

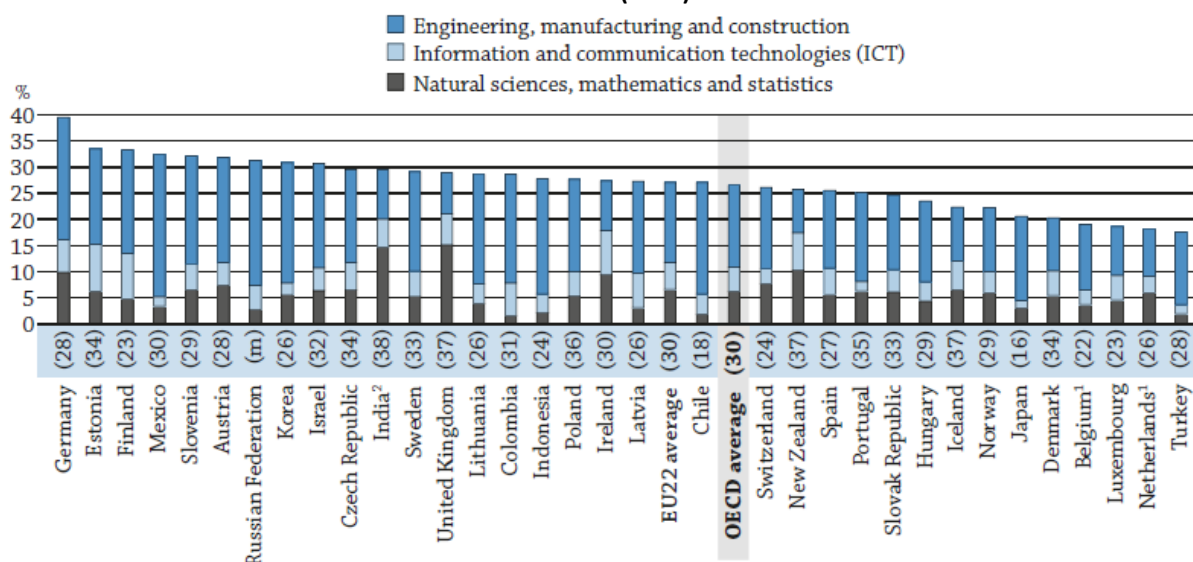
## EDUCATION AT A GLANCE 2017

*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.

### Luxembourg

- Luxembourg has the highest share of tertiary graduates in business, administration and law of all OECD countries (39%). This is partly driven by the fact that almost half of all tertiary students in Luxembourg are international students, and 48% of them enrol in business, administration and law programmes.
- Tertiary-educated adults in Luxembourg benefit from the highest net private financial returns to education across all OECD countries. This is particularly true for women.
- Luxembourg has one of the highest enrolment rates in vocational upper secondary programmes for 20-24 year-olds, with a large share of these students attending combined school- and work-based programmes.
- In contrast with most OECD countries, teachers in Luxembourg report higher actual earnings than other full-time tertiary-educated workers.
- Both students and teachers also benefit from one of the lowest class sizes among OECD countries, both at primary and secondary level.

Figure 1. Distribution of new entrants to tertiary education, by STEM field of study and share of women in these fields (2015)



**Note:** The number in parentheses corresponds to the share of female new entrants in STEM (science, technology, engineering and mathematics) fields of study.

1. Excludes new entrants at doctoral level.

2. Year of reference 2014.

Countries are ranked in descending order of the share of new entrants to tertiary education in STEM fields.

**Source:** OECD/UIS/Eurostat (2017), Table C3.1a. 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/10.1787/888933558306>

## **Luxembourg's business, administration and law programmes are attractive to both national and international students**

