Higher education in Sweden

2016 Status report

UKÄ SWEDISH HIGHER EDUCATION AUTHORITY

REPORT 2016:11

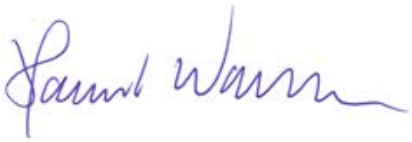
Introduction

Higher education is Sweden's largest public-sector service provider and the concern of many stakeholders. It is important for discussions about higher education and the decisions that affect the way it functions to be based on factual knowledge. *Higher Education in Sweden – 2016 status report* is a short English version of the annual statistical report on higher education institutions (HEIs) in Sweden published by the Swedish Higher Education Authority (Universitetskanslersämbetet, UKÄ). The ambition is to provide accurate information about the status of Sweden's higher education. Here you will find answers to questions such as:

- How well is Sweden doing from an international perspective?
- How much does the Swedish state invest in higher education and the research undertaken at the country's HEIs?
- How many students are acquiring qualifications from higher education in Sweden?

This report is based on the statistical data continually reported by the HEIs to Statistics Sweden and the data reported directly to UKÄ in connection with the submission of their annual reports to the Government.

Initially, the report summarises some indicators for Swedish higher education from an international perspective and, under the heading Facts about higher education in Sweden, provides a basic description of the structure of Swedish higher education and the regulatory framework. The report then outlines developments prior to and including the fiscal year of 2015 for public-sector and independent HEIs. The last chapter presents key data about students, staff and finance for each HEI.



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Higher education in Sweden
2016 Status Report

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Sweden in an international perspective

This chapter contains a study of educational levels in the OECD (Organisation for Economic Development) countries, surveys educational objectives in the European Union (EU) and presents expenditure on tertiary education in the OECD countries. The chapter is based on data from international sources, mainly the latest version of the OECD's publication *Education at a Glance* (EAG), OECD 2015, as well as data from the EU's statistical agency Eurostat.

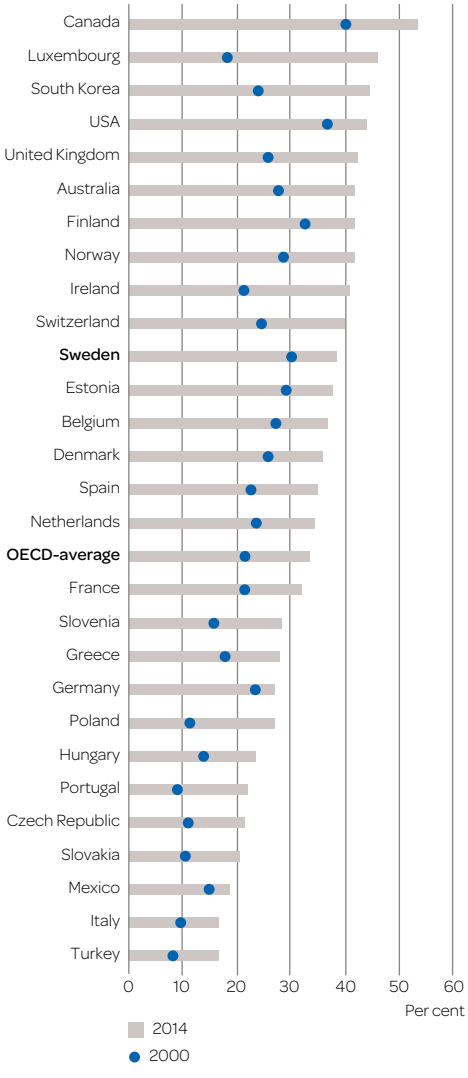
Educational attainment of the populations of OECD countries

In many OECD countries tertiary education has been expanded during recent decades and educational attainment has gradually been raised. In 2014 one-third of the adult population (25–64-year-olds) in the OECD had at least two years of tertiary education compared to 22 per cent in 2000. As the expansion of tertiary education has in most cases occurred fairly recently, there are relatively large differences in educational attainment in different generations. Among the younger generations (25–34-year-olds) 40 per cent have at least two years of tertiary education, while the corresponding figure for the older population (55–64) is 25 per cent (see table A1.4a, EAG 2015).

Educational attainment in Sweden is higher than the OECD average. In 2014 39 per cent of the adult population (25–64) had at least two years of tertiary education. Of the older population 30 per cent had tertiary education, whereas the corresponding figure for the younger population is 46 per cent.

Women have benefited to a greater extent than men from the major expansion of higher education in the OECD countries. In 2000 20 per cent of the men and women in the adult population (25-64) had at least two years of tertiary education. Fourteen years later 36 per cent of the adult women had tertiary education while only 31 per cent of the men had attained a corresponding educational level. In

Figure 1. Proportion of women and men in the adult population (25–64) with at least two years of tertiary education (ISCED 5–8) in 2000 and 2014. Only countries for which data are available are included. The countries have been ranked according to the highest educational attainment level in 2014. Source: A1.4a EAG 2015



Sweden the gender differences are considerably larger – 45 per cent of women had at least two years of tertiary education in 2014, while among men this figure was only 33 per cent (see table A 1.4b, EAG 2015, web publication).

Proportion of young people with tertiary education

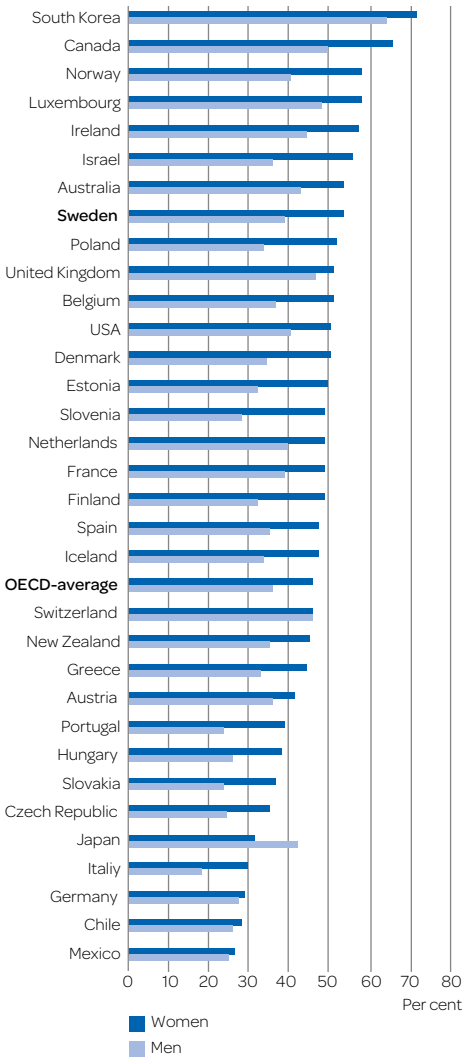
When higher education or other forms of tertiary education are expanded, the impact of these changes can be noticed first among younger age groups. The proportion of 25–34 year-olds with at least two years of tertiary education in the OECD countries rose on average by 1 percentage point between 2000 and 2014, from 26 to 41 per cent (table A1.3a in EAG 2015).

Gender differences in educational attainment are considerably larger among the younger population than those that can be seen in the adult population as a whole.

In 2014 on average in the OECD 35 per cent of the men and 46 per cent of the women in the 25–34 age group had at least two years of tertiary education.

In Sweden this gender difference was as large as 15 percentage points in 2014. While 54 per cent of the women had tertiary education, only 39 per cent of the men had attained the corresponding level.

Figure 2. Proportion of populations aged 30–34 in OECD countries with at least two years of tertiary education (ISCED 5–8) in 2014 divided into women and men. Only countries for which data are available are included. The countries have been ranked according to the highest educational attainment level for women in 2014. Source: Table A1.3a EAG 2015.

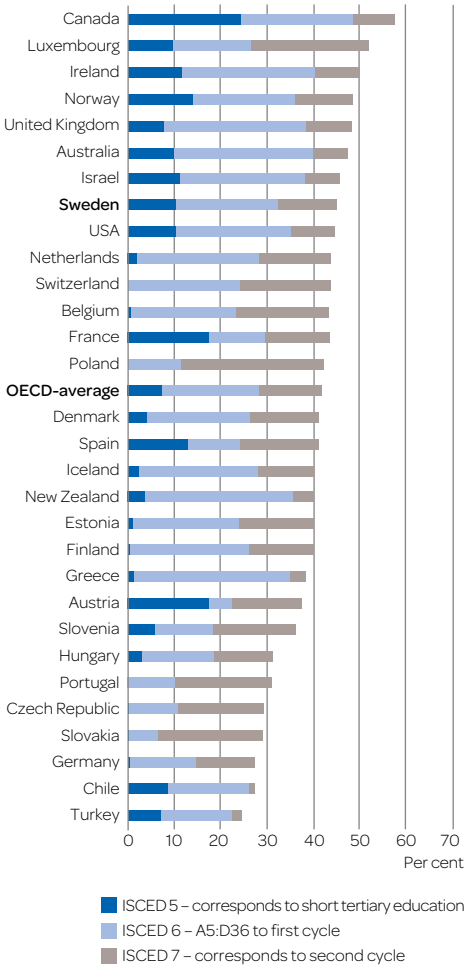


Majority of graduates in Sweden have first-cycle qualifications

The new ISCED classification now makes it possible to provide a more detailed analysis of educational attainment levels in the populations of countries that organise tertiary education according to the cycle structure agreed on by a large number of European countries in the Bologna Process (see fact sheets on pages 9 and 10). This means, for instance, that educational levels in populations can be divided up into those whose attainment corresponds to first-cycle level (ISCED 6, e.g. Bachelor's degrees) and those with attainment corresponding to second-cycle level (ISCED 7, e.g. Master's degrees).

In Sweden, as on average in the OECD, first-cycle level educational attainment (ISCED 6) is most common among the younger population, 22 per cent had this level of attainment in Sweden, 21 per cent in the OECD in 2014. The proportion of those whose educational attainment corresponded to second-cycle level in Sweden, 13 per cent, was also close to the OECD average of 14 per cent. Sweden had a somewhat higher proportion with shorter

Figure 3. Educational attainment levels in the 25–34-year-old population in the OECD countries divided by levels in 2014. The countries are ranked according to the highest total educational attainment levels. The table only includes countries that structure higher education according to the Bologna system. Source: Table A1.3a, EAG 2015.



tertiary education than the OECD average, 10 per cent compared to 7 per cent.
In most countries the proportion of the younger population (25–34) with education at first-cycle level was higher than the proportion with second-cycle education.

Europa 2020's educational targets

The EU's Europa 2020 strategy is intended to create greater growth and more jobs. The targets for higher education in Europa 2020 are a) that the proportion of 30–34-year-olds with at least two years of tertiary education will total 40 per cent and b) that 3 per cent of the EU's GDP will be invested in research and development (R&D) in 2020.

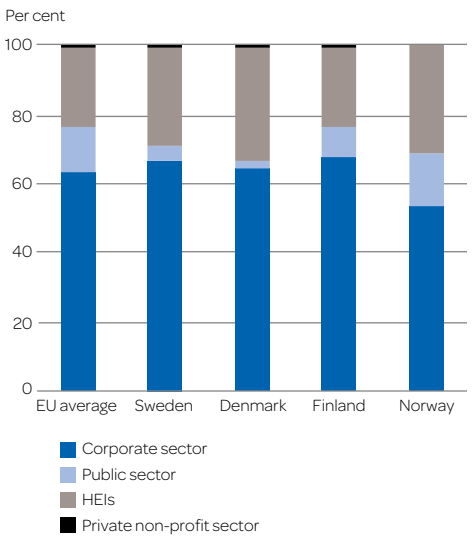
The EU's educational targets apply to the EU as a whole but all of the Member States except the United Kingdom have also laid down national objectives on the basis of their own circumstances and how they can contribute to the attainment of the EU's joint targets. Twelve countries have already achieved their national objectives for the proportion of 30–34-year-olds with at least two years of tertiary education, among them Denmark, Finland and Sweden. The proportion of 30–34-year-olds with at least two years of tertiary education is rising continuously, and in 2014 the figure was 38 per cent, according to Eurostat's statistics.

Earlier, Sweden's national objectives for the educational level of its young people was that 40–45 per cent of 30–34-year-olds would have at least two years of tertiary education by 2020, but this was revised in 2016 and the figure raised to 45–50 per cent. One point of departure for the Swedish Government is that national objectives have to be ambitious but realistic. According to Eurostat's follow-up survey, 50 per cent of 30–34-year-olds in Sweden already had at least two years of tertiary education in 2014.

Targets for investment in R&D

In 2014 the total amount invested in R&D in the EU amounted to 2.03 per cent of GDP, which can be compared to the figure of 1.8 per cent in 2003. In view of the slow rate of development, it seems unlikely that the target of 3 per cent in 2020 will be reached.

Figure 4. Total investments in R&D divided by the sector in which they are undertaken in a selection of countries and the EU average. Sweden differs from many other countries in that the bulk of its publicly financed research is undertaken in HEIs and the government agency sector accounts for only a little. Source: Eurostat.



For a long time Sweden and Finland have been the EU countries that invest most in R&D, over 3 per cent of GDP, and in recent years Denmark has also attained this level. Other countries whose investments in R&D are approaching 3 per cent of their GDP are Austria and Germany.

Sweden and Finland continue to have great ambitions when it comes to investments in R&D and have set their national objectives at 4 per cent, i.e. well above the EU's target. Austria's target is 3.76, but otherwise there are only seven other countries that have national targets of 3 per cent of GDP.

In most of the research-intensive countries the corporate sector accounts for the bulk of their total R&D. According to Eurostat's statistics, 64 per cent of the EU's total R&D was undertaken in the private corporate sector in 2014, 12 per cent in the public sector (for instance government financed research institutes), 23 per cent in the higher education sector and 1 per cent in the private non-profit sector.

In Sweden the proportion of R&D undertaken by private companies is slightly higher than the EU average, in 2014 companies accounted for two-thirds of Sweden's total R&D, a proportion that has remained more or less the same for many years. Sweden differs from many other countries in that the bulk of its publicly financed research is concentrated to HEIs while the public sector carries out considerably less R&D. In 2014 29 per cent of Sweden's total R&D was undertaken in the HEIs and 4 per cent in the rest of the public sector.

The cost of tertiary education

The OECD measures the cost of education both as a percentage of the GDP and in terms of expenditure per student. Even though educational expenditure as a share of GDP is a relatively sound measure of investment in education, it is worth noting that there are differences in the size of a country's GDP in proportion to its population. The cost of tertiary education also includes expenditure on research in higher education, as well as expenditure, in most cases to no great extent, on ancillary services such as student accommodation and canteens.

In the OECD countries for which data are available, on average about two-thirds of the expenditure is for tertiary education and about one-third for research.

In Sweden the proportion of expenditure on research is unusually high – more than half of the total expenditure per student, which is because most of the publicly funded research in Sweden is undertaken in HEIs.

Course providers' expenditure per student

In most countries the total expenditure of course providers on tertiary education and research largely comprises staffing costs. These accounted for two-thirds of the OECD average total expenditure in 2012, while the corresponding proportion for Sweden was

COUNTRIES STRUCTURE THEIR EDUCATIONAL SYSTEMS DIFFERENTLY

Educational systems are structured differently in different countries and the same type of programme can be classified as ISCED 5 in one country and ISCED 6 in another. This means that higher education programmes (ISCED 6–8) account for varying proportions of tertiary education as a whole (ISCED 5–8). The new ISCED classification has led to a reclassification of courses and programmes in a number of countries. This applies mainly to courses and programmes leading to the award of vocational and professional qualifications that had previously been classified as ISCED 5B (and in some cases 4C), which corresponded to the current ISCED 5. As some of the programmes leading to the award of professional qualifications could be considered to correspond to those at ISCED 6 level or higher, some reclassification has taken place.

Higher education programmes (ISCED 6–8) account for about three-quarters of the total amount of tertiary education in the OECD countries on average. In Canada, for instance, higher education accounts for a considerably smaller share of tertiary education, just over half, while in Finland all tertiary education is classified, in principle, as higher education. A different example can be found in Germany, where vocationally oriented tertiary education takes the form of apprenticeships and some of it, for instance programmes in nursing, is not classified as tertiary education at all according to the international classification system, and therefore not included in the data used in this analysis.

In Sweden most tertiary education is offered in the form of higher education. This is because on the whole all tertiary education was incorporated into higher education in 1977, for example programmes in nursing and education. In recent years, higher vocational education programmes have been introduced (mainly ISCED 5) but these still account for a relatively small proportion of tertiary education in Sweden.

64 per cent (table B6.2, EAG 2015). The variations in expenditure per student in different countries can be explained to some extent by the fact that in many countries HEIs (or their equivalents) own their own premises or pay little for them for other reasons. In Sweden rental costs account for an unusually large proportion of operating costs as virtually all the HEIs pay market rents for their premises (see box B6.1, EAG 2012).

In 2012 expenditure per student on tertiary education and research varied in higher education from just under USD 8,000 adjusted for purchasing power in Turkey, Chile, Mexico and Estonia to just over USD 25,000 in Luxembourg, the USA and Switzerland. The average total expenditure per student in the OECD was USD 15,000 and in Sweden USD 22,500 adjusted for purchasing power. This means that Sweden is one of the five countries that had the highest expenditure per student.

If expenditure on courses and programmes alone is taken into account, the amounts varied from around USD 4,300, adjusted for purchasing power, in Estonia and Slovakia to just over USD 20,000 in Luxembourg and the USA. The OECD average expenditure on courses and programmes alone was USD 9,800, adjusted for purchasing power, and in Sweden this figure was USD 10,600. In Sweden, therefore, expenditure on courses and programmes was slightly above the OECD average, and it is the extensive amount of research undertaken in higher education in Sweden that raises total expenditure per student in comparison to many other countries.

ISCED – INTERNATIONAL CLASSIFICATION OF EDUCATION AND EDUCATIONAL ATTAINMENT

The structure of the educational systems in the different OECD countries differs and to enable international comparison since the 1970s these countries have used the *International Standard Classification of Education* (ISCED) to categorise their educational programmes. The United Nations Educational, Scientific and Cultural Organization (Unesco) is responsible for ISCED and after a comprehensive revision of the classifications a new ISCED classification is used today (ISCED 2011). One important change in ISCED 2011 is that tertiary education had been divided up according to the Bologna system.

ISCED 2011 places higher education and other tertiary education of at least two years duration in levels 5–8. Level 5 corresponds to shorter periods of study (of at least two years however) that are considerably more complex than programmes at upper secondary level. Level 6 comprises longer (3–4 years) periods of study that often focus more on theory than those at level 5 such as Bachelor's degree programmes. Level 7 courses and programmes (Master's degree programmes) are considerably more complex than those at level 6 and often more specialised. The total period of study before the award of a level 7 qualification can vary between 5 and 8 years. Third-cycle courses and programmes are placed in level 8 (Doctoral degrees).

In Sweden first-cycle programmes, such as Bachelor's programmes, are placed in level 6 and second-cycle programmes, for instance 60 and 120-credit Master's degrees, in level 7, while PhDs and licentiate degrees are placed in level 8. Some short higher education programmes and those offered within the framework of higher vocational education that are longer than two years are classified as level 5. In this chapter levels 5–8 are referred to collectively as *tertiary education*. Note that this does not include any post-upper secondary programmes that are shorter than two years.

Educational attainment classified as corresponding to level 5 includes, in addition to studies in higher vocational education, completion of freestanding courses in higher education corresponding to 2–3 years of study. Level 6 includes at least three years of study in higher education corresponding to a Bachelor's degree (without requiring the award of a qualification). Level 7 includes at least four years of study, corresponding to and leading to the award of a Master's degree (although the award of a degree is not required for studies outside Sweden).

