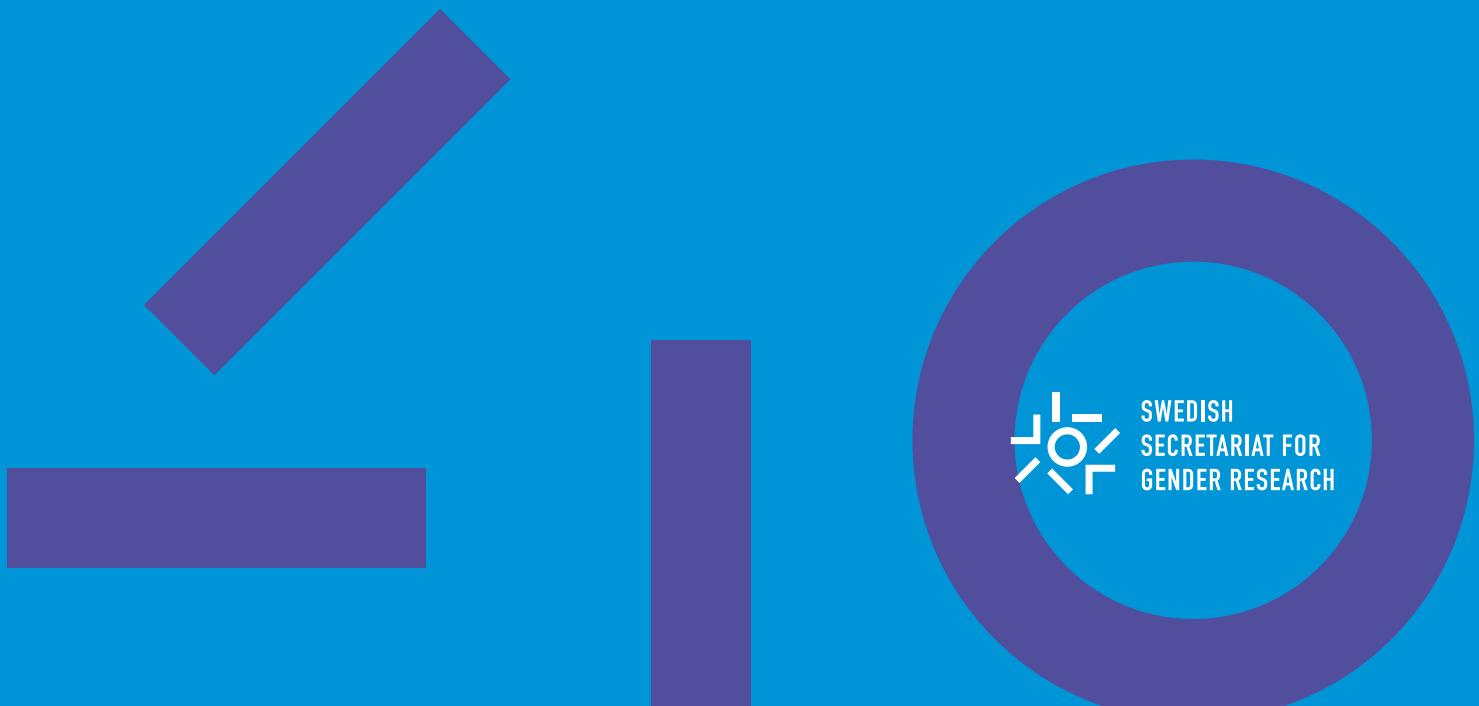




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The Gender Dimension in Research and Innovation

Results from a global survey on
research funding organisations





The Gender Dimension in Research and Innovation:
Results from a global survey on research funding organisations
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Foreword

A steadily growing interest in the gender dimension in research has become apparent in politics, policy and practice in recent decades. Just like the broader concept of gender equality, the importance of gender as a scientific perspective in research is more or less integrated today in global research policies, within the framework of the European Research Area (ERA) and Horizon Europe, and also as part of a number of national action plans and strategic priorities within research funding organisations. Gender is recognized as both a necessary and complex aspect of doing research, but also as an intrinsic part of understanding the core principles of excellence, innovation, scientific quality, meritocracy, academic freedom, etc.

At the same time, the use of gender as a concept in research policy varies in different historical and geographical contexts. It is also dependent on epistemological and ontological conditions, political and practical limitations, as well as on past and current public and academic debates. Furthermore, there is a transnational dimension to the way the concept travels among and between different stakeholders. Sometimes it moves things in a fruitful direction, but on other occasions it rather blurs the picture altogether. This is partly due to a lack of any basic agreement on integrating gender into research as such in some regions globally. Primarily, though, it is a consequence of concrete and practical dilemmas in the processes of granting research funding and, of course, is dependent on the individual researcher's ability and willingness to grasp the importance and complexities of the knowledge field of gender as such.

Therefore, this report on the work done so far on integrating the gender dimension into research funding organisations on a global scale has an important role to play in enhancing knowledge about the limitations, obstacles and solutions for research policy and practice. It is without doubt an important contribution to an ambition within research policy to move beyond simplistic and limiting understandings of one of several key challenges for future research.

Gothenburg, Sweden, in March 2021
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At several stages of the process, the work on the study have been presented at meetings with groups of officers at research funding organisations in Sweden that are tasked with implementing policies on gender equality and gender in research content. These officers have provided valuable insights that have improved the study in several ways. The last draft of the report was sent to the group for comments, which have since been incorporated. However, it should be emphasised that the shortcomings that still exist in this report are entirely the responsibility of the authors.

Summary

This report investigates how research funding organisations (RFOs) globally work to promote the inclusion of the gender dimension in research and innovation. Methods of sex and gender analysis in research serve to enhance research excellence as well as the lives of men and women. According to the European Commission, the gender dimension should be included in research when relevant. This is also stated in the policies of many national RFOs, but how do they work to implement them? This study investigates patterns in how the RFOs organize their work and points out common challenges as well as the consequences of different measures, priorities and decisions.

This study aims to map knowledge on this matter using several different methods. Primarily, the study is a survey of national RFOs around the world, as well as international or supranational organisations such as the European Union and the United Nations. We identified 150 RFOs, in most countries of the world, for the survey. Although the response rate was quite low, 20 per cent, we believe that there are interesting conclusions that can be drawn from the material regarding the types of policies and forms of implementation that have proven possible within each organization. To further map knowledge about this issue, we have completed a thorough review of previous studies of the issue, as well as analysed interviews with two RFOs that were conducted as a pilot to the survey. We have also carried out a smaller desk study of how a number of RFOs describe their implementations of relevant policies.

This study can serve as a starting point for more comprehensive studies of how RFOs around the world relate to issues of gender in the content of the research they fund. The report can be seen as an indicative guide for research funding organizations that are working, or want to work, with these issues. The report should be of interest to research policymakers who design the directives for research funding organizations, as well as members of review committees.

Main findings

This report shows that the inclusion of the gender dimension in research funding can be characterised by three common challenges. The main findings in relation to these challenges and the dilemmas underlying them are discussed below.

Vague definitions do not serve the intention

The RFOs face something of a dilemma in their work to include a gender dimension in research. RFOs do in no way want to control or interfere with the applicant's choices of methods, theoretical perspectives and the like. That is a matter of academic freedom, based on the principle that it is a prerequisite for quality in research that the researchers themselves are best equipped to judge how to investigate the research question at hand. Not interfering with academic freedom is an important aspect, but on the other hand guidelines with vague definitions or no definitions at all do not serve the basic intention. When RFOs do not define concepts, criteria and guidelines clearly, they end up being too vague, sometimes difficult to understand, and do not help the applicants either. In previous studies as well as in this survey, we can see that this vagueness and lack of definitions leads to the concepts being interpreted in a number of different ways. However, this challenge does not have to be a dilemma as such. If RFOs set out to promote greater awareness of the relevance of the gender dimension in research, one can question the point of being so vague that it does not make any difference.

The gender dimension should not be confused with gender equality

A troublesome circumstance is the quite common conflation of the gender dimension with gender equality - by applicants as well as by reviewers. An example is when applicants respond to the question of the inclusion of the gender dimension by describing the gender balance of their team instead, which can sometimes pass the review committees as an acceptable response. This is probably due to a lack of knowledge. For applicants not familiar with the concepts and the distinction between them, this tends to be confusing. If even the RFOs themselves get the concepts mixed up and use them interchangeably, it is difficult to achieve the set goal of promoting the gender dimension in research. One recommendation to avoid such simple mix-ups of this kind is to make clear what is meant in the instructions, for example by separating gender from sex, and gender in the research content from the gender balance in the research team.

All steps of the funding process should be considered

The last challenge concerns how the research funding process is organized and how much effort is put into improving its various parts. Among RFOs, it is more common to focus on how the calls for proposals are written and which questions are asked in the application forms, rather than on making sure the review committees have the appropriate competence to evaluate elements of the gender dimension in research applications. One could argue that there should be a connection between the requirements for applicants and the evaluation criteria if the organization has any ambition to follow through and consider the gender dimension throughout the various steps of the funding process. Applicants are asked to motivate if and how the gender dimension is relevant to their project, but the point of this is questionable if there is no expertise in place in the review committees to evaluate it.

Further suggestions

As seen in previous studies, the gender dimension is not something that can be tagged on. It must permeate the entire funding process, be used as a cross-cutting perspective and there from the beginning. One suggestion for achieving this is more and clearer guidance and training in gender methodology for applicants, reviewers and topic writers; another is a stronger focus on the review committees and having at least one reviewer with gender expertise.

Just as in a research proposal, the gender dimension has to permeate the RFO's entire funding process as well. Not only with regard to the review of the applications, but also the follow-up process. To see if these dimensions are used as planned, funded research projects must be followed up mid-way by the RFO, not just at the end of the project. In order to do this properly, expertise as well as allocated time and resources, are needed.

Introduction

Aim and scope

The purpose of this report is to map how research funding organisations (RFOs) globally work with issues regarding the inclusion of the gender dimension in research and innovation or, to be more specific, which measures they take to promote gender analyses in the research they fund. The study investigates patterns in how the RFOs organize their work and what dilemmas they are confronted with. What is their level of ambition? What kinds of priorities do they have?

The report can be seen as an indicative guide for RFOs who are working, or want to work, with these issues – not so much to present best practice as to point out common challenges as well as the consequences of priorities and decisions. The report should be of interest to research policymakers who design the directives for the RFOs, as well as members of review committees who are expected to participate in efforts to strengthen the quality of research by integrating the gender dimension.

The report is structured in six chapters. In the *Introduction*, we provide a background to the issues concerned, definitions of the terms in use, as well as presenting some methodological considerations. In the next chapter, *An overview of previous studies*, we summarise and discuss a selection of reports and articles on the subject. The next chapter is *Interviews with two research funding organisations*. In the chapter *A survey of the gender dimension in research funding* we present and discuss the results of the survey conducted as part of this study. Thereafter follows the short chapter *A supplementary desk study*. Each of the latter four chapters end with conclusions. These provide the basis for the last chapter, *Discussion*, where we also present some suggestions and concluding remarks.

Background

Equal opportunities in education and research for all citizens regardless of gender has been an issue of great concern in international agreements, from the Beijing Platform for Action of 1995 to the 2030 Agenda for Sustainable Development.¹ Gender equality is not only a question of fairness and of women's rights, but also something that an increasing number of institutions and organisations recognize as an important criterion for scholarly quality.² Attracting and retaining talent in all their diversity is crucial for achieving excellence.

