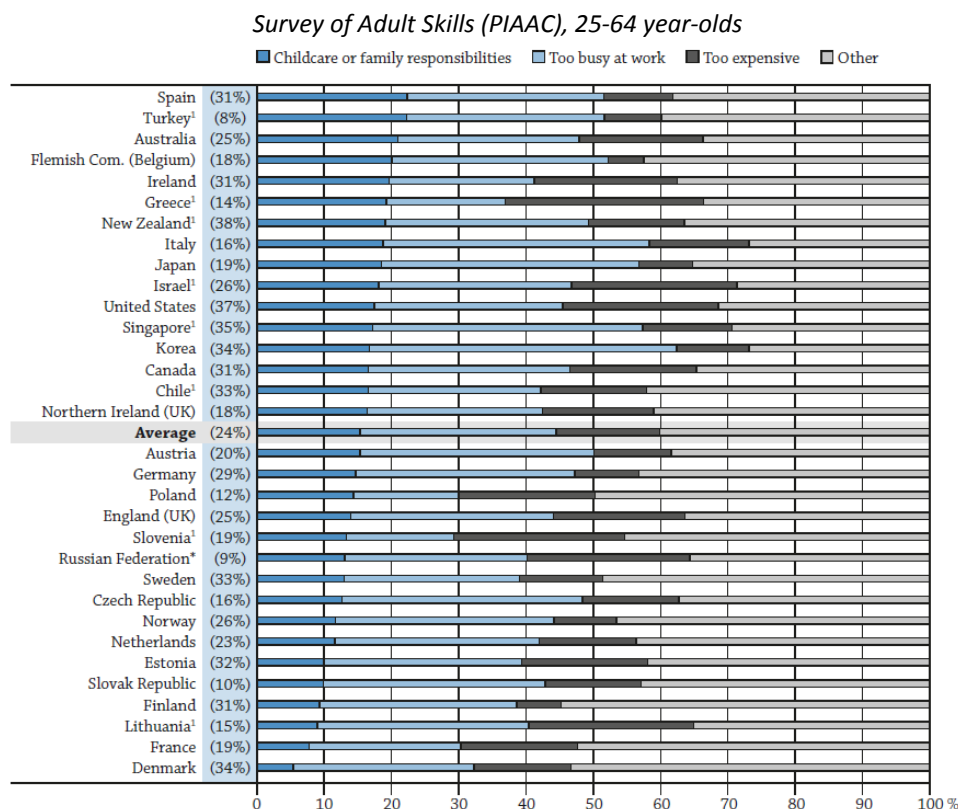
### **Few young Danes suffer from unemployment and many keep on studying over the age of 25**

- In 2015, Denmark, alongside Australia and Finland, was one of the OECD countries with the largest proportions of 25-29 year-olds enrolled in education, at over 30%, while more than 60% of 18-24 year-olds in Denmark were in education. Young adults no longer in education may be employed, unemployed or inactive. On average across OECD countries, two-thirds (67%) of 18-24 year-olds not in education are employed but this share is over 75% in Denmark.
- A common benchmark for the smoothness of the transition from school to work is the proportion of young people neither employed nor in education or training (NEET) and Denmark compares well to other countries in this respect. Across OECD countries on average, 15% of 18-24 year-olds are NEET (whether not in education and unemployed, or not in education and inactive). In Denmark the share is 8%, putting it alongside Germany (10%), Iceland (5%), the Netherlands (8%), Luxembourg (9%) and Switzerland (9%) in the group of countries with NEET rates of 10% or less.
- In most OECD countries compulsory education lasts until at least the age of 16 and in most countries, the majority of students continue education well beyond the age of 16. Many of those who leave education early have difficulties finding employment. Thus, the share of NEETS among 15-19 year-olds is 6% on average across OECD countries. Denmark has one of the lowest shares of NEETs in this age group, along with the Czech Republic and Luxembourg, at less than 3%.

