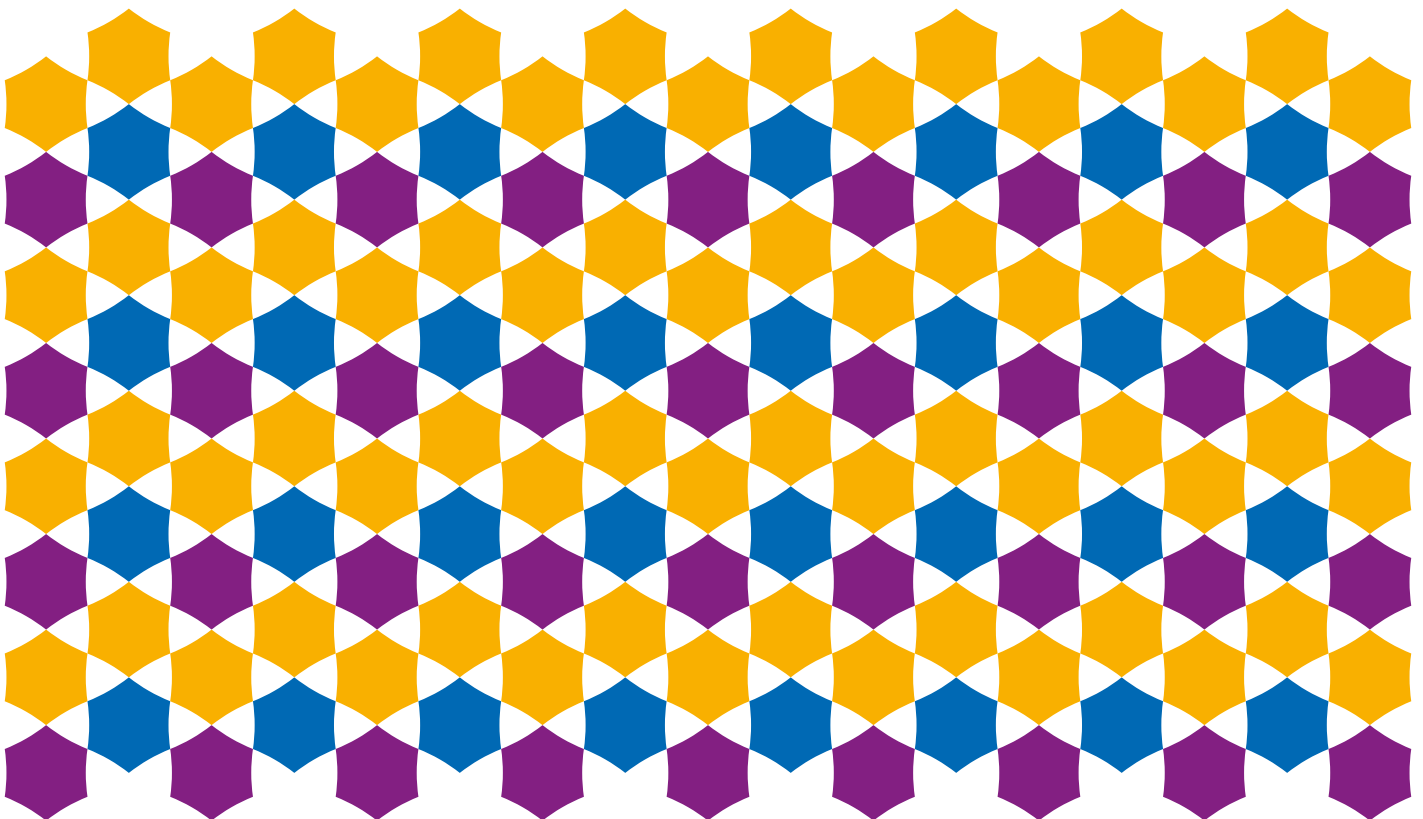


Labour market prospects after tertiary education

Sweden in an international perspective
– A comparison based on Education at a Glance



Report 2016:3

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– A comparison based on Education at a Glance

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Introduction

An increasingly knowledge-intensive labour market creates a growing demand for a well educated population and employers place greater and greater value on individuals with advanced educational attainment. As a result, labour market prospects for those with higher education should be positive. The aim of this report is to shed light on the labour market status of those with higher education in Sweden from an international perspective.

This is the second of a series of analyses in which UKÄ (the Swedish Higher Education Authority) describes different dimensions and effects of investments in education in the OECD countries. The first analysis described *Educational attainment and economic investment in the OECD* (UKÄ, Report 2015:2). This analysis focuses on the significance of higher education for an individual's prospects in the labour market and probes questions like the following. If individuals choose to continue to study after leaving upper secondary school, does this raise their chances of finding employment and reduce the risk of being unemployed? Is there any return in the form of higher wages for taking longer programmes in higher education than shorter ones?

This report is based on data from the OECD's annual publication *Education at a Glance* (EAG). EAG is very comprehensive and can be considered impenetrable for readers who are not used to it. For this reason UKÄ aims to make the data from EAG more accessible and also to focus on Sweden in its international comparisons.

The employability of graduates from higher education and the relationship of higher education to the labour market is a subject that gives rise to a great deal of debate. UKÄ regularly monitors the establishment of graduates from higher education in the labour market using an index that is constructed by combining data about the employment of individuals, unemployment and income levels. The results are relatively detailed and can serve as the basis of a national analysis of the labour market prospects of various groups of graduates from higher education.