In their statement of principles and actions, the research funding organisations (RFOs) that constitute the Global Research Council (GRC) have declared gender equality to be a key component in research excellence. To address the equality and status of women in research, the GRC advocates the promotion of gender balance in the research workforce by addressing academic culture and structures. As part of a broader approach to equality and diversity issues, and to improve the societal relevance of research, they also underline the importance of integrating the gender dimension into research design and the analysis of research outcomes.³

In the last decade, European research policy has placed increased emphasis on gender equality and integrating gender into research. Since 2012, these issues are a priority of the European Research Area (ERA), a part of the Europe 2020 strategy for the advancement of the European Union's economy. In its ERA Communication, the European Commission invited EU Member States to take steps to remove obstacles to women's participation and careers, to address gender imbalances in decision-making processes, and to strengthen the gender dimension in their research programmes. In the same communication, the Commission committed to fostering gender equality and the integration of the gender dimension into its forthcoming framework programme for research and innovation, Horizon 2020.

The anticipated impact was not only to increase the participation of women in research, but also to increase the scholarly quality and societal relevance of the knowledge, technologies and innovations produced.⁴

¹ United Nations and Department of Public Information, eds., *Beijing Declaration and Platform for Action: Beijing+5 Political Declaration and Outcome*, 2014; William Rosa, ed., 'Transforming Our World: The 2030 Agenda for Sustainable Development' (2017).

² e.g. 'Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers' (National Science Foundation, 8 November 2012); 'The DFG's Research-Oriented Standards on Gender Equality' (German Research Foundation (DFG), 8 August 2008).

³ 'Statement of Principles and Actions Promoting the Equality and Status of Women in Research' (Global Research Council (GRC), 2016).

⁴ 'A Reinforced European Research Area Partnership for Excellence and Growth: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions' (European Commission, 17 July 2012).

Methods of sex and gender analysis in research serve to enhance research excellence as well as to enhance the lives of men and women. The European Commission report *Meta-Analysis of Gender and Science Research* summarises some key ideas about research work as having implicit values, claiming that science is not value-neutral with regard to gender and other social inequalities. Sex and gender bias are persistent issues, and this has consequences for scholarly quality as well as the societal outcomes of research. Many feminist researchers have shown how normative notions of sex and gender, particularly concerning women, have distorted the priorities, designs and interpretations of results of scientific research.⁵ The language used to access and observe the world is often embedded in cultural assumptions and normative ideas about sex and gender. In order to counter the persistence of sex and gender bias and open up new lines of research, researchers need to work collaboratively to integrate the concepts of sex, gender and intersectionality into their work. According to the European Commission report, in order to ensure that these concepts are utilised, leadership is required on the part of RFOs, scholarly journals, and curriculum developers.⁶

Since the publication of the European Commission report, several projects funded by the EU's Research Framework Programmes have developed knowledge on the integration of the gender dimension. The GENDER-NET (2013-2016) and subsequent GENDER-NET Plus (2017-2022) cofunds have compiled and analysed measures and activities for RFOs and research performing organisations (RPOs), while GENDERACTION (2017-2021) has focused on research policies regarding the gender dimension and gender equality.⁷ Moreover, in a recent report, the H2020 Expert Group updated and expanded on Gendered Innovations/Innovation through Gender to make policy recommendations for Horizon Europe based on 15 case studies of the gender dimension in different areas of research.⁸

The following report investigates how RFOs globally address some of the issues raised.

⁵ e.g. Anne Fausto-Sterling, *Myths of Gender: Biological Theories about Women and Men* (1985); Evelyn Fox Keller, *Reflections on Gender and Science* (1985); Donna Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective' (1988): 575; Sandra G. Harding, *The Science Question in Feminism* (1986).

⁶ Maria Caprile et al., 'Meta-Analysis of Gender and Science Research: Synthesis Report.' (2012).

⁷ e.g. Ana Puy Rodríguez and María Pascual Pérez, 'Comparative Analysis of Existing National Initiatives on the Integration of the Gender Dimension in Research Contents' (2016); Genderaction, 'Genderaction Position Paper on Gender for the Implementation Strategy of Horizon Europe' (2019).

⁸ Londa Schiebinger and Ineke Klinge, 'Gendered Innovations 2: How Inclusive Analysis Contributes to Research and Innovation' (2020).

Concepts

The gender dimension

The gender dimension involves a shift in perspective, away from normative and non-reflective notions about gender. In research proposals, this can influence the choice of research problem, method, data collection, analysis, impact, and so on, but it is not a question of who conducts the research. Having both men and women as participating researchers does not guarantee the inclusion of the gender dimension in research, which is about improving the quality and relevance of the research.

Gender equality

The gender dimension (in the research content) is sometimes confused with gender equality (in research organisations). The simplest and most common definition of gender equality is equal representation of women and men, or gender balance, in research teams, review committees and research applications for example. However, a too narrow focus on numbers only can mask underlying inequalities. Gender equality is also a question of structural phenomena, such as career paths, employment terms and conditions, rewards systems, wage gaps, working conditions, amount of sick or parental leave accessible, and study options.

Sex and gender

In the research content, sex is a term that signifies biological women and men, or female and male animals, as statistically distinct categories. Gender is used to broaden the analysis from quantitative variables to structures and norms, in order to investigate the social consequences and cultural significance of this categorization. The concept of gender makes it possible to understand how processes can be gendered and how masculinity and femininity are negotiated in different contexts. Gender analysis can be about critically reflecting on masculinity and the male body as the norm, since what is perceived as ‘normal’ is often based on men’s experiences and conditions. This can concern most fields of research, from medicine, such as the treatment of heart conditions, to the social sciences and humanities, such as how the use of masculine-coded linguistic concepts in calls for proposals, such as excellence, can influence who is granted research funding.

Intersectionality and diversity

An intersectional approach can be used as a theoretical point of departure and methodological aid within research. It concerns how categories such as gender, race, sexuality, functionality and class interact with each other in various ways and create inequalities, discrimination and oppression. Theoretically, intersectionality is based on the idea that one such category cannot be understood in isolation from others. ‘Immigrant woman’ and ‘working class woman’ are examples of constructed female identities for which not only sexism but also racism and class oppression need to be analysed in order to understand the importance of power structures for

people's opportunities in life.

Diversity can be seen as a fairly value-neutral term, describing only factual conditions. Biological diversity, or biodiversity, signifies the variety of life on Earth, and "diversity" could be understood merely as a variety of empirical data, theoretical perspectives, and methodological approaches. However, as a policy concept it is often used instead as a normative term for respecting and appreciating individual differences in terms of age, ethnicity, gender, ability, sexual orientation, etc. In comparison to intersectionality, with which it is sometimes carelessly confused, it is an atheoretical concept and rather vague and open.

Method and approach

This report is a study of the implementation of policies on the gender dimension in research funding, primarily based on a survey of research funding organisations (RFOs) in most countries of the world, as well as international or supranational organisations such as the European Union and the United Nations. As part of the study, we have analysed interviews with two RFOs that were conducted as a pilot to the survey, read a number of previous studies on the gender dimension in research funding and, to supplement our study, we also carried out a small desk study of how a number of RFOs describe their implementation of relevant policies in this area. In the following section, we will discuss some of the methodological considerations for the study in each of its stages: the overview of studies, the interviews, the survey, and the desk study.

An overview of previous studies

A number of reports and articles on the implementation of policies on the gender dimension in research funding have been written over the years. In order to provide a broader approach to the issues we address, we have studied a selection of these. The examples were collected from Canada (the Canadian Institutes of Health Research), the European Union (Horizon 2020), the Netherlands (ZonMw), and Sweden (the Swedish Research Council and Forte), and they span a period of twelve years (2004-2016). Some of the studies are evaluations commissioned and/or published by the RFOs themselves, two are articles published in peer reviewed journals, and two are international research reviews on the matter. Although we cannot say with certainty that these cases are representative of global trends, they are well-documented and therefore well-suited for discussion. Given the variation in form, perspectives and purpose of the studies, as well as their chronological span, we want to stress the importance of not taking any of them out of their context. However, we have found some interesting observations in each study that we want to bring into the analysis of our own results.

Interviews with two research funding organisations

At an early stage of the study, visits were made to two RFOs that were known to address issues of the gender dimension in research: the Irish Research Council (IRC) and the Swiss National Science Foundation (SNSF). During these visits, interviews were conducted with representatives of each of these organisations. The interviews formed the basis for the design of the survey that would later be sent out, and, as well, an analysis of the responses that form part of our results.

The analysis of the interviews generated insights that, together with the reading of previous studies, proved valuable when we came to interpret the responses to the survey. Among other things, this concerned the question of what kinds of measures are feasible within a given organisational framework, and how this is expressed. For example, it gave us perspectives on the connection between gender equality and the gender dimension, and on the balance between working with the formulation of questions in application forms and criteria for the evaluations.

A survey of the gender dimension in research content

Through a web-based search process, 150 RFOs were identified from across the globe (see Appendix I). A departmental e-mail address was extracted from each organisation, with some exceptions where only personal addresses were available. These were compiled into a list of respondents, to which a survey was sent using the Sunet Survey tool.⁹ The survey covered important aspects of research funding: *Definition, Funding, Criteria, Expertise, Organisation, and Policy* (see Appendix II).

We want to highlight some methodological issues of the survey regarding selection and non-responses. Firstly, as the identification of RFOs was based on a search of the Internet, there could be relevant organisations in the world that were not covered by this survey. Secondly, the response rate was quite low, although several reminders and extended deadlines raised it somewhat, to 20 per cent. Only 28 organisations responded to the questionnaire, and two of them (one in Cyprus and one in Poland) had to be taken out of the material, as it turned out that they cannot be accurately characterized as RFOs. One of several factors that may have affected the response rate is probably that the survey was sent to departmental e-mail addresses, and not to individual officers within the organisations.

⁹ <https://www.sunet.se/tjanster/survey/>

The survey should not be taken as giving a representative picture of how the world's research-funding organisations work with the gender dimension in research content. However, by reaching out to organisations identified this way, we discovered several we did not know of previously and learned of their efforts to promote the gender dimension in research. Furthermore, we believe that there are interesting conclusions that can be drawn from the material regarding the types of policies and forms of implementation that have proven possible in each organisation. This study, with the observations we have made, can serve as a starting point for more comprehensive studies of how RFOs around the world relate to issues related to the gender content of the research they fund. This study can also serve as a source of knowledge for any RFO that works or wants to work with issues related to the gender dimension in research and innovation.

A supplementary desk study

Gendered Innovations has gathered information about the sex and gender analysis policies of several RFOs.¹⁰ In this study, we have used this material as a supplementary desk study. We reflect on the different approaches and what they imply. The entire desk study can be found in Appendix III.

¹⁰ <http://genderedinnovations.stanford.edu/sex-and-gender-analysis-policies-major-granting-agencies.html>

A Review of Previous Studies

In the following section, we will summarise and discuss a number of reports and articles on the implementation of policies regarding the gender dimension in research funding. We have included the observations we made from reading previous studies in a broader analysis of the issues we address.

