

24. What actions should be taken at EU level to further strengthen the role of women in science and innovation?

Submission from the genSET project, with the support of the genSET Science Leaders Panel

Background

Actions at EU level to strengthen the role of women in science and innovation are necessary to ensure that they are more fully included in R&D decision-making and in the management of R&D, in both public science institutions and in industry. The ‘leaky pipeline’ phenomenon persists in both universities and in companies, with women being ‘pushed out’ from the system, in particular at mid career and senior levels, resulting in a leadership and governance of the EU’s R&D capacity that is composed mainly of men. This inevitably means that women’s opinions are less likely to be voiced in policy and decision-making processes, which may lead to biased decision-making and priorities setting in scientific research¹.

The scarcity of women in certain scientific fields, and the lack of role models, has created serious consequences for the attitudes to science of young girls (and boys also), who, whilst recognizing the importance of the scientists’ work, are increasingly rejecting science as a career². A worrying trend since concerns are growing in several Member States over the ageing of the research labour force, and shortages of researchers are already becoming a problem in some regions and industries³.

The report, *Recommendations for Action on the Gender Dimension in Science*⁴, offers 13 evidence-based recommendations for addressing gender equality problems in science institutions. The evidence consulted by the panel of science leaders from across Europe in the process of producing their recommendation, demonstrates that the absence of women in strategic decision-making and in the governance of science - what R&D should be done, how, by whom, and for whom - has consequences for the quality of scientific endeavour⁵.

The trend towards globalization of scientific and technological capacity⁶ adds urgency for the EU to consider how to enhance its own research and innovation capacity and capability. Industry is increasingly attracted to readily available pools of trained scientists and engineers, and consumer markets outside the EU, and by the economic incentives of doing R&D in such countries/regions as Singapore, China, India, Latin America.

Crucially, the economic arguments, which underlie the “knowledge-augmentation” and “knowledge-exploitation” strategies in the context of the globalization of R&D markets, could be easily transformed to demonstrate significant value that could be created in Europe through better utilization of available, trained female talent, and by adopting new, gender-based perspective on research and innovation.

“Compared to quantitative easing and other macro policies, we believe gender equality is possibly the most powerful action the government can take to promote long-term, sustainable growth⁸.”(Goldman Sachs, 2010)

“The Index continues to track the strong correlation between a country’s gender gap and its national competitiveness. The most important determinant of a country’s competitiveness is its human talent—the skills, education and productivity of its workforce—and women account for one-half of the potential talent base throughout the world. Over time, therefore, a nation’s competitiveness depends significantly on whether and how it educates and utilizes its female talent, that is, to give women the same rights, responsibilities and opportunities as men⁹.”(World Economic Forum, 2010)

“Carve up the world’s economic growth a different way and another surprising conclusion emerges: over the past decade or so, the increased employment of women in developed economies has contributed much more to global growth than China has¹⁰.”(The Economist, 2007)

“Increasing female employment has already been an important driver of European growth in the past 10 years. A narrowing of the difference between male and female employment rates has accounted for half of the rise in Eurozone’s total employment rate and 0.4pp of its 2.1% trend growth since 1995. Encouraging more women into the labour force has been the single-biggest driver of Eurozone’s labour market success, much more so than conventional labour market reforms¹¹.”(Goldman Sachs, 2007)

The availability of highly educated women in Europe, who make up 52% of graduates and 45% of PhD awards⁷, offers an important competitive advantage in creating new ideas, markets, and products. The EU's patenting and research licensing trade will gain as a result. With its rich cultural diversity, Europe has considerable potential to use its investment in educating women to develop skilled technology entrepreneurs, who can use their experience and relationships to operate in cross-cultural, cross-border innovation environments – identifying new ideas and market opportunities, and creating new collaborative, international networks.

Furthermore, Europe's significant expertise and experience of mainstreaming gender in science, puts it in an advantageous lead role internationally with regard to exploiting new ways of enhancing the quality of its research and innovation by advancing gender-based perspectives into R&D and innovation programmes.

Action at EU level is needed in order to:

1) Promote gender and sex analysis as a dimension of science knowledge making so that the needs and impact of research on women and men is given equal importance in research design and exploitation.

This can be best addressed in Framework Programme 8 by explicitly requesting that proposals for funding incorporate where relevant a systematic analysis of sex/gender factors, to demonstrate that any assumptions of male-female/men-women similarities/differences have been addressed appropriately in the project design and delivery.

This action will advance scientific quality by removing potential for bias in research process and in applications of scientific results.

2) Promote gender equality as a dimension of quality of scientific human capital so that the intellectual and social capital of both women and men is deployed more effectively and equally.