In order to adopt an international perspective, however, it is also important to study the labour market prospects of graduates from higher education in Sweden in relation to other countries. In Sweden there is access to national registers that cover the entire population and which enable more penetrating analyses. When making international comparisons it is not always possible to use equally sophisticated statistics. Comparisons of the balance of supply and demand for different groups of graduates can only be made on the basis of national key variables such as employment rates, unemployment and wages that are not as detailed. These are therefore the variables on which this analysis is based. Employment rates and unemployment in a country are affected by a series of factors that also interact in different ways. The labour market prospects for graduates will therefore look different depending, for instance, on local and global economic developments, the structural relationships of different types of sectors and professions in the local labour market, different forms of legislation and regulations, the organisation of the social security

system, population demographics (the size of different age cohorts, retirement in different sectors, etc.) and the readiness of different groups to move, etc. This also makes it more complicated to attempt to interpret the differences that exist between various countries and such interpretations should therefore be made with some degree of caution.

Focus on 25–34-year-olds

This report focuses above all on 25–34-year-olds, partly because this is the group that best reflects the reality that those about to start their careers can expect. The focus on this group is also motivated by lack of space. In some cases other cohorts will be referred to because this is the best way of dealing with a specific feature and sometimes because of the availability of data. The information derives in most cases from 2013 and 2014. In the report we only account for the countries for which data are available for the appropriate indicators for all the relevant years. This means that there are variations in the countries presented in the different figures.

It is also important to note that in the comparisons tertiary education comprises at least two years of post upper secondary education. For Sweden this includes all completed studies in higher education and higher vocational education of at least two years even though no qualification has been awarded.

Summary

- Generally speaking Sweden has a high employment rate and one of the highest in the OECD for those with tertiary education.
- Even though more men than women are employed, the differences between the employment rates for women and men are smaller in Sweden than in the OECD on average. The gender difference is smallest for those with tertiary education.
- Unemployment among those with tertiary education in Sweden is lower than the OECD average and since 2009 the gap between Sweden and the OECD has grown increasingly. Unemployment among those with tertiary education in Sweden is lower for women than for men, while at the same time the opposite applies within the OECD.
- Only 59 per cent of women with tertiary education in Sweden who are employed also work full-time. This can be compared with the figure of 83 per cent for men. Even though this level is the same as the OECD average, it is obviously lower than Finland, for example, where 89 per cent of the women and 96 per cent of the men with tertiary education (who are employed) also work full-time.
- The salary premium in Sweden for those with tertiary education is one of the lowest in the entire OECD. Women with tertiary education earn on average 25 per cent more than those with only upper secondary education. The corresponding premium for men is 29 per cent.
- Individuals who have completed longer programmes in tertiary education (to at least Master's level) in Sweden earn on average more than those with Bachelor's degrees or the equivalent, but the differences between these levels are smaller than in the other Nordic countries.

DEFINITIONS

Educational levels are classified in Education at a Glance according to the new ISCED 2011 international standard. This new standard makes it possible to provide more detailed statistics for tertiary education (higher education has been categorised in accordance with the levels that have been agreed in the Bologna Process). Educational level is defined as the most advanced educational level attained by an individual and the levels uses in this report are:

Below upper secondary education (Only completion of education corresponding to compulsory education in Sweden),

Upper secondary education (Completed programme at upper secondary level. This also includes shorter periods of study at post - secondary level), and

Tertiary education (At least two years of tertiary education. In Sweden this includes completed studies in higher education or higher vocational education of at least two years even though no qualification has been awarded).

Employed individuals are those who during the reference week for the survey: i) were in paid employment (employees) or working for profit (self - employed or unpaid family workers) for at least one hour, or ii) were employed but temporarily not working (because of injuries, illness, holiday, strike or lock - outs, education or training, or on parental leave, etc.).

Employment rate is defined as the proportion of individuals with jobs in the total working - age population and is expressed as a percentage (the number of individuals is divided by the total number of individuals of working age). Employment rates are calculated separately for the various groups studied, for example women and men, age cohorts, per educational level, etc.

Full - time workers are those who have worked for a whole year and for at least 30 hours per week. For more detailed information about how each country defines full - time work see the section on methodology for indicator A6 in EAG 2015 (page 123).

Unemployed individuals are those who during the reference week for the survey did not have jobs but had actively sought employment at some time during the four weeks preceding the reference week and were able to begin work within two weeks after it.

Unemployment is defined as the proportion of individuals who are without jobs in the total working - age population and is expressed as a percentage (number of unemployed individuals divided by the total number of individuals of working age). Unemployment rates are calculated separately for the various groups studied, for example women and men, age cohorts, per educational level, etc.

Employment rates and unemployment

High employment rate in Sweden

One of the circumstances that will make it attractive to go on to further education is that this will lead to employment when these studies have been completed. What do the chances of finding work look like for individuals with different educational backgrounds?

In all of the OECD countries the likelihood of being employed is higher for individuals with tertiary education compared with those who have upper secondary education or less. In Sweden 89 per cent of those with tertiary education in the 25–34 age group are employed (Figure 1), which in 2014 was 6 percentage points higher than the OECD average of 83 per cent and one of the highest proportions in the OECD.

If instead we consider the development of employment rates for the 25–34 age group with tertiary education compared to the OECD average, since 2007 Sweden has been above this figure. In Sweden there has also been a more positive development curve.

Figure 1. Employment rates for 25–64-year-olds per educational level ranked according to employment rates for those with tertiary education.