Gender perspectives in funding applications within the humanities and social sciences

In 2004, the Swedish Research Council (VR) added a box in its application forms for funding that the applicants could tick if their project could concern issues of gender. This was a consequence of being tasked by the Swedish Government with promoting the gender dimension in research content, and VR intended the box as support for evaluations of its efforts to fulfil this task.

As the Swedish Research Council noted in research policy debate, there was a popular assumption that ‘ticking the gender box’ would result in a higher grant approval rate, even though the instructions to the applicants clearly stated that the question concerning the inclusion of the gender dimension was not mandatory. An evaluation of the open call for proposals in 2004, conducted by research fellow Hillevi Ganetz on an assignment from VR’s Gender Committee, refuted this assumption.¹¹

Out of 4866 applications that year, the applicants had stated that their project could concern issues of gender in 1035 cases (21 per cent). Forty-nine per cent of those were within the subject area of Humanities and Social Sciences; 26.3 per cent in Medicine and Health; 20.6 per cent in Educational Sciences; 3.4 per cent in Natural and Engineering Sciences; and 0.7 per cent in Longitudinal Databases.

A study of the applications within the subject area of Humanities and Social Sciences showed that the grant approval rate of the applications with ‘the gender box’ ticked was 11.02 per cent, compared to 12.86 per cent for all applications. In a closer reading, Ganetz categorized the applications into three groups: 1) *gender aspects*, where gender is present as an analytical category (rather than sex being a variable), but not very prominently; 2) *gender perspectives*, where gender is one of the main analytical categories; and 3) *gender research*, where gender is at the very centre of the project. For the applications categorized as gender perspectives or gender research, the grant approval rate for 2004 was 12.15 per cent.

¹¹ Hillevi Ganetz, ‘Genusvetenskapliga projektansökningar inom humaniora-samhällsvetenskap: En uppföljning av Vetenskapsrådets beredning och utfall år 2004’ (2005).

To conclude, ‘ticking the gender box’ did not automatically result in a higher grant approval rate. However, applications with a more solid gender analysis did better.

Following the recommendations from the evaluation of the call for proposals in 2004, VR revised its application form for the call in 2006. Instead of being asked whether their projects could “concern issues of gender”, the applicants were asked to state if their project involved “gender research or research with a gender dimension”. Definitions of the two categories were included in the instructions to the applicants. Only 28 per cent of the applicants in Humanities and Social Sciences ‘ticked the gender box’ (in 2004, the corresponding share was 48 per cent). The grant approval rate was 10 per cent for the applications involving “gender research or research with gender dimension”, compared to 12 per cent for all applications in the Humanities and Social Sciences. The difference, however, was not deemed to be statistically significant.¹²

From 2008, the Swedish Government cancelled the task to the Swedish Research Council to promote the gender dimension in research content. (In 2006, Sweden elected a new, centre-right government whose policies did not align with such measures.) Consequently, VR removed ‘the gender box’ from its application forms.

Sex differences in grant applications to ZonMw

Health research is a field where several measures have been implemented at international level to ensure that there is a greater focus on sex differences in research. In their study, Keuken, Haafkens and Klazinga (2007) evaluated the effects of various formal incentives introduced by the Netherlands’ funding organisation for health research and development, ZonMw, to encourage applicants to include sex differences in their research proposals.¹³ The study’s initial aim was to determine whether a given research proposal expressed an intention to consider sex and/or gender differences, although this was found to be impossible in practice. The reason was that, while these concepts are well defined in the literature, applicants still used the different concepts interchangeably when writing their research proposals. Therefore, the study was unable to determine whether the proposed studies addressed sex differences, gender differences or both. (This is a common conflation of the terms. See [Concepts in the Introduction of this report](#).)

In 1999, ZonMw adopted the general policy that its financial support was subject to the studies giving sufficient emphasis to diversity factors such as sex, age and ethnicity. Keuken et al. analysed research proposals submitted

12 Kerstin Nordstrand, ‘Genusforskning i ansökningar inom humaniora-samhällsvetenskap: En uppföljning av Vetenskapsrådets beredning och utfall år 2006’ (2008).

13 Debby G Keuken, Joke A Haafkens, and Niek S Klazinga, ‘Focus on Sex Differences in Grant Applications Submitted to the Netherlands Organization for Health Research and Development’ (2007).

to two important ZonMw grant programmes, the Prevention programme and the Innovation programme, in 2003, to determine whether they gave any consideration to sex differences. Those that did not were subjected to a further examination by two experts to determine whether a consideration of sex differences would have been relevant. The Prevention programme put in a greater effort to alert applicants to ZonMw's diversity policy. In contrast to the Innovation programme, the instructions for applicants contained more specific references regarding diversity issues.

The study found that 23 per cent of proposals submitted to the Prevention programme and 10 per cent of those submitted to the Innovation programme took sex differences into consideration. Conversely, 66 per cent of the research proposals in the Prevention programme, versus 20 per cent in the Innovation programme, failed to take sex differences into consideration, even though this might well have been relevant according to the experts' evaluations of their proposals.

The study suggests that the way in which the studied diversity policy has been implemented does not give applicants sufficient incentive to routinely consider sex differences when drafting their research proposals. The study suggests that the policy may be too broad, and that applicants need better guidance if they are to consider sex differences in their research proposals. Some recommendations are given based on the study's findings. Keuken et al. suggest clearer instructions to applicants as well as information that the evaluators (i.e. reviewers) will specifically look at the issue of sex differences in the received proposals. Another recommendation is for organisations to provide appropriate training for the staff of organisations that fund health research, as well as for present and future applicants and evaluators, with examples of how sex differences can be addressed in different kinds of research proposals. The study also suggests that policies and their progress should be monitored regularly and that clear indicators for measuring progress are needed.

Mainstreaming sex and gender analysis in basic and applied research

In their report to the European Commission on the gender dimension as well as gender equality in science, medicine, and engineering, Schiebinger, Klinge, Arlow and Newman (2010) distinguish three policy approaches.¹⁴ The first of these approaches focuses on programmes targeting women themselves in efforts to increase their participation in science and technology ("fixing the women"). The second approach seeks to increase women's participation by reforming research institutions ("fixing the institutions").

¹⁴ Londa Schiebinger et al., 'Gendered Innovations: Mainstreaming Sex and Gender Analysis into Basic and Applied Research: Meta-Analysis of Gender and Science Research - Topic Report' (2010).

The third focuses on overcoming gender bias by mainstreaming gender analysis in basic and applied research (“fixing the knowledge”).

These three policy approaches are interrelated: increasing women’s participation in science and engineering will not be successful without restructuring institutions and mainstreaming gender analysis in knowledge production.

Their paper focuses on the third approach. While the authors argue that restructuring institutions is important, it must be supplemented by efforts to eliminate gender bias from research and its design. Institutions cannot be restructured while assuming that what goes on inside them – research and knowledge production – is gender neutral, the authors claim. Change needs to come at a third level: gendered innovations in knowledge production.

Gendered innovations develop methods of sex and gender analysis for basic and applied research. Gendered innovations in science, medicine, and engineering employ gender analysis as a resource to stimulate creativity in science and technology, and by doing so to enhance the lives of both men and women.

Gender mainstreaming entails the systematic integration of gender equality into all systems and structures, policies, programmes, processes and projects, into ways of seeing and doing. Schiebinger et al. state that gender mainstreaming now needs to be expanded to include gender analysis in basic and applied research in science, medicine, engineering, and technology. Mainstreaming gender analysis in research creates gendered innovations.

Gendered innovations use gender as a resource to create new knowledge. It is crucially important to identify gender bias and understand how it operates in science and technology. However, the analysis cannot stop there: focusing on bias is not a productive strategy, the authors argue. Gender experts in science and technology are now shifting the emphasis away from critique and towards a positive research programme that employs gender analysis as a resource to stimulate gender-responsible science, medicine, and technology.

In order to mainstream gender analysis in basic and applied research, there is a need for gender experts, working with scientists and engineers, to develop internationally agreed upon methods of sex and gender analysis that can serve as a baseline for understanding how gender functions in research. It is not enough simply to ‘tag on’ a gender component late in a given project’s development. Research must consider gender from the beginning. Incorporating sex and gender analysis into basic and applied research requires that researchers are trained in specific methods, so that they can address gender issues where appropriate.

Schiebinger et al. stress the need for methods of sex and gender analysis that are readily useful to scientists and engineers. They argue this should be an international effort, as recommended in the 2010 genSET Consensus Report and the 2010 United Nations Expert Group Meeting on Gender, Science and Technology.¹⁵

According to Schiebinger et al., some of the main issues that need to be addressed are that scientists, engineers, and policymakers are not yet trained in methods of sex and gender analysis, and that methods of sex and gender analysis are not yet mainstreamed in curricula from primary through to tertiary science and technology education.

Schiebinger et al. present several further policy recommendations, which include training in gender methodology for researchers and reviewers, as well as measures for holding senior management accountable for developing evaluation standards that promote the proper implementation of gender analysis in research. The role of funding agencies is seen as crucial, and requiring that applicants include gender methodology in their research design is one recommendation.

Integration of sex and gender in health research policy

In health research, scientific evidence often fails to account for sex and gender, one consequence being that it is not always clear whether the results can be equally applied to men and women.¹⁶ This is increasingly recognized and to address the gap, some funding agencies and journals have started to implement policies and other approaches to raise awareness about sex and gender considerations among health researchers.

For all applicants to the Canadian Institutes of Health Research, a mandatory requirement to indicate whether their research designs accounted for sex or gender was introduced in December 2010. Johnson et al. have analysed the impact of the requirement by studying which applicants across different health research disciplines accounted for sex and gender in their applications. A descriptive statistical analysis was conducted to identify trends in the application data from three different funding competitions between 2010 and 2011. A qualitative thematic analysis of applicants' responses was also conducted.

The intention of the study was to investigate the extent to which consider sex and gender, identify areas of health research where sex and gender are well or poorly integrated, and reflect on opportunities to inform policy

¹⁵ genSET, 'Recommendations for Action on the Gender Dimension in Science: GenSET Consensus Seminar Report', (June 2010); UN Expert Group on Gender, Science and Technology, 'Gender, Science and Technology: Report of the Expert Group Meeting' (2010).

¹⁶ cf. Caroline Criado-Perez, *Invisible Women: Exposing Data Bias in a World Designed for Men* (2019).

and practice aimed at promoting the inclusion of sex and gender in health research. In recognition of the important influences of sex and gender on health, in December 2010 the Canadian Institutes of Health Research made a change to its grant application forms, requiring that all applicants respond to two questions:

- Are sex (biological) considerations taken into account in this study?
- Are gender (socio-cultural) considerations taken into account in this study?

Initially only those responding in the affirmative to either question were asked to describe how sex and gender considerations would be taken into account in their proposed research design. This was changed after one funding cycle so that negative responders also had to provide an explanation. All applicants were provided with access to a short web-based research guide on sex and gender and a frequently asked questions document in the online application system. These documents offered definitions of sex and gender and encouraged applicants to define and operationalize these terms as appropriate to their research designs.

Over the three competitions, which funded a total of 1459 projects, there was an overall increase in the percentage of researchers responding affirmatively to the sex and gender questions. In the first funding competition in December 2010, 26 per cent responded affirmatively to the sex and gender questions and in December 2011, 48 per cent of the applicants responded.

