GENDER-NET Plus

Policy Brief:

Promoting Gender Equality in Research Funding

Deliverable 6.4



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Task Policy Brief: Promoting Gender Equality

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Introduction

Gender equality has been a priority for the European Union for a long time. The first four sentences in the European Commission's document *A Union of Equality: Gender Equality Strategy 2020-2025* are:

"The promotion of equality between women and men is a task for the Union, in all its activities, required by the Treaties. Gender equality is a core value of the EU, a fundamental right and key principle of the European Pillar of Social Rights. It is a reflection of who we are. It is also an essential condition for an innovative, competitive and thriving European economy."

A part of this task is to continue and strengthen the work for gender equality and diversity in all parts of the European Research Area (ERA).

She Figures¹, and other publications, show that although gender equality is improving in higher education and research, it is far from achieved. There is a marked lack of gender balance in decision-making bodies and in higher positions, notably among full professors. Many studies show that women experience disadvantages and barriers in pursuing a research career, which results in a loss of women talents². In research funding, studies have shown unconscious, implicit, gender bias can occur in the evaluation of research³.

In view of the importance of competitive funding, systematic gender equality work by Research Funding Organisations (RFOs) can play a central role in promoting gender equality and diversity in higher education and research, especially in the early stages of research careers. RFOs can contribute both by 1) promoting and supporting gender equality and diversity policies in higher education and research; and 2) working towards gender equality and diversity in their own research funding.

GENDER-NET Plus, an ERA-NET Cofund in Horizon 2020, is a collaboration of 16 research funders from 13 countries (see http://gender-net-plus.eu/). The collaboration promotes gender mainstreaming in research and innovation; especially through a joint transnational research call. Furthermore, GENDER-NET Plus is committed to promoting gender equality in research funding.

The GENDER-NET Plus consortium calls on all Research Funding Organisations to take concerted action to contribute towards gender equality and diversity in higher education and research.

To this end, GENDER-NET Plus puts forward the set of recommendations below. Some of the recommendations are directed also towards national governments and international organisations.

The ultimate goal of these recommendations is well expressed in the last paragraph of *A Union of Equality: Gender Equality Strategy 2020-2025*:

"Working together, we can make real progress by 2025 in achieving a Europe where women and men, girls and boys, in all their diversity, are equal – where they are free to pursue their chosen path in life and reach their full potential, where they have equal opportunities to thrive, and where they can equally participate in and lead our European society."

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¹ European Commission (2021).

² E.g., Swedish National Agency for Higher Education (Report 2007:54), Swedish National Agency for Higher Education (Report 2016:16), Caprile et al. (2012), National Academy of Sciences (2007), Drew and Cavanan (2020), Moss-Racusin et al. (2012).

³ E.g., Swedish Research Council (2020), Swedish Agency for Economic and Regional Growth (2015), Wennerås and Wold (1997), Bedi, Van Dam, and Munafo (2012), Bornmann (2007), Brouns (2000).

The background to this Policy Brief is provided by a GENDER-NET Plus report which, building on earlier research, investigates the work towards and monitoring of gender equality at the main research funders in the 13 GENDER-NET Plus countries.

The gender balance in the pool of applicants – the Higher Education Institution (HEI) researchers with a doctorate – is a fundamental factor for the study of gender equality in research funding. In the European countries studied in this report, the share of women among HEI researchers was at least 40 per cent in all scientific fields, except in natural sciences and engineering.

However, the study shows that women HEI researchers are less likely to apply for funding than men are. In 2/3 of the cases studied⁴, women HEI researchers applied for funding less often than men did, in 1/6 of the cases women were equally likely to apply, and in 1/6 of the cases women applied for funding more often than men did. In the "median case", men were 1.36 times more likely to apply for funding than women were. The median difference in application behaviour may very well be at least as big if all European countries were included.

In the countries studied, the gender difference in success rates varied with research field and country. Some countries and fields had larger differences than others did. It is crucial that these differences are monitored and analysed by the respective RFOs. However, in this study no clear systematic success rate trend for all countries and fields emerged.