### **Enrolment of young children is one of the highest among OECD countries, allowing adults to take part in formal or non-formal education**

- In half of countries with available data, enrolment rates for 3- and 4-year-olds exceeded 90% in 2015, but full enrolment in early childhood education and care begins at the age of 2 in Denmark and Norway, where enrolment in either pre-primary or early childhood development programmes is very common. In Denmark, 91% of 2-year-olds are enrolled in early childhood education and care.
- Child care and family responsibilities can be barriers to pursuing adult education in many countries. In Australia, the Flemish community of Belgium, Spain and Turkey, 20% or more of those not participating in a desired learning activity cited child care or family responsibilities, but in Denmark, this was a barrier for only 5% of the relevant population (Figure 2).
- The presence of young children has a negative effect on the adult learning participation rate for younger adults in all countries and subnational entities that participated in the Survey of Adult Skills (PIAAC). Most countries see a difference in participation rates of 10 percentage points or more between those with and without young children. In countries with higher participation rates, the difference tends to be smaller. In Denmark, this difference is among the smallest and not even statistically significant.

**Figure 2. Barriers to participating in formal and/or non-formal education (2012 or 2015)**



**Note:** Percentage in parentheses represents the share of 25-64 year-olds who wanted to take part in (more) learning activities but did not start.

1. Reference year is 2015; for all other countries and economies the reference year is 2012.

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

Countries and economies are ranked in descending order of the share of adults citing childcare or family responsibilities as a reason for not taking part in learning activities.

Source: OECD (2017), Table C6.1b. See Source section for more information and Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

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#### Note regarding data from 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.

The Survey of Adult Skills is a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC).

#### References

OECD (2017), *Education at a Glance 2017: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2017-en>.

For more information on **Education at a Glance 2017** and to access the full set of Indicators, visit [www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm).

Updated data can be found on line at **OECD.Stat** as well as by following the **StatLinks** under the tables and charts in the publication <http://dx.doi.org/10.1787/eag-data-en>.

Explore, compare and visualise more data and analysis using: **Education GPS**  
<http://gpseducation.oecd.org/CountryProfile?primaryCountry=DNK&treshold=10&topic=EO>.

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## Key Facts for Denmark in Education at a Glance 2017

