

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.

SWEDEN

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 Sweden in Education at a Glance 2015* presents a summary of figures for Sweden and the OECD average.

Educational attainment, skills and participation in the labour market

Sweden has a large share of tertiary educated people and current patterns of entry suggest that the country will keep producing highly educated individuals. Employment is also high across level of educational attainment.

If the current entry patterns are maintained, it should indicate that 45 % of domestic students are expected to enter a Bachelor's programme over their lifetime compared to an OECD average of 55% and a EU21 average of 52%. Expected rate of entry into master's level of education is 24% (compared to 19% and 21%) and for doctoral level the expected entry is 1.6 % (compared to 1.7 % and 2.0%)(Table C3.1).

Although in many countries unemployment is higher among individuals with a low level of education, Sweden still provides job opportunities for those without upper secondary qualification, with at least two-thirds of adults employed among 25-64 year-olds. Nevertheless, from 2010 the employment rate for adults with below upper secondary education has decreased slightly for the age groups 35-44 and 45-54 year olds (Table A5.3a).

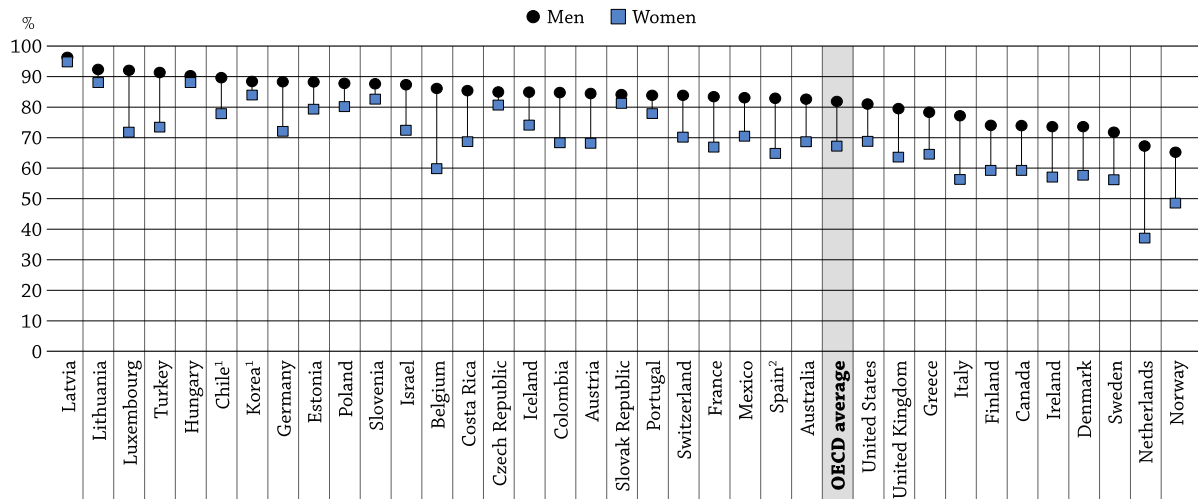
In contrast to the majority of OECD countries Sweden has also a relatively high employment rate for 25-64 year-olds who have attained upper secondary education as the highest level of education, whether they attained a vocational or a general qualification (85 % in Sweden against 74% on average across OECD countries). In Sweden, there is only a 4 percentage points' difference (7 percentage points on average) in the employment rate between those with a vocational upper secondary qualification (86%) and those with a general one (82%). This is similar to Finland and Norway, while in contrast there is a 20 percentage points' difference in employability between vocational and general programmes in Denmark (Table A5.5a).

Entrance to the labour market is still a challenge for the young population.

The proportion of 15-29 year-olds who are neither in employment nor in education or training (NEETs) is relatively low in Sweden at 9.4%, below the EU21 average of 15.6% (the OECD average is 15.5%).

Nevertheless, there are still barriers to the labour market for young adults in Sweden, in particular finding full-time employment. Only 25% of 20-24 year-olds who are not in education work more than 35 hours per week, rising to 45% among 25-29 year-olds. These figures are close to the EU21 averages of 24% and 48% respectively. The graph below also shows that the share of full-time-employed out of all employed young adults, not in education is relatively small in Sweden compared to a majority of OECD countries and this is the case for both men and women. Still, a gender gap exists: 30.1% of men aged 15-29 who are not in education are employed full time but just 20.4% of women (Tables C5.2a, C5.4a and C5.4b).

Figure 1: Percentage of 15-29 year-olds who work 35 hours or more per week among all employed young adults not in education, by gender (2014)



Note: Hours worked represent the actual number of hours worked per week, including overtime. When actual hours worked per week were equal to zero, the usual hours worked were used instead. When a country could not provide the actual number of hours worked per week, the usual hours worked were used.


1. Chile, Korea: Year of reference 2013.

2. Spain: Data refer to 16-29 year-olds.

Countries are ranked in descending order of the percentage of 15-29 year-old men not in education and working 35 hours or more in a reference week.

