

## EDUCATION AT A GLANCE 2015

*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 34 OECD countries and a number of partner countries.

### Estonia

This Country Note focuses on six major topics covered in the 2015 edition of *Education at a Glance: OECD Indicators*. These topics are: educational attainment, skills and participation in the labour market, equity in education and the labour market, financing of education, the teaching profession, tertiary education (based on the new ISCED 2011 classification), and early childhood through upper secondary education.

The table *Key facts for Estonia in Education at a Glance 2015* presents a summary of figures for Estonia and the OECD average.

#### The teaching profession

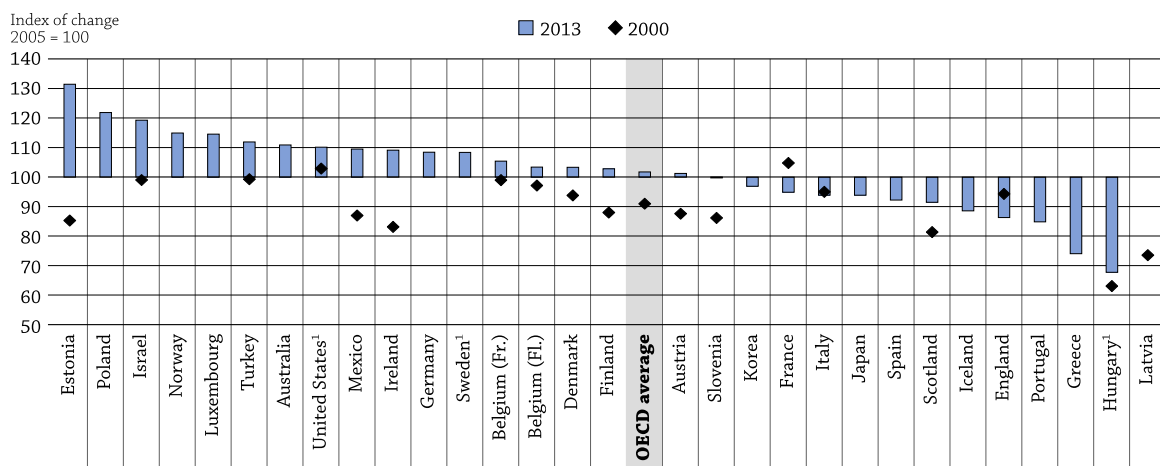
*As Estonia will be experiencing a generational turnover in the teaching profession, it faces the challenge of providing competitive salaries for teachers to attract and retain talented professionals.*

With half its teaching workforce in secondary education aged 50 or more and 19% aged 60 or more (the highest share among OECD and partner countries), Estonia will experience a generational turnover in the teaching profession in the coming years (see Figure 1). To successfully attract new talent, Estonia will need to provide new teachers with both a competitive starting salary and positive career prospects.

Between 2005 and 2013, teachers' salaries in Estonia underwent one of the highest increases in the OECD, with lower and upper secondary teachers' salaries increasing by 31%. Although the financial crisis meant the rate of growth slowed between 2010 and 2012 compared to the period 2005-10, it went up again between 2012 and 2013. However, teachers' statutory salaries in Estonia remain among the lowest in OECD and EU21\* countries at all levels of education from pre-primary to upper-secondary education. Estonia also has a relatively flat or compressed salary scale with salaries at the top of the scale only 31% higher than the starting salary for teachers in general education programmes, well below the OECD average of 60%.

Primary and secondary education teachers in Estonia can expect to earn on average about 84% of the salary of a full-time full-year worker with tertiary education. This ratio is comparable to the OECD average for primary teachers (80%) but below average for lower secondary general programmes (86%) and upper secondary general programmes (91%). Pre-primary teachers can expect to earn 59% of the salary of a full-time full-year tertiary educated worker (below the OECD average of 78%).