Source	Main topics in <i>Education at a Glance</i>	Denmark		OECD average		EU22 average			
Fields of study									
	Graduates in upper secondary vocational programmes	2015							
		%	% Women	%	% Women	%	% Women		
Table A2.1		Business, administration and law	23%	66%	20%	66%	19%	66%	
		Engineering, manufacturing and construction	26%	10%	34%	12%	33%	11%	
		Health and welfare	30%	86%	12%	82%	12%	82%	
	Services	12%	41%	17%	60%	19%	59%		
	New entrants to tertiary education	2015							
		%	% Women	%	% Women	%	% Women		
Table C3.1		Education	6%	68%	9%	78%	9%	79%	
		Business, administration and law	29%	52%	23%	54%	23%	57%	
		Engineering, manufacturing and construction	10%	30%	16%	24%	15%	25%	
	Tertiary students enrolled, by mobility status	2015							
		International students <sup>1</sup>	National students	International students <sup>1</sup>	National students	International students <sup>1</sup>	National students		
Table C4.2.		Education	2%	9%	3%	8%	3%	8%	
		Business, administration and law	28%	23%	27%	23%	26%	22%	
		Engineering, manufacturing and construction	19%	9%	17%	12%	17%	15%	
	Tertiary-educated 25-64 year-olds	2016							
Table A1.3		Education	**		13%		13%		
		Business, administration and law	**		23%		21%		
		Engineering, manufacturing and construction	**		17%		18%		
		Employment rate of tertiary-educated 25-64 year-olds	2016						
Table A5.3	Education		**		83%		83%		
	Business, administration and law		**		85%		85%		
	Engineering, manufacturing and construction		**		87%		86%		
Early childhood education									
	Enrolment rates in early childhood education at age 3	2015							
Table C2.1		ISCED 01 and 02		97%		78%		80%	
	Expenditure on all early childhood educational institutions	2014							
Table C2.3		As a percentage of GDP		1.3%		0.8%		0.8%	
		Proportions of total expenditure from public sources		81%		82%		85%	
Vocational education and training (VET)									
	Enrolment in upper secondary education, by programme orientation	2015							
		General	Vocational	General	Vocational	General	Vocational		
Table C1.3	Enrolment rate among 15-19 year-olds	40%	11%	37%	25%	35%	29%		
	Graduation rates, by programme orientation	2015							
		General	Vocational	General	Vocational	General	Vocational		
Table A2.2	Upper secondary education - all ages	69%	44%	54%	44%	50%	49%		
	Employment rate, by programme orientation	2016							
		General	Vocational	General	Vocational	General	Vocational		
Figure A5.3.	25-34 year-olds with upper secondary or post-secondary non-tertiary education as their highest educational attainment level	70%	84%	70%	80%	69%	79%		
Tertiary education									
	Share of international or foreign students, by level of tertiary education	2015							
Table C4.1.		Bachelor's or equivalent	6%		4%		6%		
		Master's or equivalent	18%		12%		12%		
		Doctoral or equivalent	32%		26%		22%		
		All tertiary levels of education	10%		6%		8%		
	Educational attainment of 25-64 year-olds	2016							
Table A1.1		Short-cycle tertiary	5%		8%		6%		
		Bachelor's or equivalent	20%		16%		13%		
		Master's or equivalent	12%		12%		14%		
		Doctoral or equivalent	1%		1%		1%		
	Employment rate of 25-64 year-olds, by educational attainment	2016							
Table A5.1		Short-cycle tertiary	87%		81%		81%		
		Bachelor's or equivalent	83%		83%		82%		
		Master's or equivalent	90%		87%		87%		
		Doctoral or equivalent	90%		91%		91%		
	All tertiary levels of education	86%		84%		84%			
	Relative earnings of full-time full-year 25-64 year-old workers, by educational attainment (upper secondary education = 100)	2015							
Table A6.1		Short-cycle tertiary	116		122		124		
		Bachelor's or equivalent	113		146		138		
		Master's, doctoral or equivalent	169		198		177		
		All tertiary levels of education	131		156		153		