- Luxembourg has the highest share of tertiary graduates in business, administration and law across OECD, with 39% of tertiary students graduating from those fields, compared with 24% on average across OECD countries. The same pattern is found among those with upper secondary vocational qualifications: 36% studied business, administration and law in Luxembourg, compared with only 19% in European countries on average.
- On the other hand, only 5% of tertiary graduates studied the fields of engineering, manufacturing and construction in Luxembourg, one-third of the OECD average (14%).
- Luxembourg has by far the highest share of international tertiary students of all OECD countries: 46% of tertiary students in Luxembourg are international students. New Zealand has the second highest share, about 21% of all tertiary students. Luxembourg's international students are unevenly distributed across both fields of study and levels of education. While they amount to one-quarter of students at bachelor's level, this rises to 71% of master's students and up to 87% of doctoral ones.
- International students in Luxembourg specialise in a fairly similar fields of study as tertiary students in the country overall, with most enrolling in business, administration and law (48%). This is considerably higher than the OECD average of 27%. On the other hand, very few international students enrol in engineering, manufacturing and construction (5%) or health and welfare (3%).
- More than half (63%) of international students in Luxembourg come from neighbouring countries. A master's programme in business, administration and law in a public institution in Luxembourg costs students USD 3 511<sup>1</sup> in tuition fees per year, relatively low compared to similar programmes in neighbouring European countries, which could explain why Luxembourg attracts so many international students from there.

## **Tertiary education has a strong impact on labour market outcomes, especially for women**

- In 2016, 43% of adults of working age (25-64 year-olds) in Luxembourg had completed a tertiary degree, more than half of them at a master's (21%) or doctoral (2%) level. Overall tertiary attainment is not much higher than the OECD average of 37%, but adults in Luxembourg are much more likely to have attained a master's level or equivalent.
- Among young adults, Luxembourg's tertiary attainment levels are even greater: 51% of 25-34 year-olds have completed tertiary education. The only countries ahead of Luxembourg on that measure are Korea (70%), Canada (61%), Japan (60%) and the United Kingdom (52%).
- In 2016, the employment rate for tertiary-educated young adults (25-34 year-olds) in Luxembourg was 90%, significantly higher than the OECD and EU22 averages of 83% and 82% respectively. However, employment rates are higher than the OECD average in Luxembourg across all educational levels: 73% of young adults without upper secondary education are employed (OECD average, 59%) and 80% of those with either upper-secondary or post-secondary non-tertiary education (OECD average, 76%). Tertiary education undoubtedly offers an employment premium in Luxembourg, but it is not necessarily as large as in other OECD countries because of the high employment rates across all education levels.
- On the other hand, adults in Luxembourg enjoy much higher net financial returns to tertiary education than their European or OECD counterparts. This is true both for men and women and for private and public net financial returns. On average across OECD countries, the net public financial returns on tertiary education are USD 83 400 for women and USD 154 000 for men. Those figures increase to USD 194 400 for women in Luxembourg and USD 262 200 for men.
- Although there is still a gap between the net earnings of tertiary-educated men and women in Luxembourg, that gap is one of the smallest among OECD countries. For instance, 35-44 year-old tertiary-educated women in Luxembourg earn about 90% of what their male peers earn, compared with an average of only 76% in other OECD countries.

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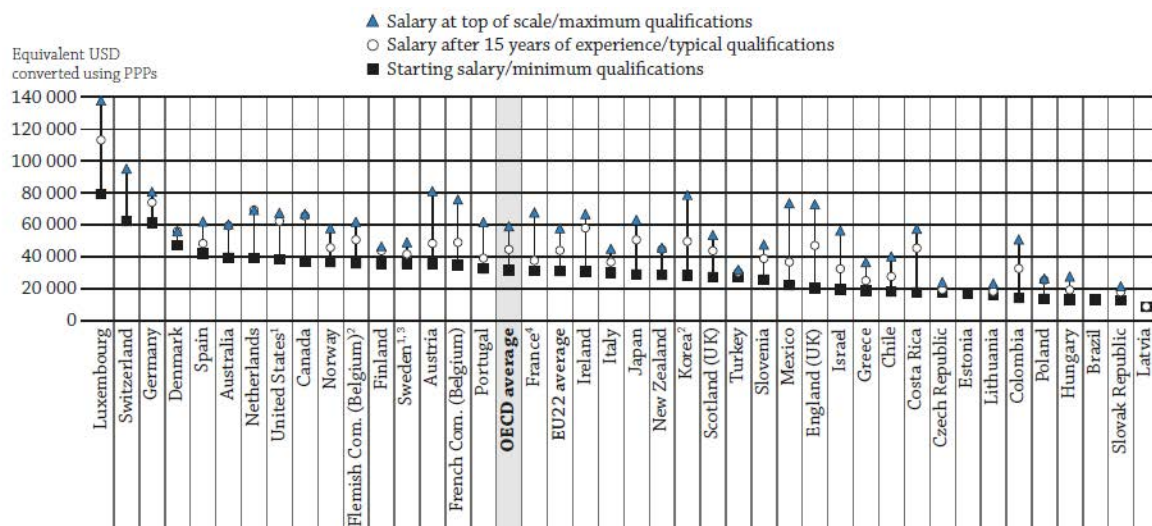
<sup>1</sup> Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs) for GDP.

