

## Women and education in the EU

Gender equality in education is guaranteed by law in EU Member States, so the issues are far more complex than simply that of gaining access to education for girls, as remains the problem in many developing countries. Yet despite the legal equality in the EU, inequalities persist because of the educational choices that girls make, which may prevent them from achieving the potential they show earlier in education. Moreover, care needs to be taken not to ignore the problem of low-performing boys, a phenomenon sometimes overshadowed by the successes of men generally. The rationale for gender differences in education has mainly been approached from two perspectives: that of biological differences and that of societal and cultural influences. In the past, the view that biological differences are the cause of different educational outcomes was prevalent, but more recently there has been a shift towards the other side of the spectrum. The latest [research](#) shows that the differences between males and females are not sufficiently significant to account for the differences in educational outcome.

### Differences between 15 year old boys and girls in the areas of reading, mathematics and science



The graph shows differences in points between the mean scores of boys and girls in the tests under the [OECD's Programme for International Student Assessment \(PISA\)](#) in mathematics, science and reading. Negative values (to the left of zero) show differences favouring girls and positive values (to the right) favouring boys. All results are for PISA 2012 except [Malta](#) (2009). As the results are based on samples of the population concerned, some of the smaller differences should not be regarded as statistically significant.

## Differences between boys' and girls' results in PISA tests

The PISA tests have been effective in showing differences in results between girls and boys in reading, science and mathematics. Administered on a sample of 15-year olds from more than 70 countries, with the same methodology in each, the results show differences in these three fields up to a point. In all EU Member States, girls significantly outperform boys in reading, whereas boys are slightly better than girls in mathematics in most. In science, the results generally do not show significant differences in performance between girls and boys.

It is interesting to note that research shows that better performance by students need not correlate with gender equality in society, with female students performing better in countries such as Jordan and the United Arab Emirates (UAE). However, this same research also shows that even though male students on average fall behind female students in overall achievement, the top performers among male students have higher level of achievement than the top performers among female students, which may be one explanation for their higher levels of professional success later in life.

## Different choices in education

The relative underperformance of girls in mathematics at 15 years old is reflected later in their choices of fields of study in higher (tertiary) education. As the graphs on the following page show, there are far fewer female than male graduates in the science, technology, engineering and mathematics (STEM) fields. Women are more likely to choose fields such as education or the arts. This potentially leads to problems because feminisation of certain professions, such as teaching, can lead to reduced prestige of the profession and lower wages.

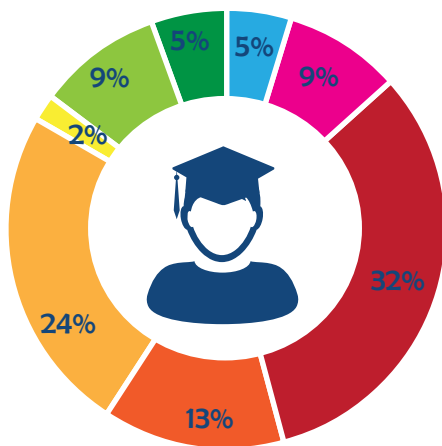
But why do men and women make these different choices? There have been a number of explanations over the years. According to some research, these choices may even be explained by the results in the PISA tests, as it may be that boys and girls go on to choose to specialise in those fields in which they are already comparatively better. In general, explanations for different choices of study field by gender can be grouped into several categories. Some explain different choices through differences in abilities between the two genders, where males and females have different educational outcomes because of inherent biological characteristics. Other reasons put forward are societal and cultural, and encompass differences in motivation and support for various choices, the influence of gender stereotypes and conflict between the feminine gender role and the choice of certain fields, such as mathematics or physics, which are considered as male domains, and a lack of female role models in stereotypically male fields. Research on gender stereotypes has been particularly illuminating on the issue, because it has unveiled how much teachers, curricula and textbooks perpetuate gender stereotypes, rather than try to put a stop to them.

However, the problem with educational choices does not stop with the choice of study fields. Women are less prone to continuing studying at PhD level as the graphs show. This is also reflected later in the lack of female scientists and professors at tertiary level. The graphs on the final page also show lower employment rates for female graduates than male graduates in general.