Johnson et al. investigated differences across disciplines, categorized into four research fields: biomedical, clinical, health systems and population health. The results showed that the highest proportion of researchers indicating that they were taking sex into account was in the clinical research field, and the highest proportion indicating they were taking gender into account was in the population health field. Researchers in the biomedical field were more likely than others to indicate that they were taking neither sex nor gender into account in their research with over 80 per cent of respondents indicating this in December 2010 and June 2011, and over 60 per cent in December 2011. In most categories, there was evidence of applicants using the terms sex and gender interchangeably.

Drawing on the results, Johnson et al. argue that research funding organisations (RFOs) play a key role in enhancing the uptake of sex and gender aspects in health research.

The authors point to the implementation of this requirement as one key factor, but also to providing applicants with clear instructions and knowledge about sex and gender as well as educating applicants, peer reviewers and research organisation staff on the importance of sex and gender aspects; and to engaging in measurement and monitoring of progress.¹⁷

Research overview of the gender dimension in funding and peer review

In their research overview, Bondestam and Grip focus on research on gender equality and gendered perspectives on research funding, which is not the focus of this report.¹⁸ However, studies describing and analysing evaluations of gender research is a particular focus in one of the chapters in this publication. That focus is motivated by gender research, characterized by interdisciplinary approaches, often bringing up questions about the challenges and opportunities in the review processes and structures.

The authors also argue that there are two important aspects of the matter worth looking into. One is to investigate whether gender research is evaluated in a fair and competent way, whether it is within gender studies, or in interdisciplinary research or within other disciplines. Another thing worth investigating, according to the authors, is whether the review committees have the expertise to be able to evaluate research proposals where a gender dimension is missing, in cases where it certainly would be beneficial for the project's scholarly quality.

Often connections are drawn between gender-equal research organisations and the integration of the gender dimension in research – yet another reason to look more closely at how gender research is evaluated, argue the authors. On an EU level these two issues are often linked together and “the gender dimension in research” includes both gender equality work and the importance of a gender dimension in research. At the same time, the authors argue it is important to point out that this policy-driven link between the two issues does not say anything about gender research as a field; most gender research looks at other aspects than the ones that would be categorized as the subfield gender equality studies.

The study finds that only a small number of the studied publications investigated these issues. It is argued that the research overview's focus and keywords in the search process might explain this partly, but it is also argued that research focusing on the evaluation of interdisciplinary research is a rather small research field, even when looking beyond the studied publications.

17 Joy Johnson et al., ‘Does a Change in Health Research Funding Policy Related to the Integration of Sex and Gender Have an Impact?’ (2014).

18 Fredrik Bondestam and Louise Grip, ‘Fördelning eller förfördelning? Forskningsfinansiering, jämställdhet och genus - en forskningsöversikt’ (2015).

The research overview links the discussion of how gender research, interdisciplinary in its nature, is evaluated to a broader understanding of the challenges of conducting fair evaluations of interdisciplinary research. The authors argue, drawing on works by Michèle Lamont and Lena Gemzöe, that fair evaluations of interdisciplinary research is a challenge.¹⁹

Although interdisciplinary efforts are often encouraged, not least from a research policy perspective, the discussion highlights that the standard for evaluations of interdisciplinary research in general is a hybrid of different disciplinary traditions. Much uncertainty remains when it comes to how to insert considerations of interdisciplinarity into evaluations; something that underscores the fact that older, more established disciplines continue to define the rules of the game, contributing to the fragility of interdisciplinary fields.²⁰

One important aspect of gender research, Gemzöe argues, is that it is studied both within a wide range of different disciplines as well as in a field of its own. It is argued that the way quality criteria as well as review committees are put together should be dictated by whether the aim is to encourage gender research in different disciplines or to encourage gender studies as a field. Drawing on the same ideas, other studies argue that structures in the assessment processes are crucial for whether or not interdisciplinary and critical approaches in research proposals stand a chance of being funded. It is argued that unconventional research should not be evaluated by existing and traditional structures, but instead that calls for proposals should be broadened, for example by explicitly encouraging interdisciplinary approaches, in order to decrease the risk of interdisciplinary fields being negatively affected by cognitive bias.

Interim evaluation of gender equality as a cross-cutting issue in Horizon 2020

In its framework programme for research and innovation, Horizon 2020 (2014-2020), the European Commission developed three main objectives to promote gender equality and the integration of a gender dimension. One of the objectives was to integrate the gender dimension into research and innovation content, taking into account as relevant biological characteristics as well as social and cultural features of both women and men in research (sex and gender analysis).

As a contribution to the overall interim evaluation of Horizon 2020 in 2017, an expert group led by senior researcher Suzanne de Chevigné conducted a study of the implementation of the programme and its funded projects for the first two years (2014-2015) based on the three objectives

¹⁹ Michèle Lamont, *How Professors Think: Inside the Curious World of Academic Judgment* (2009); Lena Gemzöe, *Kollegial bedömning av vetenskaplig kvalitet en forskningsöversikt* (2010).

²⁰ Lamont (2009).

concerning gender balance and gender dimension.²¹ The aim was to identify possible improvements and to provide an evidence base for designing future activities and initiatives, in particular the preparation of the next framework programme (Horizon Europe, 2021-2027).

In evaluating the integration of the gender dimension into research and innovation content, the expert group carried out an in-depth analysis of projects in topics that were gender-flagged (i.e. where one or more of the key words gender, sex, women or girls were mentioned). When the expert group had selected a topic, all of the projects flagged under that topic was analysed. For the analysis of the sample of 111 projects (out of nearly 10,000 financed under Horizon 2020 during the period in question), the expert group developed a ranking scheme:

- a) Projects that carry out a full gender analysis and a sex analysis where appropriate, take the gender dimension seriously into account and integrate gender in a good sense throughout the whole project;
- b) Projects that discuss the gender dimension in a few lines, and to some extent develop a sex analysis but miss the gender analysis even though it is relevant; and
- c) Projects that only mention (generally rapidly) gender balance in the team and completely miss any gender dimension in their research.

The study found that 13.5 per cent of the projects could be ranked as A. These projects tended to include good gender expertise and, more generally, social science expertise in their teams. Furthermore, 39.6 per cent could be ranked as B, and 46.8 per cent as C. An analysis of the reports from the panels evaluating the projects (evaluation summary reports, or ESR) found that only 36 per cent of the projects' ESRs included any type of comment on gender, regarding both the gender dimension and the gender balance in their research teams. There was a significantly higher frequency of gender comments from evaluation panels (i.e. review committees) where there was gender expertise, and they were also generally more detailed. Furthermore, the study found no statistical relationship between the scores given by the evaluators (i.e. reviewers) and the ranking of the projects as A, B or C, signifying that the quality of the gender dimension did not influence the evaluators. However, there was a difference in mean scores between projects with gender comments and projects without gender comments. Evaluators considered projects that "provoked" gender comments (nearly all positive) to be of higher quality.

The study gave some recommendations based on its findings. Gender training organised by the European Commission should be compulsory for project officers and agency personnel, for topic writers and for moderators of evaluation panels. In order to guarantee diverse perspectives, evaluation panels should consist of five people including at least one with gender ex-

²¹Suzanne de Cheivegné et al., 'Interim Evaluation: Gender Equality as a Crosscutting Issue in Horizon 2020' (2017).

pertise. Applicants should be encouraged to include gender experts and/or researchers with proven gender expertise in their proposals, especially under gender-flagged topics. For improving the evaluation of the gender dimension in research and innovation content in proposals, a basic guideline could be provided to help non-expert evaluators get a first impression: check using a word search that there is reference to sex/gender at a number of levels in the project, from objectives to communication of the results. The expert group also suggested that the tick box present in the evaluation template under the Sixth Framework Programme (FP6), “Have gender issues been taken into account properly?” should be reintroduced and applied to the different parts of the proposal (objectives, impact, etc.).

Gender and diversity perspectives in applications and reviewer comments

Since 2013, the Swedish Government has tasked an increasing number of its agencies with adopting gender mainstreaming as a strategy for all of their policies and activities and, when it comes to the research and innovation funding agencies, to promote gender equality in the distribution of funding.

In order to stimulate research on different groups in society, Forte – the Swedish Research Council for Health, Working Life and Welfare – launched a pilot in its open call for proposals and its programme grants in strategic research fields in 2016, where the applicants were required to state if their projects included diversity and gender perspectives. However, the instructions did not define these terms. By leaving it open to the applicants to present their own interpretations and definitions, the intention was to gather information on differing traditions, perspectives and understandings among the applicants, as well as the reviewers.

Subsequently, Forte commissioned the Swedish Secretariat for Gender Research to do a study of the applications and of the reviewers' comments. The study, conducted by researcher Helen Peterson, found that 88 per cent of the applications mentioned gender, 62 per cent sex, and 40 per cent diversity.²² The latter term was operationalized as ethnicity by 56 per cent of them, and as socioeconomic by 39 per cent. Thirty-eight per cent of the applications mentioned age/ageism. The most common (44 per cent) combination of terms was gender and ethnicity.

A closer study found that many of the applicants reinterpreted gender as sex, which was often, especially in quantitative studies, mentioned as a variable in the selection of informants. A few of the applications only described the gender balance in the research team. With reference to the study by the Swedish Research Council in 2005, many of the applications could be categorized as discussing *diversity and gender aspects* rather than *diversity*

²² Helen Peterson, ‘Genus- och mångfaldsperspektiv i ansökningar och yttranden: En kartläggning av 2016 års ansökningsomgång’ (Unpublished Working Material) (2018).

*and gender perspectives.*²³ In a number of applications, it was not clear how the description given in the “Gender and Diversity” section related to the project’s purpose and problem. The theoretical framework was, in general, very vague. In only about 10 per cent of the applications, could diversity and gender perspectives be described as well integrated into the project. Of those granted funding, the share was 27 per cent.

Furthermore, many of the reviewers’ comments did not elaborate on the diversity and gender perspectives which, according to the study, suggests that they did not put much emphasis on them in the rating of the applications. Fifty-four per cent of the comments mentioned only one or two words or, at most, a short sentence on the subject. Possibly, this was due to a lack of knowledge and competence among the reviewers concerning the issues of diversity and gender, and to a degree of uncertainty in how to understand Forte’s instructions on the subject. It could also be explained by the workload of the reviewers, since the brevity of the comments roughly correlated with the number of applications read by each reviewer. However, the comments on the “Gender and Diversity” section tended to be shorter and less evaluative than the comments in general.

Based on its findings, the study gave some recommendations. The instructions to the applicants could clarify what kind of information Forte was asking for in the “Gender and Diversity” section, for example by separating gender from sex, and gender in research content from gender balance in the research team. The instructions to the reviewers could provide clear definitions of sex, gender and diversity, and there need to be clear criteria for assessing diversity and gender perspectives in the applications. In addition, it is recommended for each committee to have at least one reviewer with specific knowledge in diversity and gender.