**Figure 1: Change in lower secondary teachers' salaries (2000, 2005, 2013)**  
 Index of change between 2000 and 2013 (2005=100, constant prices),  
 for teachers with 15 years of experience and typical qualifications




1. Actual base salaries.

Countries are ranked in descending order of the index of change, between 2005 and 2013, in the salaries of lower secondary teachers with 15 years of experience.

Source: OECD, Table D3.5a.

See Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

StatLink  <http://dx.doi.org/10.1787/888933284478> (Education at a Glance 2015, Chart D3.3)

*Teachers in Estonia have relatively smaller classes than the OECD average which allow for positive teaching conditions.*

Estonia has positive teaching conditions as shown by below-average class sizes (15 students per class in lower secondary education and 17 students in primary schools compared to 24 and 21 at the OECD average respectively and more time spent teaching than keeping order than in the majority of OECD countries. *Education at a Glance 2015* shows a negative correlation between class size and time spent teaching. Each additional student is associated with a 0.5 percentage point decrease in time spent on teaching and learning activities.

## Early childhood through upper secondary and post-secondary non tertiary education

*Education in Estonia starts early and is offered mainly in public institutions.*

While education in Estonia is compulsory only for 7-16 year-olds, more than 90% of students are enrolled from the age of 4 to 17. From primary to upper secondary, almost all students are enrolled in public institutions: 95% at primary level, 96% at lower secondary and 97% at upper secondary. At upper secondary, this rate is behind only Denmark and Ireland – both at 98% – and well above the OECD average of 81%.

*Fewer students attend vocational programmes in upper secondary education compared to other OECD countries and they mainly attend sciences and engineering programmes.*

Only a third of upper secondary students in Estonia attend vocational programmes, well below the OECD average of 46%. At post-secondary non tertiary level, only vocational programmes are offered and 23% of

young people are expected to graduate from this level of education at least once over their lifetime compared to an OECD average of 12%.

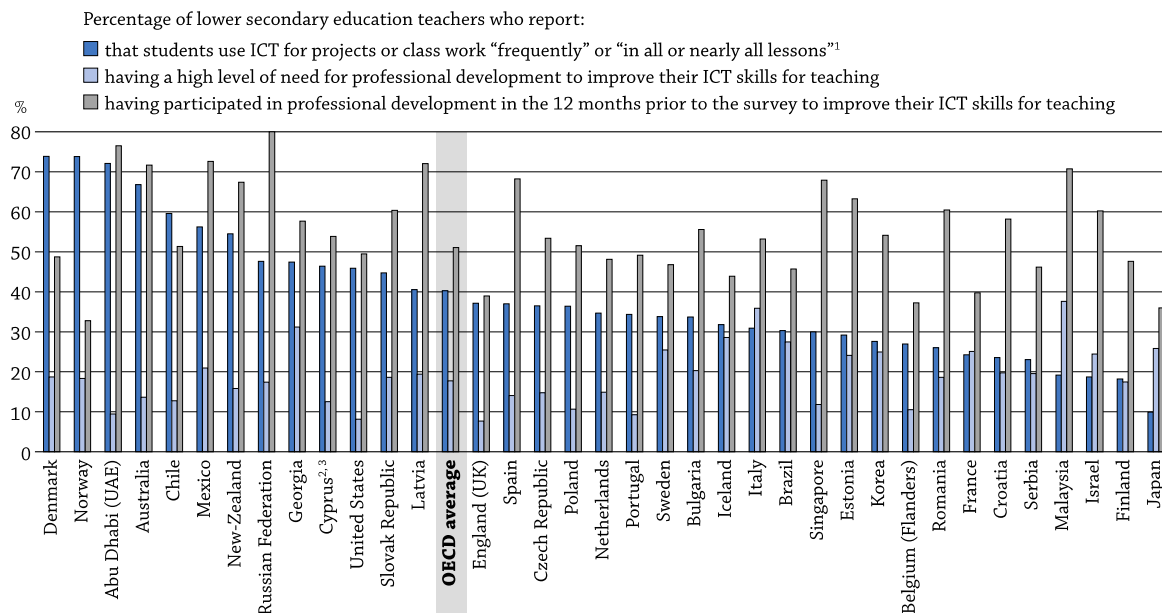
Vocational programmes at upper secondary and post-secondary non tertiary contrast in terms of gender distribution. In 2013, while a majority of vocational upper secondary programmes graduates were male - 66%; compared to 54% at OECD average; 63% of graduates from post-secondary non tertiary programmes were female (54% on average in OECD countries). This gender difference could be explained by the field of studies offered at both levels. The majority of students (60% compared to 37% at the OECD average) in vocational upper secondary programmes are enrolled in the field of sciences and engineering graduates which traditionally attract a more male dominated student population.