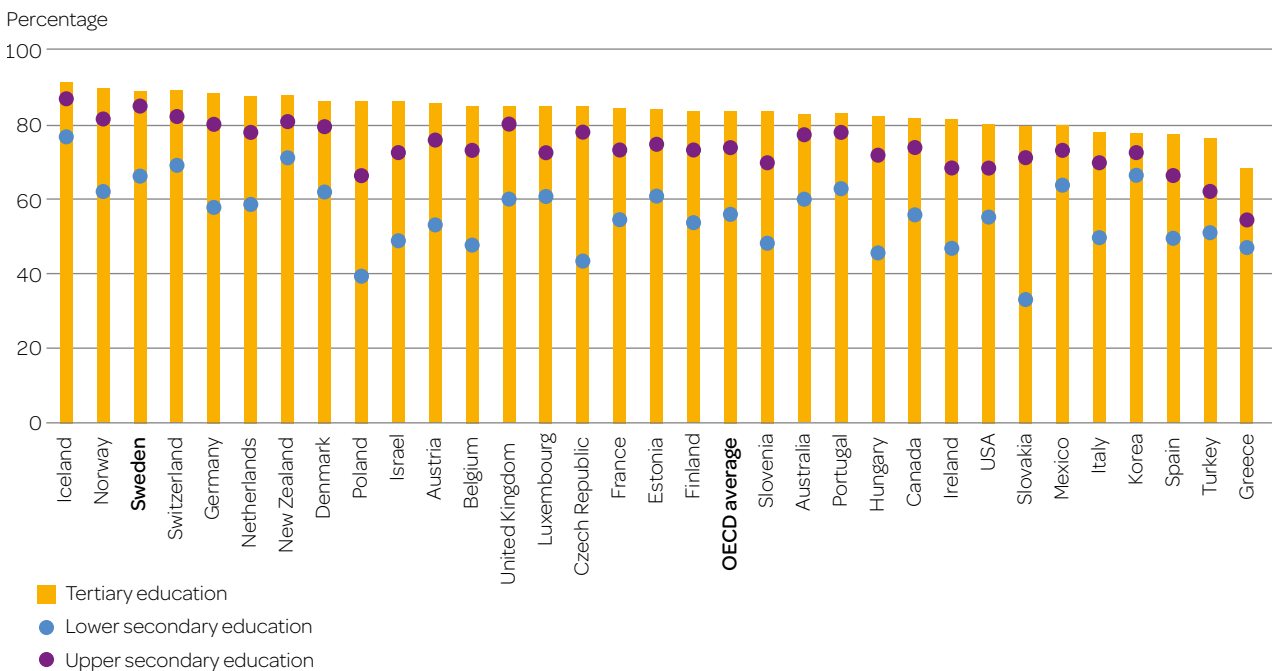
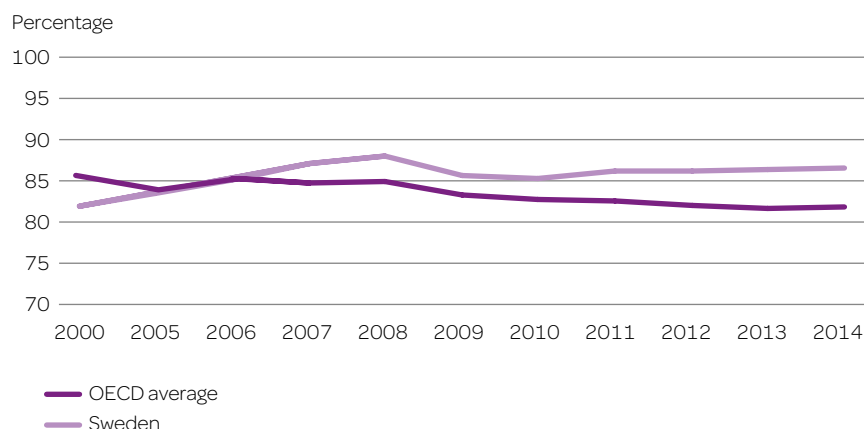


Figure 2. Employment rates for 25–34-year-olds with tertiary education in Sweden compared to OECD average 2000–2014.



Employment rates also rise over the years after graduation for the 25–34-year-olds who have received tertiary education. The average employment rate in the OECD one year after graduation for this group was 74 per cent and two years after graduation 89 per cent. In its report *Establishment in the labour market for graduates from higher education in 2013* (UKÄ report 2015:26) UKÄ has shown that the proportion of graduates gaining a footing in the labour market rises during the years after graduation and this increase is largest for those qualifying in the fine, applied and performing arts or with general degrees. Those awarded professional qualifications are already largely established within about one year, while at the same time a smaller proportion of those graduating in the fine, applied and performing arts or with general degrees are established so early, but for the two latter groups the proportion increases to a larger extent over time than for those with professional qualifications.