23 Ganetz (2005).

Conclusion

There are a number of topics present in several of the studies read for this overview. The need for more knowledge on how to include a gender perspective is one, clearly apparent as a main issue in several of the studies.²⁴ The issue on training and more knowledge is addressed both when it comes to applicants as well as evaluation panels. Research must consider gender from the beginning, it is not something that can be “added on”, and to be able to integrate a gender analysis from the beginning it requires that researchers are trained in it. Some argue readily useful methods should be an international effort.²⁵ Evaluators also need to have the right competence to evaluate these perspectives in an appropriate way. Some of the studies are giving recommendations, a common one being that both applicants, reviewers as well as topic writers need clearer guidance and training in gender methodology.²⁶ Another one is that at least one of the evaluators in a panel should have gender expertise.²⁷

Several of the studies stress RFOs important role and responsibility.²⁸ Some are recommending granting agencies to require that all applicants include gender methodology in their research design.²⁹ Monitoring and the need for indicators to follow up and measure potential progress are some measures stressed in the previous studies.³⁰

A popular assumption is that if one somehow has mentioned gender and “ticked the box”, one is more likely to receive funding. The previous studies show that this is a misconception,³¹ projects that have included some kind of gender perspective are not more likely to receive funding than projects that have not, in fact the approval rate of the applications with “the gender box” was lower than for all applications.³² Although, when singled out, projects that had a thorough gender analysis were deemed to have a higher scientific quality than those who only used gender as an aspect, not in a very prominent way.³³

24 Keuken, Haafkens, and Klazinga (2007); Schiebinger et al. (2010); Johnson et al. (2014); de Cheivegné et al. (2017).

25 Schiebinger et al. (2010); See also genSET (2010); UN Expert Group on Gender, Science and Technology (2010).

26 Keuken, Haafkens, and Klazinga (2007); Schiebinger et al. (2010); Johnson et al. (2014); de Cheivegné et al. (2017).

27 de Cheivegné et al. (2017); Peterson (2018).

28 Keuken, Haafkens, and Klazinga (2007); Schiebinger et al., ‘Gendered Innovations’; Johnson et al. (2014).

29 Schiebinger et al. (2010).

30 Keuken, Haafkens, and Klazinga (2007); Johnson et al. (2014).

31 Ganetz (2005).

32 Ibid.

33 Ganetz (2005).

Another aspect addressed is the interdisciplinary character of gender research. It is studied within a wide range of different disciplines as well as in a field of its own.³⁴ The authors are placing this fact in the broader context of the challenges of finding evaluators with the broad competence needed to evaluate interdisciplinary research fairly. Although interdisciplinary efforts often are encouraged, not at least from a research political perspective, it is argued that the standard for evaluations of interdisciplinary research in general is a hybrid of different disciplinary traditions. Much uncertainty remains when it comes to how to insert considerations of interdisciplinary into evaluations, something that underscores the fact that older, more established disciplines continue to define the rules of the game, contributing to the fragility of interdisciplinary fields.

Something brought up by almost all previous studies are how common it is that the concepts gender analysis and gender equality, as well as sex and gender, are mixed up. For example, it is quite common that the research team and its percentage of men versus women is described when a gender analysis is asked for.³⁵ One recommendation to avoid such quite simple mix-ups is to clarify in the instruction what kind of information the RFO asks for, for example by separating gender from sex, and gender in research content from gender balance in the research team.³⁶ However, there are no reason to believe this measure will solve the whole issue, as there will probably always be a number of applicants that will refer to gender balance in the research team in response to both of those two, separated questions.

34 Bondestam and Grip (2015).

35 de Chevigné et al. (2017); Peterson (2018).

36 Peterson (2018).

Interviews with two Research Funding Organisations

Irish Research Council

The Irish Research Council (IRC), launched in 2012 as a merger of the Irish Research Council for Science, Engineering and Technology (IRCS-ET) and (the Irish Research Council for Humanities and Social Sciences (IRCHSS), supports research across a number of disciplines and career stages. In response to the Horizon 2020 focus on societal challenges, the IRC has organized cross-sectorial partnerships with the objective of stimulating and supporting the establishment of a “Social Innovation Community” of researchers, social innovators, citizens and policymakers.

In its present Gender Strategy and Action Plan (2013-2020), the IRC is emphasizing the sex/gender dimension in research content as well as gender equality in terms of the under-representation of women in top positions and gender segregation among research fields.³⁷ The approach is quite similar to the Horizon 2020 objectives to promote gender equality in research funding and research teams and the integration of a gender dimension in research and innovation content (as discussed in the *A Review of Previous Studies* chapter), as the policy connects these different aspects.³⁸ However, the measures for gender equality – or, rather, *gender balance* – have been more practicable than those for sex/gender dimension. One method that has been put into practice is *gender blinding*, i.e. anonymization in terms of sex, where the applicants are encouraged not to let themselves be identified by name. This is not always successful since names can be found in letters of recommendation or other documents. Still, the proportion of women researchers who have received funding has become more even, so the IRC intends to keep making use of the gender blinding method. Moreover, the measure has not met with any great resistance, probably because it seems to fit into the ideal of meritocracy by separating the person from questions of excellence or quality of research.

Concerning the issue of the gender dimension in research content, the IRC introduced a question on its application forms for the call for proposals of 2016 very similar to the one that was being asked by Forte in

³⁷ Irish Research Council, ‘Irish Research Council Gender Strategy & Action Plan 2013-2020: Ensuring Excellence and Maximising Creativity and Motivation in Irish Research’ (2013).

³⁸ de Cheivegné et al. (2017).

the same year (as discussed in the *A Review of Previous Studies* chapter).³⁹ However, the IRC provided both applicants and reviewers with instructions, guidance and examples of studies to help them in their applications and evaluations, respectively. The applicants were also required to motivate why the gender dimension was not relevant to their project. These measures are currently evaluated, as the Gender Strategy and Action Plan is up for revision, they have not been met with any great resistance. If anything, the reviewers can be somewhat unsure of their competence in evaluating the gender dimension, or lack of it, in applications. The IRC have, as part of the review of the Gender Strategy and Action Plan, considered recruiting gender experts to their review committees and arranging workshops with gender researchers for their reviewers. Such measures have not been considered earlier, simply because the organisation has had no tradition of doing so when it comes to cross-cutting issues in general.

Swiss National Science Foundation

The Swiss National Science Foundation (SNSF) funds basic research in all fields including early stage researchers, and have set high goals for gender-equal representation when it comes to both funding and the decision-makers in the organisation. The research funding organisation has no specific plan for how to integrate gender into research and since Switzerland does not form part of the EU, EU policies are regularly monitored but not automatically adopted.

The institutionalisation of gender studies in Switzerland has developed very unevenly and with regional differences. There are now some very established locations for gender studies, but at other universities, the picture is far less clear. In addition, there are many excellent gender researchers who teach in other disciplines such as history and social anthropology, and who do not actually hold a professorship in gender studies. This situation leads to the fact that it is sometimes difficult to find corresponding expertise. However, there is strong interest in the issue, according to the interviewed representatives, and they are curious about how other research funding organisations are dealing with these issues.

SNSF's National Research Programmes are thematic programmes, financing cross-disciplinary, seven-year long projects, with calls for proposals every third year. Choosing the themes for the programme is described as a negotiation between needs and directions in Switzerland's national research policies, SNSF, the scholarly community and stakeholders, but also with other ministries involved, especially the finance ministry. Every programme is granted CHF 15-20 million.

³⁹ Peterson (2018).

Two earlier programmes have focused on gender equality research, the most recent one finalized in 2014. How gender perspectives can be part of other thematic calls for proposals was discussed during the interview, but there is no guarantee in the negotiations that such perspectives will be mandatory for applicants or what role it should have in the review process.

For the last years, the SNSF has been offering a programme aimed at supporting research in low-income countries. Twelve projects per year are granted funding. In the call for proposals, applicants are required to proof their gender awareness, i.e., they need to show that they have given thought to the various ways in which gender and sex can be considered in their planned project. They can argue for a gender dimension in the scientific project, and/or they can show that they have made an effort in recruiting a balanced team. If a topic does not lend itself to the inclusion of a gender dimension, the applicants are required to show that they have reflected upon this and to lay out the reasons for which the gender dimension is not included. In the review process, if two proposals are equivalent in terms of their scientific quality, the one where there are women researchers involved should be given priority. The same applies for the proposal with the most thorough gender dimension. In the evaluation committee of this programme, there is a designated gender equality expert and experts on gender studies.

SNSF also has a number of initiatives with the purpose of increasing the number of women in academia, such as an advanced post-doc funding scheme for women (Prima), career promotion for women, and Flexibility Grants for researchers with childcare duties.

Conclusions

The two organisations have different approaches to the issue. The differences between the countries must be weighed in here, regarding both how universities are organized and the fact that Ireland is a Member State of the EU and therefore must contend with EU policies, whereas Switzerland is not and does not need to consider EU policies. In both the IRC and SNSF, it is clear that they have ambitions when it comes to promoting the gender dimension in research. These organisations are facing partly similar, partly different, challenges. When it comes to the issue of competence in evaluating the gender dimension in research applications, the challenges seem similar in the two organisations regarding finding the right competence but also knowing what the right competence actually is.

The two organisations are dealing with gender equality in different ways as well as gender in research content. In their Gender Strategy and Action Plan, the IRC addresses both dimensions, while the SNSF does not have a general policy for these issues, but has tried different approaches. In both cases, it seems easier to address gender equality than gender in research content. The idea of what gender equality means is also much

clearer. Gender inequality can be understood as a lack of meritocracy, while the issue of gender in research content is closer to the core value of academic freedom and therefore harder to address. The measures necessary for achieving results may threaten the applicants' autonomy in choosing their theoretical perspectives and methodological approaches.

In both cases ambitions are clear, but since the measures taken must always relate to the institutional framework, there are limitations to what kind of challenges can be tackled. This concerns both gender equality vs. gender in research content as well as formulating questions in application forms and assessing competence when evaluating applications.

A Survey of the Gender Dimension in Research

The survey asked questions about definitions, earmarking of funds, criteria for evaluation, expertise in review committees, and organisation and policy (see Appendix II). Initially, it was emphasized that what was requested concerned the gender dimension and not gender equality. When presented here, the countries in which the organisations are located are used instead of the organisations' actual names. In cases where more than one organisation from the same country responded, we number them to distinguish them from each other.

Definitions of gender in research and innovation

There is quite a wide range in how, and if, organisations define what they mean by “gender in research and innovation” (cf. our discussion on concepts in the *Background* chapter). Many RFOs describe gender balance in research organisations or in decision-making, if anything. Only a few answers indicate an awareness of the relevance of gender in research content. Some organisations have clear definitions, but most of them instead have more or less (often the latter) detailed ideas on the subject. Sweden I had a rather detailed answer to the question of definition:

Sex describes the division into categories based on biological characteristics, usually women and men, girls and boys, male and female animals. Gender describes, in simple terms, the social and cultural processes that construct perceptions of sex and has implications for both structures of society and the gender identity of individuals. Including sex and gender dimensions in research can concern anything from including and analysing both women and men in the study material (sex dimension) to applying a problematising and reflective attitude to how gender affiliations are created and understood (gender dimension).

Estonia simply stated that they use the definition provided by the European Commission.⁴⁰ Canada points out that, while not all research has “potential sex, gender and/or diversity dimensions”, they also acknowledge that “these dimensions are more pervasive than one might think”. Norway stated that addressing the gender dimension means reflecting sex and gender in the content and impact of research.