*Information and communications technology is changing the learning experience in Estonia, creating a need for more training on its effective use in the classroom.*

Internet access has become commonplace for students in Estonia. PISA 2012 found that 80% of students reported having first accessed the internet before the age of 9, compared with 57% on average for OECD countries, and almost one-quarter before the age of 6, compared to the OECD average of 15%. The use of the Internet at school is at the OECD average: 66% of 15 year-olds in Estonia participating in PISA 2012 reported using Internet at school during a typical week, compared to an OECD average of 64%. Estonian students also tended to perform better in a computerised environment. This is particularly true for boys, whose performance was 10 points higher on average in the computer-based PISA reading test than in the paper-and-pencil version.

Although the use of ICT is widespread, it plays only a limited effective role in learning. Only 29% of the lower secondary teachers surveyed in Estonia as part of the 2013 edition of the OECD Teaching and Learning International Survey (TALIS) reported that students are using information and communications technology (ICT) for projects or class work frequently or in all or nearly all lessons, compared with the OECD average of 39%. Almost one-quarter (24%) of lower secondary teachers also indicated that they have a high level of need for professional development in ICT skills for teaching and 21% reported a high level of need for training in new technologies in the workplace, well above the OECD averages of 18% and 16% respectively (see Figure 2).

**Figure 2: Information and communications technology: Teaching practices, teachers' needs for professional development and participation in professional development activities (TALIS, 2013)**



1. These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.


2. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

3. Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Countries and economies are ranked in descending order, based on the overall percentage of teachers who report that students use ICT for projects or class work "frequently" or "in all or nearly all lessons".

Source: OECD, Table D8.4.

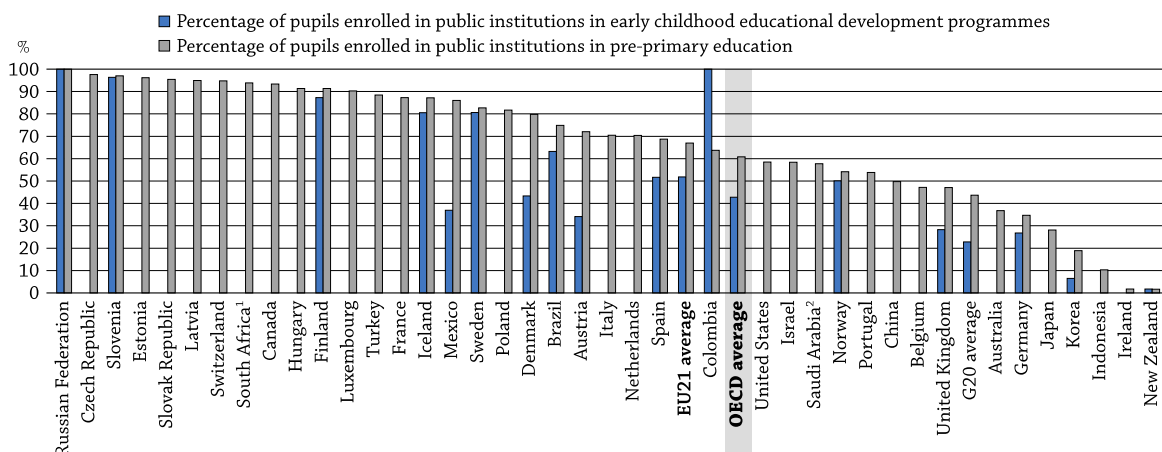
See Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