Lower unemployment among those who studied longer programmes

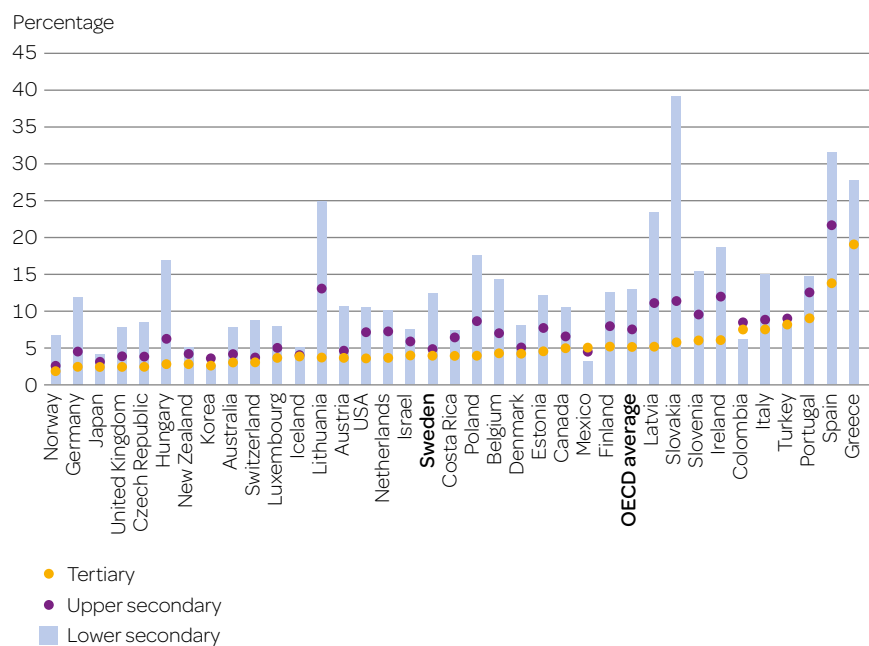
Does the risk of becoming unemployed also decline for those with tertiary education? Statistics on employment rates and unemployment complement each other. The employment rates in a country show how large a proportion of the working-age population have jobs and can depend, among other things, on a number of structural factors such as the way in which child care is organised. In some countries, for instance, one parent will abstain from placing himself or herself at the disposal of the labour market to be able to devote a larger proportion of time to taking care of the family than in other countries. This can have an impact on employment rate levels. Unemployment figures reveal, however, how large a proportion of those who intend to work are in fact employed or unemployed. This means that unemployment among different groups is affected, for instance, more explicitly by local economic factors.

Employment and unemployment among different groups is therefore affected by various factors to differing extents, even though roughly speaking there is often covariance at a national level over time. Variations in unemployment over time may also be influenced, for instance, by changes in the organisation of the social insurance system. An individual who in one

system is categorised according to the regulations as being absent through sickness may in another system be categorised as unemployed and this can affect unemployment figures.

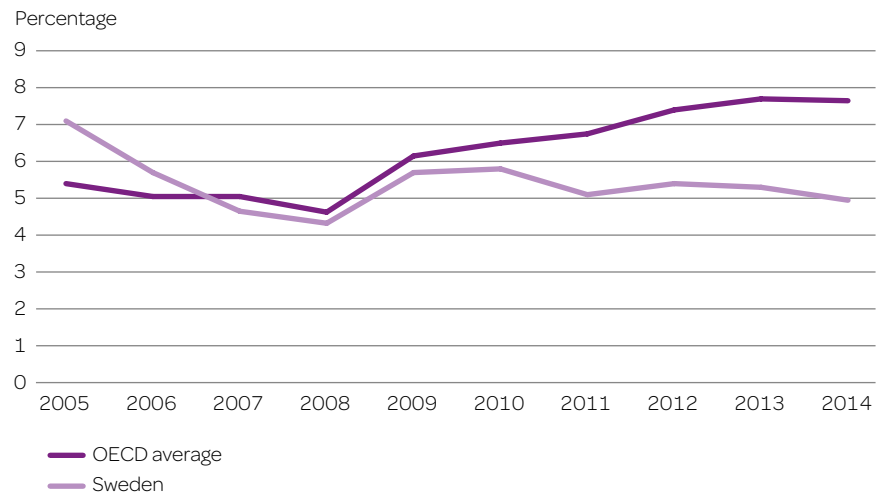
The risk of becoming unemployed is generally lower for those with more education. In most of the OECD countries unemployment was lower in 2014 for those (25–64-year-olds) who had tertiary education compared to those educated only to upper secondary level. Those educated to upper secondary level were in their turn less frequently unemployed than those with only below upper secondary education. There are, however, exceptions (among them Mexico, Korea and Turkey) where there was less unemployment among those who had spent less time in education than for those who had studied for longer. There are also large differences in the degree of variation between the different educational levels (Figure 3). These differences are due, for instance, to major differences in the composition of the labour market in different countries. Unemployment also varies with gender and age in the different countries.

Figure 3. Unemployment per educational level in 2014 for 25–64-year-olds ranked according to unemployment at tertiary level.



In 2014 unemployment in Sweden among 25–64-year-olds with tertiary education was 4 per cent, which can be compared to the figure of 4.9 per cent for those with upper secondary education and 12.6 per cent for those who did not go on to upper secondary level. On the whole these figures were somewhat lower than the OECD averages for those with tertiary education (5.2 per cent) and upper secondary education (7.8 per cent) but did not differ greatly for those with below upper secondary education (12.7 per cent). These figures are average figures for the entire population aged 25–64. If we focus instead on those who have completed their education more recently, i.e. the 25–34 age group, it can be seen that the differences in unemployment for those with tertiary education between Sweden (4.9 per cent) and the OECD average (7.6 per cent) are even larger (Figure 4).