⁴⁰ This could possibly be a reference to the three objectives of Horizon 2020: 1) Gender balance in research teams at all levels, 2) Gender balance in decision-making, and 3) Integrating the gender dimension in the content of R&I.

They claim that a growing number of studies show that doing so will contribute to increased creativity, scholarly quality and societal relevance.

Sweden II defined the gender dimension as theoretical gender and diversity perspectives in the content of the research, which applies in addition to a description of the variables included in the research project, such as gender, ethnicity and disability. The definition of the diversity concept includes aspects such as disability, ethnicity, socioeconomic status, age and sexual orientation. Similarly, Sweden IV had a pilot call for proposals, where they addressed the relevance of gender as a social category, along with other “*critical perspectives*”, such as sexuality, age and class.

Sweden III responded that they have no definition of the gender dimension but that they do consider gender, gender equality and diversity. They have set goals for gender balance, but while a “*small number of programmes address gender norms and values*” in research content, questions of “*norms and values are, however, not generally integrated in the whole organisation*”.

Kenya defined the gender dimension as “*the inclusion of gender equality issues in projects in order to collect data that captures the views, experiences and status of men and women, boys and girls as well as the social relations between the two*”.

International I is focusing on women’s participation in research as well as women as the beneficiaries of research. Differently put, they have more of a women’s dimension than a gender dimension.

If women are not involved directly in scientific research, we lose their specific experiences and local knowledge. In many countries throughout the developing world, women have daily needs and routines oriented to their roles as main care-givers to the elderly and children. Women make up the majority of agricultural workers too, growing and harvesting food for their families, as well as collecting fresh water for drinking. If women are included as both participants in scientific research and as the beneficiaries of scientific research, the impact on children, on the elderly and on local communities will be direct and highly effective. (International I)

International I’s stand on women’s issues can be contrasted to International II, also an RFO funding research on global issues, and their definition of the gender dimension. In their view...

...gender refers to the attributes and opportunities associated with being female and male and the socio-cultural relationships between women and men. These are all socially constructed and are learned through socio-cultural processes which are also context-specific and changeable, and they are related to and affected by race, ethnicity, class, economic status and age. [The organisation] adopts

the gender perspective, which means focusing on both women and men, their relationships with each other, and the resources to which they have access. In addition, it means working with a global perspective that allows for and appreciates diversity of all kinds.

To sum up, definitions vary, both in terms of to what extent they are actual definitions rather than just ideas, and in terms of what aspects they take into account.

Calls for proposals and requirements for applicants

The survey addressed the question of whether organisations have earmarked funding for research and innovation projects that include a gender dimension and how much of the total budget this earmarked money was. Organisations were also asked to give examples of how these funding opportunities are advertised in a call for proposals. The question also addressed how organisations work on including a gender dimension in calls for proposals in general, even when there is no earmarked money.

Only two organisations responded that they have earmarked funding for projects that include a gender dimension (Lebanon and International II). Both of them also provide specific training on writing proposals with a gender dimension. Lebanon stated that they do not always have specific programmes, but when the survey was answered one programme on gendered resistance was ongoing. It constituted less than 1 per cent of the total budget.

Some of the organisations responded that they do not have any earmarked funding, but that they require applicants to consider gender and other diversity dimensions in different ways, if and where applicable. The following quotes provide some insights on this matter.

*For some of its funding opportunities, [the organisation] requires applicants to consider sex, gender and diversity in their research design, if and where applicable.
(Canada)*

*Relevance of sex, gender and/or diversity. Where applicable, please describe whether and to what extent sex and/or gender [...] is relevant to the research project (methods, work programme, objectives, etc.). Where applicable, please also describe whether and to what extent diversity [...] may be significant for the research project (methods, work programme, objectives, etc.).
(Germany)*

Inclusiveness: research design and product development must demonstrate awareness of and relevance to diverse members of the community e.g. women, indigenous, ethnic, sexual minorities, possible links between disability and development.
(International I)

Sweden I has a pilot project ongoing in specific research fields, where they require the applicant to provide a reason why including a gender dimension is not applicable in their project. Norway has the intention of encouraging interdisciplinarity in calls for proposals, which they believe will lead to gender perspectives being included to a greater extent in the projects that are funded.

International I provided an answer that stands out from the rest. Instead of including a gender dimension in the calls for proposals, they provide training for successful applicants. This is in reverse to the approach to improve the gender dimension in approved projects, and they believe it to be a better way:

There is merit in the model that we use, which is to take on researchers even if they have not yet considered the gender dimension in their research, and then afterwards train them on how to do this. In this way, we ultimately increase the number of researchers considering a gender dimension in their work through training. Furthermore, while we do not explicitly require a gender dimension, it is considered perhaps in a more intersectional sense, where we ask how the research relates to all marginalised groups.
(International I)

Another organisation that stands out is Finland, which has one (out of 40) targeted, five-year term professorships dedicated to women's research and gender studies.

To sum up, there are few organisations that have earmarked funding, but quite a few require applicants to consider the gender dimension in their applications, some of them explicitly only "where applicable". Many do this in similar ways, whereas one organisation believes in a completely different approach.

Criteria and guidelines for evaluations

As observed in the section above, many RFOs do not have earmarked funds for research that includes the gender dimension, but instead encourage the inclusion of a gender dimension in all their funded research and innovation projects. However, there are few RFOs that evaluate the applications they receive on the basis of a specific criteria on the gender dimension in research.

Canada only includes the gender dimension in the evaluation criteria for applications for some specific programmes, such as the organisation's largest funding opportunity, as well as funding opportunities for students, graduates and fellows and those supporting collaboration between university researchers and partner organisations.

Sweden I has a pilot focusing on a few of the areas of research they fund. While there are no specific criteria, as the evaluation of the inclusion of the gender dimension is an aspect of the criteria "scientific quality", the organisation provides guiding questions for the reviewers. An example is:

1. Has the applicant in a satisfactory manner described the possible importance of sex and/or gender for the research project?
2. If not, is there a clear description of why?
3. If sex and gender are described as relevant to the research project, has the applicant considered sex and gender in the description of the proposed work, for instance as part of the preliminary data, the choice of samples or study population, or data analyses?

Sweden IV also had a pilot call for proposals where they addressed the relevance of gender as a social category, along with other "critical perspectives", such as sexuality, age and class.

There are differences in how detailed organisations are in formulating their criteria.

Sweden II includes "*Gender and diversity perspectives in the content of the research*" as one explicit aspect of scholarly quality in the evaluation criteria for all their calls for proposals. In order to avoid steering the review process in a certain direction, none of the criteria are followed by further explanation or instructions.

International I requires the applicants to clearly state the potential impact of their research on, among other things, the access of marginal groups to resources, goods and services, improved quality of knowledge and training in a specific subject, or a product developed and used by local communities.

"The highest score of '3' should be given to proposals where the impact is clearly stated – even if it is only a potential impact, it should be identified at the time of writing the proposal." Furthermore, the reviewers are asked to evaluate how the applicants, "*throughout the research proposal*", assess the "*awareness and efforts to include diverse members of the community e.g. women, indigenous, ethnic, sexual minorities, possible links between disability and development.*"

To sum up, among the few organisations that evaluate applications based on criteria related to the gender dimension, there are a variety of approaches to the issue.

Expertise in review committees

Organisations stating they had researchers with gender expertise in the review committees were also asked what they see as the challenges in the review process. Organisations responding that they did not have such expertise were then asked how they deal with the lack of it.

In this section, there is a fairly wide range of answers, ranging from organisations always having an explicit gender expert on their review committees to one organisation answering that if the review committee is lacking expertise in the area, information is available on the website.

International I say the selection committee meeting, where the final decisions ultimately take place, is attended, moderated and guided by a coordinator with gender expertise. Germany states that if the review committees are lacking expertise, there is information available on the organisation's website.

Some of the organisations say that it is not always possible to have explicit gender expertise. However, Sweden I, I, II, III, IV and International II stated that the question of the gender dimension has to be addressed, and Lebanon stated that it often is. Sweden I as well as Sweden II responded that when competence in the review committee is lacking, external expertise can be brought in. It is up to the reviewers to identify this lack of expertise. Sweden IV brought up that the idea of 'pooling expertise', and sharing competence and expertise among the different research funding organisations (RFOs) in the country has been on the agenda.

Slovakia and Estonia responded that some reviewers have expertise, and it is up to them to bring up the issue. Slovakia stated that it is not an easy task, because the awareness is low and due to resistance:

*But only partially, some of the researchers have expertise in the gender dimension. We expect that this expertise is shared during the session of assessment panels /committees. As the challenge we see a low awareness of the gender dimension in research and innovation and the persistence of traditional patterns of thinking.
(Slovakia)*

Canada and Norway have special training for reviewers regarding these issues.

Members of peer review committees receive training and supporting documentation to help them assess sex, gender and diversity considerations in applications. Staff is available during the review of applications to provide further support in assessing these components. (Canada)

Canada also pointed out that they are currently developing targeted resources, such as specific examples of how sex, gender and diversity considerations could be applicable to research in various natural sciences and engineering disciplines.

Norway stated that they have implemented a course for reviewers to increase their knowledge about how to better handle conscious and unconscious bias.

To sum up, several organisations find it challenging to get the right expertise for their review committees. Some organisations have special training for their reviewers on bias and/or how the gender dimension can be applicable to research.

Organisation and responsibility

The majority of the organisations are not required to provide funding for the gender dimension in research and innovation. The organisations in Sweden are a clear exception since the Swedish Government has set the requirement to integrate a gender dimension in research and innovation. This affects Sweden I, II, III, V. Where the responsibility is placed within the different organisations differs.

In Sweden I, the board and executive management are responsible for handling these requirements. This is also the case for Sweden II, where the responsibility has been delegated – first to a working group for gender mainstreaming, and later on to the division for research and innovation. In Sweden III, there is no unit, group or person responsible for handling the requirements. Moreover, in Sweden IV, one person at the division for analysis and policy is responsible.

In two of the organisations, International II and Norway, the requirements are set by the management.

Canada has a working group on equity, diversity and inclusion (EDI), which is tasked with ensuring that the objectives found in the Tri-Agency EDI Action Plan (which is carried out by the three separate federal RFOs in Canada) are met through work accomplished in all its divisions.

Furthermore, a team dedicated to EDI in the policy division has the responsibility of providing advice and developing policies and requirements concerning EDI.

To sum up, four organisations, from the same country, are required by the government to address the question of the gender dimension in research and innovation. The rest of the organisations are not required to do so, but obviously, many of them are working on these issues regardless.

Gender balance rather than gender dimension

Some of the organisations only mention their efforts made to promote gender equality, often in terms of gender balance in the distribution of funding or in the research teams, rather than gender in research content. Even though the survey explicitly did not address gender equality, since so many organisations perceived it as such, we will present some of those efforts in order to demonstrate how common it is to conflate the issues or to see them as inter-connected. Only one organisation explicitly made the distinction and addressed this issue:

*Sex and gender perspectives in research content should not be confused with gender distribution in research teams or gender equality in assessing research applications.
(Sweden I)*

Among the gender equality efforts stated, some targeted the distribution of funds between women and men.

- Monitor the share of male and female grant holders (Denmark)
- Actively supports the participation of women in the research workforce and their funding schemes have consistently high grant success rates for fellowships and projects led by women (Australia)

Some of the efforts target work-life balance for researchers.