StatLink  <http://dx.doi.org/10.1787/888933284717> (Education at a Glance 2015, chart D8.4)

## Equity in education and the labour market

*Unlike most OECD and partner countries, Estonia provides public early childhood education for the vast majority of its younger children.*

Coverage of early childhood education and care is better in Estonia than on average for OECD countries. In 2013, 87% of 3-year-olds and 91% of 4-year-olds were enrolled in early childhood education, compared to the OECD averages of 74% and 85% respectively. More children in Estonia are also enrolled in early childhood education as 2-year-olds: 67% compared with the OECD average of 39% and the EU21 average of 35%. In Estonia, 96% of children attend public early childhood education institutions which is a very high share; the OECD averages are 61% for pre-primary and 43% for early childhood educational programmes (see Figure 3).

**Figure 3: Percentage of pupils enrolled in public institutions in early childhood education (2013)**

1. Year of reference 2012.

2. Year of reference 2014.

Countries are ranked in descending order of the percentage of pupils enrolled in public institutions in pre-primary education.

Source: OECD, Table C2.2. See Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

StatLink <http://dx.doi.org/10.1787/888933284204>

Source: OECD, Table C2.2. See 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/10.1787/888933284204> (Education at a Glance 2015, Chart C2.3)

*While women in Estonia tend to reach higher levels of education than men, their salaries are lagging behind.*

Overall, women in Estonia tend to have a higher level of educational qualification than women in other OECD countries: 46% of women in Estonia have attained tertiary education compared with 38% on average. Not only women in Estonia are more educated than the OECD average, but they also tend to be more educated than their men counterparts. For example, 60% of doctoral level graduates in 2013 were women, compared with the OECD average of 47%.

Although women tend to be more qualified on average than men, their economic outcomes are worse. Tertiary educated women aged 35-44 years old working full-time earn 63% of the average earnings of their male counterparts with the same educational attainment level. Along with Hungary and Israel, this is one of the lowest rates among OECD countries.

## Financing of education

*Education in Estonia is mainly publicly funded but has experienced one of the greatest falls in public expenditure on educational institutions as a share of the country's wealth among OECD countries.*