The GENDER-NET Plus report was followed by a meeting in September 2021, where eight invited experts⁵, together with the GENDER-NET Plus consortium, discussed recommendations to promote gender equality in research funding. The recommendations build on the 2009 European Commission report *The Gender Challenge in Research Funding*, the 2017 Science Europe handbook *Practical Guide to Improving Gender Equality in Research Organisations*⁶, and other reports⁷, as well as published Gender Equality Plans from a number of Research Funding Organisations (RFOs).

Among many contributions, the meeting discussion emphasised the need to extend the work towards gender equality to the broader notions of equity and diversity, without losing track of gender (the Gender+ approach). Also, the discussion highlighted the new demands of Gender Equality Plans for applicants to Horizon Europe⁸, albeit these are directed more towards research performing organisations, and have less explicit guidelines for research funders.

⁴ There were 6 countries each divided into 6 research fields. In 24 of these 36 cases, women applied less often.

⁵ The invited experts were Ana Maria Fonseca de Almeida, Sao Paolo Research Foundation, Brazil, Fredrik Bondestam, Swedish Secretariat for Gender Research, University of Gothenburg, Lillian Hunt, Wellcome Trust, UK, Liisa Husu, Örebro University, Sweden, Marcela Linkova, Institute of Sociology of the Czech Academy of Sciences, Anne Pépin, European Commission, Helene Schiffbänker, Joanneum Research, Austria, and Holly Witteman, Laval University, Canada.

⁶ Science Europe (2017).

⁷ E.g., GEECCO (2020).

⁸ See <u>here</u>.



Recommendations for gender equality in research funding

The GENDER-NET Plus consortium puts forward the following recommendations to promote gender equality in research funding.

The recommendations are grouped under six headings, of which the first is directed towards the national level, and the other five are directed towards RFOs.

It should be noted that the recommendations do not address the issue of the gender dimension in research content, which is addressed in another GENDER-NET Plus report⁹, and is the focus of the GENDER-NET Plus research call.

The GENDER-NET Plus consortium is aware that there are national differences in the conditions for research and research funding. However, the recommendations are intended to be of a general nature.

1. Government instructions

- The European Commission has, for example in Horizon 2020, clearly stated the goal of gender equality in research¹⁰. At national level, the Government and Ministries should apply external pressure or incentives, e.g., by instructions or missions, to the RFOs. This is a very helpful measure to get the gender equality work going and to keep it going.
- National resource centres for gender equality in the research system (Ministry units, information centres, national committees) should be established and maintained to promote gender equality, including in RFOs. The RFOs often need help to develop their Gender Equality Plans (GEP). In that regard, the Global Research Council can play a role in supporting RFOs to develop their GEPs.
- Research funding in the field of gender equality in higher education should be increased. For example, research on gender consequences and impacts of a changing higher education system, or of increasing funding towards excellence centres could be supported.

2. RFO Gender Equality Plan

- The RFO leadership must be committed to and actively involved in gender equality in its research funding. The RFO must not simply delegate the gender equality question to a human resources officer or to a minor advisory committee.
- The entire RFO as an organisation must be committed to promoting gender equality and diversity. It is important to be open to bottom-up initiatives.
- The RFO should strive to influence the higher education system towards gender equality and diversity, both by developing policies and fostering cooperation, e.g., by improving the research culture, and by promoting gender equality and diversity in its research funding, including cooperation with other funders.
- The RFO should establish a permanent structure (department/section/task force or similar) for monitoring gender equality in its funding. The structure should report to, and be supported by, the highest level in the funding organisation, and be given adequate resources.

⁹ GENDER-NET Plus Deliverable 6.2: Comparative analytical report on existing national and regional initiatives on the integration of the gender dimension in research contents.