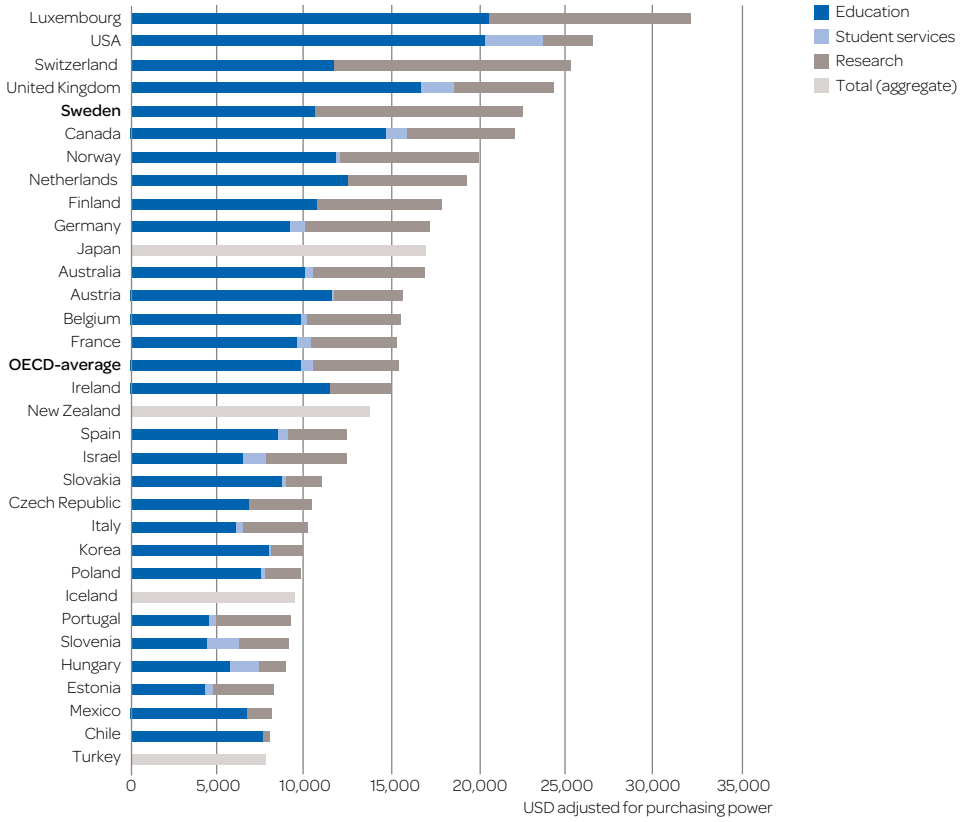
Information has to be interpreted with caution when making comparisons between different countries. OECD averages are affected, for instance, by an increase in the number of OECD countries and also by the fact that not all of these countries provide complete statistics. *Education at a Glance* is also to some extent based on definitions that are different from those normally used in Sweden. For this reason there may be differences compared to the figures accounted for in national contexts.

Expenditure on tertiary education as a share of GDP

In 2012 the OECD countries invested on average 1.5 per cent of GDP, of which 1.2 per cent was public funding, on tertiary education and research in higher education.

The corresponding figure in Sweden was 1.7 per cent of GDP, most of it public funding. Private funding in Sweden (0.2 per cent of GDP) mainly comprised additional finance for research undertaken in higher education.

Figure 5. Expenditure per student divided by activity, USD adjusted for purchasing power.
Course providers' expenditure for tertiary education (ISCED 5–8) and research in higher education in the OECD countries in 2012. The countries have been ranked according to the total expenditure per student. Some countries have not been able to divide the total expenditure and there are no data at all for Denmark and Greece. The data from Ireland, Canada, Luxembourg, Poland and Switzerland only include public-sector HEIs. Source: Table B1.2 in EAG 2015.



Facts about higher education in Sweden

Higher education in Sweden

The structure of higher education and qualifications

Sweden is one of approximately 50 countries collaborating in the Bologna Process, which aims to ensure comparability in the standards and quality of higher education qualifications. This has led to changes in the structure of higher education in Sweden and these apply to courses and programmes offered from 1 July 2007.

Cycles

All courses, programmes and qualifications are placed in three cycles: first, second or third. There is progression, i.e. each cycle is based on the one before. The formal requirements that distinguish these cycles are specified in the Higher Education Act.

Courses and programmes

All first and second-cycle educational offerings consist of courses that may be combined to form programmes.

In addition to programmes that lead to the award of qualifications, higher education in Sweden offers a wide range of freestanding courses, many of them offered as distance learning. Students may select their own combination of these courses. If these combinations meet stipulated requirements, a qualification may be awarded.

Higher education credits (HE credits)

An academic year that comprises 40 weeks of full-time study can lead to the award of 60 HE credits. The number of HE credits awarded for each course is determined by the amount of study normally required to attain its objectives. The HE credits awarded in higher education in Sweden may be compared to European Credit Transfer and Accumulation System (ECTS) credits, where 60 ECTS credits are attained after one academic year of full-time study.

Table 1. Structure of Swedish higher education qualifications.

First-cycle qualifications
General qualifications
Higher Education Diploma (120 HE credits)
Bachelor (180 HE credits)
Qualifications in the fine, applied and performing arts
Higher Education Diploma (120 HE credits)
Bachelor of Fine Arts (180 HE credits)
Professional qualifications
There are 32 different first-cycle professional qualifications, for example Bachelor of Science in Nursing (180 HE credits), Bachelor of Science in Engineering (180 HE credits) and Higher Education Diploma in Dental Hygiene (120 HE credits)
Second-cycle qualifications
General qualifications
Master (60 HE credits)
Master (120 HE credits)
Qualifications in the fine, applied and performing arts
Master of Fine Arts (60 HE credits)
Master of Fine Arts (120 HE credits)
Professional qualifications
There are 22 different second-cycle professional qualifications, for example Master of Architecture (300 HE credits), Postgraduate Diploma in Midwifery (90 HE credits) and Master of Science in Medicine (330 HE credits)
Third-cycle qualifications
General qualifications
Licentiate degree (120 HE credits)
Doctoral degree (240 HE credits)
Qualifications in the fine, applied and performing arts
Licentiate degree in Fine Arts (120 HE credits)
Doctoral degree in Fine Arts (240 HE credits)

Categories of qualifications

There are three categories of qualifications which all have the same academic status:

1. general qualifications
2. qualifications in the fine, applied and performing arts
3. professional qualifications.

Both general qualifications and qualifications in the fine, applied and performing arts are awarded within the first, second or third cycles.

Professional qualifications are awarded within the first and second cycles and mainly in the regulated professions. A majority of professional qualifications awarded in the second cycle do not require a previous, first-cycle, qualification and the programmes leading to their award cover both cycles. Swedish higher education differs from higher education in many other countries in this respect.

Teaching methods

Higher education normally consists of self-study, classroom instruction, seminars and lectures, but many courses also include laboratory sessions or field studies. Students are frequently asked to work in groups.

Government funding but a high degree of autonomy

The mission of the HEIs is to offer education based on scholarship or artistic practice and on proven experience. They are also required to undertake research or artistic research as well as development work. Most of the publicly financed research in Sweden is undertaken within higher education, which means that over half of the HEIs' operations,in terms of funding, comprise research and third-cycle programmes. In addition, the HEIs must interact with the surrounding community, provide information about their operations and act to ensure that benefits are derived from the findings of their research.

In Sweden, public-sector HEIs have considerable autonomy within a system of management by objectives. Overall responsibility for higher education and research rests with the Swedish Parliament (Riksdag) and the Government. These decide on the regulations that apply to the higher education sector, primarily the Higher Education Act and the Higher Education Ordinance (see fact sheet on page 17). In addition to laying down objectives and guidelines, they also allocate resources to the HEIs. Within these parameters, the HEIs are relatively free to decide on their own organisation, how they use resources and their course offerings.

Allocation of resources to higher education institutions

The Swedish Parliament decides on funding for the HEIs. Resources are allocated to the institutions for first and second-cycle courses and programmes on the basis of the number of students enrolled in each cycle (expressed in terms of full-time equivalents, FTEs) and the number of credits attained by the students (annual performance equivalents, APEs). The funding per FTE and APE varies for different disciplinary domains. Technology and engineering, for example, receive more than social science. Every year the Government determines a funding cap for the HEIs which lays down the maximum amount that can be paid to each institution.

Direct funding for research and third-cycle courses and programmes is based mainly on past allocations, but a proportion of the funding and new resources has since 2009 been allocated on the basis of two quality indicators. One of these takes publications and citations into account, the other research funding from external sources.

Accreditation and quality assurance

Higher education is offered by public-sector HEIs and (to a much smaller extent) by independent education providers. There are 31 public-sector HEIs and they account for approximately 90 per cent of the total number of FTEs. The Swedish Parliament decides on the establishment of public-sector HEIs while the Government decides whether a HEI has full university status. Those that lack full university status have only limited powers

to award third-cycle qualifications and somewhat limited powers to award second-cycle qualifications. There is no difference, however, in the status of the qualifications awarded.

Independent education providers are permitted to offer higher education courses and programmes if they are granted degree-awarding powers. Otherwise, there is no accreditation of institutions. In Sweden there are four independent HEIs entitled to award either all or some third-cycle qualifications. There are also nine independent education providers entitled to award first, and in some cases second-cycle qualifications, as well as four independent education providers entitled to award qualifications in psychotherapy.

A complete list of HEIs in Sweden can be found on page 64.

Degree-awarding powers

In Sweden, therefore, accreditation of higher education takes the form of granting degree-awarding powers. The regulations that apply vary depending on what types of HEI and qualifications they refer to: public-sector HEIs that lack full university status have less extensive powers but are not as restricted as the independent higher education providers, which have to make separate applications for each qualification they wish to award. However, all HEIs and independent higher education providers have to apply for entitlement to award professional qualifications and qualifications in the fine, applied and performing arts.

With the exception of independent higher education providers, who apply to the Government, applications for degree-awarding powers are appraised by UKÄ. These powers are granted indefinitely, unless there are grounds for revoking them.

Quality assurance

Responsibility for the quality of higher education is regulated in the Higher Education Act. HEIs are obliged to ensure that high standards are attained in courses and programmes as well as in research. Also, quality assurance procedures are the shared concern of staff and students.

By evaluating the quality of studies leading to the award of qualifications and quality assurance procedures, UKÄ makes sure that HEIs are accountable. These evaluations have been performed in cycles of six or four years. One cycle was completed in 2014 and a new cycle is scheduled to commence in 2016. This will comprise appraisals of degree-awarding powers, audits of the HEIs' internal quality assurance procedures, evaluation of studies leading to the award of qualifications and thematic evaluations. Failure to meet quality standards may result in degree-awarding powers being revoked.

Admission to higher education

Sweden has a more uniform system of admission to higher education than many other countries. National admission regulations are laid down in the Higher Education Act, the Higher Education Ordinance and regulations issued by the Swedish Council for Higher Education. The vast majority of admissions are pooled. The Swedish Council for Higher Education is responsible for pooled admissions on behalf of the HEIs, but the individual HEIs make the official decision to admit students. There is one single joint official website for applications for places in higher education in Sweden (www.antagning.se). Information about studying is also available on the website www.studera.nu.

Detailed national regulations apply mainly to the admission of HE entrants to first-cycle courses and programmes. There are also regulations on admission to second and third-cycle courses and programmes, but these are less comprehensive.

Specific prior knowledge is required for admission to higher education. There are general as well as specific admission requirements. General requirements apply to all courses and programmes in higher education: specific (additional) requirements are also demanded for many courses and programmes.

Fulfilment of the entry requirements does not guarantee admission. If there are more applicants than places, selection criteria are used. All first-cycle courses and programmes, apart from those that lead to the award of qualifications in the fine, applied and performing arts, use more or less the same criteria. These are based mainly on final school grades or results from the Swedish Scholastic Aptitude Test (Högskoleprovet). The Higher Education Ordinance lists what selection criteria may be invoked. It also contains regulations on the evaluation of final school grades.

Applying for third-cycle studies leading to the award of a Licentiate degree or Doctoral degree is more similar to applying for a position. Admission is only possible if the student has been appointed to a doctoral studentship or awarded a research grant, unless the student has some other form of guaranteed funding for the entire period of study. Normally funding can only be provided for the official period of study. This means that doctoral programmes have to be completed in four full years, Licentiate programmes in two.

Cost of studying

Tuition fees

For a long time Sweden was one of the few countries in Europe in which higher education was completely free of charge. In June 2010 the Swedish Parliament enacted a provision in the Higher Education Act to the effect that while higher education is free for Swedish citizens and for citizens of the EU/EEA countries and Switzerland, citizens of other countries have to pay an application fee as well as tuition fees for first and second-cycle studies, unless they are taking part in an exchange programme. In calculating tuition fees the HEIs must ensure that they cover the full cost of the instruction provided as well as counselling, health services and other types of student service. They do not have to cover accommodation and living expenses.

Financial support

The majority of students in Sweden finance their studies with the help of financial support from the state to cover their living expenses. There are minimum performance requirements in terms of the number of credits achieved for continued financial support. Student finance consists of a combination of study grants and study loans. In 2015 the grant portion of student finance for an academic year of 40 weeks amounted to SEK 28,280 and the loan ceiling to SEK 71,200. The maximum total available Government sponsored student finance for an individual student pursuing full-time studies thus amounted to SEK 99,480. Students may receive this financial support for a maximum of twelve semesters or six academic years. Repayment of the loan element is based on an annuity system and in normal cases the total debt should be repaid in 25 years or before the borrower reaches the age of 60.

Residents who are not Swedish citizens are normally only entitled to financial support for studies if they have moved to Sweden for some other reason than to study here. Otherwise they are considered to be international students and have to finance their studies themselves.

GOVERNMENT AGENCIES IN THE HIGHER EDUCATION SECTOR

A number of agencies are accountable to the Ministry of Education and Research

- The Swedish Higher Education Authority (Universitetskanslersämbetet, www.uka.se) exercises supervision of the HEIs, which means ensuring their compliance with the statutes and regulations that apply to higher education. UKÄ also reviews the quality of higher education and the efficiency and effectiveness of the use of resources and public funding at the HEIs. UKÄ is also responsible for the official statistics on the higher education sector.
- The Swedish Council for Higher Education (Universitets- och högskolerådet, www.uhr.se) issues further regulations, for example concerning the admission of applicants with grades awarded abroad, and is responsible for pooled admissions on behalf of the HEIs. The Council also evaluates educational qualifications awarded outside Sweden and brokers international exchanges.
- The Higher Education Appeals Board (Överklagandenämnden, www.onh.se) can review decisions on admission to higher education and other matters.
- The Swedish National Agency for Education (Skolverket, www.skolverket.se) lays down intended learning outcomes of upper-secondary education, conducts national tests and evaluations and also oversees participation in international education surveys.
- The Swedish Research Council (Vetenskapsrådet, www.vr.se) is the largest funding agency for basic research, in addition to being an advisor to the Government on research policy.
- CSN (Centrala studiestödsnämnden, www.csn.se) approves and distributes the financial support for students provided by the state, including both grants and loans.

REGULATION OF THE HIGHER EDUCATION SECTOR

Higher education in Sweden is governed by the Higher Education Act and the Higher Education Ordinance.

The Higher Education Act is enacted by the Swedish Parliament and contains regulations about the operations of HEIs. The Act contains basic regulations about studies offered by HEIs. For instance, it sets out what should characterise courses and programmes at different levels and stipulates freedom of research. It provides a framework for the organisation and governance of the HEIs, and states that every HEI must have a board of governors and a vice-chancellor. It also contains regulations about the duties of teachers as well as provisions about student influence. In addition, HEIs must foster equality of opportunity and broaden recruitment.

Further provisions are laid down in the Higher Education Ordinance, issued by the Government. For instance, the Ordinance states that students must be given the opportunity to influence their studies. The Ordinance contains regulations on entrance qualifications and selection for courses and programmes, as well as the appointment of teachers and doctoral students. It also includes regulations on course and programme syllabuses, grades and qualifications.

Annex 2 to the Higher Education Ordinance and annexes to the Ordinance for the Swedish University of Agricultural Sciences and the Ordinance for the Swedish National Defence College are known as Qualifications Ordinances and contain the descriptors for all qualifications awarded in higher education in Sweden.

In addition to the legislation, the Government exercises control of agencies in the higher education sector through directives which specify the tasks to be undertaken and the reports it expects.

Trends and developments

First and second-cycle courses and programmes

This section deals with first and second-cycle courses and programmes in higher education. The statistics describe admissions, attendance and the numbers graduating from HEIs. Higher education is a complex process that comprises a number of different populations: applicants, those admitted, HE entrants, registered students and graduates.

Applications and admissions

A total of 131,300 individuals who had not previously studied in higher education applied for places for the autumn semester of 2015, which was a reduction of 3 per cent compared to the previous autumn semester.

The vast majority of applicants with no previous studies in higher education are those who have recently completed upper-secondary school, but the number of 19 and 20-year-olds applying for higher education declined in the autumn of 2015. This is due among other things to demographic changes but the proportion of the cohort of 19-year-olds applying in the autumn of 2015 was also smaller than in the previous autumn.

In addition to applicants with no previous studies in higher education, there are also a large number of applicants who have already studied in higher education. This group also declined in size, from 289,600 in the autumn of 2014 to 278,000 in the autumn of 2015. This means that the total number of applicants to higher education, both qualified and unqualified, for the autumn of 2015 was 410,000, which corresponds to a reduction of 4 per cent compared to the autumn of 2014.

The gender ratio among those applying for higher education has, with minor variations, been more or less the same for a long time: 60 per cent women and 40 per cent men. In the autumn of 2015 women accounted for 62 per cent of the total number of applicants and men accounted for 38 per cent. Among applicants with no previous studies in higher education, 59 per cent were women and 41 per cent men.

Numbers of applicants vary between different programmes and also over time

Applicants for higher education can list several different alternative choices on their application forms. First choice applicants are those who have listed a programme as their first choice. An individual can only be a first choice applicant for one alternative in any one application round. Applicants can also fulfil the entry requirements for the programmes they apply for or fail to do so. An applicant may be qualified for one specific programme but not for another. A qualified first choice applicant is therefore someone who is qualified for the programme listed as her or his first choice. Here the focus will be on qualified first choice applicants, both those with previous studies in higher education and those applying for the first time. There are a large number of individuals who have previously studied in higher education who begin programmes of study. To illustrate the interest in different degree programmes those who have previously studied in higher education will be included here.

In the autumn of 2015 the total number of qualified first choice applicants for courses and programmes in higher education was 349,400, of whom 101,500 had not previously studied in higher education. The number of qualified first choice applicants applying for the different degree programmes totalled 173,900, which is a decline compared to the previous autumn semester when the corresponding figure was 175,100.

There are about 50 different programmes that lead to the award of professional qualifications and altogether they attracted 90,700 qualified first choice applicants in the autumn of 2015. In addition to programmes that lead to the award of professional qualifications,

there are programmes leading to the award of general qualifications or those in the fine, applied and performing arts, which altogether attracted 83,500 applicants.