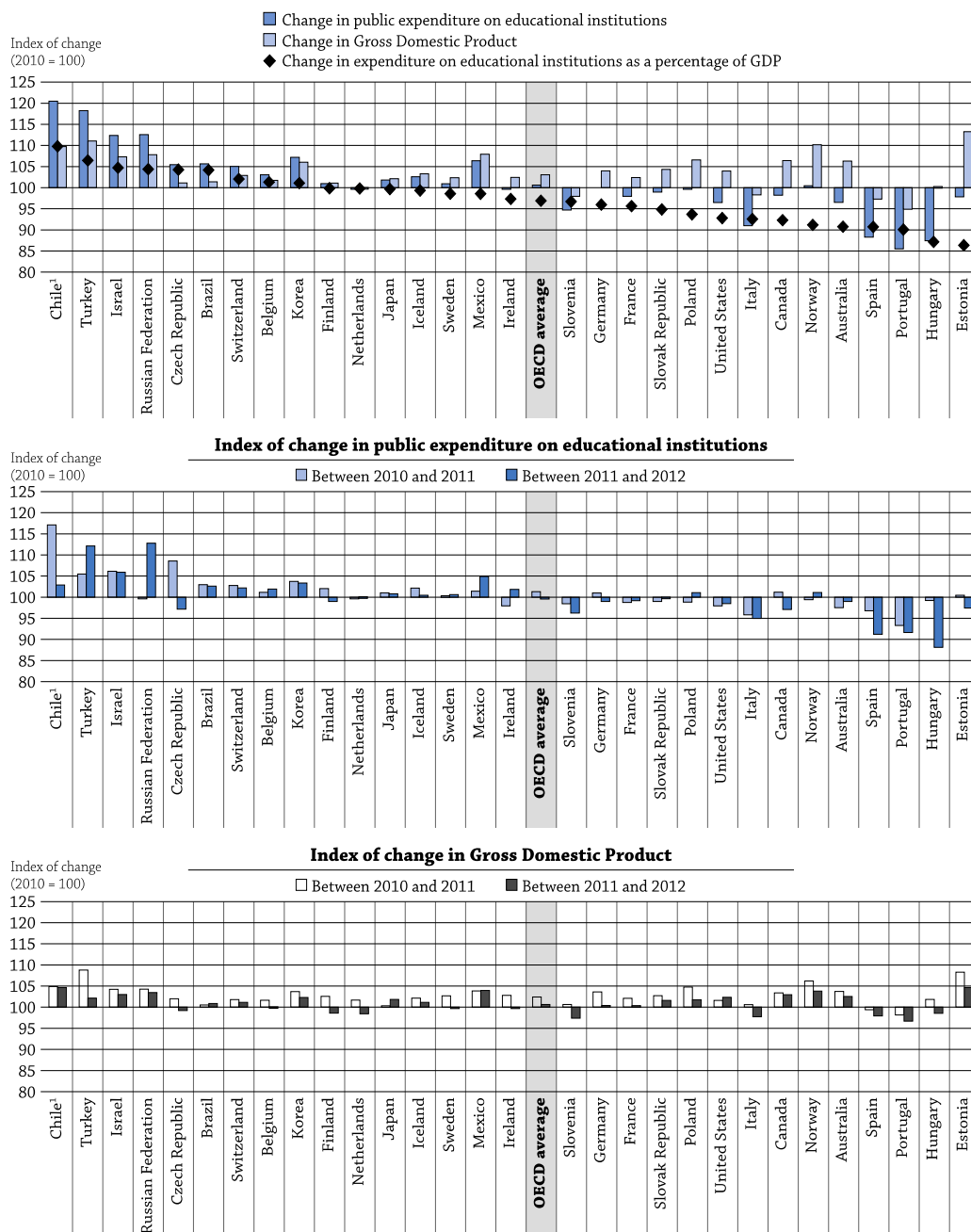
While the number of students enrolled in primary, secondary and post-secondary non-tertiary education fell by about 20% between 2005 and 2012 (one of the largest falls experienced by an OECD country), total expenditure increased by 5% and thus expenditure per student increased by 31%, above the OECD average increase of 21%. However, Estonia has experienced the highest decrease of public expenditure on educational institutions as a share of gross domestic product (GDP) between 2010 and 2012 (see Figure 4).

Education in Estonia is mainly publicly funded with 93% of expenditure on primary to tertiary institutions coming from public funds, compared with 83% on average for OECD countries. Private funding through household expenditure and other private entities amounted to 22% at tertiary level in 2012, higher than for the primary and secondary levels (.0.9%). The share of private funding at tertiary level is the same as

the EU21 average but below the OECD average of 30%. However, from 2013/14 all tertiary programmes taught in Estonian will be free of charge for full-time students in both public and government-dependent private institutions.

**Figure 4: Impact of the economic crisis on public expenditure on education and index of change in public expenditure on educational institutions and in GDP (2010 to 2012)**

*Index of change between 2010 and 2012 in expenditure on educational institutions as a percentage of GDP, primary to tertiary levels of education (2010=100, 2012 constant prices)*



1. Data refer to 2011-2013 instead of 2010-2012.

Countries are ranked in descending order of the change in expenditure on educational institutions as a percentage of GDP.

Source: OECD, Table B2.4. See Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

StatLink <http://dx.doi.org/10.1787/888933283976>

Source: OECD, Table B2.4.