Source: OECD. Tables C5.4b.

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

StatLink  <http://dx.doi.org/10.1787/888933284323> (Education at a Glance 2015, Chart C5.4)

Sweden values lifelong learning and invests in human capital at all levels of educational attainment and occupational fields.

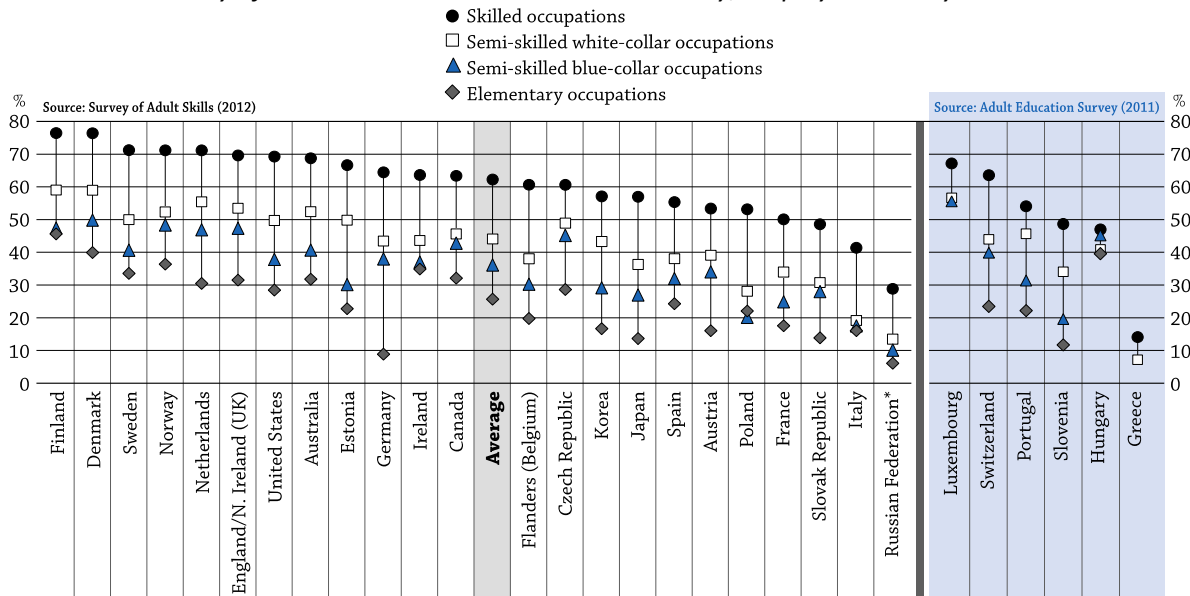
Sweden is unusual among OECD countries in that tertiary education can be acquired later in life. Only 75% of first-time tertiary graduates in Sweden are under 30, which is the lowest rate among Nordic countries (there were no data for Iceland and the OECD average is 82%) (Table A3.2).

Lifelong learning implies that opportunities to learn go beyond graduation and can continue throughout an individual's working life. Participation in employer-sponsored education in Sweden is consistently above the OECD average for all levels of educational attainment, although the least qualified are least likely to take part. Participation rates are 69% among tertiary-educated adults (25-64 year-olds) against an average of 62% among countries with available data, 56% among those with upper secondary qualifications (the average is 44%) and 38% among those with below upper secondary (the average is 29%) (Table C6.2a).

Participation in employer-sponsored education in Sweden is also above average across occupational groups; employers in Sweden do not only invest in their high-skilled workers. Participation rates in formal and non-formal employer-sponsored activities are 71% for high-skilled occupations, 50% for semi-skilled white-collar occupations, 41% for semi-skilled blue-collar occupations and 34% for elementary occupations. The equivalent figures across countries with available data are on average 62% for high-

skilled occupations, 44% for semi-skilled white-collar occupations, 36% for semi-skilled blue-collar occupations and 26% for elementary occupations. These high participation rates are consistent with other Nordic countries, and Finland, Norway and Denmark show even higher levels than in Sweden (Table C6.2c).

Figure 2: Participation in employer-sponsored education, by occupation (2011, 2012)
Survey of Adult Skills and Adult Education Survey, employed 25-64 year-olds




Notes: The data for the countries having participated in the Survey of Adult Skills refer to “employer-sponsored formal and/or non-formal education”. The data for the countries having participated in the Eurostat Adult Education Survey (AES) refer to “employer-sponsored”, job-related, non-formal education and training”.

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

Countries are ranked in descending order of participation in employer-sponsored formal and/or non-formal education among people in skilled occupations.

Source: OECD. Table C6.2c.

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

StatLink  <http://dx.doi.org/10.1787/888933284342> (Education at a Glance 2015, Chart C6.2)

Swedish adults demonstrate high levels of information and communications technology (ICT) and problem-solving skills.