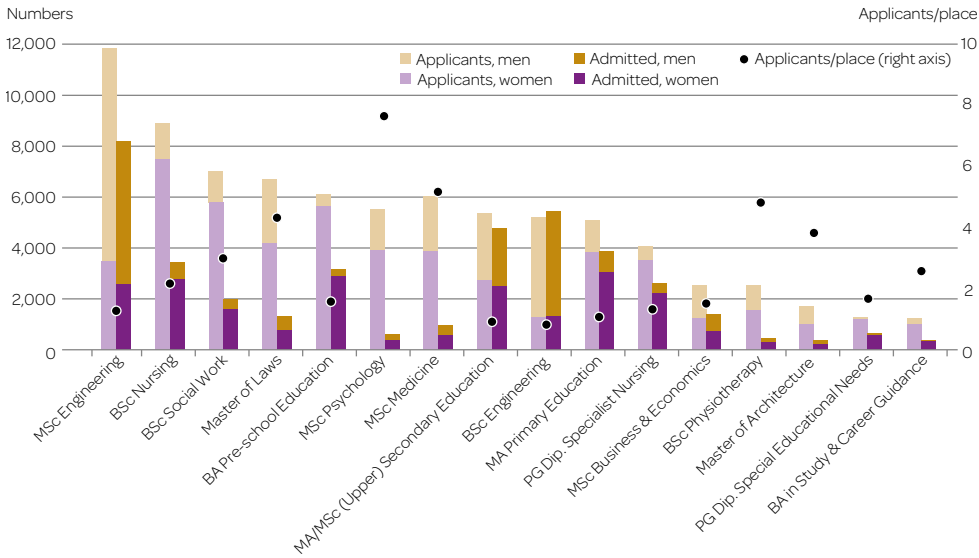
The programmes that lead to the award of professional qualifications that attracted most applicants were those in education which lead to the award of four separate qualifications, Bachelor's degrees in pre-school education, Master's degrees in primary or secondary education, Master's degrees in upper-secondary education, or Higher Education Diplomas in vocational education, in other words the four qualifications that replaced the earlier general teaching qualification. In the autumn of 2015 the number of qualified first choice applicants for these four types of programmes totalled 17,200. The second largest group of applicants were for programmes leading to the award of Master's degrees in engineering with 11,800 qualified first choice applicants. Other programmes that lead to the award of professional qualifications that attracted large numbers of applicants were those leading to Bachelor's degrees in nursing or in social work and Master's degrees in law.

The proportion of the total of 349,400 qualified first choice applicants in the autumn of 2015 applying for courses or programmes offered as distance education totalled 27 per cent. The majority of these applied for courses offered as distance education, 21 per cent of the qualified first choice applicants, while 6 per cent chose complete programmes offered in the same way. There was a rise of 5 percentage points in the proportion of first choice applicants for courses offered as distance education between the autumn of 2008 (22 per cent) and the autumn of 2011 (27 per cent). Since then the figures have remained unchanged. The proportion of women applying for courses offered as distance education in the autumn semester was 30 per cent, compared with 22 per cent of the men. This ratio has been relatively constant since 2008.

Interest in different programmes differs between men and women

More than three-quarters of the women who were qualified first choice applicants applied for degree programmes that focus on education and teaching qualifications or on health

Figure 6. Numbers of qualified first choice applicants to programmes leading to the award of professional qualifications with at least 1,000 applications, divided by gender, autumn semester 2015.



science, nursing or social care. At the same time about two-thirds of the applicants for degree programmes in technology and manufacturing or in the natural sciences, mathematics or computer science were men.

There was a gender imbalance among applicants for 12 of the 16 programmes leading to the award of professional qualifications that attracted at least 1,000 qualified first choice applicants. In only four of them was there a relatively even (40–60) gender balance: Master's programmes in engineering, upper-secondary education, medicine and architecture.

Same proportion admitted as in the previous year

In the autumn semester of 2015 57,000 of the 131,000 applicants with no previous study in higher education were admitted, which is a decline of two per cent compared to the autumn semester of 2014. This means that 43 per cent of the applicants with no previous studies in higher education were admitted in the autumn semester of 2015, which is the same proportion as in the previous year. Between 2000 and 2011 the proportions admitted varied from 50 to 57 per cent. Between 2011 and 2014 there was a relatively marked drop in the proportion admitted which has now come to an end.

In the autumn semester of 2015 239,600 of the total number of qualified first choice applicants (410,000), including those who had no previous study in higher education, were admitted. This corresponds to a reduction of one per cent compared to the total number admitted in the previous autumn semester.

FOUNDATION YEAR PROGRAMMES

Completion of a foundation year programme (a programme that provides entry requirements for higher education) enables students to augment their qualifications from upper-secondary education so that they fulfil the specific entry requirements for certain first-cycle higher education programmes. A foundation year programme is in other words an access programme and can last for one year at the most. When students are admitted to foundation year programmes at a HEI they are also admitted at the same time to the degree programmes for which they will acquire the specific entry requirements.

Since 2003 HEIs have been permitted to offer foundation year programmes for first-cycle study programmes for which there is a shortage of applicants and whose graduates are at the same time in demand in the labour market. Funding for foundation year programmes is allocated from the HEIs direct government funding.

During the academic year of 2014/15 there were 4,390 students on foundation year programmes. This is about 740 more than ten years ago but fewer in comparison with both the academic years of 2012/13 and 2013/14. There were more men than women taking foundation year programmes and in the academic year of 2014/15 the gender ratio was 60 to 40 per cent. During the last ten-year period the largest total proportion of women was 45 per cent (in the academic year of 2006/07) but at some HEIs women have been in the majority. Most of the students on foundation year programmes are young (up to 25) and in the academic year of 2014/15 they accounted for 85 per cent of the total number taking these programmes.

Just over 70 per cent of the 4,750 students who started on foundation year programmes in the preceding academic year (2013/14) went straight on to begin a study programme in higher education after finishing the foundation year. More of less the same proportions of women and men have continued.

Among those admitted who had previously studied in higher education, 72 per cent had taken courses in the previous academic year (2014/15), 10 per cent had interrupted their studies for one year and 19 per cent had not studied in higher education for two academic years or more. The proportion of those admitted who had previously studied in higher education and had been awarded at least one qualification was 27 per cent. In other words, a large number of students return to higher education after having interrupted their studies.

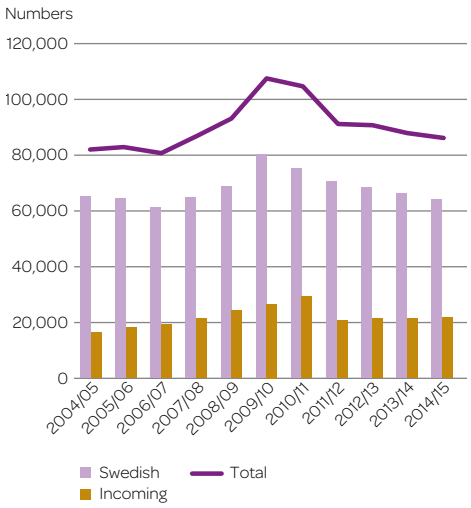
The proportion of those admitted to their first choice programmes in the autumn semester of 2015 rose somewhat compared to the previous autumn semester, from 60 to 61 per cent of all applicants (and from 54 to 55 per cent for those with no previous studies in higher education).

The number of qualified first choice applicants per place varies greatly between different programmes. Altogether there were 1.5 qualified first choice applicants per place, and this figure was 1.8 for qualified first choice applicants with no previous studies in higher education. The largest number of applicants per place among the major programmes that lead to the award of professional qualifications (with more than 1,000 applicants) were for Master's programmes in psychology, medicine, law and architecture as well as the Bachelor's programme in physiotherapy.

HE entrants in higher education in Sweden

In the academic year of 2014/15 HEIs in Sweden admitted a total of 86,000 students who were beginning their studies in higher education (HE entrants). Of these 57 per cent were women and 43 per cent men. This is the fifth academic year in a row in which the number of HE entrants has declined, compared to the previous year the drop amounted to two per cent. From the academic year of 2006/07 until 2009/10 the number of HE entrants rose markedly because of the increased demand linked to the economic downturn combined with temporary expansions of higher education in Sweden. In the academic year of 2009/10 there were 107,000 HE entrants, but by the academic year of 2014/15 the number had declined by just under 20 per cent, as the HEIs have gradually adapted the number of places offered to changing economic circumstances.

Figure 7. Numbers of HE entrants academic years 2004/05–2014/15.



HE entrants are students who begin to study in higher education in Sweden for the first time. This includes both Swedish and incoming students. The drop in the number of HE entrants in the academic year of 2014/15 was a result of a decline by 2,000 in the number of Swedish HE entrants, from 66,300 to 64,300. At the same time the number of incoming HE entrants rose by 400 to total 21,800 in the academic year of 2014/15. Incoming HE entrants account for a considerable proportion of the total number: in the academic year of 2014/15 just over a quarter of all HE entrants were incoming students.

More women than men begin studies in higher education

In 2014 14.6 per cent of 19-year-olds (born in 1995) and 43.7 per cent of 24-year-olds (born in 1990) had begun to study in courses and

Figure 8. The proportion of cohorts born 1980–1995 beginning studies in higher education in Sweden or abroad by the ages of 19, 21 and 24.

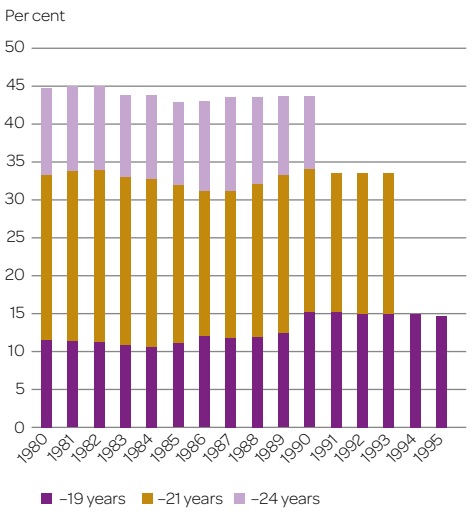
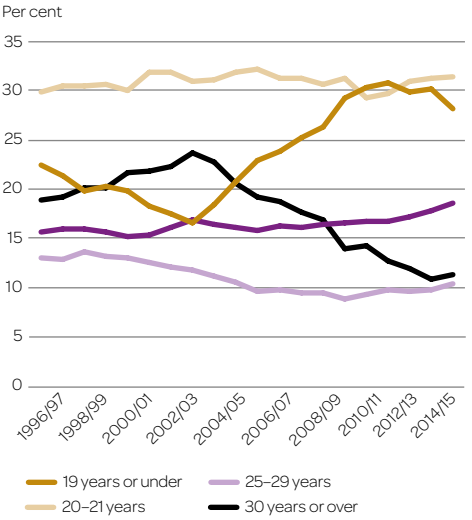


Figure 9. Proportions of Swedish HE entrants of different ages during the last 20 academic years.



programmes in higher education. The proportion of 19-year-olds that began higher education rose markedly for those born in the 1990s compared to those born in the 1980s, as a result, for instance, of changes in the admission regulations. There has been a slight decline in this trend for those born in the 1990s and the cohort born in 1995 was the one that had the lowest initial participation rates in higher education. At the same time as the proportion beginning studies in higher education at the age of 19 increased, the proportion of those doing so when they are between 20 and 24 has declined among those born in the 1990s. The proportion of those beginning studies in higher education by the age of 24 has varied from 43 to 45 per cent for those born in the 1980s and 1990s. Even if the proportion of 19-year-olds beginning to study in higher education has declined in recent years, it still remains higher than for those born in the 1980s.

Three-quarters of all HE entrants are under 25

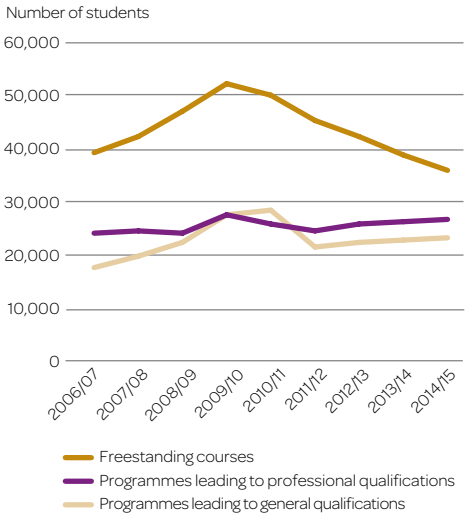
In the academic year of 2014/15 just over 78 per cent of HE entrants were 24 years old or younger. Although this is a decline of just under one percentage point since the previous academic year, the proportion of young HE entrants is still large in a historical perspective. The proportion of young HE entrants (24 or less) rose from 64 per cent in the academic year of 2002/03 to 79 per cent in the academic year of 2013/14. This rise was mainly due to an increase in the proportion who were 19 or younger and at the same time a decline in the proportion aged 30 or more. The reduction in the most recent academic year is a result of the decline in the proportion of HE entrants who were 19 or younger.

Continuing decline in HE entrants in freestanding courses

All first and second-cycle education is offered in the form of courses. These can either be freestanding or combined to form a degree programme. Degree programmes can lead to the award of professional qualifications, general qualifications or qualifications in the fine, applied and performing arts.

Most HE entrants take freestanding courses. In the academic year of 2014/15 they accounted for 42 per cent of these new students. HE entrants accounted for 27 per cent of those

Figure 10. All HE entrants divided by types of programme (freestanding courses, programmes leading to the award of general qualifications or those leading to the award of professional qualifications) 2006/07–2014/15.



beginning programmes leading to the award of general qualifications and 31 per cent on programmes leading to the award of professional qualifications. During the last academic year the proportion of HE entrants on freestanding courses has declined considerably while at the same time more and more have begun degree programmes. The number of HE entrants on programmes leading to the award of professional qualifications has at the same time risen more than the number taking programmes leading to the award of general qualifications. In the academic year of 2014/15 58 per cent of HE entrants were starting degree programmes.

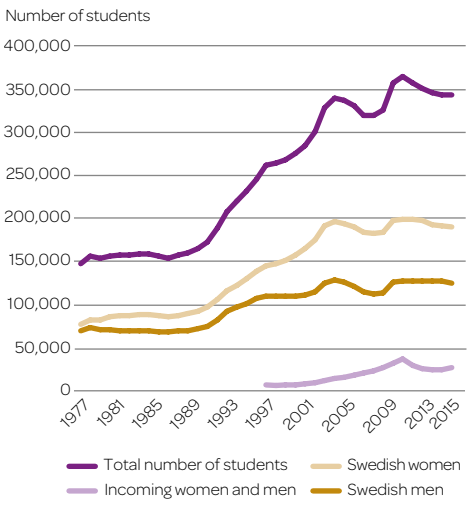
There was a major reduction in the number of HE entrants on programmes leading to the award of general qualifications in the academic year of 2011/12, which can be ascribed to the introduction of tuition fees in the autumn of 2011 when the number of incoming students dropped considerably. The number of incoming HE entrants on freestanding courses also declined in this connection. Since then the number of incoming HE entrants on freestanding courses has continued to decline, while at the same time the number taking programmes leading to the award of general qualifications has risen. The largest drop in the number of HE entrants taking freestanding courses during the most recent academic year is accounted for by those who are resident in Sweden.

The rise that has taken place in the number of HE entrants taking programmes leading to the award of general qualifications during the most recent academic year mainly consists of incoming students, while the rise in those leading to the award of professional qualifications consists of students who are resident in Sweden. Incoming students are most frequently HE entrants in freestanding courses as the majority of them are exchange students, while since the academic year of 2013/14 students who are resident in Sweden have most often chosen programmes that lead to the award of professional qualifications.

The total student population in higher education in Sweden

HE entrants form only part of the total student population. In addition to the HE entrants the student population as a whole comprises

Figure 11. Number of students registered in first and second-cycle courses and programmes each autumn semester 1977–2015.



those continuing from one year to the next and those returning to higher education after some period of absence. Altogether there were 343,300 individuals (registered students) taking first or second-cycle courses and programmes at some time during the autumn semester of 2015. Of this number just over 27,200 were incoming students, which corresponds to almost eight per cent of the entire student population.

During the most recent autumn semesters the total numbers of students have declined from a maximum of 365,000 in that autumn of 2010 to 343,300 in the autumn of 2015, a drop of just under six per cent.

On-campus studies most frequent, fewer in distance education

The most frequent form of study involves taking on-campus courses. In the autumn semester of 2015 there were 272,000 students whose studies were entirely on campus.

Distance education is defined statistically as teaching and learning when teachers and students are not generally in the same place or present at the same time. Distance education includes courses and programmes that entirely web-based with no physical meetings as well as those which include a few meetings, for instance at local study centres. In the autumn semester of 2015 there were 57,300 students taking only courses offered as distance education. The number of students taking only courses offered as distance education increased for a number of years until the autumn semester of 2011 when they totalled 65,000, an expansion supported initially by extra funding (the Swedish Net University 2002–2004). Since 2011 the number of students taking only courses offered as distance education has declined by almost 8,000 to just over 57,000 during the last three autumn semesters.

Some students combine courses offered on campus and as distance education. During the autumn of 2015 these totalled 14,100, which was a reduction of 12 per cent since the preceding autumn.

Participation in higher education highest at the age of 22

In the autumn of 2015 the highest rate of participation in higher education was among 22-year-olds, of whom 26 per cent were taking first or second-cycle courses and programmes. The participation rate for women was 31 per cent, which was 10 percentage points higher than for men (21 per cent) of the same age. Since the previous autumn semester the proportion of those aged 19 and 20 enrolled in higher education has declined to some extent while it has risen among older age groups.

Numbers of places measured in terms of FTEs

What follows is a description of developments in the numbers of places offered in first and second-cycle courses and programmes, measured in terms of FTEs. Unlike the previous section this does not focus on the student population – in other words the individuals – but on the extent of higher education courses and programmes and the subject areas they cover.

FTEs are calculated by dividing the total number of credits for which all students have been registered by 60 (60 HE credits corresponds to full-time study for one academic year). As not all students enrol for full-time study for an entire year, the number of FTEs is lower than the number of registered students.

Developments in the total number of FTEs are presented for each calendar year (spring semester plus autumn semester), of which 2015 is the most recent. Other figures relating to FTEs apply to academic years, of which the most recent is 2014/15.

Minor decline in the number of FTEs

In 2015 the number of FTEs in first and second-cycle courses and programmes totalled 294,400, which is a drop of almost 1,100 FTEs or 0.4 per cent compared to 2014. The number of FTEs has declined every year since it peaked in 2010. Two factors in particular affect

Figure 12. Number of FTEs 1989/90–2015.

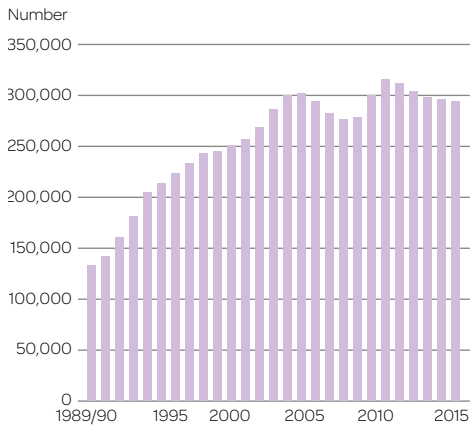
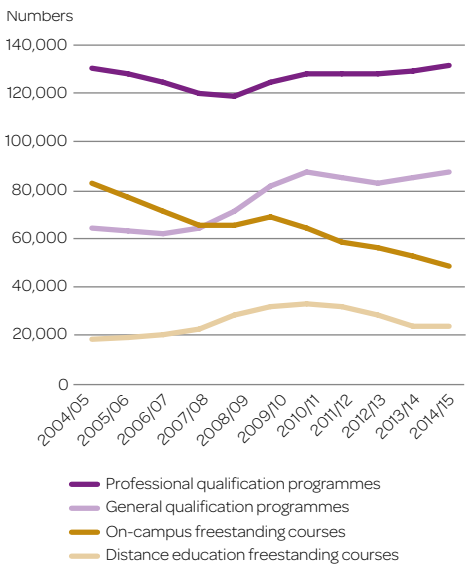


Figure 13. Numbers of FTEs in different forms of study academic years 2004/05–2014/15.



the number of places offered. One is student demand, the other the amount of direct government funding. The impact of direct government funding on the number of places offered also depends on the structure of courses and programmes and the ensuing grant per FTE. The more it costs to offer courses and programmes, the fewer that can be financed by direct government funding. For example the per capita funding for the humanities and social science has been raised, financed to some extent within existing funding parameters. In addition the Government has given priority to the expansion of programmes in health care and education where costs are higher than average so there are fewer FTEs overall.

After a few years when demand for higher education was low, the trend shifted in 2008. A number of temporary expansions of higher education for a few years after 2010 (because of the major economic downturn) enabled the HEIs to admit more students and provide more courses and programmes than ever before. As economic conditions have altered, the HEIs have adjusted the numbers of places offered and this has led to a reduction in the number of FTEs since 2010.