- Funding periods usually prolonged because of family leave, and the review procedure for funding of research posts take into account career breaks due to family leave (Finland)
- Puts strong emphasis on equal opportunities e.g. by taking family-friendly provisions to further balance gender relationships (Belgium FWO)

Some efforts take into account the representation of women and men in the review committees.

- Increases the proportion of women among reviewers with a view to working towards a balanced composition in review committees (Finland)
- Review committees contain at least 1/3rd experts from the underrepresented gender (Belgium FWO)
- Try to consider female candidates as often as possible, when recruiting to committees – “but it’s difficult to find new

female members or to keep them more than one mandate because, as a minority, they are also requested by other institutions and it's a lot of pressure on committed female researchers" (Switzerland)

Some efforts take into account the review process in relation to gender equality.

- Open and transparent review procedure for equal and fair evaluation of qualifications regardless of sex (Finland)
- Acknowledges the need to have more reviewers with expertise in gender and equality dimensions as gender equality is an essential part of responsible research (Finland)
- All reviewers are instructed about unconscious bias, including gender bias, in research (Belgium FWO)
- "It would not be fair to say that the assessment process of applicants is done without any expertise in the gender dimension, however there is no formal expertise" (Denmark)

All of the efforts above were stated by organisations that only addressed gender equality in their response, not the gender dimension in research. There were also cases where the organisations provided answers concerning gender equality as well as the gender dimension in research.

- "If women are not involved directly in scientific research, we lose their expertise and local knowledge" (International I)
- Has set a goal to have an equal distribution (40-60 per cent range) in terms of gender in the project groups of granted projects, and evaluates the distribution in most programmes during the decision-making process (Sweden III)
- Women's applications to the open calls are observed to be "equal or slightly fewer in number" than men (Lebanon)
- Register the number of men and women in R&D (Montenegro)
- The success rate of proposals regarding many aspects, including field of scholarship, age and gender of project leader, has (2018) been monitored (Latvia)
- Certain calls aimed at young female researchers (International II) Women are encouraged to apply for membership on the board of trustees, but, since it takes place through elections, boards do not always include the number of women they would like to see (Lebanon)
- It is difficult finding female reviewers (International II).

To sum up, quite a few organisations have gender equality efforts, but do not work with the gender dimension in research. They have still chosen to respond to the survey, although it did not concern gender equality. Some organisations have described efforts regarding both gender equality and the gender dimension in research.

Conclusions

Among RFOs it is common to conflate the issues of gender equality and gender in research. Some of the organisations only mention their efforts made to promote gender equality, regarding the distribution of funds, the gender balance in research teams and review committees and work-life balance for researchers. While there can be organisational advantages in dealing with gender equality and gender in research in the same policy, there is also a risk of neglecting the area of gender in research if it is mixed up with gender equality efforts, such as gender balance in research teams or the like.

In gender research, whether a part of gender studies or any other discipline, the baseline is critical thinking and questioning of the status quo. Traditionally, within gender research, gender as a concept implies structural power inequalities. When investigating how RFOs understand and define gender in research, definitions built on those kind of ideas are seen sometimes, but often “gender in research” is not understood along those contextual lines. Definitions vary, both in terms of to what extent they are actual definitions or just ideas, and in terms of what aspects they take into account. In a few cases, there are clear definitions of sex, gender and diversity, whereas most of them are quite vague in how they define the terms in question. This vagueness could be intentional, motivated perhaps by respect for the value of academic freedom. Nevertheless, it risks reinforcing, or at least not challenging, the common conflation of gender equality and gender in research. Some organisations touch upon why they make efforts to include gender in research, where scientific quality and societal relevance are some aspects. Since it dictates how requirements are set and how applications are evaluated, more RFOs should ask themselves this question.

Earmarked funding for gender in research is uncommon, but there are some organisations that require their applicants to describe whether their projects will consider the relevance of gender in various respects. Some of the organisations use the term “when applicable” when asking about the gender dimension in their requirements, whereas only one of them approaches this matter the other way around: by requiring applicants to give reasons why a gender dimension is not applicable. In the first case, an applicant can “get away with” saying it is simply not relevant to their project. In the second case, the way the requirement is set can make the applicants seriously consider the relevance of the gender dimension in the entire research design. The main challenge in this is that researchers have a tendency to adjust their proposals to fit the requirements, but without the intention of actually improving the research project. This again relates to the RFOs’ whole idea of why the gender dimension should be included in research content, whether it concerns scientific quality or societal relevance.

A few organisations include the gender dimension as an aspect of scholarly quality in their evaluation criteria, and one organisation as an aspect of the potential impact on society. Some organisations provide guiding questions for reviewers, whereas others have the gender dimension in research as one

aspect of scholarly quality, but chose not to define it further or to give any further instructions, arguing that doing so could risk steering the peer review process in a certain direction. The dilemma here is similar to the one regarding requirements for applicants: RFOs want to avoid any sort of steering, in the name of academic freedom, but the vagueness that comes with this stance can instead impose a risk of not being able to achieve the objectives regarding gender dimension that they are committed to. Furthermore, one can argue that there should be a link between requirements for applicants and evaluation criteria, if the organisation has any ambition to follow through and consider the gender dimension through the various steps of the funding process.

The question of expertise on the gender dimension in review committees is a challenge to RFOs, which they tackle in different ways. In some cases, the lack of expertise needs to be identified by the reviewers themselves. This is apparently difficult; it is often hard to identify what you do not know in circumstances like this. Some organisations say there is expertise among their reviewers, and that it is up to them to address the issue. In cases where reviewers with expertise in such committees are few, a risk might be that they are simply there as tokens. Depending on how the peer review process is set up, it might also be difficult for those reviewers to bring up the issue, especially if they are often met with resistance. At the risk of over-generalization, one organisation points out that awareness of the relevance of gender in research is low and that there is resistance to the issue. Some organisations have special training for their reviewers, on bias and on how to evaluate the gender dimension in research. Training like this, together with guidelines, can be used as a complement to recruiting expertise to review committees. On the one hand, training efforts could be democratizing and complement the knowledge among reviewers, but on the other hand, the risk might be that no real experts are brought in and that no one takes responsibility for addressing these issues.

A Supplementary Desk Study

Gendered Innovations has gathered information about several RFOs' sex and gender analysis policies (see full desk study in Appendix III).⁴¹ Our analysis of this material shows there is a wide range in the extent to which research funding organisations (RFOs) define their work on incorporating a gender analysis. Some RFOs have clear, explicit guidelines, which specify that the organisation requires all applicants to indicate whether there is a gender dimension in their proposed project, and if so, how a gender dimension will be integrated (Irish Research Council; Canadian Institutes of Health Research; Dutch Ministry of Health, Wellbeing, and Sports; European Commission Directorate-General for Research and Innovation; French National Research Agenda, Austrian Research Promotion Agency, Austrian Science Fund). Some organisations also specify how they ensure that their review committees have the right competence to evaluate the gender dimension (Irish Research Council; Canadian Institutes of Health Research), with one example of how reviewers also must provide recommendations for improvements in the review process (Canadian Institutes of Health Research).

Guidance and training in gender analysis is provided by some organisations, in some cases both for reviewers and applicants (Irish Research Council), by some only for potential applicants (Canadian Institutes of Health Research), by some only for reviewers (French National Research Agenda), and by some only for external reviewers (UK Research and Innovation).

On the other end of the spectrum, there are some cases where "gender analysis" is not further specified; it is then assumed that the reader of the document knows what that implies (Spanish Ministry of Science and Innovation and Universities). Some organisations are very clear and explicit in *what* they do, but do not specify *how* they do it (Bill and Melinda Gates Foundation; Research Council of Norway; World Health Organisation). Some organisations do not consider gender, but only biological sex as a variable, for example when it comes to persons (or animals) being studied (US National Institutes of Health; German Research Foundation) as well as for the research team and for individuals affected by the implementations of the research results (German Research Foundation). Although, in the case of the German Research Foundation, the instructions refer to "sex and/or gender", but in the specification of them they seem to concern biological sex only.

⁴¹ <http://genderedinnovations.stanford.edu/sex-and-gender-analysis-policies-major-granting-agencies.html>

Applicants are asked by several RFOs to describe how sex and/or gender is taken into account in the project's content. The applicants are only required to do so when "relevant" or "applicable" by some (European Commission Directorate-General for Research and Innovation; German Research Foundation), while by others, the applicants must provide reasons why they have excluded a sex and/or gender dimension (Canadian Institutes of Health Research). The applicants are also asked by some to outline how a sex and/or gender analysis will be implemented and integrated in the different steps of the project (Irish Research Council; Dutch Ministry of Health, Wellbeing, and Sports, French National Research Agency).

Discussion

The inclusion of the gender dimension in research funding applications has been shown, in the four different parts of this report, to be characterised by a few common challenges and dilemmas:

How clear and detailed can the definitions of gender be in calls for proposal and application forms, and the instructions to applicants as well as to reviewers, without posing too much of a restriction on the academic freedom of the researchers?

How can the gender dimension in research be related to, or separated from, issues of gender equality in review committees and research performing organisations?

How do research funding organisations (RFOs) prioritize between efforts related to different steps of the research funding process, i.e. calls for proposals and application forms vis-à-vis the review process?

These three issues are discussed in the following section.

Definitions

The RFOs face something of a dilemma in their work to include a gender dimension in research, as they are torn between policy and democratic expectations and demands and the Mertonian principles of academia.⁴² RFOs in no way want to control or interfere with the applicant's choice of methods, theoretical perspectives and the like. It is a question of academic freedom, based on the principle that this is a prerequisite for quality in research, and that the researchers themselves are best equipped to judge how to investigate the research question at hand. In a way, RFOs try to handle this dilemma by placing the responsibility for upholding academic freedom onto the members of review committees, who are themselves also members of academia. However, the review committees are also expected to carry out policy requirements for achieving scientific results and assuring societal relevance. The task at hand is to enhance the reviewers' ability and competence to handle this dilemma.

Not interfering with academic freedom is an important aspect, but too great a fear of doing so can lead to terms being used with no or only vague definitions. When RFOs do not define concepts, criteria and guidelines clearly, they end up being too vague, sometimes difficult to understand and not serving the purpose that the RFO had initially. While a multitude of understandings of a concept such as gender is not a problem in itself, it can be a problem when vague definitions lead to counter-productive measures.

⁴² Robert K. Merton, 'The Normative Structure of Science', in *The Sociology of Science: Theoretical and Empirical Investigations*, [1942] (1973), 267–78.

Both in previous studies and in our survey, we can see that this vagueness and lack of definitions led to the concepts being interpreted in a number of different ways. However, the challenge discussed does not have to be a dilemma as such. If RFOs set out to promote greater awareness of the relevance of the gender dimension in research, one can question the point of being so vague that it does not make any difference.

