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# **DRAFT REPORT**

on women's careers on science and University and glass ceilings encountered  
(2014/2251(INI))

Committee on Women's Rights and Gender Equality

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## MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

### on women's careers on science and University and glass ceilings encountered (2014/2251(INI))

*The European Parliament,*

- having regard to Articles 2 and 3 of the Treaty on European Union (TEU) and Articles 8, 10, 19 and 157 of the Treaty on the Functioning of the European Union (TFEU),
- having regard to the 1979 UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW),
- having regard to Directive 2006/54/EC of the European Parliament and the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast)<sup>1</sup>,
- having regard to the Commission communication of 21 September 2010 entitled 'Strategy for equality between women and men 2010-2015' (COM(2010)0491),
- having regard to the Commission communication of 5 March 2010 entitled 'A Strengthened Commitment to Equality between Women and Men, A Women's Charter' (COM(2010)0078),
- having regard to the European Pact for Gender Equality (2011-2020) adopted by the Council on 7 March 2011,
- having regard to the Commission Communication of 15 September 2014 entitled European Research Area Progress Report 2014 (COM(2014)0575),
- having regard to the Commission communication of 17 February 1999 entitled 'Women and Science: Mobilising women to enrich European research' (COM(1999)0076),
- having regard to the Commission communication of 17 July 2012 entitled 'A Reinforced European Research Area Partnership for Excellence and Growth' (COM(2012)0392),
- having regard to the Commission report of 3 September 2014 entitled 'Gender Equality Policies in Public Research' and based on a survey of the members of the Helsinki Group (the Commission's advisory group on gender, research and innovation),
- having regard to the She Figures 2012 Gender in Research and Innovation Statistics and Indicators, published by the Commission in 2013,
- having regard to the Council conclusions of 5 December 2014 on the European research area - Progress Report 2014,

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<sup>1</sup> OJ L 204, 26.7.2006, p. 23.

- having regard to its resolution of 10 March 2015 on progress on equality between women and men in the European Union in 2013<sup>1</sup>,
  - having regard to its legislative resolution of 21 November 2013 on the proposal for a regulation of the European Parliament and of the Council establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)<sup>2</sup>,
  - having regard to its resolution of 21 May 2008 on women and science<sup>3</sup>,
  - having regard to its resolution of 3 February 2000 on the Commission communication entitled ‘Women and science - Mobilising women to enrich European research’<sup>4</sup>,
  - having regard to Rule 52 of its Rules of Procedure,
  - having regard to the report of the Committee on Women’s Rights and Gender Equality (A8-0000/2015),
- A. whereas gender equality is a fundamental principle of the European Union, enshrined in the Treaty on European Union, and one of its objectives and tasks;
  - B. whereas gender equality is a basic precondition for the full enjoyment of human rights by women and girls and is essential for their empowerment and the achievement of a sustainable and inclusive society; whereas the insufficient use of human capital decreases potential advantage for research and innovation-related business and for overall economic development;
  - C. whereas according to the available statistics and surveys, women are under-represented at higher hierarchical levels, even in sectors where they form a majority such as the educational sector;
  - D. whereas there have been some positive developments regarding female researchers and their share has been growing faster than that of men in recent years, but the numbers of female researchers are still significantly lower than those for men, with the biggest gap being in the business sector;
  - E. whereas academic careers for women remain markedly characterised by strong vertical segregation, with only a very low proportion of women occupying the highest academic posts; whereas according to the 2012 She Figures women account for only 10 % of university rectors;
  - F. whereas there is a need to promote and support greater entrepreneurship among women;
  - G. whereas the reasons for this situation are numerous and complex, including negative stereotypes and prejudices and conscious and unconscious bias;

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<sup>1</sup> Texts adopted, P8\_TA(2015)0050.

<sup>2</sup> Texts adopted, P7\_TA(2013)0499.

<sup>3</sup> OJ C 279E, 19.11.2009, p. 40.

<sup>4</sup> OJ C 309, 27.10.2000, p. 57.

- H. whereas female researchers are more likely to assume a higher share of obligations related to parenting or their families than their male counterparts, and, therefore, all proposed measures have to take into account the possibility of successfully reconciling professional and family life;
- I. whereas despite all ongoing efforts to promote gender equality and equal opportunities, women still experience unequal access to research positions, funding, publishing and academic awards;
- J. whereas the Commission is already committed to ensure 40 % representation of the under-represented sex in the membership of all its expert groups, panels and committees, and, in particular, will apply this to the specific programme Horizon 2020;