Viewed from a longer perspective, however, there has been a considerable rise in the number of FTEs. In the early 1990s there were approximately 150,000 FTEs. In the early years of this century this figure had more than doubled and totalled 300,000 but in 2015 there were 294,400 FTEs taking first and second-cycle courses and programmes.

Continued decline in the number of places offered in freestanding courses

During the academic year of 2014/15 programmes leading to the award of professional qualifications accounted for 45 per cent of the number of places offered, while those leading to general qualifications accounted for 30 per cent and programmes in the fine, applied and performing arts for 1 per cent of this total. The remaining 25 per cent of places offered were in freestanding courses – of which 17 per cent were offered on campus and 8 per cent as distance education.

Law and social science are by far the largest subject areas. In the academic year of 2014/15 there were just over 122,000 FTEs studying law and social science, which corresponds to 41 per cent of the total number of places offered. The humanities and theology as well as engineering each accounted for 15 per cent

RECOGNITION AND EVALUATION OF QUALIFICATIONS AWARDED OUTSIDE SWEDEN

In addition to those who graduate from HEIs in Sweden, graduates who have immigrated to Sweden and / or studied in some other country also enter the Swedish labour market. The Swedish Council for Higher Education (UHR) has the task of evaluating most of the higher education programmes offered abroad. Recognition means that graduates from higher education programmes outside Sweden, apart from those offering admission to a regulated profession, may be provided by UHR with a certificate evaluating and recognising their qualifications. The evaluation involves making a comparison with qualifications in the Swedish Qualifications Ordinance. In addition, the National Board of Health and Welfare, the National Agency for Education and other appropriate authorities evaluate programmes offered abroad that provide admission to regulated professions, for example those that require registration with a regulatory body.

During 2015 UHR issued almost 6,400 of these certificates. Most frequently these involved comparisons with Bachelor's degrees. Just over 4,100 qualifications were assessed as corresponding to a Swedish Bachelor's degree, a Bachelor's degree in the fine, applied and performing arts or a Higher Education Diploma, just over 1,400 corresponded to a 60-credit or 120-credit Master's degree and about 75 to a PhD. Most of the certificates relating to professional qualifications concerned programmes in engineering: just over 700 were considered to correspond to Bachelor's degrees in engineering and just over to 300 Master's degrees.

The applications for recognition and evaluation submitted during 2015 involved qualifications awarded in 144 different countries. By far the most had been awarded in Syria (2,600). This was followed by Iran (480), Iraq (440), Russia (350), Poland (300), the United Kingdom (260), the USA (250) and Ukraine (230).

REGISTRATION IS REQUIRED FOR SOME PROFESSIONS

If a qualification awarded abroad is for professional practice in health and medical care, registration is required, in which case evaluations are made and certificates issued by the National Board of Health and Welfare. During 2015 the National Board of Health and Welfare issued 2,730 certificates for individuals with qualifications awarded abroad, of which about 1,500 were for medical practitioners. In the same year the National Board of Health and Welfare issued about 10,300 certificates to individuals with qualifications awarded in Sweden.

The National Agency for Education conducts similar evaluations for certification as a teacher. During 2015 the National Agency for Education issued certificates to 4,525 individuals with qualifications in teaching or pre-school education awarded abroad. The total number of certificates issued in teaching or pre-school education in 2015 was about 47,000.

of the total number of places offered, followed by the natural sciences with 10 per cent in the academic year of 2014/15. All the other subject areas accounted altogether for less than 20 per cent of the total number of places offered. The distribution of FTEs across these different fields of study was more or less the same as in the previous year.

Graduates

The number of students who are actually awarded qualifications varies between different forms of study – for example students on degree programmes are more likely to request the award of a qualification than those taking freestanding courses. The numbers of graduates and qualifications of different kinds are accounted for below.

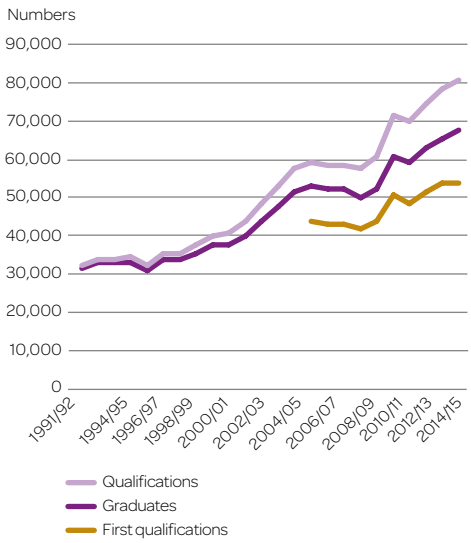
Numbers of graduates and qualifications increasing

A total of 67,900 students graduated from first and second-cycle programmes in the academic year of 2014/15, of whom 43,000 were women and 24,900 men. In all, 41,400 graduated at first-cycle level (67 per cent women and 33 per cent men) and 29,000 at second-cycle level (57 per cent women and 43 per cent men). The reason why the aggregate total for the two levels is larger than the total number of graduates is that a student can be awarded a first-cycle qualification and a second-cycle qualification in the same academic year. In the academic year of 2014/15 the number awarded their first qualification, excluding incoming students, totalled 48,000, of whom 30,900 were women and 17,900 men. Only qualifications awarded in Sweden are taken into account when graduates are classified as having been awarded their first qualification. Excluding incoming students, who in most cases are not expected to find employment in Sweden on completion of their studies, gives a more realistic estimate of the input of graduates to the Swedish labour market.

In the academic year of 2014/15 a total of 47,450 first-cycle qualifications were awarded and 33,450 at second-cycle level. Women received 51,200 of these qualifications and men 29,700. The reason why the number of qualifications is considerably higher than the number of graduates is discussed below.

The numbers of graduates and qualifications have been rising for a number of years. Since the academic year of 1991/92 the number of graduates has more than doubled. The number of qualifications awarded has risen even more, from 32,100 to 80,900. Both the numbers of graduates and qualifications were fairly constant in the years immediately before 2008/09, when the first second-cycle qualifications were awarded, but then rose significantly. The rise in the numbers of graduates and qualifications is, in other words, largely due to the fact that since 2007 students can first be awarded a first-cycle qualification and then another at second-cycle level. As the same individual can then be registered more than once (first for a first-cycle qualification and later for one at second-cycle level) the numbers of graduates leads to an over-estimate of the input of graduates to the labour market in comparison to the numbers awarded their first qualifications.

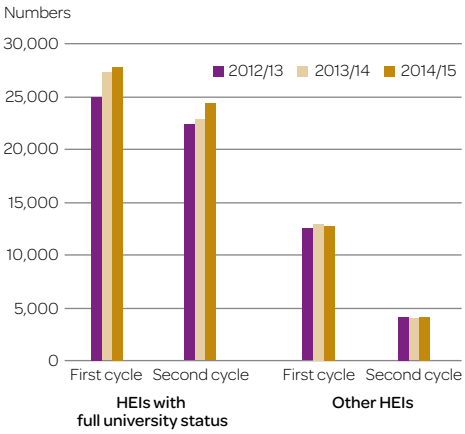
Figure 14. Total numbers of graduates and qualifications awarded academic years of 1991/92–2014/15 as well as the numbers awarded their first qualifications 2005/06–2014/15.



Three times as many graduates from HEIs with full university status

HEIs vary greatly in size. In terms of graduates in the academic year of 2014/15 Lund Univer-

Figure 15. Numbers graduating from HEIs with full university status and from other HEIs in the academic years of 2012/13–2014/15 at first-cycle and at second-cycle level.



sity accounted for the largest number (7,100 graduates), followed by Stockholm University (6,300), the University of Gothenburg (6,200), Uppsala University (5,200) and Linköping University (4,300).

The numbers graduating from a HEI depend primarily on its size, in other words the number of students, but also on the structure of the courses and programmes it offers, as the tendency to apply for the award of qualifications varies among them. In the academic year of 2014/15 a total of 52,200 students graduated from HEIs with full university status and 17,000 from the other HEIs.. The corresponding figures for the academic year of 2013/14 were 50,100 and 17,000. This means that HEIs with full university status account for the entire rise of 3.5 per cent in the number of graduates described above.

First-cycle qualifications were awarded to 27,900 students at HEIs with full university status and 12,800 at other HEIs in the academic year of 2014/15. In other words, 67 per cent of those graduating from first-cycle courses and programmes did so at a HEI with full university status. At second-cycle level the corresponding figures are 24,400 and 4,000 graduates, which means that HEIs with full university status accounted for an even larger proportion, 84 per cent. HEIs with full university status, therefore, offer more second-cycle courses and programmes than the other HEIs. These figures do not differ significantly from those for the previous two academic years. Second-cycle courses and programmes accounted for 47 per cent of all those graduating from HEIs with full university status in the academic year of 2014/15, i.e. almost half of these graduates had studied at second-cycle level.

Student completion rates

While the number of graduates is one way of measuring outcomes and is useful for estimating the input of graduates to the labour market, other statistics may be needed to describe how efficient courses and programmes are. Three of these are retention rates, graduation rates and performance indicators. These all measure student completion rates.

Students in degree programmes more often continue to the second semester

The first opportunity to measure student completion rates comes after the first semester and involves determining how many students go on to the second semester. This naturally assumes that their course of study covers more than one semester. These data are available for HE entrants, i.e. students who are registered for the first time at a HEI. The most recent statistics are for students who were registered for their first semester of study in the autumn of 2013.

Students who were registered on a degree programme in the autumn of 2013 were, not unexpectedly, more likely to continue in the spring of 2014 than those taking freestanding courses in their first semester. About half of the students registered in freestanding courses in the autumn of 2013 were not registered in the spring of 2014. On the other hand only about 10 per cent of the HE entrants registered in some form of degree programme were no longer registered during the spring of 2014.

In the academic year of 2013/14 a somewhat larger proportion of women registered in the autumn semester were also registered in the following semester, and this applied in particular to those registered in programmes leading to the award of general qualifications.

Higher graduation rates in programmes leading to the award of professional qualifications

Graduation rates, or in other words how large a proportion of those beginning a programme are awarded qualifications, offer another measurement of student completion rates. Graduation rates vary for different programmes. They depend on the type of programme and also the reasons why students are taking them. It can be assumed that students taking a degree programme intend to complete the entire course of study, while some of the students taking freestanding courses probably intend to study for only a short period.

Graduation rates in higher education are measured by monitoring groups of students who begin their studies in a specific semester at the time when they should have completed them. In order to include students who take longer than usual, these statistics are normally collected three years after the end of their nominal period of study. The most recent figures available are for students who were monitored up to and including the academic year of 2013/14. Depending on the nominal period of study for the different programmes, these figures show the graduation rates of students who began during the academic years of 2005/06–2009/10.

During the academic year of 2013/14 graduation rates were higher for programmes leading to the award of professional qualifications than for those leading to general qualifications. This varied however between the different professional qualification programmes. Students taking programmes in midwifery had the highest graduation rate, 93 per cent. Programmes in medicine (88 per cent) and dentistry (85 per cent) were in second and third place. The ten qualifications for which students had the highest graduation rates all offered admission to regulated professions, i.e. those for which registration, and therefore the qualification, was required for professional practice. The registration requirement almost certainly made it more important for students to acquire the qualifications.

There were also programmes leading to the award of professional qualifications that had considerably lower graduation rates. Among the programmes requiring 180 HE credits and that had at least 200 beginners, Bachelor's programmes in engineering had the lowest graduation rates (43 per cent) when monitored during the academic year of 2013/14.

STUDENTS HAVE TO APPLY FOR THE AWARD OF A DEGREE CERTIFICATE

The Higher Education Ordinance stipulates that a "… student who fulfils the requirements for the award of a qualification shall, upon request, be provided with a certificate". This could be interpreted strictly to mean that degree certificates are only issued on request. It was natural to place this responsibility on the students as higher education in Sweden has traditionally comprised courses and it has therefore been difficult to know when students had completed their studies. This is, however, one of the reasons why graduation rates are low in Sweden compared to other countries. The report of the Government enquiry *Högre utbildning under tjugo år* [*Higher education over twenty years*] (SOU, 2015:70) observes that the HEIs could be given greater responsibility and proposes that the Government consider an amendment to the Higher Education Ordinance intended to assign sole responsibility to the HEIs for issuing degree certificates when a student fulfils all the requirements.

The healthy labour market for engineers could explain why students did not need to be awarded a qualification or even complete their studies.

Performance indicators

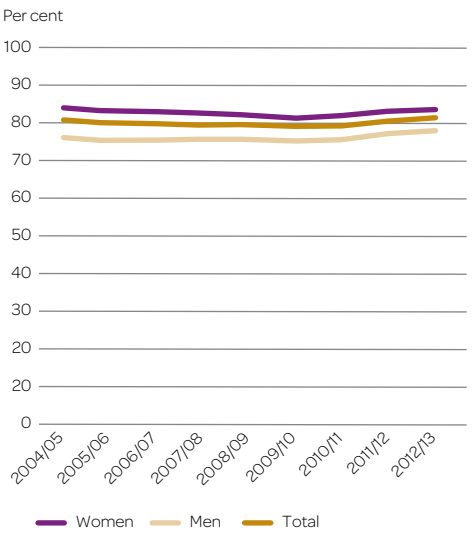
Performance indicators measure the extent to which students acquire the HE credits they are registered for in a specific academic year. Performance indicators are based on the number of HE credits for which a student is registered each time they are enrolled in a course and the number of credits awarded. This last figure is monitored during the semester in which a student registers and the three following semesters.

As the credits awarded to students are monitored over four semesters, the latest figures available for performance indicators are for the academic year of 2012/13.

Performance indicators relatively stable over time

During the academic year of 2012/13 the performance indicators were on average 83 per cent for women and 78 per cent for men, which was a slight rise for both groups since the preceding academic year. Since the academic year of 2004/05 the overall performance indicator has been relatively stable at around 80 per cent. In this section the performance indicators for Swedish and incoming students will be presented separately. One reason for doing so is that Swedish students account for the majority of the places in courses and therefore any joint presentation of the two groups would apply mainly to them. In addition, it may be interesting to study the two groups separately, as there could be alternative explanations of any differences or variation in performance indicators between them.

Figure 16. Performance indicators for the academic years of 2004/05–2012/13 by gender.



Small changes in performance indicators during the last academic year for Swedish students

In the academic year of 2012/13 the performance indicators for the Swedish students averaged 81 per cent. Performance indicators varied however for different types of courses and programmes, with 93 per cent for those leading to the award of qualifications in the fine, applied and performing arts, 89 per cent in those leading to professional qualifications and 85 per cent those leading to the award of general qualifications. The corresponding figure for freestanding courses was 63 per cent. There were additional differences between freestanding courses offered on campus and as distance education. The performance indicator for on-campus freestanding courses was 68 per cent, which can be compared with the figure of 53 per cent for those offered as distance education. In programmes leading to the award of general qualifications the performance indicators were obviously lower for those offered as distance education. In the academic year of 2012/13 the performance indicator for courses in programmes leading to the award of general qualifications offered as distance education was 72 per cent (distance courses account for only 7 per cent of the total number of places offered in these programmes). This means that there is a difference of 14 percent-

age points compared to on-campus courses in programmes leading to the award of general qualifications.

Rise in performance indicators for incoming students

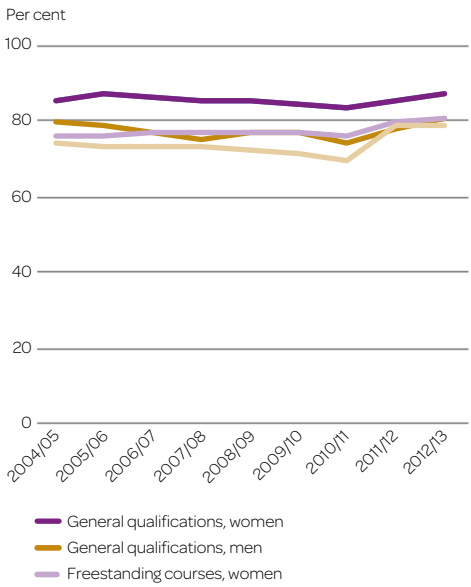
In the academic year of 2012/13 the performance indicators for incoming students averaged 81 per cent. This is a rise of 1 percentage point over the previous academic year. The performance indicators for men rose by just under two percentage points to 80 per cent while the rise for women was 1 percentage point to 84 per cent.

There are two categories of incoming students: free-movers who come to study in Sweden under their own auspices and exchange students who study in Sweden as part of an exchange programme. Free-movers mainly take on-campus programmes leading to the award of a general qualification while exchange students largely attend on-campus freestanding courses. During the academic year of 2012/13 these two forms of study accounted for 89 per cent of the total number of course places in which incoming students were registered, measured in terms of FTEs. For this reason the statistics presented below about performance indicators apply only to those registered for these two forms of study.

After the introduction of tuition fees for incoming students from countries outside the EU/EEA and Switzerland the number of incoming students who were beginners dropped by just under 12,300 between the academic years of 2010/11 and 2012/13. At the same time it can be seen that the performance indicators rose during the same period, in particular for men.

Between 2010/11 and 2011/12 there was a major rise in the performance indicators in freestanding courses with a increase of almost 9 percentage points for men and around 4 percentage points for women to around 79 per cent for both groups. The academic year of 2012/13 saw only minor rises in performance indicators.

Figure 17. Performance indicators for incoming students academic years 2004/05–2012/13 in on-campus programmes leading to the award of general qualifications and in freestanding courses.



In programmes leading to the award of general qualifications the trend shifted between the academic years of 2010/11 and 2012/13 with the performance indicators rising for two years in succession after declining for several years (with a few exceptions). Men accounted for the largest increase of just under 7 percentage points to 80 per cent, while the performance indicator for women rose by almost 4 percentage points to 87 per cent during the period 2010/11–2012/13.

Teaching qualifications

Programmes in education account for a large share of higher education in Sweden. During the academic year of 2014/15 13,000 students began to study to become teachers, which is a rise of 1,200 HE entrants, or 10 per cent, compared to the previous academic year.

There is a great deal to suggest that the numbers of teachers needed in the future will

exceed the numbers graduating today and that the shortage of teachers will therefore increase, particularly in certain specialisations and subjects. Teacher training is also a subject of continual political debate and has been reformed a number of times in recent decades. Different forecasts have been made in recent years which are, however, more or less unanimous at an aggregate level. On the basis of predicted future needs, the National Agency for Education forecasts that programmes in education will have to provide 13,700 students with teaching qualifications each year between 2015 and 2019, excluding continued professional development courses. This means that the recent graduation figures of about 8,000 qualified teachers each year are inadequate.

Historically, graduation rates in programmes in education have been around 65 per cent. Assuming that there are no drastic changes, this means that around 21,000 students would have to begin studying to become teachers every year to be able to provide the estimated requirement of 13,700 graduates. That is 8,000 more than the just over 13,000 beginners in these programmes in the academic year of 2014/15. Courses in education need in other words to be much larger than they are today if forecast future needs are to be met.

Broadened recruitment to higher education

Swedish society consists of a diversity of people with different backgrounds and characteristics. The Government considers that recruitment to higher education needs to be broadened so that the student population will reflect the diversity of the population at large.