Figure 4. Unemployment for 25–34-year-olds with upper secondary education compared with OECD average 2000–2014



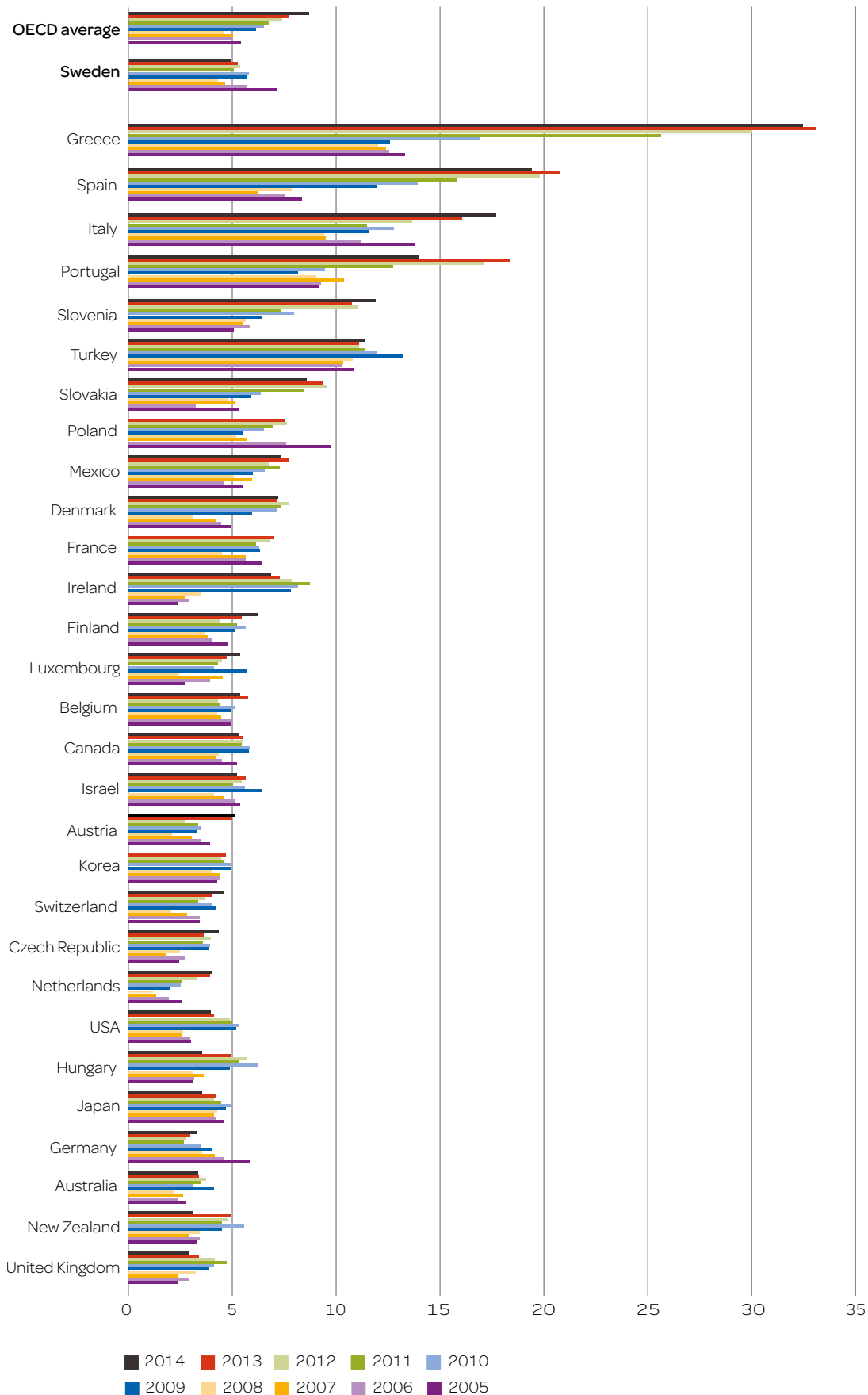
Unemployment among 25–34-year-olds with tertiary education has been lower in Sweden than in the OECD since 2007. Since 2009 there has been a relatively major increase in this difference (see Figure 4) to 2.7 percentage points in 2014.

The same pattern over time also applies for 25–34-year-olds with upper secondary education but the difference between Sweden (6.2 per cent) and the OECD average (10.2 per cent) was even larger in 2014 than previously. Unemployment among those with upper secondary education has been below the OECD average since 2006. Among those in the same age group with lower secondary education the average unemployment figure in Sweden was 16.6 per cent in 2014 and 18.7 per cent in the OECD. This was the first year during the most recent decade that unemployment among this group was lower in Sweden than the average figure for the OECD. The trend reversed to some extent in Sweden with relatively major reductions in unemployment among Swedish 25–34-year-olds with below upper secondary and upper secondary education between 2013 and 2014 (see indicator A5 in EAG 2015). A similar trend in employment rates with relatively major rises for those with lower secondary and upper secondary education can also be seen between 2013 and 2014.

What these changes are due to is uncertain, but over time unemployment often reflects local economic conditions which are, in their turn, affected by labour market structures. It seems as well that young people with less education and women have been most susceptible to economic changes in the last decade. The statistics also suggest that the economic crisis affected many other OECD countries more severely than Sweden after 2009.

A comparison of 25–34-year-olds with tertiary education in the OECD countries over time also reveals major variations in unemployment patterns. In some countries, such as Greece, Spain, Portugal and Italy, unemployment has been higher than the OECD average and there were, above all, major rises in these figures from 2009 onwards (Figure 5).