In Sweden a relatively high rate of adults aged 25-64 have good ICT and problem-solving skills. In line with the pattern found in most countries, these skills are related to educational attainment: 62% of tertiary-educated adults have good problem-solving skills and readiness to use ICT, but only 38% of those with upper secondary or post-secondary non-tertiary education. These are above the OECD averages of 52% and 25% respectively (Table A1.6a).

Equity in education and the labour market

Sweden has made great strides in closing gender gaps, which are among the narrowest across OECD countries for educational attainment, pay and labour-market participation.

Sweden more than other OECD countries has made significant progress in narrowing or closing long-standing gender gaps in many areas of education and employment, pay and labour-market participation. Regarding educational attainment, development has even led to unbalances in the opposite direction, with an under-representation of men. Sweden has the highest share of women among first-time graduates at bachelor's level, at 69%. Although women are majority at master's level, their share is below the OECD average (55% in Sweden against 56% on average) (Table A3.4).

Inside the educational system, Swedish girls compare well to boys. Sweden is among the few countries participating in PISA 2012 where slightly more 15-year-old girls than boys (0.4 percentage points) are enrolled in a vocational programme. In many other countries the opposite is true: for example the gap is 24 percentage points in Italy and on average in OECD countries boys outnumber girls in vocational programmes by 4 percentage points (Table A10.2).

Despite their higher educational attainment, 25-34 year-old women in Sweden and on average across OECD countries still have lower employment rates than 25-34 year-old men, although the gender gap is much narrower among tertiary-educated young adults than among those with lower educational attainment. In 2014, Sweden had the narrowest gap in employment rates of 25-64 year-old men and women with either below upper secondary and tertiary education in 2014, of all OECD countries (2.1 percentage points), and among the narrowest for people with below upper secondary (14.5 percentage points). This tendency is mostly supported by women aged 55-64, for which the employment rate of 58% is well above the OECD average of 36% (Tables A5.3b and c).

In terms of earnings for full-time work, 35-44 year-old tertiary-educated women earn 85% of what their male peers earn (the OECD average is 74%). Even if it is still a long way off equity, Sweden is among the best performers among OECD countries for gender inequality in earnings (Table A6.2a).

In addition to the increasing gender gaps in educational attainment, there are also large differences between men and women in their fields of study in Sweden.

Looking at the choice of fields of study at the highest level of education attained, a clear trend emerges across OECD countries, including Sweden. In the field of engineering, manufacturing and construction, women are largely under-represented. In Sweden 8% of women choose this field compared with 44% of men, in line with the OECD averages of 7% and 38% (Table A10.3).

This is also reflected in the share of male and female graduates within each field of education. In 2013, women made up 29% of graduates in engineering, manufacturing and construction in Sweden, above the OECD average of 24% but below Denmark, which had the highest share at 35%. At the other end of the spectrum, 82% of graduates in the field of education are women in Sweden (the OECD average is 78%, Table A3.7).

Upward mobility in education is becoming less common in Sweden and downward mobility is a real possibility despite free tertiary education.

Intergenerational mobility in education, as measured by the 2012 Survey of Adult Skills, part of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), refers to the proportion of individuals whose highest level of qualification is different from that of their parents: higher in the case of upward mobility, and lower in the case of downward mobility.

Sweden has one of the highest proportions of tertiary graduates, which leaves less room for upward mobility. Thus 39% of 25-64 year-olds have attained tertiary education. For 35-44 year-olds it is 46% and 30% for 55-64 year-olds, way above the OECD averages of respectively 33%, 38% and 25% (Table A1.3a).

However, the proportion of 25-34 year olds non-students with a higher level of education than their parents is shrinking in Sweden, with 24%, like in majority of the countries, where this proportion is on average 32% when considering all levels of education (Table A4.1).

On average across OECD countries, 22% of tertiary-educated 25-34 year-olds non-students have surpassed their parents' educational attainment. In contrast, in Sweden, only 15% of young adults are tertiary-educated while their parents were not. This is explained by the fact that as the share of adults whose parents have a tertiary education increases, there is less room for upward mobility to tertiary education (Table A4.1a).

Nevertheless, upward mobility works well for Sweden for the less qualified. Among first-generation tertiary-educated 25-34 year-olds non-students, 34% have parents with below upper secondary education in Sweden, compared to 23% on average for countries with available data (Table A4.2a).

The share of 25-34 year-olds non-students whose educational attainment is lower than their parents' has reached 28% in Sweden, the highest of the countries with available data, compared to 16% on average. Similar levels are seen in Estonia and Norway (27%), but other European countries are doing better, including France and Spain with only 10%, and Denmark with 18%. It is especially notable for a country in which tertiary education is free of tuition fees.

Finally, 47% of 25-34 year-old Swedish non-students have the same educational attainment as their parents, in line with the OECD average of 52% (Table A4.1a).

Initial education

Early childhood education benefits all, particularly disadvantaged and immigrant children but despite high enrolment and investment, Sweden still struggles to close the performance gap between immigrant and native students.