The social bias in recruitment persists

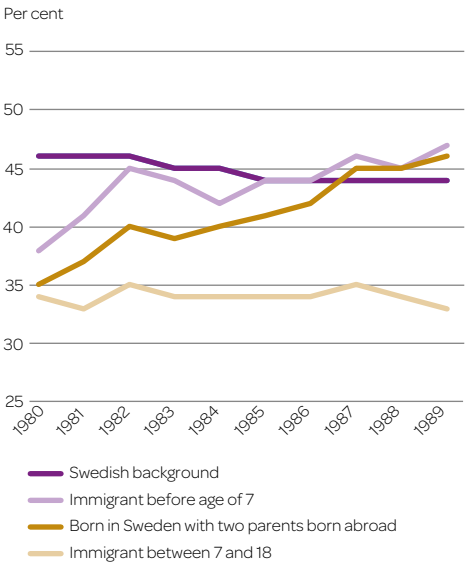
The effect of social bias in recruitment to higher education is that social origin affects how likely individuals are to begin studies in higher education. A total of 44 per cent of those born in 1990 had begun to study in higher education by the age of 25 (i.e. up to and including 2015). But school-leavers with at least one parent with a research qualification (Licentiate degree or PhD) were considerably more likely to go on to higher education (83 per cent), as were also the group who had at least one parent with a substantial period of study in higher education – at least three years but not a research qualification (69 per cent). In comparison, a mere 22 per cent of those whose parents only had below upper-secondary education (for instance primary school or compulsory school) had gone on to higher education. Between the social groups with parents whose educational attainment is either advanced or relatively limited there are other groups and the social bias in recruitment shows that the more highly qualified parents are, the greater the probability of their children starting to study in higher education.

The same pattern can be seen in the social bias in recruitment for both women and men – in other words the more advanced their parents' education, the more likely individuals are to begin higher education themselves. But as more women begin higher education than men, they form a larger proportion of those from each social category (measured in terms of parental educational attainment) beginning higher education. Combining gender and social background reveals therefore that the daughters of parents with research qualification are most likely to begin higher education (86 per cent) while the sons of parents who have not completed upper-secondary education are least likely to (16 per cent).

Social bias in recruitment no longer affects children arriving in Sweden before starting school …

The Swedish population includes individuals with both Swedish and international backgrounds. Students with Swedish backgrounds are those born in Sweden who have at least one parent also born here. Those with international backgrounds are therefore those who were either born abroad themselves or born in Sweden but with two parents who were born

Figure 18. Proportions who have begun higher education in Sweden by the age of 25 among individuals born 1980–1989 with Swedish or international backgrounds (three different categories are shown). Note the truncated y-axis.



abroad. Incoming students come to Sweden in order to study and are not included in the Swedish population: they are not, therefore, included in the categories of students with Swedish or international backgrounds. Nor are newly arrived immigrants included in this description, as they have not yet been given residence permits and become part of the Swedish population.

Of those born in 1989 44 per cent of those with Swedish backgrounds and 42 per cent of those with international backgrounds had begun to study in higher education by the age of 25, i.e. by 2014. About the same proportions of these two groups therefore go on to higher education and there is no social bias in recruitment.

The picture changes if we also take into account whether students with international backgrounds were born in Sweden or not and at what age they arrived in Sweden. Only 33 per cent of those born in 1989 who arrived between 7 and 18 years of age, in other words after the start of compulsory education in Sweden, had begun to study in higher education by the age of 25 . The proportions of those continuing to higher education in the two other groups with international backgrounds were in fact somewhat larger than for those with Swedish backgrounds. For those born abroad who had arrived in Sweden before the age of seven this figure was 47 per cent, and for those born in Sweden who had two parents who were born abroad it was 46 per cent.

Analysis of all ten cohorts born during the 1980s reveals that during the first years of the decade all three groups with international backgrounds were underrepresented in higher education. For instance 46 per cent of the students with Swedish backgrounds in the cohort born in 1980 had begun higher education. The figures for the three groups with international backgrounds show that 34 per cent of those who arrived between the ages of 7–18, 35 per cent of those born in Sweden with two parents born abroad, and 38 per cent of those who arrived in Sweden before the age of 7 had begun to study in higher education by the age of 25. The social bias in recruitment in relation to those with Swedish backgrounds has therefore disappeared for two of the groups with international backgrounds during the last decade.

... but those who arrive later are underrepresented in higher education

Those who arrived in Sweden around the start of compulsory schooling or later (aged 7–18) have not, however, caught up – the proportion beginning higher education has varied within the interval of 33–35 per cent in all the cohorts born during the 1980s. This applies to both boys and girls. But because more women begin higher education than men, it is the men who arrived in Sweden between the ages of 7 and 18 who are least likely to continue to higher education – in the cohort born in 1989 only 27 per cent did so, while the figure for women who had arrived in Sweden within the same age range was 39 per cent.

Third-cycle courses and programmes

The number of new entrants to third-cycle programmes has declined to some extent in recent years but in a longer perspective these programmes have expanded.

Compared to 1990 both the numbers of new entrants to third-cycle programmes and the numbers graduating have risen considerably. This rise in the numbers of new entrants to third-cycle programmes and of third-cycle students in general took place at the beginning of the period. During the last 15 years the numbers of new entrants have varied between 2,900 and 3,900, while at the same time the total number of third-cycle students has varied between 17,600 and 20,000. There has been above all a major rise in the number of PhDs awarded since 1990, which has more than doubled during the period. The number of Licentiate degrees has also increased but not to the same extent.

Since 2010 HEIs without full university status have been able to apply for entitlement to award third-cycle qualifications in one or more specific research domains and a number of the HEIs have been granted these powers. There are now 29 HEIs that have this entitlement but third-cycle programmes are still largely confined to the large universities.

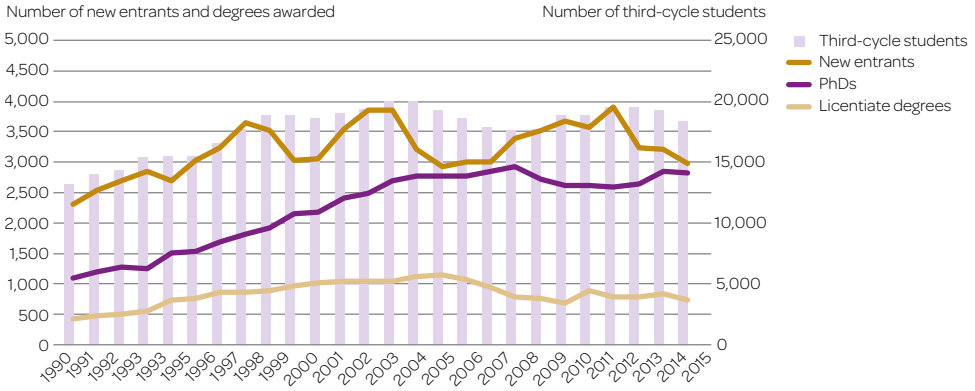
In 2015 two-thirds of the 18,440 third-cycle students were studying at six universities: Lund University, Karolinska Institutet, Uppsala University, the Royal Institute of Technology, the University of Gothenburg and Stockholm University. In the autumn of 2015 each of these universities had between 1,500 and 2,700 third-cycle students.

New entrants

In 2015 the number of new entrants to third-cycle programmes totalled 2,990, which was slightly less than in the previous year, when the figure was 3,200.

There has been a decline in the numbers of both Swedish and international new entrants to third-cycle programmes since 2013 and in 2015 this was larger among international new entrants. The drop in the number of international third-cycle students could partly be explained by the tuition fee reform, which led to a decline in the number of incoming students on Master's programmes. An indirect result of this may have been a decline in the number of international new entrants

Figure 19. Numbers graduating from HEIs with full university status or from other HEIs in the academic years of 2012/13–2014/15 at first-cycle and at second-cycle level. In this diagram the number of third-cycle students is shown on the right axis while new entrants and degrees awarded are shown on the left axis.



ENTITLEMENT TO AWARD THIRD-CYCLE QUALIFICATIONS

All HEIs with full university status are entitled to award general qualifications at third-cycle level and since 1 January 2010 the other HEIs have also been able to apply for entitlement to award third-cycle qualifications. These applications are made for entitlement to award qualifications in separate research domains and are appraised and approved by UKÄ. Research domains can include one or several third-cycle subject areas and are, generally speaking, more restricted than the earlier disciplinary research domains were. Since 2010 entitlement to award third-cycle qualifications has been granted to 13 HEIs.

Licentiate degrees and PhDs in the fine, applied and performing arts were introduced as qualifications in their own right on 1 January 2010. All of the HEIs, including those with full university status, have to apply for entitlement to award these qualifications. Applications are appraised and approved by UKÄ. Three HEIs, Lund University, the University of Gothenburg and the University of Borås, have been granted entitlement to award third-cycle qualifications in the fine, applied and performing arts.

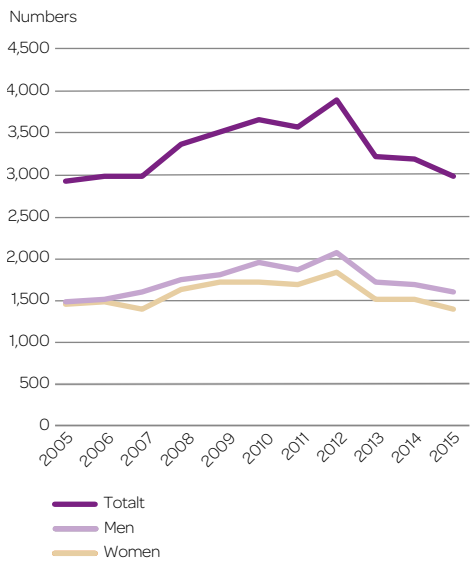
at third-cycle level as many of these students were recruited from incoming students taking Master's programmes.

An international third-cycle student is someone who has informed the Swedish Migration Agency that third-cycle study is the reason for applying for residence in Sweden and who arrived less than two years before these studies commenced. As not all third-cycle students apply for residence permits, the students at this level who arrived in Sweden less than two years before beginning their studies are also included in this category.

There were 1,140 international students among the 2,990 new entrants to third-cycle programmes in 2015, which corresponds to 38 per cent of the total number. Viewed in a longer perspective the number of international new entrants has risen significantly during the last ten-year period, from 570 in 2005 to 1,140 in 2015. In 2005 international new entrants accounted for 22 per cent of the total and this rose to 40 per cent in 2012, which is also the year with the highest number of international new entrants.

Another explanation for the reduction could be that more and more HEIs are employing new entrants on doctoral studentships instead of awarding them doctoral grants. As doctoral studentships are more expensive than doctoral grants, this can mean that in some subjects there is less financial scope for recruiting third-cycle students.

Figure 20. The numbers of new entrants to third-cycle programmes 2005–2015 in total and divided into women and men.



The gender ratio for new entrants to third-cycle programmes was more or less even between 2005 and 2015, with the proportion of women varying between 46 and 50 per cent. In 2015 this ratio was 47 per cent women and 53 per cent men.

Among the new entrants to third-cycle programmes in 2015 there were 14 new entrants to programmes leading to the award of Licentiate and Doctoral qualifications in the fine, applied and performing arts, ten of them women and four men.

More new entrants are employed on doctoral studentships

The regulations stipulate that doctoral students must be able to guarantee that they can support themselves throughout their programme. This may take the form of different kinds of employment in higher education, employment outside the higher education sector, doctoral grants or stipends. In its bill *Forskning och innovation* [*Research and innovation*] (Govt. bill 2012/13:30) the government at that time concluded that the social conditions for third-cycle students with doctoral grants and scholarships needed improvement and that instead they should be offered employment as doctoral students. Several HEIs phased out doctoral grants and decided that third-cycle students were to be appointed to doctoral studentships or offered some other form of employment at the institution. This change in the way third-cycle studies were financed had an obvious impact in 2015 when the proportion of new entrants appointed to doctoral studentships rose significantly to total 66 per cent compared to 57 per cent in 2014. At the same time the number of third-cycle students receiving grants declined from 11 per cent to 5 per cent.

Viewed in a longer perspective the proportion of new entrants employed on doctoral studentships has doubled since 2005 while the figure for those receiving grants has declined from 24 to 5 per cent.

Third-cycle students

In this section we will focus on the entire population of third-cycle students. In the autumn of 2015 the number of third-cycle students totalled 18,440, which was slightly less than in 2014, when the figure was 19,340. International students accounted for 35 per cent of the total number of third-cycle students, which is the same proportion as in 2014.

This report deals with the active third-cycle students, i.e. those who have an activity level of 1 per cent or more. The population of third-cycle students also includes those admitted to programmes leading to the award of Licentiate degrees. There were just over 18,440 active third-cycle students in the autumn of 2015 and in addition about 2,940 registered students who were not active, which means that altogether there were about 21,400 registered third-cycle students.

The numbers of third-cycle students have varied between 18,000 and 20,000 during the last ten-year period. This number is mainly influenced by the input of students at third-cycle level (the number of new entrants) and third-cycle student completion rates.

During the last ten-year period the gender ratio among active third-cycle students has been more or less in balance and this was also the case in 2015, when there were 47 per cent men and 53 per cent women.

And just as in previous years full-time third-cycle students were in the majority, 59 per cent pursued full-time study in 2015. The proportion of full-time students has been the same since 2005. Full time is used here to refer to students whose degree of activity was between 80 and 100 per cent during a complete semester, as third-cycle students regularly combine their studies with part-time teaching in first and second-cycle courses and programmes.

More men than women were studying full time, 63 per cent compared with 55 per cent of the women. Women were more likely than men to have degrees of activity between 41 and 79 per cent.

Figure 21. Number of third-cycle students per autumn semester 2005–2015, totals and women and men.

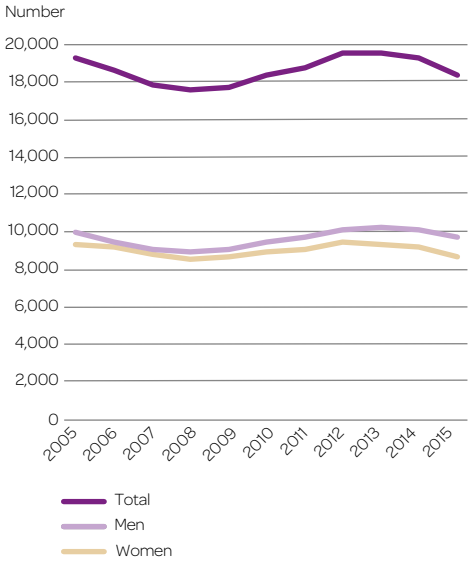
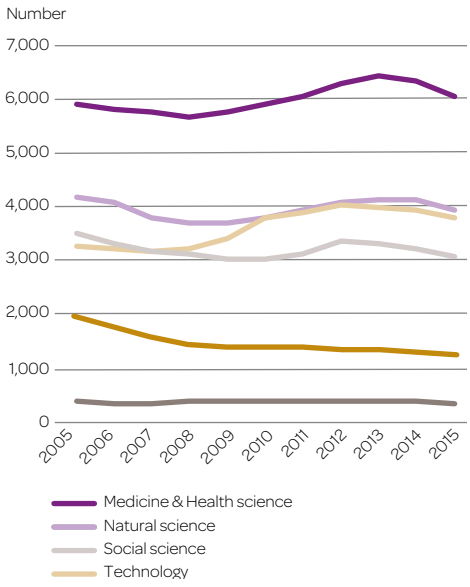


Figure 22. Number of third-cycle students per field of research autumn 2005–2015



Most third-cycle students in medicine and health science

In the autumn of 2015 the largest number of third-cycle students, one-third, were in programmes in medicine and health science. The numbers of third-cycle students in the different subject areas has varied during the period 2005–2015, but throughout the period medicine and health science have accounted for the largest proportions. The largest increase between 2005 and 2015 took place, however, in technology, while the numbers of third-cycle students have declined most in the humanities and social science.

Third-cycle qualifications in the fine, applied and performing arts were introduced, as has already been pointed out, in 2010. The University of Gothenburg, Lund University and the University of Borås, have been granted entitlement to award these third-cycle qualifications. Altogether these three HEIs had a total of 70 third-cycle students in the fine, applied and performing arts, almost two-thirds of them at Lund University. These are included in the humanities in the figures presented above.

Qualifications and graduates

Third-cycle degrees are divided into general qualifications and qualifications in the fine, applied and performing arts, and in each category either a Licentiate degree (which corresponds to two years of full-time study) or a PhD (corresponding to four years of full-time study) may be awarded.

During 2015 a total of 3,560 third-cycle qualifications were awarded, i.e. both Licentiate degrees and PhDs. This is a decline of just under four per cent or 130 degrees in comparison with 2014.

The majority of third-cycle degrees awarded are PhDs. During 2015 a total of 2,840 PhDs were awarded, which corresponded to over three-quarters of the students graduating from third-cycle programmes during the year. Just under a quarter of the third-cycle qualifications awarded are Licentiate degrees.

Third-cycle qualifications in the fine, applied and performing arts were introduced in 2010 and up until 2015 15 PhDs have been awarded in these fields and 5 Licentiate degrees.

Student completion rates

Student completion rates in third-cycle programmes indicate the extent to which new entrants complete their studies and graduate, and also how quickly they do so.

One measurement of student completion rates is offered by *graduation rates*, which reveal how large a proportion of new entrants to third-cycle programmes graduate after a specific number of years. The most recent cohort that can be studied within five years of beginning their third-cycle programmes are those that did so in 2010, and 47 per cent of them had been awarded a PhD within five years (up until 2015).

Graduation rates vary for third-cycle students in different fields of research. The largest number of new entrants in 2007 who had been awarded PhDs within five years were those studying agricultural science (60 per cent) and the smallest in the humanities (30 per cent). Among those awarded degrees within eight years the largest group was in natural science (82 per cent) and once again the smallest group in the humanities (63 per cent). A larger proportion of men had been awarded degrees within five years (53 per cent) than women (45 per cent) but after eight years graduation rates were as high for women as for men (76 per cent in both cases).

Another way of measuring student completion rates is to compare the *gross period of study* with the *net period of study*. Net period of study measures the amount of time third-cycle students actively devote to their studies. Gross period of study indicates, on the other hand, the total time spent in third-cycle programmes without taking levels of activity into account. For third-cycle students awarded PhDs during 2015 the median net period of study was 8.5 semesters while the gross period of study averaged 11 semesters. The net period of study for third-cycle students awarded Licentiate degrees in the same year was 5.4 semesters and the gross period of study 7 semesters. This means that third-cycle students complete their programmes in just over the time they are intended to take – four years for a PhD and two years for a Licentiate degree.

International mobility

This section contains information about international student mobility in first and second-cycle programmes in higher education. International mobility includes both international students that come to Sweden to study and Swedish students who travel abroad to do so. The two groups are referred to here as incoming and outgoing students.

Incoming HE entrants autumn 2015

The most recent data available about international student mobility cover incoming students who were new entrants in higher education in Sweden (new incoming students) in the autumn semester of 2015, when they totalled 16,510. Exchange students accounted for 53 per cent of this number while 47 per cent were free-movers.

After having declined for three autumn semesters in a row, in the autumn of 2015 the number of exchange students rose by 3 per cent compared to the autumn semester of 2014. The rise in the number of free-movers was 10 per cent.

Fee-paying students

Since 1 July 2011 students from countries outside the EU/EEA and Switzerland who are not taking part in exchange programmes have to pay application and tuition fees to study in Sweden. This means that free-movers can be divided into fee-paying and non-fee-paying students. After the introduction of application and tuition fees initially there was a marked decline in the number of free-movers. Since then the number of both fee-paying and non-fee-paying free-movers has risen.

INCOMING AND OUTGOING STUDENTS

As a group incoming students include both exchange students who are taking part in exchange programmes at HEIs in Sweden as well as students from other countries who arrange their programmes of study in Sweden themselves and who are referred to as free-movers. Incoming free-movers are individuals who have been granted residence permits for study, who were born outside Sweden and arrived less than six months before their studies began, as well as other individuals who do not have Swedish civic registration numbers in the HEIs' student administration systems.

Outgoing students comprise exchange students, free-movers and students on language courses. Exchange students are those who are participating in an exchange programme arranged by a Swedish HEI in partnership with a HEI in some other country. Free-movers and students on language courses have arranged their programmes of studies themselves.