## Vocational education and training is attractive to upper secondary students in Luxembourg

- Vocational programmes at the upper secondary level are well developed in Luxembourg. Among 15-19 year-olds, 36% are enrolled in vocational programmes, compared with only 27% in general programmes. On average across OECD countries these rates are reversed, with 37% of teenagers in that age group attending general upper secondary programmes and 25% of them vocational ones.
- Perhaps even more noteworthy is the fact that Luxembourg has one of the highest rates of enrolment in upper secondary vocational programmes among 20-24 year-olds across OECD countries. About 9% of this age group are enrolled in upper secondary vocational programmes, almost twice the OECD average. Almost all 20-24 year-olds enrolled in upper secondary education are in vocational programmes (92%).
- A non-negligible portion of students in vocational programmes study in combined school- and work-based programmes (14% of all students in upper secondary education, which corresponds to almost one-quarter of vocational students). This is less than in countries such as Austria, Denmark or Germany where between one-third and 40% of students in upper-secondary education are enrolled in those programmes, but it is close to the EU22 average of 16%.
- Those enrolment rates are good news because vocational upper secondary education is associated with positive employment prospects and labour market outcomes in general. The unemployment rate in Luxembourg for upper secondary graduates from vocational programmes is only 5%, whereas adults who graduated from a general upper secondary programme face a 10% unemployment rate.

**Figure 2. Lower secondary teachers' statutory salaries at different points in teachers' careers (2015)**

*Annual statutory salaries of teachers in public institutions, in equivalent USD converted using PPPs*



1. Actual base salaries.

2. Salaries at top of scale and typical qualifications, instead of maximum qualifications.

3. Salaries at top of scale and minimum qualifications, instead of maximum qualifications.

4. Includes the average of fixed bonuses for overtime hours.

Countries and economies are ranked in descending order of starting salaries for lower secondary teachers with minimum qualifications.

Source: OECD (2017), Table D3.1a, Tables D3.1b and D3.6, available on line. 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/10.1787/888933558781>

## High salaries and relatively good school environments are attracting young teachers into the profession

- On average, teachers in Luxembourg are relatively young compared to other teachers across OECD countries. From primary to upper secondary, 17% of all teachers are under 30 years old in Luxembourg, compared with 10% on average across OECD countries. Perhaps more importantly, only 21% of them are aged 50 or over, considerably below the European average of 35%. The share fell by 7 percentage points between 2005 and 2015, with up to 28% of teachers in Luxembourg aged 50 or over in 2005. The profession seems to be rather more attractive in Luxembourg than on average in other OECD countries since more and more young people are entering it.

- This might be partly due to the fact that teachers are very well paid in Luxembourg, from the very start of their careers. Pre-primary and primary teachers in Luxembourg benefit from the highest starting salary of all teachers working in all OECD countries, at USD 68 348, more than twice the EU22 or OECD averages of around USD 29 000. These higher salaries continue throughout teachers' careers. The wage gap between teachers in Luxembourg and in other countries is even greater at the secondary level, with starting salaries of USD 79 312, more than twice that of secondary teachers in other OECD countries, which average USD 32 059 for lower secondary teachers and USD 33 681 for upper secondary ones.
- What is even more noticeable is that teachers tend to earn more than tertiary-educated adults in general in Luxembourg, making the profession relatively attractive. A primary teacher earns on average 10% more than other tertiary-educated adults and a secondary teacher 26% more. In contrast, in other European countries, primary teachers earn 21% less on average and secondary teachers between 10% and 14% less (depending on whether they teach in lower or upper secondary programmes). The only other European countries where teachers are better paid on average than other tertiary-educated adults are Finland (for secondary education), Latvia and Portugal.
- On top of earning relatively good salaries, primary teachers in Luxembourg enjoy the smallest class sizes among OECD countries, alongside Latvia. On average classes have only 16 children, compared to up to 26 (United Kingdom), 27 (Japan and Israel) or even 30 (Chile), and an OECD average class size of 21 children. The same applies at secondary level, with an average class size of 19 students in Luxembourg, compared with 23 on average across OECD countries.

