



The Science Council

1. The Science Council is a membership organisation of learned societies and professional bodies drawn from across science and its applications. Collectively our members represent almost 500,000 individuals including scientists, teachers and senior executives in industry, academia and the public sector. There are currently 41 member organisations: a list is attached. In addition to providing a mechanism for the sector to work collectively, the Science Council develops and leads collaborative projects working with member organisations and the wider scientific community: examples include LMI analysis of the UK Science Workforce and Diversity, Equality and Inclusion.¹
2. The Science Council's principal area of work is to advance the professional practice of science across the breadth of the science workforce, including non-graduate and technical roles in science. A key aspect of this is professional registration and having introduced Chartered Scientist (CSci)² in 2004, the Science Council has added Chartered Science Teacher (CSciTeach), Registered Scientist (RSci) and Registered Science Technician (RSciTech).³ RSci and RSciTech aim to raise the profile, aspirations and retention of scientists at graduate and technician level.

Supporting a more diverse science workforce

3. More women achieve first degrees and postgraduate degrees in a STEM subject than men,⁴ yet women make up only 41% of the science workforce⁵. A number of science sub-sectors are significantly male dominated, including Advanced Manufacturing (94% male); Metals (94% male); Construction & Installation (93% male) and Energy & Environment (90% male).
4. We therefore welcome the opportunity to contribute to the Committee's enquiry. The Science Council supports the government's ambition to eliminate the gap. A primary objective of ours is to work towards a UK science workforce that reflects society's diversity, looking beyond gender to ethnicity, geographical distribution, age and skills levels and ensuring equality of opportunity.
5. Average wages across the science workforce are generally higher than the average wage across the whole economy.⁶ However, there has been very little research undertaken to determine the extent of the gender pay gap across the science workforce. The Science Council collects anonymised annual data from member bodies on the gender split in their own membership and across its four professional registers. The percentage of women over 40 years of age across our registers is as follows:

- Chartered Scientist: 39%
- Chartered Science Teacher: 55%
- Registered Scientist: 40%
- Registered Science Technician: 66%

The percentage of women under 40 across our registers is:

- Chartered Scientist: 47%
- Chartered Science Teacher: 58%

¹ <http://www.sciencecouncil.org/content/diversity-equality-and-inclusion>

² <http://www.charteredscientist.org/>

³ <http://www.professionalregisters.org/>

⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/477360/UKCES_Gender_Effects.pdf

⁵ <http://www.sciencecouncil.org/UK-science-workforce>

⁶ http://www.sciencecouncil.org/sites/default/files/UK_Science_Workforce_FinalReport_TBR_2011.pdf

- Registered Scientist: 47%
 - Registered Science Technician: 56%
6. The Science Council has built progression and transferability into its professional registers to provide a clear route from technician level through to Chartered status. We are committing time and resources to tracking the number of registrants progressing through our registers. Through this we can develop an accurate picture of the number of women that move into senior positions within the science workforce, the salary bands in which they sit, and where potential barriers exist to progression.
 7. **We call on the government to support the Science Council's ability to meet the ambition to register all scientists by publicly encouraging more scientists, both male and female, to register as professional scientists with the Science Council.**
 8. Nearly 6 million people are employed in science roles across the UK economy.⁷ If the Science Council was provided with greater support to register all 6 million as registrants, we would be able to provide the government with a very accurate picture of the issues affecting the recruitment, retention and training of scientists at all levels throughout the UK economy, including gender issues by age and type of employment.

Question 1: How adequate are the Government's proposals for tackling the pay gap faced by women over 40? What additional measures would be most effective in reducing the pay differentials faced by this group?