This can be best addressed by requesting that scientific institutions receiving EU funding make their assessment and selection criteria and procedures transparent. In addition, the 8th Framework Program should request specific steps for the projects to undertake to implement the Recommendations of the Science Leaders'.

This action builds also on the Council of Europe's call for gender equality issues to be included in the modernisation of research institutions and in any structural and cultural changes (General Secretariat of the Council of the European Union, Brussels, May 28, 2010).

3) Strengthen the conditions for science institutions receiving EU funding to implement relevant existing gender equality policies and legislations.

This can be done in particular with regard to clauses advanced by the Treaty of Amsterdam and in the Commission's *Roadmap for equality*

*"The Commission should reinvigorate its approach to promoting female scientists and should aim to galvanise Member States to address gender gaps, especially where female researchers face specific obstacles, while ensuring that it redoubles its efforts to achieve gender balance with a specific strategy for the remainder of FP7. It **should accept its responsibilities in a leadership role, with the support of the Member States, to use positive measures for the training of female scientists**"¹²."(EC, 2010)*

*"...we found that 10 prescription drugs have been withdrawn from the U.S. market [between] January 1, 1997 [and January 2001]. **Eight of the 10 prescription drugs posed greater health risks for women than for men: four of these may have led to more adverse events in women because they were prescribed more often to women than to men, while the other four had more adverse events in women even though they were widely prescribed to both women and men**"¹³."(US OGA, 2001)*

"Europe simply cannot reach the level of SET resources needed for its development without finding ways to remove its anachronistic science gender imbalance. It seems almost inconceivable that, at the beginning of the 21st century, European countries in need of both innovation and increasing birth rates still do not consider it a matter of social priority to provide universally available kindergartens and schools which are open all day"¹⁴."(EC, 2004)

between women and men (COM(2006)92), which includes the following priority areas: 1) reconciliation of private and professional life; 2) equal representation in decision-making; and 3) elimination of gender stereotypes.

This action will ensure that science institutions catch-up on progress made on gender equality issues in other sectors.

4) Create new political stimulus for leadership in mainstreaming gender in ERA.

Recognizing that R&D has a major role to play in the societal and economic advancement of the EU, and that this advancement requires cooperation of the whole of society, women and men, greater awareness of gender issues is needed in the wider cultures of the scientific system. This requires collaboration between different sectors: universities, research institutes, industrial R&D labs, as well as Civil Society organizations. This can be done by requesting that the EU funded research consortia, and scientific organizations have put in place and are deploying a clear gender equality strategy and action plans, including actions for the advancement of women to leadership roles.

This action will help create conditions for developing sufficient research and innovation capacity in the EU to solve the grand challenges (health, age, energy, climate change) set out in the EU2020 Strategy, which have a strong underlying gender dimension.

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References

1. Mapping the maze. Getting more women to the top in research. 2008. EUR23311
2. Young people and science. 2008. Gallup Organization. Flash Eurobarometer 239 Analytical Report. European Commission: Research Directorate-General
3. R&D Managers and HR Managers working together for a successful R&D organization, EIRMA meeting, 8 April 2011
4. Recommendations for action on the Gender Dimension in science. 2010. FP7 SiS funded project, genSET, working with 100+ science institutions to build capacity for mainstreaming gender in science. http://www.genderinscience.org/consensus_report.html,
5. Promoting Women in Science and Medicine, The Lancet, 5th March 2011
6. International division of labour in R&D. Research follows production. 2011. Deutsche Bank Research. Thomas Neyer and Steffen Dyck, February 3, 2011
7. She Figures 2009
8. Womenomics 3.0: The Time Is Now. 2010. Goldman Sachs Global Economics, Commodities and Strategy Research, October 1, 2010.
9. Global Gender Gap Report 2010. World Economic Forum, Geneva.
10. The future of the world economy lies increasingly in female hands. 2006. The Economist, April 12, 2006
11. Gender inequality, growth and global ageing. 2007. Kevin Daly, Goldman Sachs Economic Research Group, April 3 2007
12. Interim Evaluation of the Seventh Framework Programme, *Report of the Expert Group, November 2010*
13. Drugs Withdrawn From Market. 2001. Letter to House of Representatives from US General Accounting Office, GAO-01-286R,
14. *Europe needs more scientists!* Conference. 2004. High Level Group (HLG) on Human Resources in Science and Technology, , Brussels, 2 April 2004
15. CERN, Tripartite Employment Conditions Forum (TREF), 73rd Meeting, Geneva – 18 & 19 May 2010

“Factors responsible for a low number of women in top management, the “glass ceiling” effect and the ‘leaky pipe’, should be investigated. Active support should be provided...” Participation in studies at the European level to strengthen the career chances for women scientists should be envisaged¹⁵.”(CERN, 2010)