The ratio of children to teaching staff is an indicator of the resources devoted to early childhood education. The child-teacher ratio in Sweden at the pre-primary level, excluding non-teaching staff (e.g. teachers' aides), is six children per teaching staff, among the lowest in the OECD countries.

Expenditure per child on all early childhood education – integrated childcare and preschool education – is the highest across OECD countries – USD 12 7521 compared to USD 7 886 on average – and even higher for early childhood education development only (USD 14 180). Moreover, enrolment in early childhood education in Sweden is high, at 92.9% compared to 74.0% on average for the OECD. The difference is

¹ Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs).

greatest for the early years (2-4 year-olds), while evening out in the years before primary school (Tables C2.2 and C2.3).

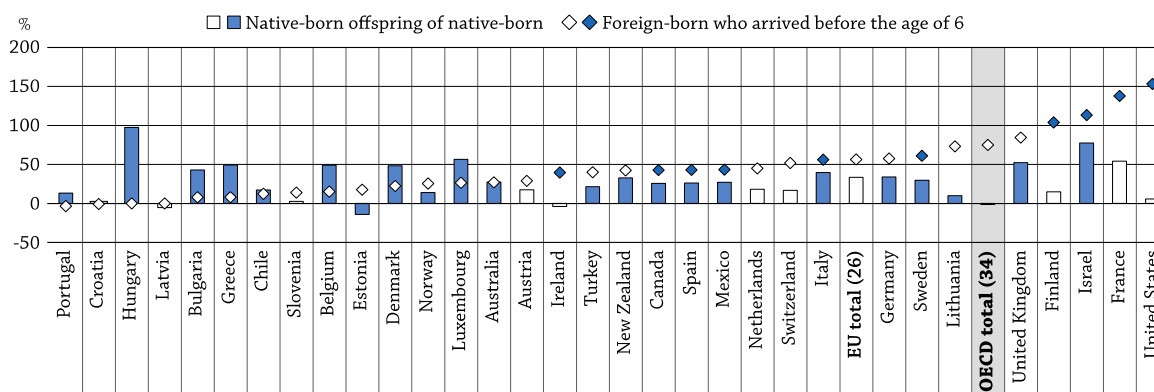
Across OECD countries, early childhood education is particularly beneficial for children with an immigrant background. Among 15-year-old immigrant students who arrived in their OECD host country before the age of 6, the gap in performance between those who had attended pre-primary education and those who had not is equivalent to around 2 years of schooling. However, it does not seem to compensate immigrant students in Sweden to such a great extent. Among immigrant children of comparable socio-economic backgrounds who had arrived in Sweden before the age of 6, the performance gap in the PISA reading assessment between the two groups was 61 score points, equivalent to more than one year of schooling (Indicator C2).

Across OECD countries, an average of 69% of 3-6 year-old immigrant children were enrolled in pre-primary education in 2012 – an attendance rate that was 7 percentage points lower than among their native-born peers. In Sweden, 87% of immigrant children were enrolled in pre-primary education in 2012, compared to 93% of their native-born peers (OECD, 2015: Figure 13.5).

The gap in reading literacy among 15-year-old pupils of immigrant background in Sweden was greater, however. In 2012, average reading literacy among foreign-born 15-year-old pupils - who arrived in Sweden before the age of 6 - lagged 77 points behind the offspring of native-born parents (compared to the OECD average of 21 points) and among native-born pupils of immigrant parentage the gap was 40 points (compared to the OECD average of 3 points) (OECD, 2015: Figure 13.7).

Figure 3: Mean PISA scores of 15-year-old students who did or did not attend preschool in the host country (2012)

Differences in PISA reading scores after accounting for socio-economic background




Note: White bars and markers indicate differences which are not statistically significant (with a probability of 0.05). Positive figures means that those who had attended preschool scored better in the PISA reading assessment than those who had not attended preschool.

Countries are ranked in ascending order of the difference in PISA reading scores between the immigrants who arrived in their OECD host country before the age of 6 and who had attended pre-primary education and those who had not attended pre-primary education.

Source: OECD Programme of International Student Assessment (PISA). *Indicators of Immigrant Integration 2015: Settling In* (<http://dx.doi.org/10.1787/9789264234024-en>), Figure 13.6.

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

StatLink  <http://dx.doi.org/10.1787/888933284199> (Education at a Glance 2015, Chart C2.2)

Financing of education

Public investment in education remained stable throughout the economic crisis with one of the highest levels of spending per student in the OECD.

Sweden spends 5.4% of its gross domestic product (GDP) on educational institutions from primary to tertiary education, in line with the OECD average of 5.3%. Its level of expenditure per student (for core services, ancillary services and research and development) is among the highest across OECD countries at USD 12 742 per student per year for primary to tertiary education, above the OECD average of USD 10 220. Sweden is also the only OECD country which funds 100% of primary, secondary and post-secondary non-tertiary institutions from public sources, compared with an OECD average of 90.6% (Tables B1.1a, B2.1 and B3.1).