9. The government's proposals are a welcome step. We particularly welcome the extension of pay gap monitoring to the public sector, which employs a significant number of scientists.⁸ Bonus payments are not usual in science but we welcome their inclusion and hope that overtime payments will also be included. While measuring and making public the pay gap by company is important, eliminating the gender pay gap requires longer-term commitment by all members of society to challenging existing stereotypes through monitoring of children and young people's behaviour and preferences.
10. Evidence suggests that young women are often deterred from pursuing science careers by their learning experiences and the careers advice they receive.⁹ We therefore need to be sure that gender stereotypes that place girls in passive and caring roles continue to be challenged. The percentage of female apprentices in early years (childcare) for example has been over 90% for the past 10 years. In engineering over the same period, this has been around 5%.¹⁰ **Girls should therefore receive disproportionate encouragement and support to study science and maths.**
11. Part-time pay should always be exactly pro-rata of what would be paid for the role full-time. As long as women are expected to take on the bulk of domestic and caring responsibilities in society and at home then women will seek part-time work which enhances the differential.
12. One solution would be to move to a 4-day working week so that men have the opportunity to take domestic responsibility and women are not regarded as uncommitted workers, by working 4 days per week. For scientists in particular time away from work would encourage personal and professional development thereby boosting their potential for career progression.
13. The government must also continue to incentivise organisations to report on the gender of those present at senior levels and on their recruitment and retention practices. The voluntary approach advocated by Lord Davies has successfully begun to tackle the gender

⁷ <http://www.sciencecouncil.org/content/science-workforce>

⁸ Science Council workforce research 2014

⁹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302973/evidence-report-77-high-level-stem-skills_1_.pdf

¹⁰ <http://www.lakes.ac.uk/sites/lakes.ac.uk/files/44.%20Fuller%20and%20Unwin.pdf>

balance on company boards.¹¹ In due course, this should be extended to public sector and voluntary organisations to gain a better understanding of career progression and whether it is affected by gender.

Question 2: What actions would be most effective in improving recruitment, retention and re-training for women aged over 40?

Question 4: Are there particular difficulties in narrowing the gender pay gap for women working in predominantly female sectors and non-professional roles? Are there any evidence-based measures which could effectively address these issues?

14. Before taking action to improve the recruitment, retention and re-training of women over 40 in the science workforce, it is important to gain a better understanding of when and why many women decide to take a career break or decide not to continue with a career in science.
15. Currently, women take on the greater burden of caring responsibilities. However, research shows that a majority of men want to take on greater caring responsibilities, but that some employers are deterred from enabling this by practical issues.¹² Employers should therefore be supported to encourage more men to take on a greater share of the caring burden. The provision of more flexible and longer paternity leave (combined with a 4-day week) would provide men with greater opportunities to share caring responsibilities. Approaches to tackling this could include:
 - Enabling both men and women to work more flexible hours or compress their working hours into fewer days
 - Facilitate the option of home-working, including provision of equipment and internet access
 - Wider provision of part-time working options for career-returners
16. Poor promotion and recruitment practices, few part-time roles available at more senior levels in STEM, and a lack of work-life balance in academia are consistently raised within the Science Council community as major concerns relating to gender pay issues. There is evidence to suggest that career breaks, particularly at the early family-formation stage, hinders the progression of women to the highest occupational levels. Women who take career breaks also tend to take longer to progress than women who do not take career breaks.¹³ Women returning to work therefore require good return-to-work support. Opportunities to progress can also be limited for women as they are often locked into a particular geographical location.
17. The Research Excellence Framework (REF) for example risked penalising women taking maternity leave. The Science Council welcomes the changes to the panel criteria adopted by all four UK funding bodies which will allow one less output per submission for each period of leave, but academia needs to do much more to create the flexible environment that will enable women to maintain and advance their careers alongside their family responsibilities.
18. There is nothing inherent about any sector or occupation that should make it either predominantly male or female. However, terminology and images often plays a role in perpetuating stereotypes.¹⁴ To counteract the existing stereotypes, those working in science should always be called scientists; the use of 'female' or 'woman' scientist should only be used when the distinction is relevant.
19. To help ensure that careers in science are seen as attractive options, where all individuals

¹¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/471951/BIS-15-585-women-on-boards-davies-review-5-year-summary-october-2015.pdf

¹² http://www.cipd.co.uk/NR/rdonlyres/F36B815C-ABAF-4A04-8842-639EA20E48BD/0/Flexible_working_Taskforce_report.pdf