## Denmark - Country Note - Education at a Glance 2017: OECD Indicators

Source	Main topics in <i>Education at a Glance</i>	Denmark		OECD average		EU22 average		
Adult education and learning								
	Participation of 25-64 year-olds in adult education <sup>2</sup>	2012		2012 <sup>3</sup>		2012		
Table C6.1a	Participation in formal education only	5%		4%		n.a.		
	Participation in non-formal education only	52%		39%		n.a.		
	Participation in both formal and non-formal education	9%		7%		n.a.		
	No participation in adult education	34%		50%		n.a.		
	Financial investment in education							
	Annual expenditure per student, by level of education (in equivalent USD, using PPPs)	2014						
Table B1.1	Primary education	USD 12 158		USD 8 733		USD 8 803		
	Secondary education	USD 10 998		USD 10 106		USD 10 360		
	Tertiary (including R&D activities)	USD 16 568		USD 16 143		USD 16 164		
	Total expenditure on primary to tertiary educational institutions	2014						
Table B2.1	As a percentage of GDP	6.5%		5.2%		4.9%		
	Total public expenditure on primary to tertiary education	2014						
Table B4.1	As a percentage of total public expenditure	13.5%		11.3%		9.9%		
Teachers								
	Actual salaries of teachers in public institutions relative to wages of full-time, full-year workers with tertiary education	2015						
Table D3.2a	Pre-primary school teachers	0.72		0.78		0.79		
	Primary school teachers	0.88		0.85		0.86		
	Lower secondary school teachers (general programmes)	0.89		0.88		0.90		
	Upper secondary school teachers (general programmes)	1.01		0.94		0.96		
		Annual statutory salaries of teachers in public institutions, based on typical qualifications, at different points in teachers' careers (in equivalent USD, using PPPs)	Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience
Table D3.1a	Pre-primary school teachers	USD 41 938	USD 47 601	USD 29 636	USD 39 227	USD 28 726	USD 38 487	
	Primary school teachers	USD 46 974	USD 55 054	USD 30 838	USD 42 864	USD 30 080	USD 42 049	
	Lower secondary school teachers (general programmes)	USD 47 256	USD 55 999	USD 32 202	USD 44 623	USD 31 498	USD 43 989	
	Upper secondary school teachers (general programmes)	USD 46 914	USD 60 956	USD 33 824	USD 46 631	USD 32 503	USD 46 151	
	Organisation of teachers' working time in public institutions over the school year	Net teaching time	Total statutory working time	Net teaching time	Total statutory working time	Net teaching time	Total statutory working time	
Table D4.1	Pre-primary school teachers	1417 hours	1680 hours	1001 hours	1608 hours	1034 hours	1564 hours	
	Primary school teachers	784 hours	1680 hours	794 hours	1611 hours	767 hours	1557 hours	
	Lower secondary school teachers (general programmes)	784 hours	1680 hours	712 hours	1634 hours	663 hours	1593 hours	
	Upper secondary school teachers (general programmes)	386 hours	1680 hours	662 hours	1620 hours	629 hours	1580 hours	
	Percentage of teachers who are 50 years old or over	2015						
Table D5.1	Primary education	**		32%		33%		
	Upper secondary education	**		40%		42%		
	Share of female teachers in public and private institutions	2015						
Table D5.2	Primary education	**		83%		86%		
	Upper secondary education	**		59%		61%		
	Tertiary education	**		43%		44%		
	Ratio of students to teaching staff	2015						
Table D2.2	Primary education	**		15		14		
	Secondary education	**		13		12		
	Tertiary education	**		16		16		
Equity								
	Intergenerational mobility in education <sup>2</sup>	2012		2012 <sup>3</sup>		2012		
		Both parents have less than tertiary	At least one parent attained tertiary	Both parents have less than tertiary	At least one parent attained tertiary	Both parents have less than tertiary	At least one parent attained tertiary	
Tables A4.1 and A4.2		Less than tertiary education (30-44 year-olds' own educational attainment)	65%	32%	69%	31%	n.a.	
		Tertiary-type B (30-44 year-olds' own educational attainment)	19%	29%	12%	16%	n.a.	
	Tertiary-type A and advanced research programmes (30-44 year-olds' own educational attainment)	15%	39%	20%	55%	n.a.		
Transition from school to work								
	Percentage of people not in employment, nor in education or training (NEET)	2016						
Table C5.1	18-24 year-olds	8%		15%		15%		
Education and social outcomes								
	Percentage of adults who report having depression	2014						
		Men	Women	Men	Women	Men	Women	
Table A8.1		Below upper secondary	11%	19%	10%	15%	10%	14%
		Upper secondary or post-secondary non-tertiary	8%	9%	6%	10%	6%	10%
	Tertiary	6%	8%	5%	6%	4%	6%	

The reference year is the year cited or the latest year for which data are available.

Refer to Annex 3 for country-specific notes and for more information on data presented in this key facts table ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

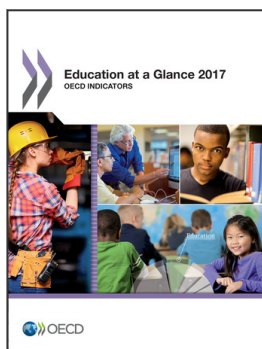
1. For some countries foreign students are provided instead of international students.

2. Data refer to ISCED-97 instead of ISCED-A 2011.

3. OECD average includes some countries with 2015 data.

\*\* Please refer to the source table for details on this data.

Cut-off date for the data: 19 July 2017. Any updates on data can be found on line at <http://dx.doi.org/10.1787/eag-data-en>



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