UNIDENTIFIED COUNTRIES

Information is lacking about the country of origin of a large proportion of the incoming free-mover group. Students from the Nordic countries do not need residence permits to come to live in Sweden and it is probable that many of the students from the EU/EEA and Switzerland do not apply for residence permits either, as these are not required for short periods of stay in Sweden. This means that the number of free-movers from the EU/EEA and Switzerland may have been underestimated and that a large proportion of students from these countries have been included in the category of those from unidentified countries.

Table 2. Numbers of new incoming students who had not previously studied in Sweden, divided by region and student category, autumn 2014 until autumn 2015, with numerical changes and percentage between autumn 2014 and autumn 2015.

Number of incoming students					
Areas of origin	Student category	Autumn semester 2014	Autumn semester 2015	Change from 2014 in numbers	Change from 2014 in percentage
Total	Free-mover	7,030	7,750	720	10
	Exchange	8,520	8,770	250	3
	Total	15,550	16,510	960	6
EU/EEA and Switzerland	Free-mover	2,120	2,210	90	4
	Exchange	5,990	6,200	210	4
	Total	8,110	8,410	300	4
Non-EU/EEA and Switzerland (third country students)	Free-mover	2,640	2,650	10	0.4
	Exchange	2,530	2,570	40	2
	Total	5,170	5,220	50	1
Unidentified country	Free-mover	2,270	2,880	610	27
	Total	2,270	2,880	610	27

In the autumn semester of 2015 there were 2,510 new incoming students who paid tuition fees and this was a rise of 9 per cent compared to the autumn semester of 2014.

Incoming HE entrants academic year of 2014/15

The rest of this chapter will deal with new incoming students in more detail and will be based on figures for academic years, of which the most recent deal with 2014/15.

In the academic year of 2014/15 there were 21,770 new incoming students. This means that compared to the academic year of 2013/14 the number of new incoming students rose by 2 per cent. The number of new exchange students declined to some extent, from 13,800 in the academic year of 2013/14 to 13,210 in the academic year of 2014/15, while the number of free-movers rose from 7,480 to 8,560. Even so the number of new incoming exchange students was larger than the number of new incoming free-movers, precisely as it was in previous years. As earlier, in the academic year of 2014/15 the proportion of women was somewhat larger among exchange students (55 per cent) than among free-movers (48 per cent).

One-third of the new incoming free-movers were fee-paying students. There was a major increase in the size of this group compared to the academic year of 2013/14, from 1,840 to 2,820 (53 per cent).

In the academic year of 2014/15 the number of new incoming students was still lower than in the academic year of 2010/11, i.e. the year in which tuition fees were introduced. During the academic year of 2014/15 new incoming students accounted nevertheless for a considerable proportion of all HE entrants in Sweden. About one HE entrant in four in Sweden was an incoming student.

Figure 23. Total number of new incoming students academic years of 2005/06–2014/15 and divided into free-movers and exchange students.

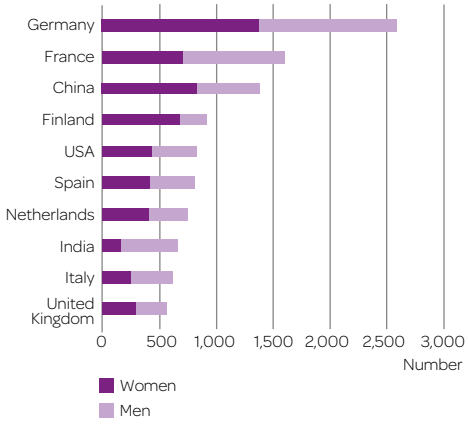
Largest increase in the number of incoming students from Africa and Asia

In terms of geographical origins 51 per cent of the 21,770 new incoming students in the academic year of 2014/15 came from countries in the EU/EEA and Switzerland. In comparison, 35 per cent came from countries outside the EU/EEA and Switzerland and 15 per cent from unidentified countries.

Most of the new incomers in the academic year of 2014/15 came from Germany, France and China. This applied both to the entire group of new incoming students and to new exchange students. India was the country from which most free-movers had travelled to study in Sweden, followed by Finland and China.

The number of new incoming students from countries outside the EU/EEA and Switzerland rose by 16 per cent compared to the academic year of 2013/14 and totalled 7,560 in the academic year of 2014/15. Just over half of them came from Asia and 20 per cent from North America. The number of new incomers from Asia rose by 20 per cent over

Figure 24. The 10 countries from which most new incoming students come to Sweden and the number of incoming students from each country academic year of 2014/15.



the previous year while in principle the number of new incomers from North America remained the same. The number of new incoming students from Africa almost doubled compared to the previous year, 320 in the academic year of 2013/14 and 630 in the academic year of 2014/15, the largest rise in percentage terms.

Total number of incoming students in Sweden

So far this section has dealt with new incoming students, in other words those who are studying in Sweden for the first time. These new incoming students are counted as HE entrants, but many incoming students study for more than one academic year in Sweden and do not therefore belong to this group. The new incoming students and those who have spent more than one academic year studying in Sweden together constitute the total number of incoming students that will be described in this section.

During the academic year of 2014/15 the total number of incoming students in Sweden was 33,180. The majority, almost 60 per cent, were free-movers. Unlike the new incoming students there were therefore more free-movers than exchange students among the total number of incoming students. This is largely because free-movers often spend longer periods in Sweden and more frequently complete entire degree programmes, while a short period of study in Sweden usually forms part of the programmes that exchange students are taking in their own countries.

For the first time since the academic year of 2010/11 there was a rise in the total number of incoming students in the academic year of 2014/15.

Free-movers accounted for the whole of this increase and their number rose by 6 per cent compared to the academic year of 2013/14, from 18,580 to 19,730. There was, on the other hand, a drop in the number of exchange students by 4 per cent. The previous decline in the total number of incoming students was a result of the tuition fee reform.

Outgoing students from Sweden

Students who leave Sweden to study abroad, who are referred to as outgoing students. This group is normally divided into three categories: free-movers, exchange students and students on language courses.

The number of outgoing students has increased each academic year since the academic year of 2008/09 and in 2014/15 totalled 29,100, which is 170 more than in the previous academic year. Free-movers accounted for 66 per cent of the outgoing students, 25 per cent were exchange students and 10 per cent students on language courses.

There were more women than men studying outside Sweden in the academic year of 2014/15. The gender difference was somewhat smaller among the 7,180 exchange students (of whom 57 per cent were women) than among the 19,250 free-movers (59 per cent women). Women accounted for 61 per cent of the students on language courses.

Most students travel to the USA and the United Kingdom

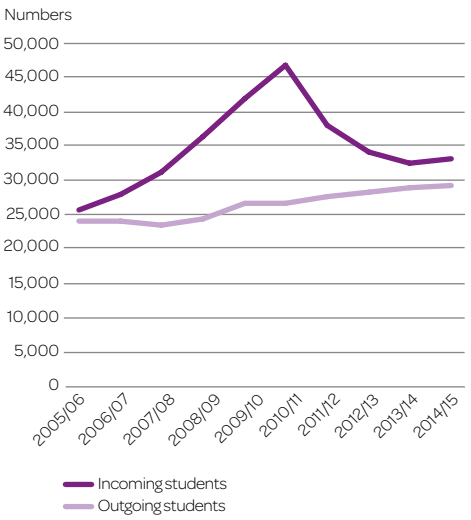
As in previous academic years, a large proportion of the outgoing students in the academic year of 2014/15 studied in other European countries, a total of almost 60 per cent. In particular, many of them went to study in other EU countries. Next to Europe, North America was the most popular destination and attracted 22 per cent of the outgoing students, 88 per cent of them went to the USA. In terms of specific countries the USA was in fact the most frequent destination, closely followed by the United Kingdom. The former attracted 20 per cent of all outgoing students, the latter 18 per cent. Australia was the third most common country although it attracted considerably fewer outgoing students, 6 per cent of the total number.

The most frequent destinations for exchange students were the USA, United Kingdom and Australia. The USA and United Kingdom were also the most frequent destinations for free-movers, followed by Poland as the third most frequent country. The number of students travelling to Poland has risen considerably in recent years and between the academic years of 2010/11 and 2014/15 alone has risen by 33 per cent. One major explanation is that in the last few years a great many students have travelled to Poland to study medicine.

Considerably more incoming than outgoing exchange students

During the academic year of 2014/15 there were a total of 33,180 incoming students in Sweden. The number of outgoing students was 29,100 and therefore somewhat lower. In terms of student categories there were 470 more incoming than outgoing free-movers. This was a minor difference compared to the exchange students, where there were 6,330 more incoming than outgoing students.

Figure 25. Total numbers of incoming and outgoing students academic years 2005/06–2014/15.



For several academic years in a row there have been more incoming than outgoing students in Sweden. The greatest difference could be seen in the academic year of 2010/11 when there were 46,700 incoming and 26,600 outgoing students. When tuition fees were then introduced the difference between the number of incoming and outgoing students dropped considerably.

Global increase in the number of international students

During 2013 about 4 million students were studying in countries other than their countries of origin. Australia, Luxembourg, New Zealand, Switzerland, the United Kingdom and Austria host the largest proportions of international students. Students from Asia account for 53 per cent of all international students and in terms of countries China, India and Germany have the largest numbers of outgoing students. The largest number of students travelling between two countries were those leaving China for the USA – a total of 225,000 in 2013. Student mobility has also increased

in Sweden but still does not play a significant role. Outgoing students leaving Sweden in 2013 accounted for less than 0.5 per cent of the global total of international students.

Education and employment

The relationship between education, work and the surrounding community can be described from various perspectives. An individual's possibility of finding employment is dependent on a large number of different factors.

Individuals may be more or less employable and this will affect their possibilities of finding work and establishing themselves in the labour market. Completion of an educational programme has a significant effect on an individual's employability. The impact of a programme on an individual's employability is related, for instance, to what students learn during their studies and the demands they encounter during their careers. An important factor that affects an individual's possibility of finding work is also the competition with other job-seekers. The match between education and employment can be described in terms of the structural balance between supply and demand in the labour market.

How the potential labour market can be described for graduates varies from programme to programme. Some programmes, above all those leading to the award of a professional qualification, target specific careers and prepare students in concrete terms both through their contents and structure, for example by including internships.

One way of monitoring the match between the supply of different groups of graduates in various fields and labour market requirements therefore involves keeping track of how well individuals succeed in gaining a footing in the labour market. The following is a presentation of the extent to which those gaining qualifications from higher education in Sweden establish themselves in the labour market during the period immediately after graduation and in what type of employment.

Establishment in 2013 for those graduating 2011/12

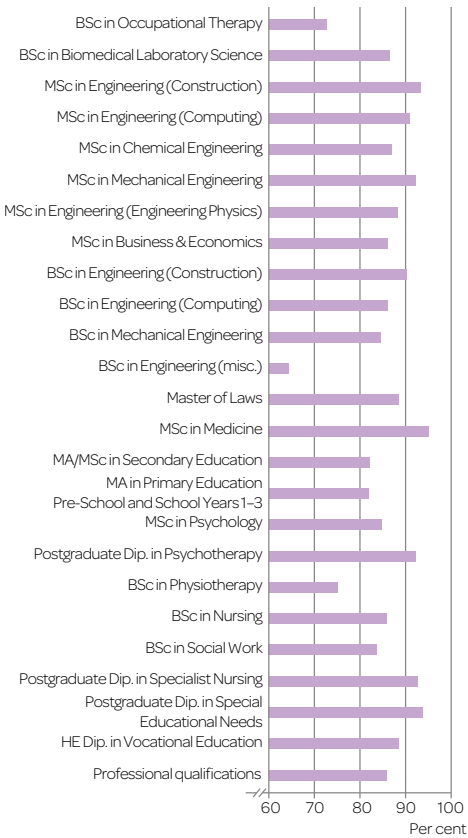
UKÄ regularly publishes reports that describe the establishment of recent graduates in the labour market. The most recent was based on a study in 2013 of a population of 42,870 students who graduated during the academic year of 2011/12. The proportion who were established in 2013, i.e. one year after graduation, was 81 per cent. A somewhat larger proportion of the men (13,320 graduates) were established than the women (27,980 graduates), 81 per cent against 80 per cent.

Students most frequently acquire some form of professional qualification, which was the case for 25,960 of those graduating in 2011/12. Of these 86 per cent had established themselves in the labour market in 2013. During the same year 14,780 graduated with general qualifications. Of these 74 per cent were established in the labour market in 2013. A total of 560 students were awarded qualifications in the fine, applied and performing arts in 2011/12 and 38 per cent of them had established themselves in the labour market in 2013.

Establishment in 2013 and 2009 for those graduating in the academic year of 2007/08

An alternative to comparing the establishment of different cohorts of graduates at any one time is to monitor establishment for the same cohort at different points in time. UKÄ has studied how large a proportion of those awarded professional qualifications in 2007/08 were established in the labour market in 2009 and in 2013. This means that the same group, those awarded qualifications in 2007/08, were monitored about one and five years after graduation.

Figure 26. Proportion (percentage) of graduates in the academic year of 2011/12 established in the labour market in 2013 per professional qualification. Only qualifications awarded to at least 200 individuals in 2011/12 are included and the number of graduates is given in parentheses.



A total of 78 per cent of those qualifying in 2007/08 had established themselves after one year. Five years after graduation this proportion had risen on average by about five percentage points to 84 per cent.

Establishment for graduates with Swedish and international backgrounds

In its latest report on labour market establishment UKÄ has also studied whether this differs for graduates with Swedish or with international backgrounds. Individuals with international backgrounds are either those born in Sweden with parents who were born abroad or who were themselves born abroad. The proportion of those with international backgrounds graduating in 2011/12 was 17 per cent.

Graduates with international backgrounds have been divided into three regional groups in addition to those born in Sweden whose parents were born abroad. The regions used are Europe apart from Sweden, Asia/Africa, and North America/Latin America/Oceania.

About one-fifth of all those with international backgrounds were born in Sweden with parents born abroad, one-third were born in some other European country and one-third in Asia/Africa. Seven per cent were born in North America, Latin America or Oceania.

UKÄ's analysis of the labour market establishment of graduates in 2013 shows that the proportion was 9 percentage points higher for those with Swedish backgrounds (82 per cent) than for those with international backgrounds (73 per cent).

A higher proportion of the women with international backgrounds graduating in 2011/12 established themselves (74 per cent) than the men (70 per cent). Among students with international backgrounds the largest proportion of these established in the labour market were individuals born in Sweden with parents born abroad (78 per cent). The proportion of students themselves born abroad who gained a footing in the labour market was significantly lower (71 per cent). This figure varied for the different groups of students born abroad between 68 and 75 per cent.

One factor that can to some extent contribute to the differences in establishment rates for graduates with Swedish or international backgrounds is that figures are only available for the labour market in Sweden. Graduates who have established themselves in labour markets in other countries are not included in these statistics.

Labour market establishment in Sweden in an international perspective

UKÄ has made a comparative study of the labour market prospects for graduates from higher education in an international perspective (*Labour market prospects after tertiary education in Sweden in an international perspective – A comparison based on Education at a Glance*, Report 2015:22, UKÄ) which shows that on the whole tertiary education increases the chances of finding jobs and also reduces the risk of unemployment. In all of the OECD countries individuals with tertiary education were employed to a greater extent than those with upper-secondary education, who were in their turn more likely to be employed than those who had below upper-secondary education. The average rate of employment in the OECD for 25–64-year-olds with qualifications from tertiary education was 83 per cent. The corresponding figure in Sweden was 89 per cent, in other words 6 percentage points higher than the OECD average and one of the largest proportions in the OECD.

In most of the OECD countries the risk of being unemployed in 2014 was lower for 25–64-year-olds who had tertiary education than for those with upper-secondary education. A smaller proportion of individuals with upper-secondary education were unemployed than those who had below upper-secondary education.

In the OECD unemployment in the working age population (25–64-year-olds) with tertiary education was 5.2 per cent. The unemployment rate for the corresponding group in Sweden was lower, 4.0 per cent. Unemployment among those with upper-secondary education in the same age group was higher in both Sweden (4.9 per cent) and in the OECD (7.8 per cent) compared to corresponding groups with tertiary education. Unemployment in the adult population was therefore lower in Sweden than the OECD average. Those who had below upper-secondary education had the highest rate of unemployment and this figure was more or less the same in Sweden at 12.6 per cent as in the OECD, 12.7 per cent. Among those who had recently completed their studies (in the age group 25–34) the difference between unemployment for those with tertiary education in Sweden (4.9 per cent) and the OECD average was even larger (7.6 per cent).

Figure 27. Employment rates among the adult population (25–64-year-olds) by educational level in 2014 ranked according to employment rates for those with tertiary education.

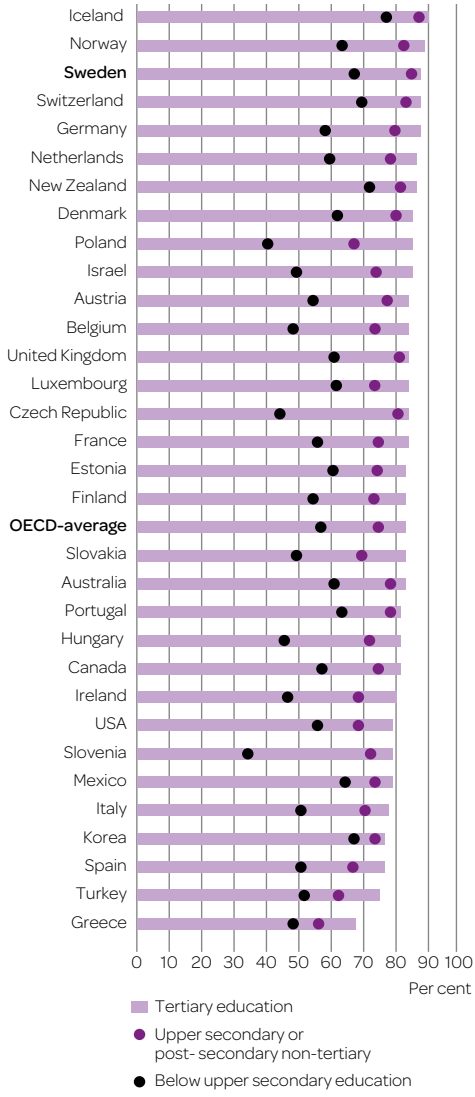
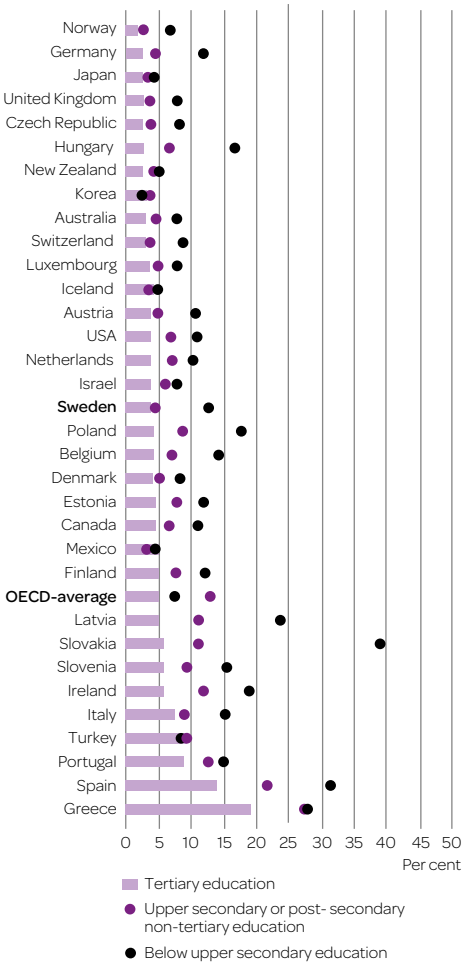


Figure 28. Unemployment in the adult population (25–64-year-olds) per educational level in 2014 ranked according to unemployment for those with tertiary education.



For the younger age group (25–34) employment rates for those with tertiary education have been higher and unemployment lower in Sweden than the corresponding average levels in the OECD since 2007. During this period, therefore, development trends in Sweden have been more positive.