¹³ TBR, Leading the way: increasing the diversity of the science workforce, Project two: exploring the impact of socio-economic background on careers in science, TBR for the Royal Society

¹⁴ <http://onlinelibrary.wiley.com/doi/10.1002/sce.3730670213/pdf>

are welcome and supported, there are a number of relatively low-cost actions that the government, in partnership with professional bodies, could take, including:

- Auditing school text books, teaching materials and career information literature for gender bias and requiring schools to use materials that are accredited for gender balance
- Using appropriate marketing material to ensure vocational education and apprenticeships appeal to both sexes
- Provide workplace opportunities for teachers to update their knowledge, skills and better understanding of the range of qualifications and career pathways in science
- Ensure that unconscious bias training is a compulsory requirement in teacher training
- Provide school leaders and teachers with training that enables them to develop an inclusive and gender neutral culture in their schools
- Ensure that all online job application forms are gender neutral
- Ensure Ofsted includes an element of its inspection seeking to check the school is not stereotyping children

20. Given the projected long-term demand for science skills across the UK economy, a greater collaborative effort is needed from business, government and education to engage, encourage and inspire more young people, including girls, to study science and pursue a career in science.

Question 5: Should the regulations on gender pay reporting be extended to organisations with fewer than 250 employees?

21. Yes. Gender pay reporting should not be limited to larger organisations and must include public, private and voluntary sector employers of all sizes. It is the case that 58% of scientists work in organisations with fewer than 250 employees.¹⁵ The Science Council considers it essential therefore to have the basic data on gender pay differences, and other diversity characteristics, across the whole economy and at all levels of employment, in order to measure progress and assess the impact of ongoing schemes and projects.

22. There may be a case for very small and micro-organisations to be exempted from the requirement due to the lack of significant information, the potential administrative burden of reporting or where revealing the salary of individuals would be inappropriate. However, they too should be incentivised to report data on their employees' pay. To reduce the administrative burden on smaller employers, providers of HR systems used by small and large organisations should be required to build-in easy gender pay reporting capabilities.

Question 6: Would voluntary measures regarding what employers do with gender pay gap information be sufficient to create change within organisations? What could be done to ensure that information about an organisation's pay gap is translated into action?

23. Providing employers with information on the gender pay gap in their sector means they can benchmark their own performance against competitors.

24. The government and public sector bodies should lead by example to encourage behaviour change across the economy. They are significant procurers of goods and services from private sector and charitable organisations, and should use their supply chains to hasten progress. This could include:

- writing into procurement contacts and tenders, that goods and services will only be purchased from organisations that demonstrate evidence of taking the necessary steps to improve the gender pay gap if one exists within their organisation

¹⁵ <http://www.sciencecouncil.org/content/science-workforce>

- encouraging organisations to audit and publish their own recruitment and promotion practices for evidence of gender bias
- requiring the removal of gender identifiers in recruitment processes so that short-listing is done gender blind

Member Organisations of the Science Council

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Association for Clinical Biochemistry and Laboratory Medicine
Association of Neurophysiological Scientists
Association for Science Education
British Academy of Audiology
British Association of Sport and Exercise Science
British Computer Society
British Psychological Society
British Society of Soil Scientists
Chartered Institution of Water and Environmental Management
College of Podiatry
Energy Institute
Geological Society of London
Institute of Biomedical Science
Institute of Brewing and Distilling
Institute of Corrosion
Institute of Food Science and Technology
Institute of Marine Engineering, Science and Technology
Institute of Materials, Minerals and Mining
Institute of Mathematics and its Applications
Institute of Physics and Engineering in Medicine
Institute of Physics
Institute of Science and Technology
Institute of Water
Institution of Chemical Engineers
Institution of Environmental Sciences
London Mathematical Society
Mineralogical Society
Nuclear Institute
Oil and Colour Chemists' Association
Operational Research Society
Physiological Society
Royal Astronomical Society
Royal Meteorological Society
Royal Society of Chemistry
Royal Statistical Society
Society for Cardiological Science and Technology
Society for General Microbiology
Society of Biology
Society of Dyers & Colourists
The Organisation for Professionals in Regulatory Affairs