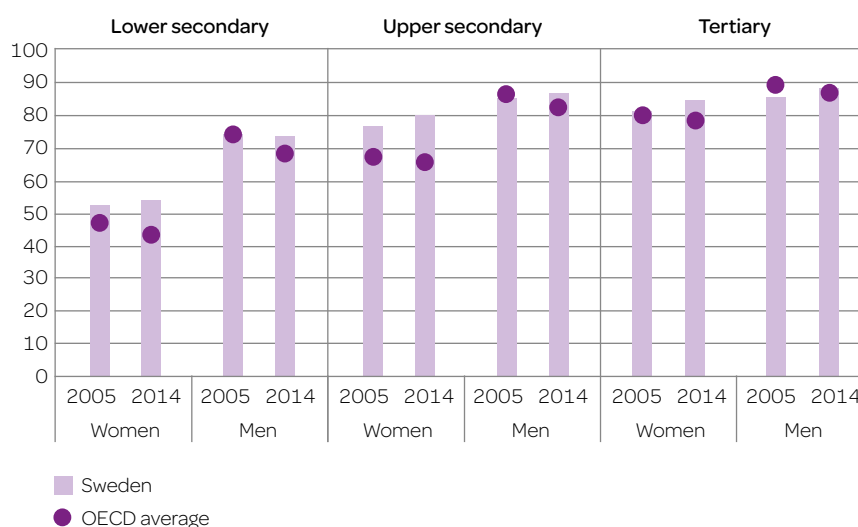
Figure 5. Unemployment among 25–34-year-olds who have received a qualification in tertiary education divided by country 2005–2014.



Smaller gender differences in employment rates in Sweden than the OECD average

On the whole there are more men with jobs in the OECD than women and this difference is larger among groups with lower educational attainment. Sweden is one of the countries where the gender difference is lowest for the group with tertiary education. For 25–34-year-olds in this group there has been a slight reduction of the gender gap between 2005 and 2014 from 4.7 to 3.2 percentage points, while the OECD average has remained relatively stable at around 9 percentage points (Figure 6). Gender differences have been growing in groups with upper secondary education or less during these years.

Figure 6. Employment rates in Sweden compared with OECD average for 25–34-year-olds in 2005 and 2014 per educational level and gender.

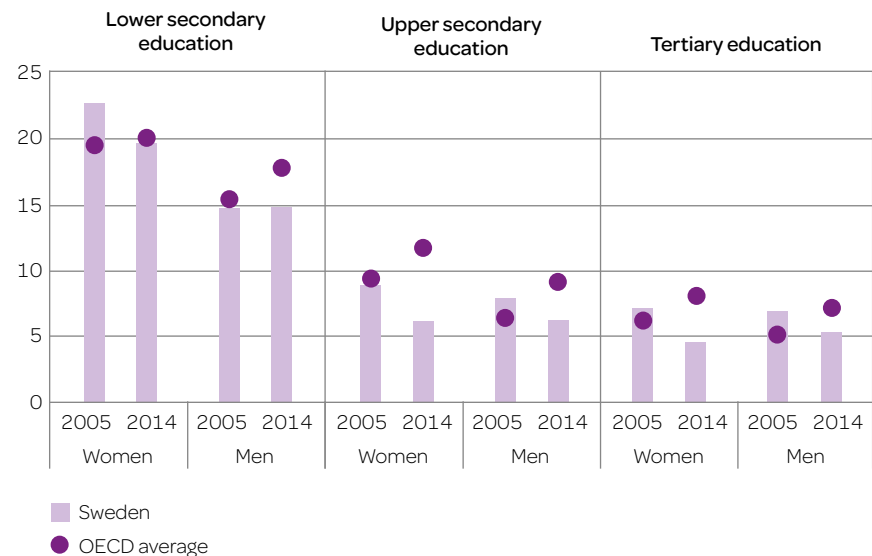


For 25–34-year-olds in Sweden the gender difference for those with upper secondary education was 6.4 percentage points in 2014, which can be compared with the OECD average of 16.9 percentage points. The gender gap for this group with upper secondary education has declined to some extent both in Sweden and in the OECD on average since 2005. For the group that did not go on to upper secondary level the gender gap in Sweden was as large as 19.5 percentage points, which is however just over 5 percentage points lower than the OECD average. In other words the average OECD gender gaps are even larger. This difference has also declined to some extent for those with below upper secondary education in both Sweden and on average in the OECD since 2005.

Differences between men and women are not on the whole as large for unemployment as for employment rates. In Sweden women with tertiary education in the 25–34-year-old group were less likely to be unemployed in 2014 (4.6 per cent) than men (5.3 per cent), a difference of 0.6 percentage points. This means that there has been a relatively large change since 2005, when unemployment among women with tertiary education was higher in Sweden than for men and the corresponding figures were 7.3 per cent for women and 6.9 per cent for men.

At the same time there has been a rise in unemployment in the OECD for both women and men at every level of educational attainment (Figure 7). For 25–34-year-olds with tertiary education the gender differences in average unemployment figures in the OECD have been stable at around 1 percentage point but unlike Sweden have been somewhat higher for women than for men.