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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.

#### 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](http://dx.doi.org/10.1787/eag-data-en) 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=LUX&treshold=10&topic=EQ>.

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

Source	Main topics in <i>Education at a Glance</i>	Luxembourg		OECD average		EU22 average	
	<b>Fields of study</b>						
	<b>Graduates in upper secondary vocational programmes</b>	<b>2015</b>					
		%	% Women	%	% Women	%	% Women
Table A2.1	Business, administration and law	36%	60%	20%	66%	19%	66%
	Engineering, manufacturing and construction	27%	14%	34%	12%	33%	11%
	Health and welfare	12%	77%	12%	82%	12%	82%
	Services	6%	57%	17%	60%	19%	59%
	<b>New entrants to tertiary education</b>	<b>2015</b>					
		%	% Women	%	% Women	%	% Women
Table C3.1	Education	6%	79%	9%	78%	9%	79%
	Business, administration and law	37%	51%	23%	54%	23%	57%
	Engineering, manufacturing and construction	9%	16%	16%	24%	15%	25%
	<b>Tertiary students enrolled, by mobility status</b>	<b>2015</b>					
		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	6%	21%	3%	8%	3%	8%
	Business, administration and law	48%	26%	27%	23%	26%	22%
	Engineering, manufacturing and construction	5%	10%	17%	12%	17%	15%
	<b>Tertiary-educated 25-64 year-olds</b>	<b>2016</b>					
Table A1.3	Education	**		13%		13%	
	Business, administration and law	**		23%		21%	
	Engineering, manufacturing and construction	**		17%		18%	
	<b>Employment rate of tertiary-educated 25-64 year-olds</b>	<b>2016</b>					
Table A5.3	Education	**		83%		83%	
	Business, administration and law	**		85%		85%	
	Engineering, manufacturing and construction	**		87%		86%	
<b>Early childhood education</b>							
	<b>Enrolment rates in early childhood education at age 3</b>	<b>2015</b>					
Table C2.1	ISCED 01 and 02	66%		78%		80%	
	<b>Expenditure on all early childhood educational institutions</b>	<b>2014</b>					
Table C2.3	As a percentage of GDP	0.6%		0.8%		0.8%	
	Proportions of total expenditure from public sources	99%		82%		85%	
<b>Vocational education and training (VET)</b>							
	<b>Enrolment in upper secondary education, by programme orientation</b>	<b>2015</b>					
		General	Vocational	General	Vocational	General	Vocational
Table C1.3	Enrolment rate among 15-19 year-olds	27%	36%	37%	25%	35%	29%
	<b>Graduation rates, by programme orientation</b>	<b>2015</b>					
		General	Vocational	General	Vocational	General	Vocational
Table A2.2	Upper secondary education - all ages	34%	44%	54%	44%	50%	49%
	<b>Employment rate, by programme orientation</b>	<b>2016</b>					
		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%	80%	69%	79%
<b>Tertiary education</b>							
	<b>Share of international or foreign students, by level of tertiary education</b>	<b>2015</b>					
Table C4.1.	Bachelor's or equivalent	26%		4%		6%	
	Master's or equivalent	71%		12%		12%	
	Doctoral or equivalent	87%		26%		22%	
	All tertiary levels of education	46%		6%		8%	
	<b>Educational attainment of 25-64 year-olds</b>	<b>2016</b>					
Table A1.1	Short-cycle tertiary	5%		8%		6%	
	Bachelor's or equivalent	15%		16%		13%	
	Master's or equivalent	21%		12%		14%	
	Doctoral or equivalent	2%		1%		1%	
	<b>Employment rate of 25-64 year-olds, by educational attainment</b>	<b>2016</b>					
Table A5.1	Short-cycle tertiary	84%		81%		81%	
	Bachelor's or equivalent	83%		83%		82%	
	Master's or equivalent	87%		87%		87%	
	Doctoral or equivalent	91%		91%		91%	
	All tertiary levels of education	86%		84%		84%	
	<b>Relative earnings of full-time full-year 25-64 year-old workers, by educational attainment (upper secondary education = 100)</b>	<b>2015</b>					
Table A6.1	Short-cycle tertiary	**		122		124	
	Bachelor's or equivalent	**		146		138	
	Master's, doctoral or equivalent	**		198		177	
	All tertiary levels of education	158		156		153	