The statistics presented in UKÄ's report show that the economic crisis has had a more serious impact on many other OECD countries than Sweden after 2009, as the gap between unemployment rates for those with tertiary education in Sweden and the OECD average has widened relatively significantly since then. A comparison of 25–34-year-olds with tertiary education in the various OECD countries over time reveals that there are major variations in patterns of unemployment.

In *Education at a Glance* (EAG) the OECD uses three broad classifications to define levels of educational attainment in the adult population. These are *below upper-secondary*, *upper-secondary or post-secondary non-tertiary* and *tertiary*. As only a limited number of post-secondary non-tertiary programmes are offered in Sweden, the terms used in this report are *below upper-secondary*, *upper-secondary* and *tertiary*.

A larger proportion of men are employed

In the OECD a larger proportion of men than women are employed and this difference is greater among groups with lower educational attainment levels (UKÄ, Report 2015:22). Among 25–34-year-olds this gap also diminished to some extent between 2005 and 2014, from 4.7 to 3.2 percentage points, while the OECD average has been relatively stable at around 9 percentage points. There has been an increased gender imbalance in groups with upper-secondary education or who have below upper-secondary education.

Unemployment gender differences were not as large as in the proportion of those gainfully employed. The differences in the unemployment rates for men and women with qualifications from tertiary education in Sweden increased, however, between between 2013 and 2014, when among women unemployment dropped from 5.2 to 4.6 per cent while it has remained the same for men at 5.3 per cent. In the OECD, on the other hand,

the gender difference remained unchanged during this period. In Sweden unemployment also declined between 2013 and 2014 for women with upper-secondary education or who have below upper-secondary education and in these groups the unemployment rates for men also declined, although not as strongly.

In a longer perspective unemployment declined in Sweden for both women and men between 2004 and 2014. The greatest drop has been for women. Occupancy rates have also risen for both men and women irrespective of educational attainment level. At the same time unemployment and the proportion of those in work have declined in the OECD for both women and men at all educational levels.

Even if Sweden is one of the OECD countries where the gender difference is lowest in the proportion of those with tertiary education who are employed, the picture changes if the proportions with full-time employment are taken into account. On average in the OECD 80 per cent of the men and 58 per cent of the women in the 35–44 age group with tertiary education who were employed had full-time jobs, a difference of 22 percentage points. The corresponding figures in 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 average for the OECD.

One of the factors that contributes to the greater prevalence of of part-time employment among women in the 25–34 age group is that many of them have children, and women are more likely to stay at home and look after their children than men. The variations between the countries may be due, among other things, to differences in the possibilities of working part time while children are small.

Teachers and researchers

About 30 per cent of all those employed by the state in Sweden work in the higher education sector. Calculated in terms of FTEs this figure is approximately 24 per cent. This makes higher education the single largest public-sector undertaking

In 2015 the number of employees in higher education totalled 75,000 individuals or 60,700 FTEs. If the proportion of third-cycle students appointed to doctoral studentships are excluded, the total number of FTEs is 50,400, just over 200 fewer than in 2014.

Doctoral students undertake a considerable amount of the research and teaching in Swedish HEIs but in this report they will be dealt with mainly as students and are not therefore included in the following description of the research and teaching staff. For information about third-cycle students readers are referred to the section entitled *Third-cycle courses and programmes*.

Research and teaching staff

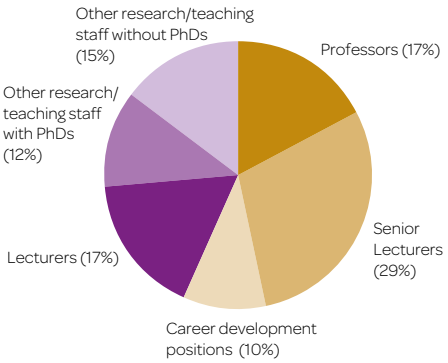
In this report employees are divided into those who have research and teaching duties and those who do not.

In 2015 the number of employees who had research and/or teaching duties amounted to almost 29,200 FTEs, or 34,900 individuals. Between 2014 and 2015 the size of the research and teaching staff rose by just over 100 FTEs (almost 240 individuals).

The largest single category of employees in 2015 comprised senior lecturers, who accounted for 29 per cent of the research and teaching staff, while professors and lecturers each accounted for 17 per cent.

The category of other research and teaching staff without PhDs accounted for 15 per cent, those with PhDs 12 per cent and career

Figure 29. Proportions of different employment categories in 2015 (FTEs).



development positions 10 per cent of the employees with research and teaching duties.

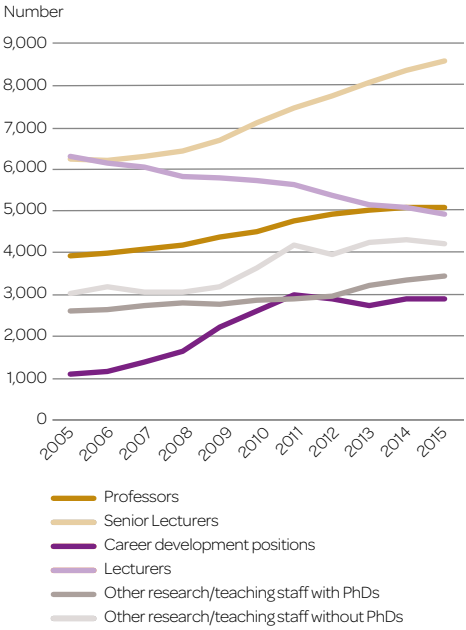
Continued increase in the numbers of senior lecturers and professors

In particular, there has been an increase in the number of senior lecturers during the last ten years. Between 2005 and 2015 this rose from 6,230 to 8,580, an increase of 38 per cent. During this period there has been a decided rise in the number of women who are senior lecturers. There has also been a considerable increase in the number of professors over the last few years. Since 2005 the number of professors has risen by 1,160 FTEs. In relative terms this corresponds to an increase of 30 per cent. Between 2014 and 2015, however, only the number of women professors rose, the number of men declined.

Continued decline in the number of lecturers

No PhD is required for appointment to a lectureship and the number of lecturers has declined continuously since 2005, when they constituted the single largest category of employees among staff with research and teaching duties. In 2015 the number of lecturers totalled 4,920 FTEs, 160 fewer than the year before and 1,400 fewer than in 2005. On average the number of lecturers has declined by about 140 FTEs each year since 2005.

Figure 30. Number of research and teaching staff (FTEs) at HEIs 2005–2015 by employment category.



This drop in recent years in the number of lecturers can to some extent be viewed as a result of the endeavours by the HEIs to employ mainly teachers with PhDs as part of their aim to enhance links with research and research expertise in first and second-cycle courses and programmes.

Most frequent career development positions are postdoctoral appointments

The number of career development positions continued to rise in 2015, when they totalled 2,910 FTEs. Since 2005 the number of career development positions has risen by about 1,800 FTEs and postdoctoral appointments accounted for the bulk of this increase. Positions of different kinds for recent PhD graduates have existed for many years. The current form of appointment was introduced in 2008. Between 2005 and 2015 the number of postdoctoral appointments rose by 1,830 FTEs and of associate senior lecturers by 390 FTEs,

while the drop in the number of postdoctoral research fellows was 430 FTEs.

The number of women in career development positions almost tripled between 2005 and 2015, from 466 to 1,310 FTEs. The number of men rose from 640 to 1,600 and has more than doubled.

Three out of ten research and teaching staff appointments were on fixed-term contracts

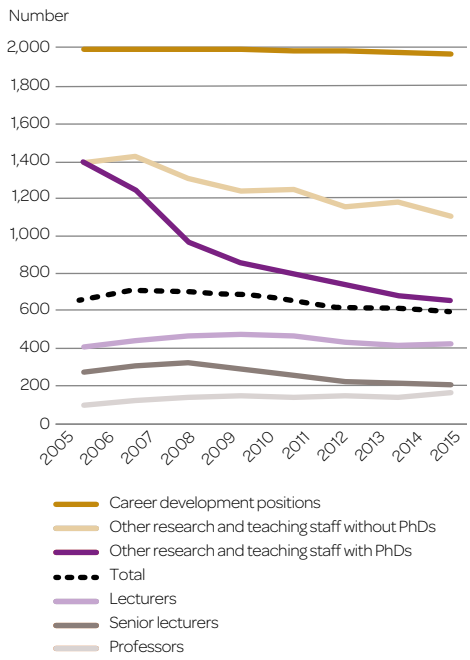
Compared to other public sectors a large proportion of the staff in higher education have fixed-term appointments.

Three out of ten of the research and teaching staff had fixed-term appointments in 2015 (in terms of FTEs). Between 2014 and 2015 the total proportion of fixed-term appointments declined from 31 per cent to 30 per cent. During the eight years in which it is possible to follow this development, fixed-term appointments have, on the whole, become fewer, the proportion has declined by four percentage points. This trend has not, however, been the same for all employment categories.

Considerably fewer of the category of other research and teaching staff with PhDs were employed on fixed-term appointments in 2015 than in 2008, a drop from 70 per cent to 33 per cent. Those belonging to this category are often employed in externally funded projects. The reduction in the number of fixed-term appointments for this category has coincided with the increase in resources for research since 2008.

Overall, in 2015 a larger proportion of women had fixed-term appointments than men, 32 per cent as against 29 per cent. In most of the other employment categories as well it was somewhat more frequent for women to have fixed-term appointments.

Figure 31. Proportions of research and teaching staff with fixed-term appointments 2008–2015 per employment category (FTEs).



Women and men

The gender ratio among research and teaching staff has evened out, generally speaking. In 2005 40 per cent were women, a proportion that had risen to 44 per cent in 2015 (FTEs).

There are differences in the proportions of women in different employment categories but they all lie within the 40–60 per cent range, except for professors, where women account for 26 per cent.

To encourage a rise in the proportion of women professors the Government set targets for their recruitment at 34 HEIs for the period 2012–2015. These targets were determined on the basis of the recruitment base (senior lecturers and postdoctoral research fellows) in different fields of research. The targets include promotions to professorships and visiting professors but not adjunct professors. There have been targets of this kind since 1997, except for an intermission between 2009 and 2011. The targets apply to the proportion of women recruited during a four-year period, irrespective of whether they stay on at the HEI or not.

The proportion of women among senior lecturers has risen from 35 to 46 per cent since 2005. As senior lecturers constitute a relatively large group, this has had an overall impact on the gender ratio among teachers and researchers. Senior lectureships often precede appointments to professorships and there are therefore grounds for believing that the growth of the proportion of women professors will continue.

The proportion of the staff who are women also varies in different subject areas. The smallest proportions of women can be found in the subject areas of engineering, 24 per cent, and the natural sciences, 29 per cent, while the largest proportions of women are in the subject areas of medicine and health science, a total of 58 per cent.

International staff mobility

The mobility of staff in the higher education sector is being discussed more and more in different contexts. The EU Commission has identified mobility as an important area and has also focused on the question in its own studies (see for instance *MORE 2 – Higher Education Sector Report*, EU Commission, 2013).

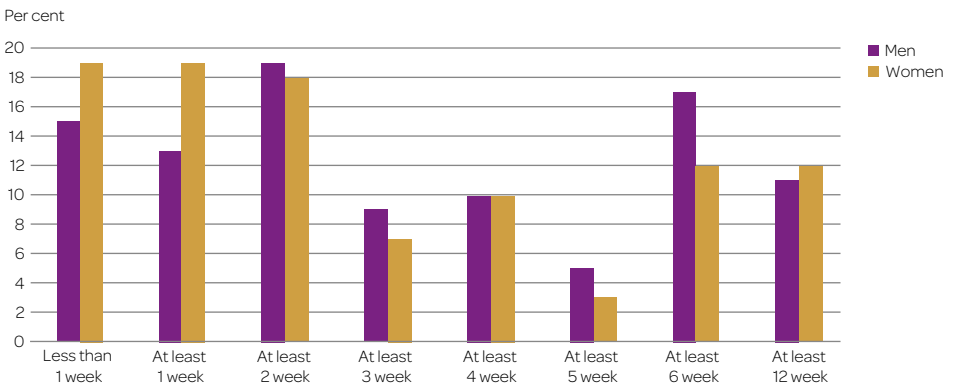
During 2015 at UKÄ's request, Statistics Sweden conducted a questionnaire survey of research and teaching staff (including third-cycle students on doctoral studentships) in which they were asked to indicate to what extent they had spent time abroad as part of their employment during the last year. The survey also asked the respondents to indicate whether they had gone abroad in order to "Undertake research and teach", "Mainly to undertake research", "Mainly to teach", or "Mainly to study". The questionnaire was sent to a stratified sample of 2,400 employees and the response rate was 51 per cent.

The responses to the survey indicated that 37 per cent of the sample had been abroad for at least one of these activities – 31 per cent of the women and 41 per cent of the men. It was above all the professors, and in particular the women, who had been mobile during 2015. A total of just over 58 per cent of the professors reported that they had travelled abroad, almost 60 per cent of the women and just under 58 per cent of the men.

A relatively large number of postdoctoral research fellows, associate senior lecturers and postdocs also reported international mobility, almost 50 per cent. According to the responses, the lecturers were the category that had travelled least, the proportion amounted to 17 per cent.

"Mainly to undertake research" was the most frequently reported reason for spending time abroad. In all, 24 per cent gave this as the reason why they travelled. "Undertake research and teach" was the reason reported by 12 per cent, "Mainly to teach" by 9 per cent and "Mainly to study" by 7 per cent.

Figure 32. Time spent abroad by staff who have been mobile in 2015 for women and men.



The respondents were also asked to state how many weeks they had spent abroad in 2015 altogether or whether this period was less than one week. The proportion of the respondents who had travelled that had spent at least four weeks abroad was 69 per cent. There are certain differences between women and men when it comes to the length of their stay abroad. It appears that women generally spend shorter periods abroad than men. The proportion of women who had spent less than five weeks abroad was 73 per cent while for men this figure was 66 per cent. When it came to longer periods of mobility of at least 12 weeks the gender ratio was relatively even.

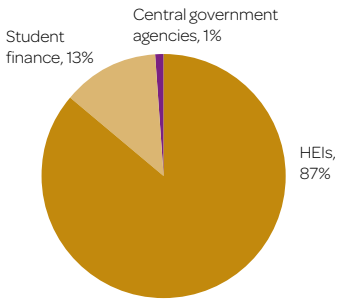
The conclusion is that women seem to be less mobile than men. In addition women spend less time abroad than men do. These findings agree with other surveys that have been undertaken, for instance, at the behest of the EU Commission and which suggest that on the whole women are less mobile than men. The overall variations between the length of the periods spent abroad by women and men are, among other things, the outcome of the differences in the proportions of women and men in different employment categories.

Finance and research funding

The total expenditure on education and research at Sweden's HEIs in 2015 amounted to SEK 66.7 billion. This corresponds to 1.6 per cent of Sweden's gross domestic product, GDP, which is somewhat lower than in the previous year. The reason for this decline is that Sweden's GDP grew more rapidly in 2015 than expenditure at the HEIs.

The total expenditure in the higher education sector also includes the costs of student finance and the central government agencies that deal with different aspects of higher education. Expenditure on student finance in higher education in 2015 amounted to

Figure 33. Allocation of expenditure in the higher education sector in 2015.



SEK 9.7 billion and the direct allocations to the central agencies totalled SEK 0.5 billion.

This means that the total expenditure for the higher education sector was SEK 76.9 billion in 2015, which corresponds to 1.85 per cent of Sweden's GDP.

In terms of their expenditure there are major differences between the HEIs. At the largest HEIs with full university status expenditure can total several billion SEK, the highest amount being at Lund University with SEK 7.8 billion in 2015. The smallest of the public-sector HEIs are those offering programmes in the fine, applied and performing arts as well as the Swedish School of Sport and Health Sciences, whose turnover was between just under SEK 0.1 billion and 0.3 billion in 2015. Expenditure for the smallest independent education providers amounted to only a few million SEK.

Funding for the HEIs

To some extent 2015 saw a reverse in the development trends of recent years. The major increases in revenues for research and third-cycle courses and programmes since 2009 which resulted from the two most recent research policy bills began to tail off. At the same time revenues for first and second-cycle courses and programmes, which consist largely of direct government funding, rose, an increase that it has been promised will continue in the next few years.

Figure 34. HEIs' total revenues for first and second-cycle courses and programmes and for research and third-cycle courses and programmes 1997–2015, SEK billions at 2015 prices.

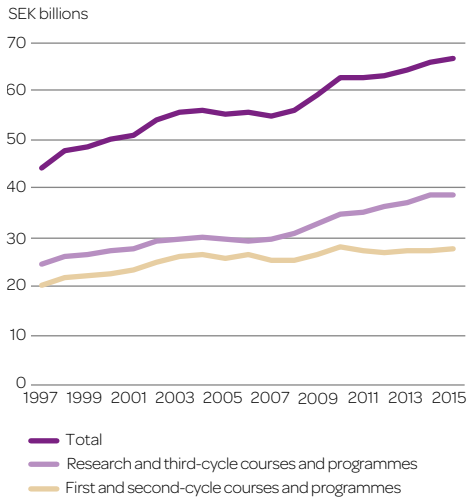
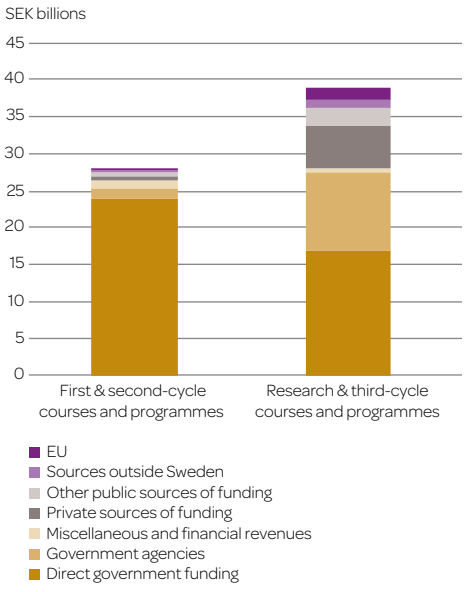


Figure 35. Funding for first and second-cycle courses and programmes and for research and third-cycle courses and programmes in 2015 per source of funding, SEK billions.



The HEIs total revenues for all of their activities amounted to SEK 66.9 billion in 2015, an increase compared to 2014 of SEK 0.6 billion in fixed prices. Almost SEK 0.4 billion of this rise was in funding for first and second-cycle courses and programmes and just over SEK 0.2 billion related to research and third-cycle courses and programmes. The revenues allocated for first and second-cycle courses and programmes in 2015 totalled SEK 27.7 billion and SEK 38.8 billion was for research and third-cycle courses and programmes.

Sweden differs from many other countries in that the bulk of publicly funded research is undertaken in the HEIs and there are only a few state-funded research institutes. This is one important reason why the HEIs' revenues for research and third-cycle courses and programmes have been larger than those for first and second-cycle courses and programmes for the entire period from 1997 until 2015. The difference has, however, grown markedly during the last ten-year period. In 2005 revenues for research and third-cycle courses and programmes were SEK 4 billion larger than those for courses and programmes at first and second-cycle level. In 2015 this difference had risen to SEK 11 billion. The explanation is that most of the increase in revenues since 2005 has been for research and third-cycle courses and programmes.

By far the largest share of the revenues of HEIs without full university status, however, consists of funding for first and second-cycle courses and programmes – 78 per cent – while research and third-cycle courses and programmes account for 22 per cent.

State funding provides 80 per cent of the HEIs' total revenues. Other public funding accounts for 5 per cent and private funding for 10 per cent. The remaining 5 per cent consists of funding from the EU, other international sources and miscellaneous sources, including financial revenues.

There are differences in the ways in which courses and programmes at first and second-cycle level and at research and third-cycle level are funded. The resources for first and second-cycle courses and programmes mainly

take the form of direct government funding, 88 per cent, while the corresponding proportion for research and third-cycle courses and programmes is 43 per cent.