See 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/10.1787/888933283976> (Education at a Glance 2015, Chart B2.4)

## Tertiary education: bachelor's, master's and doctoral programmes (based on ISCED 2011 classification)

*Estonia has historically high attainment of tertiary education, current patterns of entry to bachelor's programme (first cycle) also exceed both OECD and EU averages.*

In Estonia, 38% of 25-64 year-olds had a tertiary qualification in 2014, against an OECD average of 32%. Estonia has a long tradition of tertiary education, with relatively high attainment levels among the older age groups: 36% of 55-64 year-olds have a tertiary qualification, compared to an OECD average of 25%.

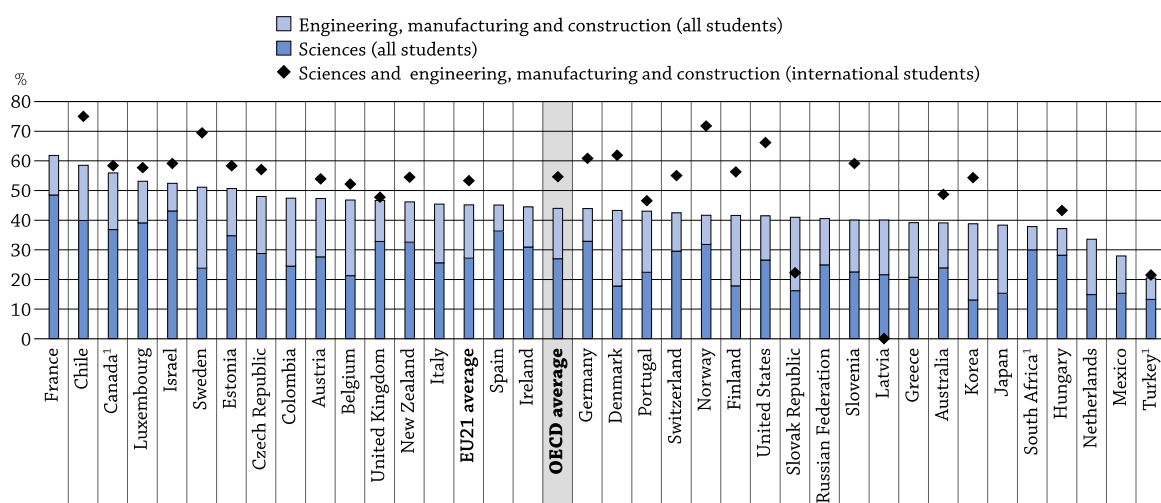
If the current patterns of entry are maintained, this tendency should continue with 68% of domestic students expected to enter a bachelor's programme over their lifetime compared to an OECD average of 55% and a EU21 average of 52%. The expected rate of entry into master's and doctoral levels of education are also at or above OECD averages: 24% at master's level against 19% on average for the OECD, and 1.8% at doctoral level; similar to the OECD average.

*The fields of sciences and engineering are well developed at tertiary level in Estonia and they tend to attract a more gender-balanced student population than the OECD average.*

One in three master's graduates in Estonia earned a degree in the fields of sciences or in engineering, manufacturing and construction, compared to one in five across OECD countries in 2013. At doctoral level, more than half of graduates earned a degree in sciences or engineering, manufacturing and construction compared to 40% on average among OECD countries.

Additionally, the fields of science and engineering, manufacturing and construction attract more women in Estonia than the OECD average. Women represented 45% of sciences tertiary graduates in Estonia in 2013 and 30% of graduates in engineering, manufacturing and construction, both higher than the OECD averages of 39% and 24% respectively (see Figure 5).

**Figure 5: Percentage of students (all students and international students) who graduate from sciences and engineering at doctoral level (2013)**



1. Year of reference 2012.

Countries are ranked in descending order of the percentage of sciences and engineering graduates at doctoral level.

Source: OECD. Table A3.5.