Between 2005 and 2012, total expenditure remained constant while enrolment decreased at primary, secondary and post-secondary non-tertiary levels. This led to an increase in expenditure per student over the period (Table B1.5a).

Public expenditure on education increased by 5% between 2008 and 2012, a similar rate to public expenditure for all services, which left the proportion of public expenditure on education unchanged at 11.7% of total public expenditure in 2012, in line with the OECD average (Table B4.2).

Research and development makes up a large share of all tertiary expenditure, with private funds playing an important role.

In Sweden, 31.1% of expenditure on educational institutions goes on tertiary education, despite tertiary students making up only 17.6% of students in all levels of education combined, compared to shares of 28.5% of expenditure and 20.1% of students on average across OECD countries (Table B1.7). Moreover, expenditure per student at tertiary level increased by 19% from 2005 to 2012. While enrolment was stable over this period, expenditure increased by 21% (Table B1.5b).

This disparity is explained mainly by the fact that Sweden has the highest expenditure per student at tertiary level on research and development (R&D): USD 11 946 compared to USD 4 846 on average across OECD countries. R&D accounts for more than 50% of total expenditure per tertiary student in Sweden. Private expenditure on tertiary education goes mainly on R&D in Sweden. At least 10% of expenditure on tertiary institutions is covered by private entities other than households, and these contributions are largely directed towards sponsoring research and development (Tables B1.2 and B3.1).

Tertiary institutions are 89.3% funded by public sources. While many countries have seen an increase in the share of private spending on tertiary education over the past decade, Sweden has maintained its high share of public spending. Between 2005 and 2012, funding from both public and private sources increased but public funding increased faster, by 22% compared to 10% for private sources (Tables B3.1 and B3.2b).

Tuition fees: a fence for international students?

One unique aspect of Sweden's system is that neither public nor government-dependent private tertiary institutions charge tuition fees for students who are Swedish nationals. Recently, however, tuition fees have been introduced in tertiary education for citizens from countries outside the European Economic Area except from Switzerland. Though scholarships have been granted, there has been a significant decline in the enrolment rate of students from these countries (Swedish Higher Education Authority, (2013), "Fewer Students from Asia after the Tuition Reform", Statistical Analysis, Stockholm). In 2013, the share of international or foreign students enrolled in Sweden in tertiary education was 5.8% compared to 8.6% on average across OECD countries (Table C4.1).

Tertiary education: short cycle, bachelor's, master's and doctoral programmes

In Sweden and in most OECD countries, the entry rate into bachelor's degree programmes is higher than the entry rate into master's or doctoral programmes.

It is estimated that 67% of young adults in OECD countries will enter tertiary education at least once during their lifetime if current patterns of entry continue (only 56% in Sweden). However, Data for Sweden show relatively high entry rates into higher levels of tertiary education in Sweden (e.g Master's and doctoral programmes). This is probably due to the country's highly developed financial support systems for students, and not just the absence of tuition fees. While tertiary attainment is increasing, the entry rate for more advanced tertiary degrees such as master's and doctoral levels tend to be lower than bachelor's programmes. Entry rates into master's or equivalent programmes are 29% in Sweden, higher than the OECD average of 22%, but just 47% at bachelor's or equivalent level, compared with the OECD average of 57% (Table C3.1).

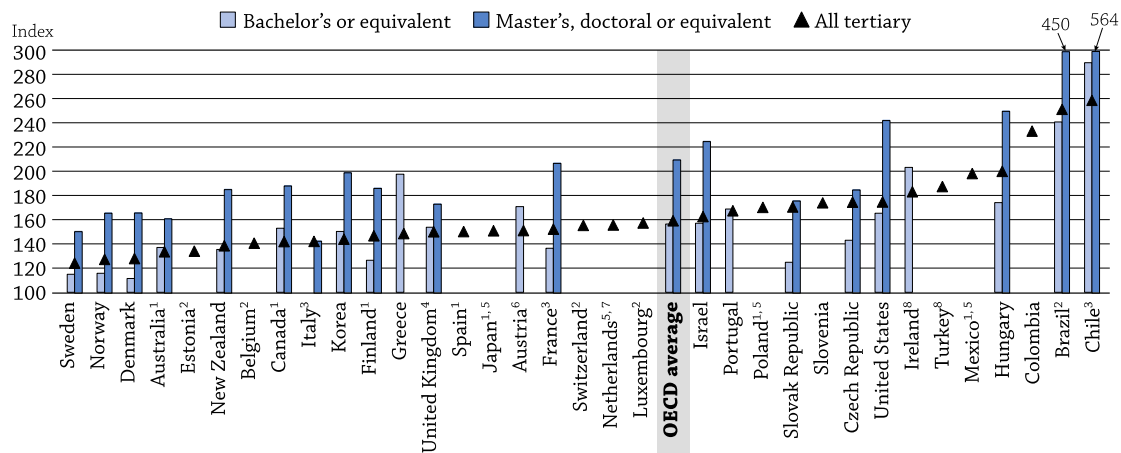
Across OECD countries, there are slightly more labour market opportunities for adults with a master's degree than for those with only a bachelor's degree, and the advantage is even more marked in terms of earning premiums. However, these advantages are smaller in Sweden than in most OECD countries.