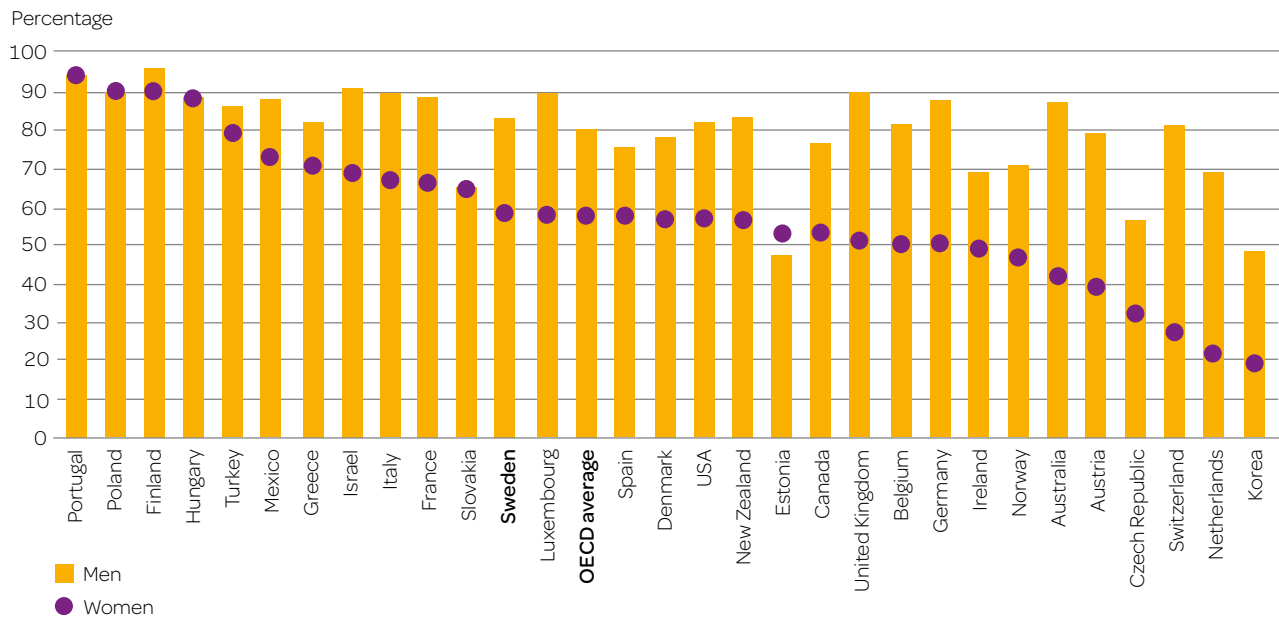
Figure 7. Unemployment in Sweden compared with OECD average for 25–34-year-olds in 2005 and 2014 per educational level and gender.



Fewer women than men with tertiary education work full-time in Sweden

Even though Sweden is one of the OECD countries where the gender differences are smallest for those with tertiary education who are employed, a different picture emerges if we look at how large a proportion are also working full-time. On average in the OECD 80 per cent of the men with tertiary education in the 25–34-year-old group who were employed had full-time employment and 58 per cent of the women in the same group, a difference of 22 percentage points. The corresponding figures for Sweden are 83 per cent of the men and 59 per cent of the women, a difference of 25 percentage points, which is just over the OECD average.

Figure 8. Proportion of 25–44-year-olds with tertiary education employed in 2013 divided by gender. Ranked according to proportion of women working full-time.



Note that if no data are available for 2013 data from 2012 have been used. The OECD average is based on all the countries in the figure.

If we compare with the other Nordic countries, we see considerably larger numbers working full-time in Finland than in Sweden, with 96 per cent of the men and 89 per cent of the women doing so. Denmark was closer to the level in Sweden while in Norway both fewer men and women with tertiary education work full-time (among those who are employed).

One of the factors that may contribute to the larger proportion of women in Sweden working part-time is that many of them (and men) aged 25–34 have small children and women devote more of their time to unpaid work in their homes. Differences between the countries may for instance be due to differences in the possibilities of working part-time while looking after small children.

Relative salaries

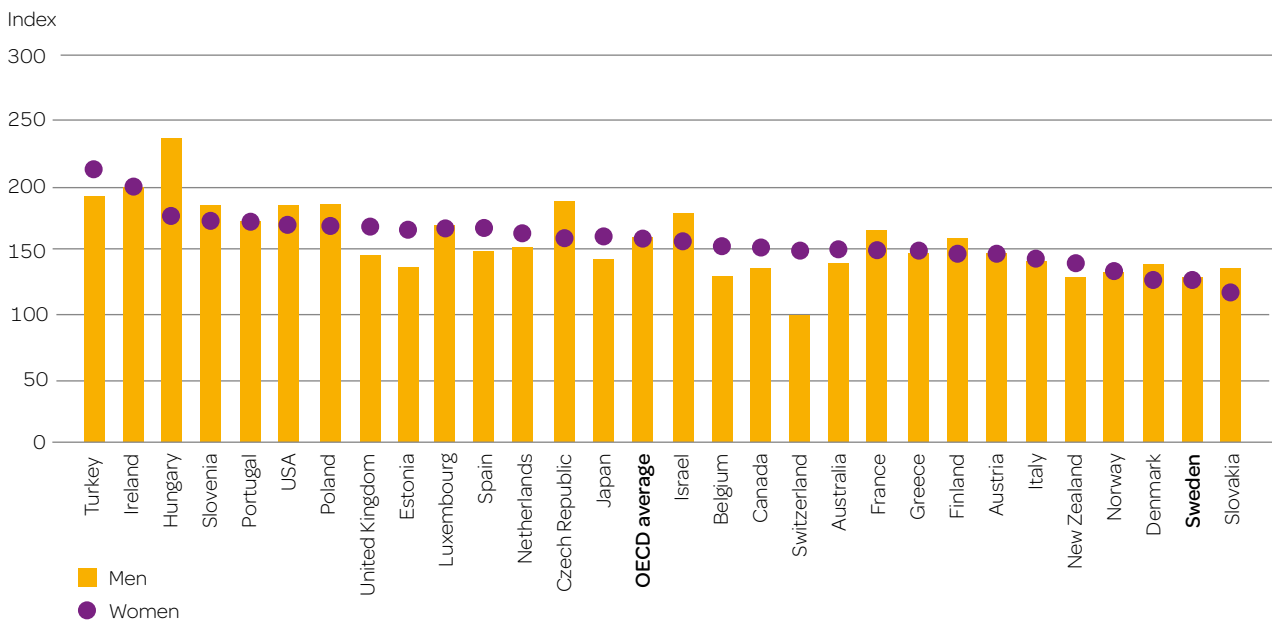
Salary premium for tertiary education low in Sweden in an international comparison

Apart from the gains in terms of personal development, the possibility of interesting work and perhaps higher social status, many acquire higher education because of the possibilities it offers of positions with higher salaries. What then do the differences in earnings look like for those with tertiary education?