See 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/10.1787/888933283490> (Education at a Glance 2015, Chart A3.4)



## Educational attainment, skills and participation in the labour market

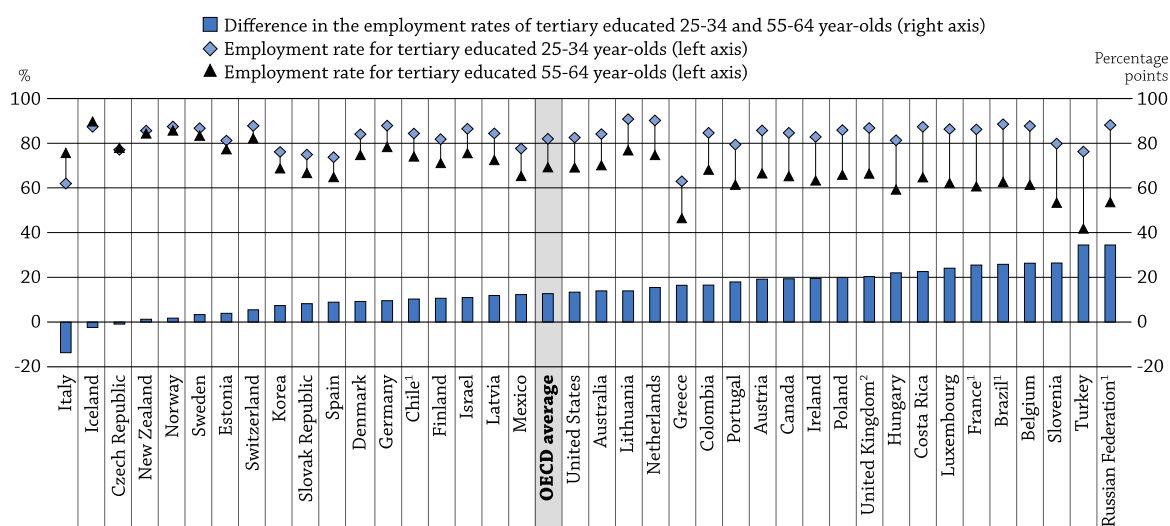
*Higher levels of qualification lead to better economic outcomes but the earning premiums from tertiary education are low.*

Education increases both earnings and the likelihood of employment. In 2014, while the overall employment rate was 77% in Estonia (above the OECD average of 73%), the rate varies from 40% of adults with primary education as their highest level of educational attainment, to 95% for adults with doctoral degrees.

Age makes less of a difference to employment rates than educational attainment. The employment rate among tertiary-educated young adults (25-34 year-olds) was 81% in 2014, against 77% for older adults (55-64 year-olds) with the same attainment level. This difference is one of the lowest in OECD countries, after the Czech Republic, New Zealand, Norway and Sweden (see Figure 6). This small change in employment rate by age group shows positive employment prospects throughout a tertiary-educated individual's working life.

In 2014, a tertiary-educated adult earned on average 35% more than an adult with upper secondary education as their highest level of attainment. Earning premiums for tertiary education are however lower in Estonia than the OECD average. Young adults in Estonia get a very small earnings premium from tertiary education – just 23% more than those with upper secondary education, which is below the OECD average of 41%.

**Figure 6: Employment rates for younger and older tertiary-educated adults (2014)**  
25-34 and 55-64 year-olds, and percentage-point difference between these two groups




1. Brazil, Chile, France, the Russian Federation: Data for year 2014 refer to year 2013.

2. The United Kingdom: Data for upper secondary attainment includes completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (18% of the adults are under this group).

Countries are ranked in ascending order of the percentage-point difference between the employment rate of the tertiary-educated 25-34 and 55-64 year-olds.

Source: OECD. Tables A5.4b and c, available on line.

See 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/10.1787/888933283632> (Education at a Glance 2015, Chart A5.4)



\* EU21 countries are those that are members of both the European Union and the OECD. These 21 countries are 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.

## References

OECD (2015), *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2015-en>.


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## Note regarding data from Israel

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

**For more information on Education at a Glance 2015** 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 <http://dx.doi.org/10.1787/eag-data-en> and by following the **StatLinks**  under the tables and charts in the publication.