¹⁰ See https://ec.europa.eu/programmes/horizon2020/en/node/797



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- The RFO must develop and decide on a GEP to promote gender equality in its research funding¹¹. Preferably, the following points should be covered.
 - * Goals/targets for the research funding and the funding process
 - * Data on gender equality in the research funding
 - * Follow up and analysis of how the goals are met
 - * Knowledge and methods for reaching the goals
 - * Clear responsibility and accountability in the organisation for each goal
 - * Consequences/actions if the goals are not met
- The RFO should work actively with gender equality throughout the organisation. Invited speakers/experts can give valuable knowledge and positive energy.
 - * Discuss gender and diversity in research funding within the RFO.
 - * Conduct awareness-raising activities with evaluation panels and decision-making bodies, and with staff on a regular basis.
 - * Provide training to staff, evaluation panels and decision-making bodies, with clear examples and case studies on how to address bias, gender equality and diversity.
 - * Make participation in gender equality and diversity training mandatory for reviewers.
- The RFO should contribute to the work against Gender Based Violence in higher education institutions; e.g., by demanding policy documents from applying HEIs. This can be linked to requirements for good research conduct.
- An ambitious activity is to conduct gender equality observations in selected assessment panels as a basis for training and discussions, and for improving the assessment process.
- The RFO must be aware of potential unintended consequences of its GEP; e.g., greater burden on women and/or on disadvantaged groups to participate in committees, etc.¹²

3. Gender balance in decision-making bodies and evaluation panels

- All decision-making bodies of funding organisations should be gender balanced, with at least 40 per cent each of women and men¹³.
- There should be at least 40 per cent each of women and men among evaluators and reviewers.
- The RFO should increase its efforts to identify and recruit more women evaluators and reviewers, including through the use of databases of women scientists¹⁴, such as Academia-Net¹⁵.
- The gender balance among the chairpersons of evaluation panels should be considered.
- If a share of 40 per cent of women¹⁶ is difficult to reach in a particular research field, then a lower percentage can be accepted temporarily, in order not to over-extend the few women in the field. Preferably, in these cases a woman can be appointed as chairperson, to give better balance to the panel. Also, when underrepresented, the few women's time should be used wisely, by giving priority to achieving gender balance on the boards and committees with more impactful decision-making roles.

¹¹ See also the web page of the European Institute for Gender Equality, EIGE: https://eige.europa.eu/

¹² See also the last recommendation in Section 3.

¹³ The same percentage holds in EU programs, see https://ec.europa.eu/programmes/horizon2020/node/797

¹⁴ Cf. GEECCO (2020).

¹⁵ https://www.academia-net.org/

¹⁶ Or men, in the very few research fields dominated by women.



4. Monitor gender data and publish the results

- The RFO should collect data annually on the gender of applicants (including principal investigators and teams), grantees and evaluators as a part of the funding process.
- Gender data should be collected and presented in long-term time series to enable assessment of trends and development over time.
- The RFO should make their gender monitoring data publicly available on a regular basis on their websites, in publications and in annual reports. In particular, success rates and average amounts of funding for women and men should be published.
- The RFO should estimate the pools of potential applicants, per scientific field, to assess whether women apply for funding less often than men do.
- If the RFO supports research infrastructure, women's and men's use of each infrastructure should be monitored and be compared with the share of women and men in the research field.
- The data should be presented per scientific field, since there are large variations in the proportion of women researchers across disciplines.
- Diversity, inclusion and intersectionality need to be considered/embedded in research funding along with equity. However, in many countries, data on diversity, e.g. race/ethnicity, indigenous identity, sexual orientation, disability, etc., is not always possible to collect, due to legal constraints related to integrity. To avoid this problem, surveys and studies on diversity and research funding can be commissioned from and performed by researchers outside the RFO; the results can then be reported to the RFO, without the RFO having access to the sensitive personal data.
- Networks of RFOs can be fora for exchange and discussion on diversity and intersectionality issues.