### ***Gender equality in academic positions***

- 1. Notes that despite positive changes in recent years, gender equality in science and academia has still not been achieved, with the situation varying across Member States, fields of research and academic grade; points out the strikingly low presence of women in the highest academic and decision-making positions in scientific institutions and universities, which indicates the existence of a glass ceiling;
- 2. Reiterates that gender equality is one of the principles on which the EU is founded and has to be respected also in the field of research and academia; stresses that all forms of direct or indirect discrimination against women must be abolished;
- 3. Regrets that unequal access for women to research positions, funding and publishing still persists, including a gender pay gap in the area of science and academia, despite legal provisions for equal treatment and non-discrimination on the labour market being in place in the EU and Member States;

### ***Positive measures***

- 4. Urges the Commission and the Member States to analyse the existing legal provisions with the aim of properly implementing and, if necessary, revising them in order to enforce the equal treatment of women and men; the principle of non-discrimination must be observed in all types of employment contract or funding, and the legal right to equal pay for equal work must be respected for all elements of remuneration granted to men and women, including grants and scholarships;
- 5. Notes that besides the enforcement of legal provisions, cultural and institutional barriers that generate direct or indirect discrimination against women in scientific careers and decision-making have to be removed in order to achieve gender equality; these barriers are often based on bias, negative prejudices and conscious or unconscious stereotypes, and institutional changes can help remove them;
- 6. Urges the Commission to build on existing programmes and initiatives and to step up positive campaigns aimed at girls and women encouraging them to enter academic and research careers in all scientific fields, with a special focus on engineering and the technology sector, where, despite recent positive changes, the participation of women remains below average;

7. Calls on the Commission, the Member States and relevant stakeholders to strengthen initiatives and programmes encouraging women to continue their scientific and academic careers, such as coaching and networking programmes and supporting young female scientists participating in research programmes and grant applications, as well as supporting the individual careers of female researchers and the advancement of their careers to the highest grades; women should also be encouraged to apply for decision-making positions;

### ***Balancing professional and personal life***

8. Underlines that the need to successfully reconcile professional and family obligations often represents a major barrier to women advancing their scientific and academic careers, and represents one of the major reasons for them dropping out of those careers;
9. Calls on the Commission, the Member States, research funding organisations and other stakeholders to design programmes to actively encourage women to continue their careers after maternity or parental leave, and to provide funding for re-entry programmes, as well as allowing more flexibility regarding women's scientific production following the birth or adoption of a child and providing adequate childcare services; these measures should also be applied to researchers working on individual stipends and staff in externally funded research projects;

### ***Institutional changes and projects***

10. Takes note of the fact that, in addition to encouraging individual women's careers, institutional changes are needed in order to overcome the barriers to gender equality, especially with regard to vertical segregation and the participation of women in decision-making committees;
11. Urges the Commission to step up its coordination role regarding the gender mainstreaming initiatives within the European Research Area, and to raise awareness and offer relevant training aimed at stakeholders regarding the importance of gender mainstreaming in science and academia;
12. Welcomes the fact that the Commission finances the creation of gender equality plans through projects under the 7th Framework Programme and Horizon 2020, and also welcomes the joint project of the Commission and the European Institute for Gender Equality for creating an on-line tool for gender equality plans as a means of identifying and sharing best practices with relevant stakeholders; underlines that proposed best practices should take into account the independence of universities and research organisations and the variety of their organisational structures across the Member States;

### ***Steps forward***

13. Calls on the Member States to provide incentives to research institutes and universities to introduce and apply gender equality plans, to introduce a gender dimension in their national research programmes, and to implement comprehensive strategies for structural change in order to overcome the existing gaps in research institutions and programmes;

14. Calls on the Commission and the Member States to consider the creation of gender equality plans as a precondition for access to public funding in research, science and academia;
15. Calls on the Commission and the European Institute for Gender Equality to further develop the existing methodology for maintaining gender-disaggregated statistics for all academic and scientific activity, in addition to human resources statistics, and to develop valid indicators for measuring institutional change processes nationally and across the European research area;
16. Calls on the Member States, the academic sector and all relevant stakeholders to introduce special programmes in tertiary education in order to highlight the significance of gender equality;
17. Calls on the Commission to consistently apply gender budgeting to all programmes and measures providing funding in the area of science, academia and research;

### ***Getting involved***

18. Calls on the Commission and the Member States to further strengthen networking among female scientists at national, regional and EU level;
19. Reiterates the importance of ensuring higher participation of women in decision-making and of ensuring gender balance on evaluation panels, selection boards and all other committees, as well as nominated panels and committees taking decisions related to recruitment, funding, research programmes and publishing; research institutions and universities should be encouraged to introduce targets for the participation of women in those bodies;
20. Instructs its President to forward this resolution to the Council, the Commission and the governments of the Member States.

## **EXPLANATORY STATEMENT**

### **Glass ceiling**

The term glass ceiling was adopted in 1986 by the journalists of the Wall Street Journal. It describes the invisible barriers (based on prejudices) that limit the advancement of women to higher positions in their career paths.