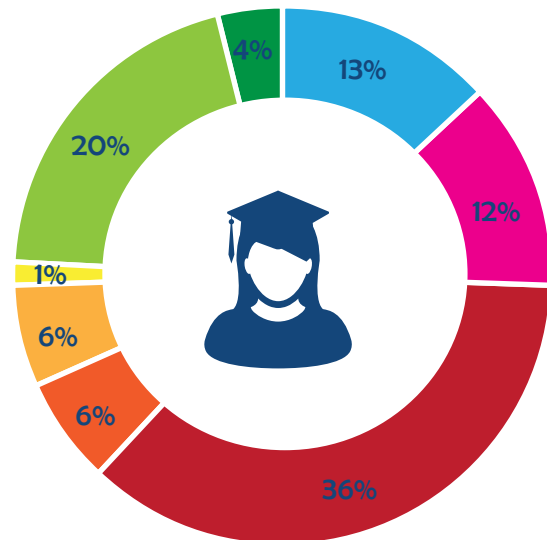
## Outlook

The data presented show the complexity of the issue of gender equality in education. An important element that is not touched upon is how gender interacts with other categories, such as migrant or socio-economic status. The issue of low-performing boys is also an important topic for discussion. The debate continues, but it is evident that merely giving access to girls to education and raising their educational achievement has not completely resolved the issue.