5. Increase applications from and funding to women researchers

- Women should be especially encouraged to apply in the funding calls.
- Special attention should be given to the call texts, from a gender equality perspective (e.g., avoid wordings that might appeal more to men than to women).
- The eligibility and assessment criteria must neither favour men nor women (neither directly nor indirectly). To achieve this, understandings of and criteria for "research excellence" need to be challenged in terms of how they historically perpetuate inequality and biases. Special gender equality attention should be given to the choice of scientific field when new funding calls are decided.
- Support directed to the career paths of young researchers, especially women, should be considered when the funding calls and priorities of the RFO are decided. A more planned career path can lessen the insecurity of employment and reduce the number of short-term contracts.
- Special gender equality attention should be given to grants aimed at researchers at later career stages, e.g., different kinds of excellence grants. Gender equality should be explicitly mentioned in the call text. Each application should be asked to describe the gender balance in the research team and, for larger research teams, the gender balance in the team leadership. This should be considered in the assessment of the application as one of the quality criteria. Also, each application should include a Gender Equality Plan from the department/institution involved.



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- If the RFO supports research infrastructure, then equal access of women and men to the infrastructure should be monitored and promoted.
- Special attention to gender equality should be given to the way researchers' CVs are presented in the applications career paths other than linear ones should be expected and valued. Biological age should be replaced by career age (time since PhD award) when assessing the career of applicants. Research output assessment should not rely only on Journal Impact Factors¹⁷, but should consider accomplishments relative to opportunities.
- Parental leave should be taken into account in the RFO's internal evaluation rules by discounting at least one year per child when assessing career age.
- Measures to improve and facilitate work-life balance should be integrated in all funding forms. Mobility grant schemes should take into account and compensate for additional costs for mobile researchers with family obligations and/or disabilities.
- The burden on all applicants, but especially on women, should be minimised by streamlining application processes; e.g., standardising CVs and application formats, as well as facilitating porting application details between web forms. The number of separate applications, e.g., for special calls, should be kept to a minimum.

6. Generally improve transparency in research funding

- The transparency of the funding process should be improved, as a means to promote gender equality.
- Evaluation procedures, criteria and results should be made public.
- Procedures and criteria for recruiting evaluators and reviewers should be made explicit and published.
- More international evaluators and reviewers should be used.
- Effective procedures to prevent conflicts of interest, unethical behaviour, harassment
 or bullying, and any formof discrimination in decision-making or peer review should
 be established and published. A gender equality perspective should be integrated in
 codes of conduct for all persons involved in funding decisions.
- The applicants should receive constructive evaluation feedback in writing.

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¹⁷ Cf. the San Francisco Declaration on Research Assessment (DORA) https://sfdora.org/read/

References

- Artiles Viera, Marta, Maija Locane, Anne Pépin, and Viviane Willis-Mazzichi (2017). <u>Implicit Gender Biases during Evaluations: How to raise awareness and change attitudes?</u> Workshop Report, Brussels, 30-31 May 2017.
- Bedi, Gillinder, Nicholas T Van Dam, and Marcus Munafo (2012). <u>Gender inequality in awarded research</u> grants. Lancet, 380 (9840), 474.
- Bondestam, Fredrik, and Louise Grip (2015). <u>Fördelning eller förfördelning? Forskningsfinansiering,</u> <u>jämställdhet och genus en forskningsöversikt</u>. (In Swedish) Gothenburg, Swedish Secretariat for Gender Research.
- Bornmann, Lutz (2007). <u>Bias cut. Women, it seems, often get a raw deal in science so how can discrimination be tackled?</u> Nature, 445 (7127), 566.
- Bornmann, Lutz, Rüdiger Mutz, and Hans-Dieter Daniel (2007). <u>Gender differences in grant peer review:</u>
 A meta-analysis, Journal of Informetrics, Volume 1, Issue 3, July 2007, Pages 226-238.
- Brouns, Margo (2000). <u>The gendered nature of assessment procedures in scientific research funding. The Dutch case</u>. Higher Education in Europe, 25(2), 193-199.
- Bührer, Susanne, et al. (2019). Evaluation Framework for Promoting Gender Equality in Research and Innovation: How to define suitable indicators to evaluate gender equality effects in R&I systems?

