Women in STEM

Statistics and facts

(Reporting period 2012 - 2015)

www.theiet.org
56% of university students in the UK are female.

50% of STEM enrolments, including medicine (postgraduate/undergraduate full-time & part-time) are female, unevenly distributed by discipline e.g.

- 61.1% of biological sciences undergraduates
- 15.8% of engineering and technology undergraduates
- 79.4% of medicine undergraduates
- 39.9% of physics undergraduates
- 17.4% of computer science undergraduates

Female STEM graduates are more likely to find work quicker, but also more likely to find themselves in jobs that don’t require a degree such as childcare, retail and business admin. 40% of female graduates and 28% of male graduates were in jobs classed as below professional level.

Men are also more likely to enter careers related to their degree.
Women represent 47% of the UK workforce.

But only 13% (693,000) of the STEM workforce are women, an increase of 8.2% on 2012.

- 27% of Science and Engineering Technicians
- 15% of ICT professionals and
- 5.5% of Engineering professionals are women.

28% of female employees compared to 23% of male employees are members of trade unions.

Prospect has around 14,000 female members working in STEM.

2.4m women not in work want to work.

Potential contribution to the UK economy, if women were to participate more fully in STEM employment: £2bn.

If all the women who wanted to work were employed, GDP growth would be up to 10% higher by 2030.

1.3m women want to increase the number of hours they work.
In academia overall, in 2013 women only made up 14% of Vice Chancellors in UK universities. Academia is a significant STEM employer in the UK. Women account for 34% of UK STEM postgraduates and are evenly distributed across discipline.

17% of full-time STEM professors are female compared to 26.7% in non-STEM subjects.

PERFORMANCE AND PROGRESSION

Women are being put off careers in STEM because of pressures of family life combined with “biases” in the workplace.

The percentage of men and women in management positions in the UK by age:
- Under 20: 46% women; 54% men
- 30-44: 38% women, 62% men
- 45-49: 35% women; 65% men

1/3 of UK managers are female.

Just over one in ten (11%) STEM business owners are women. Compared to one in three (33%) who are owners of non-STEM businesses.

Women led SMEs add around £70bn to the economy.
**FTSE 100 companies: 23% women Directors (up from 12.5%)**

Of the FTSE 100 companies outside of STEM sectors each has at least one woman on their Board.

One in five STEM companies in the FTSE 100 have no women on their Board.

Europe: Women's share of board seats ranges from 7.9% in Portugal (PSI-20 index) to 18.5% in Germany (DAX index) to 33.3% in Norway (OBX index).

North America: Women hold 19.2% of S&P 500 board seats in the United States, and 20.8% of S&P/TSX 60 board seats in Canada.

Asia-Pacific: Women's share of board seats ranges from 3.1% in Japan (TOPIX Core 30 index) to 9.5% in India (BSE 200 index) to 19.2% in Australia (S&P/ASX 200 index).

**50%**

Of UK female managers reported self-doubt about job performance and careers, while less than 30% of men gave similar responses.

1 out of 7 Research Councils have ever had a female CEO.

Early academic STEM careers often involve short-term contracts which end their STEM career at this early stage.

Studies have found a connection between gender diversity on corporate boards and financial performance:

- Companies with the most women board directors (WBD) outperform those with the least on ROS by 16%.
- Companies with the most WBD outperform those with the least on ROIC by 26%.
- Companies with sustained high representation of WBD, defined as those with three or more WBD in at least four of five years, significantly outperformed those with sustained low representation by 84 percent on ROS, by 60 percent on ROIC, and by 46 percent on ROE.

**Women professional engineers have doubled in number since 2012 (an increase of 13.2%)**

However... the UK has the lowest % of female engineering professionals in Europe at less than 10% (Latvia, Bulgaria and Cyprus lead with 30%). (2007 data)

Females represent 6% (7,500) of registered engineers and technicians in the UK.
Women working in science are less likely to take career breaks than women who work in other occupations. Women commonly experience a change in their work and career trajectory when returning to the workplace after having children, with about one third facing a downward shift in status.

Once in work, many female engineers report high job-satisfaction, although there are still problems within the industry regarding the retention of women. For example, two-thirds of female engineers do not resume their engineering jobs after taking maternity leave.

Cost of childcare cited by women as a barrier to progression in to senior roles and a disincentive for working longer hours.

Cost of childcare and inflexible working hours were cited as the main barriers faced by women hoping to return to their STEM careers.

Progression: there is a clear link between flexible working and levels of women in management positions.

Top quartile of organisations for flexible working: 47.5% female managers
Top quartile had an average of: 38% female managers

Appraisal mechanisms feeding into leadership are more likely to rate women and BAME employees less favourably.

Less than half of organisations regularly monitor starting salaries for gender bias.

Women and BAME employees are less likely to be identified as ‘high potential’ (12.2% of women, 15.4% of men, 10% of BAME employees).

Unconscious bias continues to be present during application stage as fewer BAME and women selected.

1/5 female respondents said their employer is not supportive of working mothers, while a further 18% say the same about their colleagues.

Two in three female non-parents told us they feel women with no children are expected to work longer hours than those with children, compared to 40% of mothers.

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Female graduates are more likely to have chosen subjects which lead to lower earnings as opposed to subjects such as STEM which are known to be more rewarding careers.

The UK gender pay gap in favour of men in 2014 is 9.4% based on median hourly earnings for full-time workers.

For every £1 earned by a man in the UK working part or full-time, a woman earns 81p. That means it takes the average woman 20 years longer to earn £1m (reaching this at age of 70 compared to 51 for a man).

On average, a male graduate earns £3 more (£17 p/h) than a female graduate (£14 p/h). This may be linked to female graduates being more likely to work in lower-middle skilled role and part-time roles.

The median basic income for male registered engineers and technicians (£55,000) is 19.7% higher than females (£45,941).

The average hourly earnings for a STEM graduate are £18.91.

Women earn on average £140,000 less than men over their working careers.

Annual median gross pay for selected STEM technician and craft careers:
- Engineering technicians: £32,796
- Telecommunications engineers: £32,272
- IT operations technicians: £29,449

Engineering Professionals (NEC):
- Engineering Technicians: £39,977
- Telecommunications Engineers: £28,821
- IT Operations Technicians: £23,352
- Electrical Engineers: £32,139

The median pay for selected full-time STEM professions by gender (2013) – UK.