Higher educational attainment is associated with better labour market opportunities in Sweden, as in most of OECD and partner countries with available data.

Nevertheless, employment rates are quite homogenous in Sweden, and well above the OECD average for each level of attainment. Thus, the difference in employment rates between bachelor's and master's levels is only 3 percentage points (89% and 92% respectively) compared to 5 percentage points on average across OECD countries (Table A5.1a).

The earnings advantage of a tertiary education in Sweden is the smallest among OECD countries. Those who have completed tertiary education earn only 25% more on average than someone who reached upper secondary education. On average across OECD countries, the advantage is 60%, while it is 57% for EU21 countries. The earnings advantage of attaining master's level is somewhat greater, however. Swedish adults with a bachelor's level qualification earn 15% more than adults with upper secondary education, while those with a master's or doctoral level one earn 51% more. These earnings premiums are still much lower than the OECD average of 57% and 114% respectively, but still telling when considering that both bachelor's, master's and doctoral level programmes are free of tuition fees in Sweden . It can also been argued that higher education free of tuition fees contributes to provide to Swedish employers highly qualified staff to a competitive cost (Table A6.1a).

Figure 4: Relative earnings of tertiary-educated workers, by level of tertiary education (2013)
 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. Australia, Canada, Finland, Japan, Mexico, Poland, Spain: Year of reference 2012.

2. Belgium, Brazil, Estonia, Luxembourg, Switzerland: Index 100 refers to the combined ISCED levels 3 and 4 of the educational attainment levels in the ISCED 2011 classification.

3. Chile, France, Italy: Year of reference 2011.

4. 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).

5. Japan, Mexico, the Netherlands, Poland: Index 100 refers to the combined ISCED levels 3 and 4 of the educational attainment levels in the ISCED-97 classification.

6. Austria: Master's, doctoral or equivalent are included in bachelor's or equivalent.


7. The Netherlands: Year of reference 2010.

8. Ireland, Turkey: Earnings net of income tax.

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

Source: OECD. Table A6.1a.

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

StatLink  <http://dx.doi.org/10.1787/888933283686> (Education at a Glance 2015, Chart A6.1)

Doctoral candidates in Sweden are more likely to be male, to study sciences and engineering, and to come from abroad.

The graduation rate at doctoral level is pretty high in Sweden at 2.7%, compared to the OECD average of 1.7%. When international students are excluded, this rate remains fairly high at 1.9%, but still significantly above the OECD average of 1.4%. One-third of students in doctoral programmes are international in Sweden as well as on average across OECD countries (Table A3.1).

Higher is the level of tertiary education, higher is the proportion of international students enrolled in science fields. Thus, at the doctoral level, as at the master's level, international students are over-represented in the field of engineering, manufacturing and construction: 38% of them graduate from this field, compared with 27% of doctoral students in Sweden overall and well above the OECD average of 23% (Table A3.5). International students are also well represented in the sciences, with 32% of them graduating from this field compared with 24% of all doctoral students. This difference is more marked at master's level though, where sciences attract 20% of international students, but only 8% of all master's students overall (Table A3.5).

Women are still under-represented in doctoral programmes in Sweden. In 2013, 46% of advanced research degrees were awarded to women, close to the OECD average of 47% (Table A3.4).

The teaching profession

Swedish teachers have a flat salary development in primary and secondary education. While starting salaries are relatively high, they fall behind their counterparts with the same level of educational attainment over time.

Teachers' salaries in Sweden are relatively compressed in primary as well as in secondary education: starting salaries are slightly above the OECD average, but the maximum salaries are 15- 20% below average.

The ratio of teachers' annual salaries relative to similarly educated workers is 76% for pre-primary education, 82% for primary education, 84% for lower secondary education and 88% for upper secondary education. Among 25-34 year-olds and 35-44 year-olds, annual salaries are on average similar to or above professionals with the same level of educational attainment. Among 45-55 year-olds and 55-64 year-olds, however, increases level off and teacher salaries consistently lag behind. For example, a pre-primary teacher aged 45-54 can expect to earn on average about 68% of the salary of a full-time full-year worker with tertiary education, while the ratio for an upper secondary teacher in a general programme is 79% (Table D3.6a).

Sweden has a decentralised education system giving schools a high level of autonomy over teachers' working conditions.

Sweden's decentralised educational system gives schools a high level of autonomy. In contrast to the majority of OECD countries, the authority to determine teachers' base salaries and award additional payments rests at the local level of school board or head principal (Table D3.8c).