### 2012 graduates - Bachelors' or Masters' degrees (EU 28)

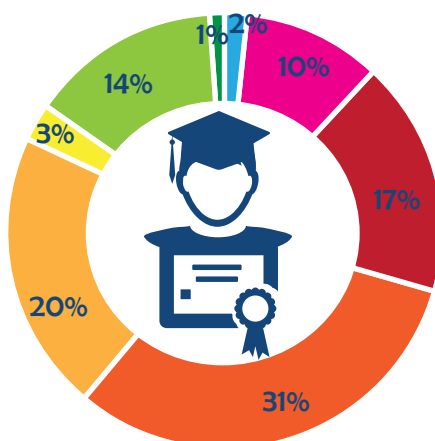


1 990 561 men

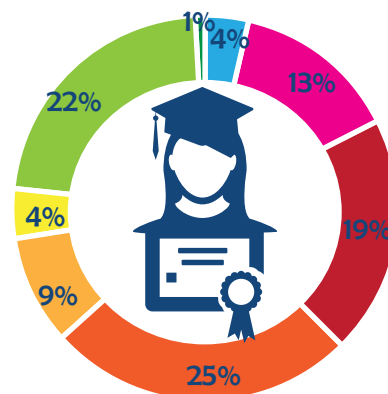


2 850 223 women

### 2012 graduates - PhD degrees (EU 28)



63 061 men



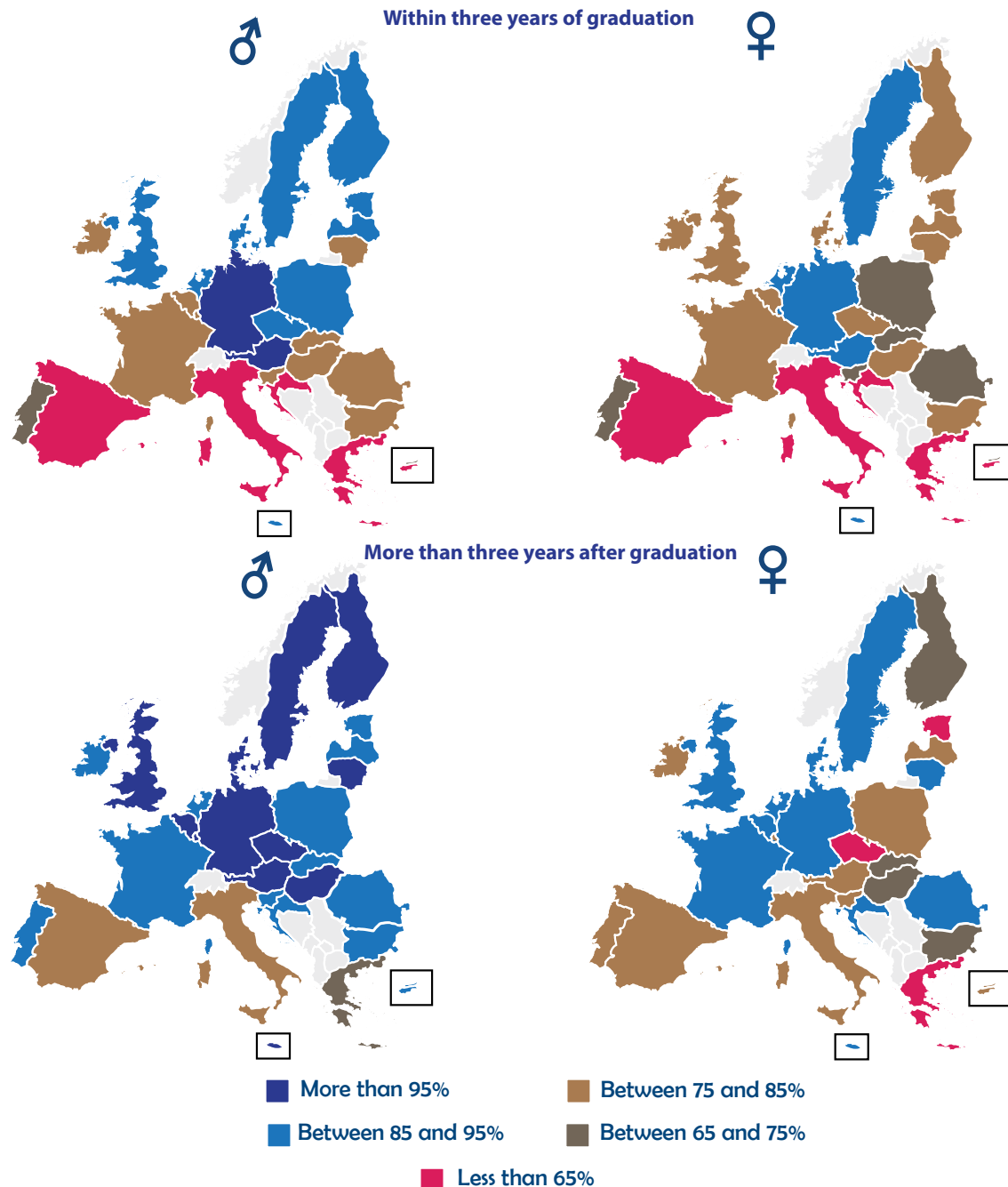
56 652 women

- |  |   |
|--|---|
| Teacher training and education science | Engineering, manufacturing and construction |
| Humanities and arts                    | Agriculture and veterinary                  |
| Social sciences, business and law      | Health and welfare                          |
| Science, mathematics and computing     | Services                                    |

The graphs show the differences in the total number of male and female graduates at Bachelors' and Masters' levels, and from PhD programmes, in the EU 28 in 2012 (France 2011), as well as the breakdown by subject. While women far outnumber men in completing higher education, men prevail at the level of PhD graduates. Women choose more programmes in education and health and welfare, while men opt far more for programmes in engineering and science, mathematics and computing.

Data source: [Eurostat](#)

### Employment rates among graduates aged up to 34 (2013)



The graphs show gender differences in employment rates among higher education graduates younger than 34. After more than three years since their graduation, the percentage of men in employment is significantly higher than that of women. A number of reasons, such as young mothers staying at home, the structure of the labour market and employment policies, availability of child-care facilities and similar could be the cause of this difference. This loss of a highly educated labour force is a cause for concern.

**Datasource:** Eurostat

**Disclaimer and Copyright.** The content of this document is the sole responsibility of the authors and any opinions expressed therein do not necessarily represent the official position of the European Parliament. It is addressed to the Members and staff of the EP for their parliamentary work. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy. © European Union, 2015.

eprs@ep.europa.eu – <http://www.eprs.ep.parl.union.eu> (intranet) – <http://www.europarl.europa.eu/thinktank> (internet) – <http://epthinktank.eu> (blog)