 Catalano, Giuseppe (Ed.); International Society for Scientometrics and Informetrics -ISSI-: 17th International Conference on Scientometrics and Informetrics, ISSI 2019. Proceedings. Vol.2:

 With a Special STI Indicators Conference Track. 2-5 September 2019, Sapienza University of Rome.
- Caprile, Maria, et al. (2012). <u>Meta-analysis of gender and science research Synthesis Report</u>. Luxembourg: Publications Office of the European Union.
- Drew, Eileen, and Siobhàn Canavan (2020). <u>The Gender-sensitive University: A Contradiction in Terms?</u>
 Taylor & Francis.
- European Commission (2009). <u>The Gender Challenge in Research Funding: Assessing European National Scenes.</u> Luxembourg: Office for Official Publications of the European Communities.
- European Commission (2020). A Union of Equality: Gender Equality Strategy 2020-2025
- European Commission (2021). She Figures 2021.
- GEECCO (2020). <u>Promoting gender equality in the evaluation process: Guideline for jury members,</u> reviewers and research funding organizations' employees.
- GENDER-NET (2015). Award schemes, gender equality and structural change, Deliverable D2.7.
- GENDER-NET Plus (2021). <u>Gender equality in research funding</u>. <u>A study of 11 European countries, Israel, and Canada, Deliverable D6.3</u>.
- Husu, Liisa, and Paula Koskinen (2010). <u>Gendering Excellence in Technological Research: A Comparative European Perspective</u>, Journal of Technology, Management and Innovation, 2010, Volume 5, Issue I.
- Lerchenmueller, Marc J., and Olav Sorenson (2018). <u>The gender gap in early career transitions in the life</u> <u>sciences</u>, Journal of Research Policy 47 (2018) 1007–1017.
- Lipinsky, Anke (2013). *Gender Equality Policies in Public Research*. Luxembourg: Publications Office of the European Union.



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- Meulders, Danièle, Síle O'Dorchai, Robert Plasman, and Audrey Rigo (2010). <u>Gender wage gap and funding, Meta-analysis of gender and science research Topic report</u>. Brussels: European Commission, FP7.
- Moss-Racusin, Corinne A, John F Dovidio, Victoria L Brescoll, Mark J Graham, and Jo Handelsman (2012). Science faculty's subtle gender biases favor male students. PNAS 109 (41), 16474-16479.
- National Academy of Sciences, National Academy of Engineering, and Institute of Medicine (2007).

 <u>Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering</u>. Washington, DC: The National Academies Press.
- Ranga, Marina, Namrata Gupta, and Henry Etzkowitz (2012). <u>Gender Effects in Research Funding, A review of the scientific discussion on the gender-specific aspects of the evaluation of funding proposals and the awarding of funding</u>. Bonn: Deutsche Forschungsgemeinschaft (DFG).
- Rissler, Leslie J., Katherine L Hale, Nina R Joffe, and Nicholas M Caruso (2020). <u>Gender Differences in Grant Submissions across Science and Engineering Fields at the NSF</u>. BioScience, Volume 70, Issue 9, September 2020, Pages 814–820, https://doi.org/10.1093/biosci/biaa072.
- Sagebiel, Felizitas, and Susana Vázquez-Cupeiro (2010). <u>Stereotypes and identity Meta-analysis of gender and science research</u> Topic report. Brussels: European Commission, Directorate-General for Research and Innovation.
- Science Europe (2017). Practical Guide to Improving Gender Equality in Research Organisations.
- Swedish Agency for Economic and Regional Growth (2015). <u>Below the surface What's the talk and who gets the money II?</u>. (In Swedish, with <u>English leaflet</u>). Stockholm: Swedish Agency for Economic and Regional Growth.
- Swedish National Agency for Higher Education (Report 2007:54). <u>Postgraduate studies and research</u> <u>career the significance of gender and social background.</u> Stockholm: Swedish National Agency for Higher Education.
- Swedish National Agency for Higher Education (Report 2016:16). <u>Kvinnor och män i högskolan.</u> (In Swedish) *Stockholm: Swedish National Agency for Higher Education*
- Swedish Research Council (2020). <u>A gender equal process A qualitative investigation of the assessment of research grant applications</u>. Stockholm: Swedish Research Council.
- Wennerås, Christine, and Agnes Wold (1997). Nepotism and sexism in peer review, Nature 387, 341-343.