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

Source	Main topics in <i>Education at a Glance</i>	Luxembourg		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	**		4%		n.a.	
	Participation in non-formal education only	**		39%		n.a.	
	Participation in both formal and non-formal education	**		7%		n.a.	
	No participation in adult education	**		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 21 153		USD 8 733		USD 8 803	
	Secondary education	USD 21 595		USD 10 106		USD 10 360	
	Tertiary (including R&D activities)	USD 46 526		USD 16 143		USD 16 164	
	Total expenditure on primary to tertiary educational institutions	2014					
Table B2.1	As a percentage of GDP	3.6%		5.2%		4.9%	
	Total public expenditure on primary to tertiary education	2014					
Table B4.1	As a percentage of total public expenditure	8.2%		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	1.10		0.78		0.79	
	Primary school teachers	1.10		0.85		0.86	
	Lower secondary school teachers (general programmes)	1.26		0.88		0.90	
	Upper secondary school teachers (general programmes)	1.26		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 68 348	USD 108 470	USD 29 636	USD 39 227	USD 28 726	USD 38 487
	Primary school teachers	USD 68 348	USD 108 470	USD 30 838	USD 42 864	USD 30 080	USD 42 049
	Lower secondary school teachers (general programmes)	USD 79 312	USD 113 136	USD 32 202	USD 44 623	USD 31 498	USD 43 989
	Upper secondary school teachers (general programmes)	USD 79 312	USD 113 136	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	880 hours	**	1001 hours	1608 hours	1034 hours	1564 hours
	Primary school teachers	810 hours	**	794 hours	1611 hours	767 hours	1557 hours
	Lower secondary school teachers (general programmes)	739 hours	**	712 hours	1634 hours	663 hours	1593 hours
	Upper secondary school teachers (general programmes)	739 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	17%		32%		33%	
	Upper secondary education	29%		40%		42%	
	Share of female teachers in public and private institutions	2015					
Table D5.2	Primary education	76%		83%		86%	
	Upper secondary education	50%		59%		61%	
	Tertiary education	38%		43%		44%	
	Ratio of students to teaching staff	2015					
Table D2.2	Primary education	11		15		14	
	Secondary education	11		13		12	
	Tertiary education	8		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)	**	**	69%	31%	n.a.	
	Tertiary-type B (30-44 year-olds' own educational attainment)	**	**	12%	16%	n.a.	
	Tertiary-type A and advanced research programmes (30-44 year-olds' own educational attainment)	**	**	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	9%		15%		15%	
Education and social outcomes							
	Percentage of adults who report having depression	2014					
Table A8.1		Men	Women	Men	Women	Men	Women
	Below upper secondary	15%	16%	10%	15%	10%	14%
	Upper secondary or post-secondary non-tertiary	11%	14%	6%	10%	6%	10%
	Tertiary	4%	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)).

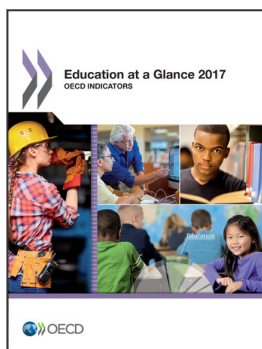
1. For some countries foreign students are provided instead of international students.

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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