Explore, compare and visualise more data and analysis using:



<http://gpseducation.oecd.org/CountryProfile?primaryCountry=EST&treshold=10&topic=EO>

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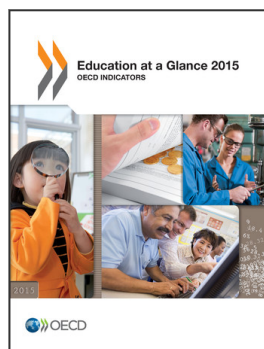
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## Key Facts for Estonia in Education at a Glance 2015

Table	Indicator	Estonia	OECD average
<b>Educational Access and Output</b>			
	<b>Enrolment rates</b>	<b>2013</b>	<b>2013</b>
C2.1	3-year-olds (in early childhood education)	87%	74%
	<b>Highest educational attainment level of 25-64 year-olds</b>	<b>2014</b>	<b>2014</b>
A1.4a	Below upper secondary	9%	24%
	Upper secondary or post-secondary non-tertiary	54%	43%
	Tertiary	38%	34%
	<b>Highest educational attainment level of 25-64 year-olds (disaggregation at tertiary level)</b>	<b>2014</b>	<b>2014</b>
A1.1a	Short cycle tertiary	7%	8%
	Bachelor's or equivalent	10%	16%
	Master's or equivalent	20%	11%
	Doctoral or equivalent	1%	1%
	<b>Entry and graduation rates</b>	<b>2013</b>	<b>2013</b>
C3.1	Percentage of today's young people expected to enter tertiary education at least once during their lifetime	**	67%
A3.1	Percentage of today's young people expected to graduate with a bachelor's or equivalent degree in their lifetime	**	36%
<b>Economic and Labour Market Outcomes</b>			
	<b>Unemployment rate of 25-64 year-olds</b>	<b>2014</b>	<b>2014</b>
A5.4a	Below upper secondary	11.9%	12.8%
	Upper secondary and post-secondary non-tertiary	7.8%	7.7%
	Tertiary	4.7%	5.1%
	<b>Average earnings premium for tertiary-educated 25-64 year-olds (upper secondary = 100)</b>	<b>2013</b>	<b>2013</b>
A6.1a	Short cycle tertiary	**	125
	Bachelor's or equivalent	**	157
	Master's, Doctoral or equivalent	**	214
	All tertiary	135	160
	<b>Percentage of people not in employment, education or training (NEET) for 15-29 year-olds</b>	<b>2014</b>	<b>2014</b>
C5.2b	Men	11.8%	13.2%
	Women	17.7%	17.9%
<b>Financial Investment in Education</b>			
	<b>Annual expenditure per student (in equivalent USD, using PPPs)</b>	<b>2012</b>	<b>2012</b>
B1.1a	Primary education	5668 USD	8247 USD
	Secondary education	6791 USD	9518 USD
	Tertiary (including R&D activities)	8206 USD	15028 USD
	<b>Total expenditure on primary to tertiary educational institutions</b>	<b>2012</b>	<b>2012</b>
B2.2	As a percentage of GDP	4.9%	5.2%
	<b>Total public expenditure on primary to tertiary education</b>	<b>2012</b>	<b>2012</b>
B4.2	As a percentage of total public expenditure	11.2%	11.6%
<b>Schools and Teachers</b>			
	<b>Ratio of students to teaching staff</b>	<b>2013</b>	<b>2013</b>
D2.2	Primary education	13 students per teacher	15 students per teacher
	Secondary education	11 students per teacher	13 students per teacher
	<b>Average actual teachers' salaries</b>	<b>2013</b>	<b>2013</b>
D3.4	Pre-primary school teachers	12009 USD	37798 USD
	Primary school teachers	17141 USD	41248 USD
	Lower secondary school teachers (general programmes)	17141 USD	43626 USD
	Upper secondary school teachers (general programmes)	17141 USD	47702 USD

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

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



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