Sweden has one of the highest number of teaching hours per year in pre-primary school among OECD countries (no data are available for other levels), 1 792 hours per year compared to 1 005 hours on average. This is also decentralised to the local level. Although the total working time per year is statutory, school leaders decide on the number of working hours per week and on the use of teachers' with regard to teaching and non-teaching activities (Tables D4.1 and D3.8c).

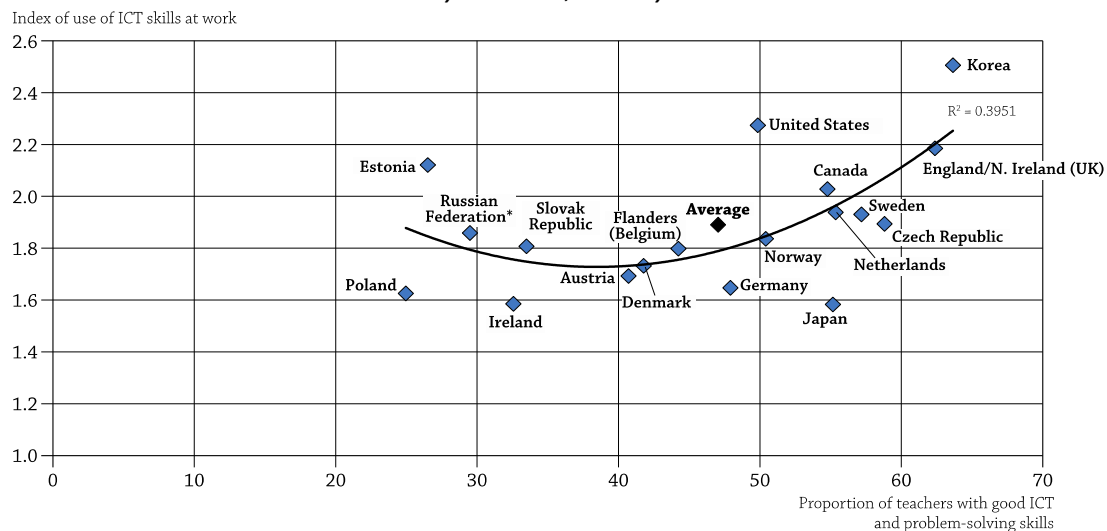
Swedish teachers demonstrate good ICT skills, but the implication in the classrooms can be enhanced.

Results from the Survey of Adult Skills show that 57% of Swedish 25-64-year-old teachers demonstrate good skills and readiness to use ICT, compared to 47 % on average for OECD countries. However, although 91% of 25-64-year-old Swedish teachers report that they have the computer skills needed for their job, Swedish teachers are only around OECD average on the index of use of ICT skills at work (Tables D5.4a and b).

At lower secondary level, 34% of teachers indicated that students use ICT for projects or class work frequently or in nearly all lessons, compared to 40% on average. Compared to other OECD countries, 25% of Swedish teachers indicated that they need more professional development in ICT skills for teaching, compared to 18% on average. Moreover, the quality of the training could also be enhanced. Among Swedish teachers who participated in ICT for teaching training in the latest 12 months, 66% considered it to have had a moderate or large positive impact on their teaching, compared to an OECD average of 79% (Table D8.4).

Figure 5: Relationship between teachers' use of information and communication technologies skills at work and proficiency in those skills (2012)

Survey of Adult Skills, teachers who teach both pre-primary and primary school, primary teachers and secondary teachers, 25-64 year-olds




Notes: Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers refer to teachers who were currently working as teachers at the moment of the survey. The index of use of ICT indicates the frequency of use of ICT skills at work. The higher the index, the more frequent the use of ICT skills at work. See the *Definitions* section.

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

Source: OECD. Tables D5.4a and D5.4b.

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

StatLink  <http://dx.doi.org/10.1787/888933284572> (Education at a Glance 2015, Chart D5.5)

By the age of 15, Swedish students appear well equipped to participate fully in the digital age.

The impact of ICT use in school on students' performance is mixed. Moderate use is related to somewhat better learning outcomes than when ICT is not or to a very limited extent integrated into teaching and learning. However, very frequent use in classrooms does not appear to contribute to improvement. Nevertheless, as ICT influences a substantial amount of modern life and work, students need to be educated in navigating it, as well as critically evaluating different sources of information in a range of fields, and schools are expected to create learning environment that integrate the development of these skills (OECD (2015). Students computers and learning: Making the Connection, PISA, OECD Publishing.).

PISA 2012 evaluated not only how skilled 15-year-olds are in gathering and processing information that they acquire when reading printed texts, but also how proficient they are in reading digital material. PISA found that some countries have been far more successful than others in helping students to equip themselves to participate fully in the digital age. This includes Sweden, along with Australia, Brazil, Korea, Singapore and the United States, all countries where 15-year-old boys and girls perform better at digital reading than print reading, while the opposite was found in Germany Hungary, Israel, Shanghai (China), Poland, Spain and the United Arab Emirates. Although girls still outperform boys in Sweden, the mean score difference is significantly smaller in the computer-based assessment, 18 points compared to 51 points for print reading (Table D8.3 and Chart D8.3).