The calculation range of glass ceiling reflects the degree of difficulty faced by women so that they can advance their career at levels similar to those of their male colleagues.

Particularly, the presupposed social role of women affects not only their personal lives, but also their experience in the workplace, causing numerous and complex problems.

Research shows that women's skills, methods and overall approach to scientific questions appear to be entirely the same as those of men.

As a result, women are under-represented at higher hierarchical levels, even in sectors where they represent a majority, such as in the educational sector.

The reasons that lead to this situation are numerous and complex, as is shown by literature review and the research conducted with emphasis on the educational sector.

By limiting the presence of women in the field of research through conscious and unconscious stereotypes, we are rejecting an important potential that has been developed at our universities and we are devaluing high skilled human capital. The insufficient use of this human capital decreases potential advantage for research and innovation related business and for the overall economic development. Science and innovation constantly require new ideas and the best ones unquestionably emerge in diverse environment.

At the same time, unequal treatment and discrimination of women is a gross violation of their basic human rights.

### **Statistics**

Published every three years since 2003, She Figures presents human resource statistics and indicators in the research and technological development (RTD) sector and on gender equality in science. The She Figures 2012 shows that despite progress, gender inequalities in science tend to persist. For example, while 59 % of EU graduate students in 2010 were female, only 20% of EU senior academicians were women.

Although the proportion of female researchers has been growing faster than that of men, in 2009, only 33% of researchers in the EU -27 were women. The percentage is the lowest in the Business Enterprise sector, where only 19% of all researchers were women, compared to 40% in the Higher Education Sector and 40% in the Government Sector.

Women's academic career remains markedly characterised by strong vertical segregation. In 2010, the proportion of female students (55%) and graduates (59%) exceeded that of male students, but men outnumbered women among PhD students and graduates (the proportion of female students stood at 49% and that of PhD graduates at 46 %). Furthermore, women



represented only 44% of grade C academic staff, 37% of grade B academic staff and 20% of grade A academic staff. The under-representation of women is even more striking in the field of science and engineering. The proportion of women increased from just 31% of the student population at the first level to 38% of PhD students and 35% of PhD graduates, but stood at 32% of academic grade C personnel, 23% of grade B and just 11% of grade A. Female graduates often opt out of science after they have completed their PhD.

Gender diversity in the boardroom is shown to lead to innovative ideas, increased competitiveness and performance, and improved corporate governance. More women in leadership positions also signal to the outside world that a company understands the complexity of world markets and is prepared to compete at the global level.

Recent studies conducted in the US demonstrate growing evidence of the role of gender bias in driving women out of science careers. 'A 2012 randomized, double-blind study gave science faculty at research-intensive universities the application materials of a fictitious student randomly assigned a male or female name, and found that both male and female faculty rated the male applicant as significantly more competent and hire-able than the woman with identical application materials. A 2014 study found that both men and women were twice as likely to hire a man for a job that required math.' (Joan C. Williams: The 5 Biases Pushing Women Out of STEM, Harvard Business Review, 5 March 2015).

### **Barriers to professional development of women**

Negative stereotypes and prejudices established from ancient times until today (biases generate big discriminations).

#### Maternity and other family obligations

In two-career marriages, female researchers are more likely to assume higher share of obligations related to parenting than their partners, also trying to fulfil the expectations of the society and usually accept more junior positions. Family obligations might be very likely also one of the most important reasons why female graduates opt out after they have completed their PhD, as it is the time to start a family. But in comparison to male researchers, it is more likely that having children will influence their productivity and their career advancement. According to the She Figures 2012, in 2010 researchers were more likely to have children than the working populations, therefore all measures have to take into account the possibility to successfully balance professional and private life.

#### Discrimination: the distinction of professions being to 'male and female'

Traditionally, societies often perceive some professions as being made for male and some for female. These stereotypes lead to the low representation of women in science and engineering. The proportion of women among full professors was highest in the humanities and the social sciences, 28,4% and 19,4% respectively, and lowest in engineering and technology, at 7,9%.

#### The pay gap

Gender pay gap problem must be acknowledged. The pay gap is present also in research and university careers, thus being one of the factors contributing to the possible frustration of

women in these fields over slow advancement of their careers, together with worse access to research funding and to publishing, and making them abandon their careers. Unequal pay for equal work is considered as direct discrimination in EU-law: 'The principle of equal pay for equal work or work of equal value(...) constitutes an important aspect of the principle of equal treatment between men and women and an essential and indispensable part of the *acquis communautaire*' (Directive 2006/54/EC).

#### Lack of ambitions (lack of vision and confidence)

The 'stereotype threat' makes women believe that they are less likely to succeed in their academic career than their male counterparts or that they are less competent, which indeed makes them act as being less competent.