In the figure we have chosen to present data for the 25–64-year-old group. For those with tertiary education relative salaries increase with age in all the OECD countries, on average by 36 percentage points if the 25–34-year-old group is compared with the 55–64-year-old group. Presenting relative salaries for only the younger age groups would not therefore be meaningful.

Sweden is one of the countries in which differences in earnings for those with tertiary education and those with upper secondary education are lowest. In the figure the index figure of 100 corresponds to no difference in earnings between these educational levels. An index figure above 100 means that those with tertiary education earn more than those with upper secondary education. For instance an index figure of 125 means that those with tertiary education earn on average 25 per cent more than the group with upper secondary education.

Figure 9. Relative salaries for each gender among 25–64-year-olds with tertiary education in relation to those with upper secondary education (index = 100) in 2013. Arranged according to index for women.



Note that where no data were available for 2013 the figures for the most recent year were used but from no later than 2010.

In Sweden men with tertiary education earn on average 29 per cent more than those with upper secondary education and the corresponding figure for the women is 25 per cent. Only Switzerland has a lower difference for men while for women only Slovakia is below Sweden. The Swedish figures are 32 percentage points below the OECD average for both genders, even though those for women are slightly lower than for men. From a Nordic perspective only the figures for women in Denmark are at the same low level as in Sweden. The highest salary differential in the Nordic countries are for those with tertiary education in Finland, with 58 per cent higher earnings for the men and 47 per cent for the women when compared with their counterparts with upper secondary education.

It is important to remember that these figures indicate the average salary premiums for tertiary education. For certain groups of graduates, for instance those with degrees in medicine or Master's degrees in engineering (or the like), salary premiums are often considerably larger.

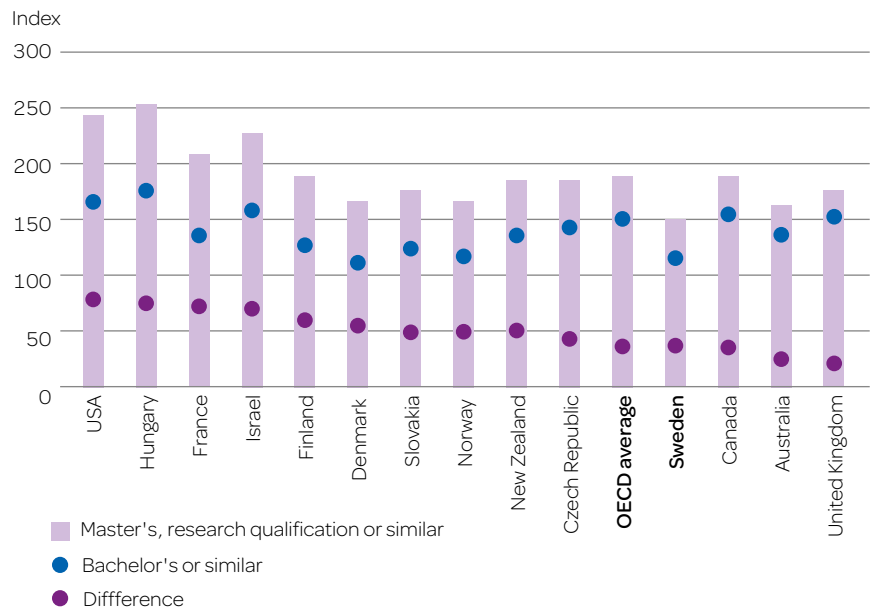
Greater rewards for longer periods of study

The numbers graduating from longer programmes of study in Sweden are increasing all the time (*Studenter och examinerade på grundnivå och avancerad nivå 2013/14 [Students and graduates in first and second-cycle programmes 2013/2014]*, Statistiska meddelanden, UF 20 SM 1501, UKÄ and Statistics Sweden). A longer period of study involves a greater financial investment by the individual, for instance in the form of larger student loans and delayed entry into the labour market. One reason for studying for longer should then be relatively higher earnings in comparison with those who have studied in tertiary education for shorter periods.

The figure below shows the salary differentials for individuals with at least a Master's degree or the equivalent (at least five years of study) and those with a Bachelor's degree or the equivalent (three years of study), where both levels are compared in relation to the salaries paid to those who have upper secondary education alone. Only the countries for which data are available for both levels are presented in the figure and the OECD average has been calculated on the basis of all the countries for which data for the different levels are available. In the figure an index of 100 means that there is no difference in salary between the educational levels. An index over 100 means that those with tertiary education earn more than those with upper-secondary education.

In all the countries for which data are available individuals who have completed longer periods of study have higher salaries than those with three years of tertiary education. The average difference between the levels in the OECD is 37 percentage points. The figures for Sweden are just below this average with a difference of 36 percentage points. Sweden also has lower salary differences than the other Nordic countries, where the largest can be found in Finland, with a difference in salary of 60 percentage points between those with at least a Master's degree and those with degrees at Bachelor level.

Figure 10. Relative salaries for those who have at least a Master's degree or alternatively a Bachelor's degree from tertiary education compared to those with upper-secondary education. Ranked according to difference between Master's and Bachelor's. The data refer to 2013.



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