Funding for first and second-cycle courses and programmes

Most students in first and second-cycle courses and programmes pay no fees and their studies are financed by government funding allocated directly to the HEIs by the Swedish Parliament. Since the autumn semester of 2011, however, incoming students from countries outside the EU/EEA and Switzerland who are not participating in exchange programmes have to pay tuition fees in Sweden. The absolute bulk of the HEIs' revenues for first and second-cycle courses and programmes is provided by direct government funding and in 2015 this amounted to SEK 24 billion.

Alongside their regular offerings at first and second-cycle level the HEIs also provide different types of commissioned services in the form of contract education and contracted courses. In 2015 payment for these commissioned services totalled SEK 1.5 billion, which corresponded to about five per cent of the HEIs' total revenues for first and second-cycle courses and programmes. The HEIs also derive income from other charges (SEK 1.5 billion in 2015) which mainly comprise reimbursement of their costs, although one-third consists of tuition fees. Various grants also provide revenues and this means that altogether the HEIs' total revenues for first and second-cycle courses and programmes totalled SEK 27.7 billion in 2015. In fixed prices this is just over 1.3 per cent less than in the previous year.

Increased revenues from tuition fees

In 2015 the HEIs received revenues amounting to SEK 506 million from application and tuition fees. The HEIs' revenues from tuition fees have risen steadily since they were introduced in the autumn of 2011 for incoming students from countries outside the EEA and Switzerland. Compared to 2014 these revenues have risen by SEK 127 million or 33 per cent. In spite of this significant increase, revenues from tuition fees still only account for a modest proportion of the funding for first and second-cycle courses and programmes, 2.1 per cent in 2015.

In connection with the introduction of tuition fees the Government reduced its direct funding to the HEIs by SEK 539 million from 2013 and onwards (this money was returned to the higher education sector, however, for instance in the form of higher per capita funding). In 2015 the HEIs' revenues from tuition fees amounted to SEK 506 million which means that the total number of fee-paying students has not yet reached a level that corresponds to the reduction in direct funding.

Contract education

The HEIs are able to offer courses and programmes on contract to government agencies, companies and other organisations for the individuals selected by them. The costs of contract education are not covered by direct government funding for first and second-cycle courses and programmes. In contrast to other forms of higher education, the HEIs are entitled to charge fees for courses of this kind, which have to be calculated so that they provide full cost coverage.

Contract education is mainly (60 per cent) commissioned by government agencies, but is also provided to a large extent to municipalities and county councils (17 per cent) as well as private companies in Sweden (10 per cent). In 2015 the HEIs' total revenues for contract education were SEK 1.4 billion, which is more or less the same level as it has been for a number of years.

Direct government funding for first and second-cycle courses and programmes

The bulk of direct government funding comprises framework funding for first and second-cycle courses and programmes, which in 2015 totalled SEK 22.3 billion for all the HEIs.

But there are other forms of funding as well, for instance HEIs with programmes in medicine receive some of the funding allocated for medical training and research. The HEIs can also receive allocations for other purposes and altogether these amounted to just over SEK 1.7 billion in 2015.

The total funding for first and second-cycle courses and programmes therefore amounted to SEK 24 billion. Compared to 2014 this is an increase in fixed prices of 1.2 per cent.

Funding for research and third-cycle courses and programmes

In 2015 the HEIs' revenues for research and third-cycle courses and programmes totalled SEK 38.8 billion, which was SEK 0.2 billion more than in 2014 in fixed prices. Direct government funding accounted for SEK 16.8 billion and external funding for SEK 22 billion of this total in 2015.

ALLOCATION OF RESOURCES FOR FIRST AND SECOND-CYCLE COURSES AND PROGRAMMES

Government funding for the first and second-cycle courses and programmes offered by the HEIs is based on the number of registered students (converted to FTEs) and the HE credits they attain (converted to annual performance equivalents) in the different disciplinary domains. The funding varies between the domains.

The number of places offered is limited by a "funding cap". The funding cap lays down the maximum amount each HEI may receive and, together with the way in which courses and programmes are divided among the different disciplinary domains, sets the limits for the number of places that can be provided.

The basic unit of instruction in higher education consists of courses, which are classified as belonging to one or several disciplinary domains. The Government determines which disciplinary domains each HEI may include in calculating FTEs and annual performance equivalents. The HEIs that include FTE's and annual performance equivalents in the fine, applied and performing arts are only allowed to do so for a limited number of students. Otherwise it is the HEIs themselves that classify the disciplinary domain or domains that courses belong to. Resources are then allocated to the HEIs on the basis of these classifications.

In 2015 over 40 per cent of the entire number of places offered (total FTEs) were in the humanities, social science, law and theology, domains which receive the lowest funding. One-third were in engineering and technology and in natural science, so that most of the remaining disciplinary domains were small. Programmes in the fine, applied and performing arts, the domains that receive the highest per capita funding, only offer a few per cent of the total number of places.

The allocation system and funding cap apply to the public-sector HEIs with the exception of the Swedish University of Agricultural Sciences and the Swedish Defence University, as well as to Chalmers University of Technology and Jönköping University. These HEIs provide 97 per cent of the total number of places offered, in terms of FTEs. HEIs may be assigned other tasks that are funded by direct government funding, for example decentralised education at Luleå University of Technology or continued professional development for journalists at Linnaeus University. For other tasks, such as supplementary programmes for individuals who have graduated outside Sweden or qualifying programmes for teachers who lack certification, HEIs receive direct government funding which is allocated by the Swedish Legal, Financial and Administrative Services Agency. Independent education providers receive, with a few exceptions, indirect government funding for higher education programmes.

ALLOCATION OF RESOURCES FOR RESEARCH AND THIRD-CYCLE COURSES AND PROGRAMMES

The current funding system lays down that new funding for research and third-cycle courses and programmes as well as 20 per cent of the existing direct government funding is to be based on two "outcome" indicators: external funding and research productivity (publications and citations). This allocation principle was introduced in 2009, when the proportion of existing direct government funding to be reallocated totalled 10 per cent, but this was later increased to 20 per cent in 2014. The current government modified the model for the allocation of resources for 2016 so that a larger proportion of the increased funding went to HEIs without full university status or those that had recently acquired it. In the spring of 2016 the Government also gave the Swedish Research Council the task of adjusting the way in which the model applied the indicators for research production and citations as a basis for allocating resources.

In addition to its direct funding, the Government channels resources for research through the research councils and other public agencies that fund research. Although this funding is therefore determined by political decisions, it is allocated competitively.

Revenues from private sources of funding rose in 2015

In addition to the direct government funding, a considerable amount of research funding is channelled through the research councils and other public agencies that fund research. Almost half of the SEK 22 billion received as external funding, SEK 10.7 billion, comes from the public purse. In all, the Government provided 71 per cent of the funding for research and third-cycle courses and programmes in 2015.

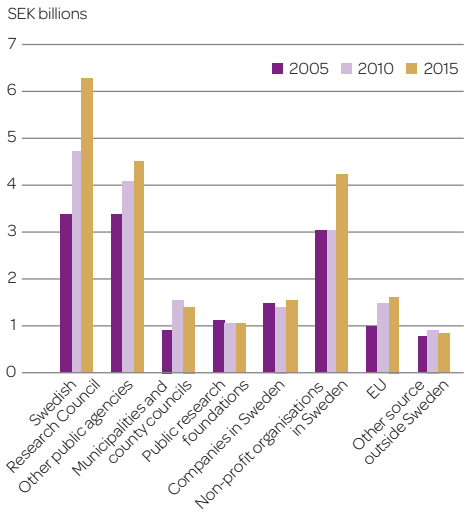
Municipalities and county councils as well as the public research foundations accounted for 6 per cent, so that altogether 77 per cent of this funding comes from the public purse.

Private foundations and other non-profit organisations are important sources of research funding and in 2015 they accounted for 11 per cent of the funding for research and third-cycle courses and programmes.

The EU, mainly through its framework programme, accounted for 4 per cent of this funding in 2015 and 2 per cent came from other sources outside Sweden.

External funding mainly takes the form of research grants that are sought competitively.

Figure 36. HEIs' revenues for research and third-cycle courses and programmes from external sources in 2005, 2010 and 2015 per source of funding, SEK billions in 2015 prices.



Research grants accounted for 83 per cent of the external funding and 7 per cent came from fees charged for contract research, while other revenues from fees amounted to SEK 2.1 billion (10 per cent).

Key figures for higher education institutions

Higher education is offered at about fifty HEIs with full university status and other HEIs and institutions that vary greatly in size and degree of specialisation. The accompanying tables present quantitative data to describe the differences and similarities between the HEIs. The smallest institutions that are not run by the state have been excluded.

First and second-cycle courses and programmes

HE entrants at the HEI. These figures indicate the number of individuals beginning to study for the first time at the institution in the academic year of 2014/15 in Sweden.

Median age of new entrants. Median age of new entrants at the HEIs and new entrants for the first time in any HEI in the academic year of 2014/15.

Proportion of women/men. The proportion of women and men among HE entrants in the academic year of 2014/15.

Total number of students. Total number of students, autumn semester 2015.

Education profile. The number of FTEs in some subject areas – humanities, theology, social science and technology - divided by all FTEs in the academic year of 2014/15.

The proportion of FTEs in second-cycle courses and programmes. The number of FTEs studying in the second cycle divided by all first and second-cycle FTEs in the academic year of 2014/15.

Total number of qualifications awarded. The total number of qualifications awarded in the academic year of 2014/15.

Third-cycle courses and programmes

Third-cycle entrants. New students in third-cycle studies, 2015.

Total number of third-cycle students. The number of active third-cycle students, autumn semester 2015. Active students are those who have reported at least 1 per cent of full-time study activity.

PhD degrees. The number of PhD degrees awarded, 2015.

Licentiate degrees. The number of Licentiate degrees awarded, 2015.

Teaching and research staff

Teaching and research staff. The number of teaching and research staff (in FTEs), 2015. The figures include professors, senior lectures, lecturers, postdoctoral research fellows, visiting lecturers, fixed-term part-time lecturers and other research and teaching staff.

Proportion of women/men. The proportion of women and men among teaching and research staff, 2015.

Teaching and research staff with PhDs. The proportion of the teaching and research staff with PhD degrees, 2015.

Funding

Total expenditure. Total expenditure (SEK million), 2015.

Proportion of first and second-cycle courses and programmes. The proportion of expenditure for first and second-cycle courses and programmes related to total expenditure, 2015.

First and second-cycle courses and programmes

HEI	HE entrants at the institution	Median age	Proportion of women/men	Total number of students (autumn semester 2015)
Total	**169 842**	**21,8**	**56/44**	**343 344**
Uppsala University	14 639	21,4	58/42	29 160
Lund University	12 896	21,4	56/44	29 831
University of Gothenburg	11 461	21,8	65/35	29 815
Stockholm University	18 249	21,7	61/39	34 529
Umeå University	10 493	22,2	59/41	20 686
Linköping University	7 341	21,4	53/47	19 933
Karolinska Institutet	2 967	22,6	72/28	7 343
KTH Royal Institute of Technology	6 455	21,8	31/69	15 277
Chalmers University of Technology	3 221	21,6	32/68	9 706
Luleå University of Technology	5 225	21,5	45/55	9 357
Stockholm School of Economics	656	22,0	41/59	1 777
Swedish University of Agricultural Sciences	1 779	22,5	60/40	4 575
Karlstad University	5 432	21,6	59/41	10 128
Linnaeus University	11 887	22,0	58/42	18 626
Örebro University	5 163	21,3	61/39	10 359
Mid Sweden University	6 442	22,7	59/41	9 145
Blekinge Institute of Technology	4 495	21,3	34/66	4 050
Swedish Defence University	416	22,1	36/64	654
Swedish School of Sport and Health Sciences	470	21,2	37/63	965
University of Borås	3 318	22,1	70/30	6 870
Dalarna University	7 667	23,5	57/43	9 624
University of Gävle	5 943	22,5	57/43	9 239
Halmstad University	3 790	21,8	58/42	6 384
Jönköping University	5 177	21,8	56/44	8 629
Kristianstad University	6 067	22,1	67/33	8 106
University of Skövde	4 277	22,1	53/47	5 793
University West	4 570	22,1	63/37	5 808
Malmö University	7 690	22,2	64/36	14 999
Mälardalen University	4 738	21,9	59/41	8 895
Södertörn University	4 737	21,8	70/30	7 646
University College of Arts, Crafts and Design	416	25,8	69/31	768
Royal Institute of Art	146	27,0	76/24	209
Royal College of Music in Stockholm	456	23,6	56/44	978
Stockholm University of the Arts	485	25,3	62/38	702

First and second-cycle courses and programmes

HEI	Humanities / theology (%)	Social science / law (%)	Technology (%)	Second-cycle (%)	Total number of qualifications awarded
Total	**14**	**41**	**15**	**20**	**80 882**
Uppsala University	21	38	8	24	5 613
Lund University	16	38	16	26	7 687
University of Gothenburg	16	50		23	6 587
Stockholm University	25	61		18	6 558
Umeå University	13	42	7	21	4 605
Linköping University	11	34	21	23	5 590
Karolinska Institutet	1	11		39	2 887
KTH Royal Institute of Technology	3	1	70	38	3 880
Chalmers University of Technology	2	9	62	35	3 085
Luleå University of Technology	9	29	32	16	1 490
Stockholm School of Economics	2	98		59	654
Swedish University of Agricultural Sciences		15	22	33	1 067
Karlstad University	9	55	9	13	1 875
Linnaeus University	19	48	8	10	2 824
Örebro University	9	56	6	14	2 430
Mid Sweden University	15	46	14	10	2 004
Blekinge Institute of Technology	3	13	63	19	970
Swedish Defence University	11	46	12	7	166
Swedish School of Sport and Health Sciences		20		16	219
University of Borås	9	50	16	15	2 302
Dalarna University	41	36	8	6	1 278
University of Gävle	12	43	21	7	1 439
Halmstad University	14	43	18	10	1 292
Jönköping University	13	40	22	14	2 585
Kristianstad University	5	64	7	8	1 231
University of Skövde	12	24	33	6	1 000
University West	6	61	13	7	1 417
Malmö University	10	58	13	12	2 753
Mälardalen University	11	49	13	13	2 017
Södertörn University	36	47		6	1 463
University College of Arts, Crafts and Design	1	11		33	181
Royal Institute of Art				74	40
Royal College of Music in Stockholm	1	11		25	188
Stockholm University of the Arts		13		16	95

Third-cycle courses and programmes

HEI	Third-cycle entrants	Total number of third-cycle students (autumn semester 2015)	PhD degrees	Licentiate degrees
Total	**2 985**	**18 443**	**2 835**	**721**
Uppsala University	318	2 165	315	93
Lund University	417	2 662	379	48
University of Gothenburg	262	1 596	282	40
Stockholm University	229	1 465	232	85
Umeå University	112	972	174	12
Linköping University	201	1 177	171	47
Karolinska Institutet	390	2 242	359	8
KTH Royal Institute of Technology	281	1 822	328	122
Chalmers University of Technology	230	1 155	167	139
Luleå University of Technology	123	532	82	35
Stockholm School of Economics	19	141	12	1
Swedish University of Agricultural Sciences	73	536	120	12
Karlstad University	37	241	30	17
Linnaeus University	44	261	33	8
Örebro University	48	408	52	9
Mid Sweden University	33	129	17	2
Blekinge Institute of Technology	12	83	14	12
Swedish Defence University				
Swedish School of Sport and Health Sciences	1	19	1	2
University of Borås	14	70	15	3
Dalarna University	4	8	2	
University of Gävle	4	30	1	
Halmstad University	11	58	3	1
Jönköping University	32	161	16	9
Kristianstad University				
University of Skövde	9	32		1
University West	6	44	2	1
Malmö University	38	177	17	6
Mälardalen University	18	194	10	8
Södertörn University	14	67	1	
University College of Arts, Crafts and Design				
Royal Institute of Art				
Royal College of Music in Stockholm				
Stockholm University of the Arts				

Teaching and research staff

Funding

HEI	Teaching and research staff (FTEs)	Proportion of women/men	Teaching and research staff with PhDs	Total expenditure (SEK million)	Proportion of first and second-cycle courses and programmes
Total	**29 179**	**44/56**	**58**	**66 740**	**41**
Uppsala University	3 177	45/55	58	6 533	29
Lund University	2 958	38/62	66	7 792	31
University of Gothenburg	2 556	50/50	66	5 922	38
Stockholm University	2 300	48/52	59	4 645	40
Umeå University	1 937	47/53	63	4 216	41
Linköping University	1 631	40/60	64	3 740	44
Karolinska Institutet	2 058	52/48	61	6 394	16
KTH Royal Institute of Technology	1 545	25/75	56	4 329	31
Chalmers University of Technology	1 230	23/77	56	3 375	29
Luleå University of Technology	620	35/65	64	1 677	43
Stockholm School of Economics	95	24/76	72	390	64
Swedish University of Agricultural Sciences	1 310	46/54	62	3 173	16
Karlstad University	598	50/50	52	1 029	67
Linnaeus University	965	45/55	49	1 674	72
Örebro University	538	50/50	59	1 184	65
Mid Sweden University	461	44/56	51	918	62
Blekinge Institute of Technology	204	37/63	43	417	69
Swedish Defence University	221	26/74	23	509	76
Swedish School of Sport and Health Sciences	58	51/49	50	134	72
University of Borås	342	54/46	46	639	80
Dalarna University	395	55/45	44	599	80
University of Gävle	346	50/50	44	570	79
Halmstad University	279	43/57	53	524	76
Jönköping University	377	52/48	48	848	72
Kristianstad University	309	61/39	48	484	87
University of Skövde	271	40/60	45	454	77
University West	289	56/44	43	485	80
Malmö University	747	54/46	50	1 382	82
Mälardalen University	468	47/53	49	877	72
Södertörn University	365	51/49	66	715	62
University College of Arts, Crafts and Design	75	55/45	22	177	91
Royal Institute of Art	30	59/41	3	75	92
Royal College of Music in Stockholm	70	29/71	10	146	94
Stockholm University of the Arts	92	56/44	5	269	78

Higher Education Institutions in Sweden 2015

HEIs with entitlement to award first, second and third-cycle qualifications

Public sector
Uppsala University
Lund University
University of Gothenburg
Stockholm University
Umeå University
Linköping University
Karolinska Institutet
KTH Royal Institute of Technology
Luleå University of Technology
Swedish University of Agricultural Sciences
Karlstad University
Linnaeus University
Mid Sweden University
Örebro University
Blekinge Institute of Technology*
Dalarna University*
Halmstad University*
Malmö University*
Mälardalen University*
Södertörn University*
The Swedish School of Sport and Health Sciences*
University of Borås*
University of Gävle*
University of Skövde*
University West*
Independent
Chalmers University of Technology
Ersta Sköndal University*
Stockholm School of Economics
Jönköping University*

*HEIs entitled to award third-cycle qualifications in only one or more specific research domains at the end of 2015.

HEIs entitled to award first and second-cycle qualifications

Public sector
Kristianstad University
University College of Arts, Crafts and Design
Royal Institute of Art
Royal College of Music in Stockholm
Stockholm University of the Arts
Swedish Defence University
Independent education providers
Beckman College of Design
Gammelkroppa School of Forestry
Johannelund Theological Seminary
Newman Institute
Sophiahemmet University
Stockholm School of Theology
The Red Cross University College
University College of Music Education in Stockholm
Örebro School of Theology
Independent course providers
Evidens University College
Stockholm Academy for Psychotherapy Training
The Erica Foundation
The Swedish Institute for CBT & Schema Therapy

The Swedish Higher Education Authority (UKÄ) is a government agency that deals with questions concerning higher education. UKÄ is responsible for the official statistics on higher education and also works with the quality assurance of higher education courses and programmes, monitoring and evaluating efficiency, legal supervision and leadership development in higher education.

You can read more on the web-site **www.uka.se**.

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