#### Unequal access to the professions, to funding

Funding and resources are extremely important issue.

According to the 2012 She Figures, out of the 22 countries for which 2010 data are available, 17 countries reported higher success rates for men in obtaining research funding. In three EU Member States, Iceland and Norway the success rates were higher for women.

According to European Research Council, from grants awarded in 2007, women were very successful in the humanities with up to 50% of the grants, but in life sciences, only around 35%.

A more recent analysis of European Postdoctoral and Young Investigators Award shows women are receiving a substantial fraction of these prestigious honours. For three such programmes, women had lower success rates (80-90% of the male rate), but for some Marie Curie Mobility Actions, women had higher success rates. This can be seen as proof that EU Gender Budgeting works.

#### Lack of experienced management

Previous research has shown that in selection boards with equal participation of women, women were also more likely to prefer male candidates to female candidates with equal qualifications.

#### Sexual harassment of women

Previous research has shown that an important factor in succeeding in academic career is finding a mentor. However, in male-dominated fields, women are more likely than men to be in cross-gender mentoring relationships. Strict policies should be put in place in order to prevent sexual harassment.

#### **Ongoing programmes to promote gender equality**

Gender equality is one of the key priorities of a 'Reinforced European Research Area Partnership for Excellence and Growth' (ERA) and a cross cutting issue in Horizon 2020. Other initiatives include Helsinki Group on Gender in Research and Innovation, a campaign launched by the EC 'Science it's a girl thing!', a strategy 'Institutional change' to promote gender equality within the Research Performing Organisations (RPO) and Research Funding

Organisations (RFO) and EC funded expert group 'Innovations through Gender'.

## **Proposals to adjust the role of women in science (measures to eliminate)**

### Some measures relating to motherhood

- When women give birth or adopt a child, their scientific production should be calculated as less productive for at least a year and accompanied by a work pause when appropriate.
- Temporary reduction of their teaching or project management activities during the period of maternity.
- Quality crèches at work must be provided.

### General measures

- Inclusion of across the board gender equality in academic and scientific activity to integrate gender aspects into:
  - Structures (maintaining sex-disaggregated statistics for all academic and scientific activity and seeking a gender balance in professional associations and rotation of positions).
  - Programmes (including content on gender equality and considering the gender impact on particular research work).
  - Budget: Society must finance specific educational programs, in order to highlight the significance of gender equality.
- Supervision of selection procedures: entrance, promotion, awarding of sabbaticals, project funding, scholarships etc.
- Gender mainstreaming manuals and trainings offered to members of selection boards.
- Systematic accountability of progress in terms of equality.
- Assistance so that activities which use public money respect principles of equality (from the criteria that govern appointments in the Royal Academies to the science committees of congresses and national prizes or eligible positions).

### Positive Action Measures

- Money and/or reserved positions to achieve a numerical balance between women and men.
- Active recruitment of women (seeking potential candidates when women do not apply for a post), particularly for senior positions.

- Remedies by various organisations and fora for the correction or the drastic improvement of the situation.

In addressing the issues with glass ceilings that women can encounter in the science & other fields, the important area to note is that the glass is indeed only glass. The report will bring forward examples of how the glass is encountered for various situations & individuals – and how these barriers can be whittled away, or even shattered, by taking specific measures today that address gender bias and by working with the future workforce to build confidence, skills and change perceptions.

#### Some of the topics covered:

1. The life of a woman in science-related fields: examples that illustrate the statistics found in research.
2. Barriers, Quotas & #HeForShe: current methods of tackling the situation and aiming to make a difference.
3. Influences & Confidence Building must start earlier: examples of organisations who start the work at younger ages and why.
4. Specific recommendations that we can do to make a difference etc.

#### **Conclusion (Outcome)**

As a conclusion, we could define the glass ceiling as one of the barriers to women as a group, preventing them to reach top positions in science, university and professional field. Lots of research and gallop-surveys (old and recent) have been carried out in this connection and almost all converge in a common conclusion. Measures must be radical and not superficial. The co-operation on a collective level is of outmost importance and has to be made by each one of us on an individual and collective level.

There is always more need for a strong and committed women's unit. Member States should indulge better practice policies in recruitment and employment of scientists. The notion of equality should start from school where children learn that they are equal in every aspect of their lives. Diversity training should be also implemented by schools in order to support women in STEM professions. Need for continuously enforced legislation regarding that matter is crucial.

Men and women differ but nevertheless they must and they have to be equal concerning their rights, despite their age, religion, family status and their educational background.

The best reason for doing this is the one given by Nancy Hopkins: 'Changing hearts and minds one by one is much too slow-change the institution and hearts will follow'.