* 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.

Sub-national comparisons

Education at a Glance provides an authoritative compilation of international comparisons of key education statistics. While countries attain specific values in these comparisons, readers should not assume that countries themselves are homogeneous. The country averages include significant variations among sub-national jurisdictions.

Regional policy makers can benefit most from the comparisons presented in *Education at a Glance* when they can compare the results from their own sub-national areas with national and sub-national data from other countries. To this end, the OECD, with support from the U.S. National Center for Education Statistics, is, for the first time, releasing select sub-national data for six *Education at a Glance* Indicators in this edition (see <http://nces.ed.gov/surveys/annualreports/oecd/index.asp>). These include data on educational attainment by selected age groups (Indicator A1), employment rates by educational attainment (Indicator A5), annual expenditure per student (Indicator B1), enrolment rates by age (Indicator C1), enrolment rates in early childhood and primary education (Indicator C2), and enrolment rates and work status of 15-29 year-olds (Indicator C5)

Ten countries participated in this pilot compilation of sub-national estimates by providing information for some or all of the Indicators included: Belgium, Brazil, Canada, Germany, Ireland, the Russian Federation, Slovenia, Spain, Sweden and the United States. Sub-national estimates were provided by countries using national data sources or were calculated by Eurostat using NUTS2 data.

Although the variation between the highest- and lowest-ranked countries for a given Indicator, on average, was larger than the variation within most countries, variations within both federal and non-federal pilot countries were substantial. For example, for the Indicator on tertiary attainment, the ratio of the highest-ranked jurisdictions to the lowest-ranked, within countries, was nearly 2:1 or more in many of the participating countries.

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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.

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

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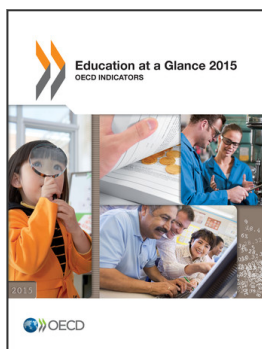
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Key Facts for Sweden in Education at a Glance 2015

Table	Indicator	Sweden	OECD average
Educational Access and Output			
	Enrolment rates	2013	2013
C2.1	3-year-olds (in early childhood education)	93%	74%
	Highest educational attainment level of 25-64 year-olds	2014	2014
A1.4a	Below upper secondary	18%	24%
	Upper secondary or post-secondary non-tertiary	43%	43%
	Tertiary	39%	34%
	Highest educational attainment level of 25-64 year-olds (disaggregation at tertiary level)	2014	2014
A1.1a	Short cycle tertiary	10%	8%
	Bachelor's or equivalent	15%	16%
	Master's or equivalent	12%	11%
	Doctoral or equivalent	1%	1%
	Entry and graduation rates	2013	2013
C3.1	Percentage of today's young people expected to enter tertiary education at least once during their lifetime	56%	67%
A3.1	Percentage of today's young people expected to graduate with a bachelor's or equivalent degree in their lifetime	26%	36%
Economic and Labour Market Outcomes			
	Unemployment rate of 25-64 year-olds	2014	2014
A5.4a	Below upper secondary	13.2%	12.8%
	Upper secondary and post-secondary non-tertiary	4.9%	7.7%
	Tertiary	4%	5.1%
	Average earnings premium for tertiary-educated 25-64 year-olds (upper secondary = 100)	2013	2013
A6.1a	Short cycle tertiary	106	125
	Bachelor's or equivalent	115	157
	Master's, Doctoral or equivalent	151	214
	All tertiary	125	160
	Percentage of people not in employment, education or training (NEET) for 15-29 year-olds	2014	2014
C5.2b	Men	9.3%	13.2%
	Women	9.6%	17.9%
Financial Investment in Education			
	Annual expenditure per student (in equivalent USD, using PPPs)	2012	2012
B1.1a	Primary education	10312 USD	8247 USD
	Secondary education	11177 USD	9518 USD
	Tertiary (including R&D activities)	22534 USD	15028 USD
	Total expenditure on primary to tertiary educational institutions	2012	2012
B2.2	As a percentage of GDP	5.4%	5.2%
	Total public expenditure on primary to tertiary education	2012	2012
B4.2	As a percentage of total public expenditure	11.7%	11.6%
Schools and Teachers			
	Ratio of students to teaching staff	2013	2013
D2.2	Primary education	13 students per teacher	15 students per teacher
	Secondary education	12 students per teacher	13 students per teacher
	Average actual teachers' salaries	2013	2013
D3.4	Pre-primary school teachers	35290 USD	37798 USD
	Primary school teachers	38258 USD	41248 USD
	Lower secondary school teachers (general programmes)	39026 USD	43626 USD
	Upper secondary school teachers (general programmes)	41013 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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