Confusions

It is quite common for RFOs to handle both the gender dimension and gender equality in one policy. Often the same officials or units of the organisation are responsible for the gender dimension as for gender equality (often in terms of gender balance in the distribution of funds, sometimes gender balance in review committees or even gender observations of review processes, and requirements on research teams to present gender equality plans). This organisational logic, or strategic interconnection, is one thing. A more troublesome circumstance is the quite common conflation of the two, by applicants as well as reviewers. An example is when applicants on the question of the gender dimension instead describe the gender balance of their team, which sometimes can pass the review committees as an acceptable answer. One recommendation to avoid quite simple mix-ups like this is to clarify in the instructions what kind of information the RFO is asking for, for example by separating gender from sex, and gender in research content from gender balance in the research team.⁴³ However, there is no reason to believe this measure will solve the whole issue, as there will probably always be a number of applicants who will refer to gender balance in the research team in response to both of those two, separate questions.

This common confusion can also be seen in light of the first issue presented. This is probably due to a lack of knowledge, something that could be avoided at least to some degree by clearer definitions of the gender dimension in research. Vague definitions tend to lead to this conflation, which is a common one both in our results and in previous studies. For applicants not familiar with the concepts and the distinction between them, this tends to be confusing.

If even the RFOs themselves get the concepts mixed up and use them interchangeably, it is difficult to achieve the set goal of promoting the gender dimension in research.

Some organisations in our survey touch upon why they make efforts to include gender in research, where scientific quality and societal relevance are some aspects. The RFO's own intentions can play an important role here. Just asking oneself the question "why?" in promoting a gender dimension in research can serve to guide the practical work of doing so, as it can help in selecting requirements for applicants and criteria for evaluating applications. The measures adequate for one purpose can be less adequate for another.

⁴³ Peterson (2018).

Priorities

The third, and last, issue is a matter of how the research funding process is organised and how much effort is put into improving its different parts. As a consequence of the law of least resistance, perhaps, it is more common among RFOs to focus on how the calls for proposals are written, which questions are asked in the application forms, and so on, than on making sure the review committees have the appropriate competence in assessing elements of the gender dimension in research applications. One can argue that there should be a link between requirements for applicants and evaluation criteria, if the organisation has any ambition to follow through and consider a gender dimension through the various steps of the funding process. It may be unconventional for an organisation to train their reviewers in cross-cutting issues, or it may be difficult to recruit new members with expertise in the gender dimension as well as the subject or focus area in question. However, if the applicants are asked to motivate if and how the gender dimension is relevant to their project, one can question the point of it if there is not any competence in place to assess it.

Furthermore, researchers tend to be skilled in adjusting their applications to fit the call for proposals, but in the end still do what they intended to do in the first place. Vague definitions may make this even more common, since the concepts used in the calls can be interpreted and used in many different ways in applications. As seen in previous studies, a gender dimension is not something that can be ‘tagged on’.⁴⁴ It must be thorough, used as a cross-cutting perspective and there from the beginning. Some suggestions in the previous literature in order to achieve this are more and clearer guidance and training in gender methodology for applicants, reviewers and topic writers. Another suggestion is a stronger focus on the review committee and that at least one reviewer should have gender expertise.

Just as in a research proposal, the gender dimension has to permeate the RFO’s entire funding process as well, with regard to not only the review of applications, but also the follow-up process. To see if these dimensions are used as planned, funded research projects have to be followed up mid-way by the RFO, not only at the end of a project. In order to do this properly, the right expertise, as well as allocated time and resources, are needed.

⁴⁴ This is a point also made by Schiebinger et al. (2010). Recently, the H2020 Expert Group updated and expanded on Gendered Innovations/Innovation through Gender to make policy recommendations for Horizon Europe based on 15 case studies of the gender dimension in different areas of research. See Schiebinger and Klinge (2020).

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Appendices

I. Survey on gender dimension in research and innovation

1. Definition

How does your organization define gender dimension in research and innovation?

2. Funding

Does your organization have earmarked funding for research and innovation projects that includes a gender dimension?

Yes:

- a) How much of your total budget for research is earmarked for projects that include the gender dimension in research and innovation?
- b) Could you please give us an example of how these funding opportunities are advertised in a call for proposals?

No

3. Criteria

Many RFOs do not have earmarked funds for research that includes the gender dimension, but instead encourage the inclusion of a gender dimension in all their funded research and innovation projects, which is assessed on the basis of specific criteria

Does your organization have specific criteria for assessing the inclusion of the gender dimension in projects seeking funding from your organization?

Yes

- a) How are they formulated?

No

4. Expertise

Are the assessments conducted by researchers with expertise in the gender dimension in research and innovation?

Yes

- a) What does your organization see as the challenges in the assessment process?

No

- a) How do you deal with any lack of expertise in the gender dimension in research and innovation in the assessment process?

5. Organization

Is your organization required to provide funding for the gender dimension in research and innovation?

Yes

- a) Who sets the requirements?
- b) Which unit, group or person(s) within your organization is/ are responsible for handling these requirements?

No

6. Policy

If your organization provides instructions or policy documents concerning the inclusion of the gender dimension in research and innovation to applicants, we would very much appreciate it if you could attach them as PDF or Word files, or send a link to them.

II. A complementary desk study

Austrian Research Promotion Agency (FFG)

The Austrian Research Promotion Agency has

- a) Since 2009 funded RTI (Research, Technology and Innovation) projects that are required to integrate gender aspects in research content;
- b) In 2011 started Femtech Research Projects as a direct continuation of one such initiative, with the aim to increase the level of interest among scientists related to gender issues when developing and carrying out research projects, with a view to improving the quality and capability of solutions, products, and technologies to meet the need of all customers;
- c) Included in their evaluation criteria three elements related to gender for all their proposals: 1) gender analysis in the research (*has gender been taken into consideration?*), 2) gender equality in team participation (*are teams gender balanced?*), and 3) gender-equal benefits to users (*do products work equally well for women, men, and gender-diverse individuals?*).

Austrian Science Fund (FWF)

Beginning 1 January 2019, every programme across all of the Austrian Science Fund will integrate the following guidelines in their call for proposals: All potential sex- and gender-related aspects in the planned project as well as the planned implementation of these research questions must be described in a separate section. This aspect should be addressed briefly in the text even if the applicant believes the project does not raise any sex- or gender-related issues.

Canadian Institutes of Health Research (CIHR)

Since 2006, the Canadian Institutes of Health Research expects grant applicants will integrate sex and gender analysis into their research when appropriate. This statement has later been supplemented with:

- a) Mandatory requirement for applicants to report how sex and/or gender will be accounted for in the research protocol, or justify their exclusion (2010).
- b) Mandatory requirement to include a Sex and Gender Champion on select strategic initiatives (2014).
- c) Three online training modules for integrating sex and gender in biomedical research; primary data collection with humans; and the analysis of data from human participants. Completion of the training modules becomes mandatory for select strategic funding competitions (2015).
- d) Sex and Gender-based Analysis in Research Action Plan. Structural changes are made to the peer review assessment

forms to rate applicants' integration of sex and gender as a strength or weakness of the proposal, and to provide recommendations for improvement (2018).

Dutch Ministry of Health, Wellbeing, and Sports

The Dutch Ministry of Health, Wellbeing, and Sports has financed a Gender & Health program (2016-2020) with a budget of 12 million euros, implemented by ZonMw (The Netherlands Organisation for Health Research and Development) to foster a sex- and gender-sensitive approach to health and disease in research, education, and care practices. Applicants are asked to:

- Describe a research objective, research aim, and research question explicitly linked to sex and gender analysis.
- Justify how you define and operationalize sex and/or gender within your research project and your theoretical framework.
- Describe the expected outcomes of your research disaggregated by sex and/or related to gender.
- Indicate how much and in what way previous research has taken sex and/or gender aspects into account with respect to your research topic. Please show what clues or evidence towards sex- and/or gender-related factors this suggests for your proposed research.

European Commission

Directorate-General for Research and Innovation

Since 2003, the European Commission has supported “questioning systematically whether, and in what sense, sex and gender are relevant in the objectives and in the methodology of projects.”

- a) These policies have been reaffirmed and expanded in Horizon 2020 in 2014, the Commission’s current funding framework. In the proposal template, applicants are asked “Where relevant, describe how sex and/or gender analysis is taken into account in the project’s content.”
- b) In December 2016, the EC Advisory Group on Gender published its second advice paper on preparing grants that integrate the gender dimension into research.

French National Research Agency (ANR)

French National Research Agency has adopted a policy (2019) which:

- a) requires all applicants to indicate whether there is a sex and/or gender dimension to their research, and, if so, to outline how sex/gender analysis will be integrated in the design, implementation, evaluation, interpretation and dissemination of the results.
- a) provides guidance and training for peer-review assessors for evaluation in this area.

Bill and Melinda Gates Foundation

In 2012, the Gates Foundation stated that:

.../ representation by sex alone does not ensure that women's or men's priorities will be taken into account. We are also willing to provide the needed support, tools and resources to appropriately inform, shape, train, and support the inclusion of gender in our work.

In 2013, the Gates Foundation stated that they do not support grant proposals for agricultural development that do not account for gender differences and do not consider how agricultural initiatives may benefit or hinder women or men.

German Research Foundation (DFG)

The DFG has a Proposal Preparation Instructions (2020), which:

- a) requires applicants to, where applicable, describe whether and to what extent sex and/or gender of researchers, of persons under study, of individuals affected by the implementation of research results, of animals under study, with regard to samples taken from humans or animals and in other respects is relevant to the research project (methods, work programme, objectives, etc.).
- b) Where applicable, applicants are also asked to describe whether and to what extent diversity in terms of, for example, the state of health, ethnic background or culture of researchers, persons under study, individuals affected by the implementation of research results or diversity in other respects may be significant for the research project (methods, work programme, objectives, etc.). Applicants are also asked to explain to what extent these or similar considerations may also be relevant to animals under study or samples taken from humans or animals.

Irish Research Council (IRC)

The Irish Research Council has a Gender Strategy & Action Plan (2013-2020), which:

- a) requires all applicants to indicate whether there is a sex and/or gender dimension to their research, and, if so, to outline how sex/gender analysis will be integrated in the design, implementation, evaluation, interpretation and dissemination of the results.
- b) facilitates researchers to correctly identify and recognise a potential gender dimension in their proposed research through the provision of reference materials and training sessions.
- c) provides guidance and training for Irish-based researchers in this area.
- d) provides guidance and training for Council peer-review assessors for evaluation in this area.
- e) reviews and monitors funded proposals

Research Council of Norway

The policy 'Gender Balance and Gender Perspectives in Research and Innovation' (2013) states:

Good research must take into account biological and social differences between women and men, and the gender dimension should be one of the main pillars of the development of new knowledge. In research projects this dimension may be manifested through the research questions addressed, the theoretical approaches chosen, the methodology applied, and in the efforts to assess whether the research results will have different implications for women and men.

It also states that the Research Council will:

- a) strengthen the knowledge base on gender perspectives for use in research and innovation policy.
- b) assess the relevance of gender perspectives in all application assessment.

Spanish Ministry of Science and Innovation and Universities

The Spanish Strategy for Science, Technology and Innovation (EESTI) (2013-2020) includes

- a) mainstreaming of gender among its basic principles, pointing at the participation of women in all scientific fields
- b) and the incorporation of gender issues in research content and methodology.

UK Research and Innovation

All Official Development Assistance (ODA) funds must comply with the requirements of the International Development (Gender Equality) Act 2014. It states: "desirability of providing development assistance that is likely to contribute to reducing poverty in a way which is likely to contribute to reducing inequalities between persons of different gender."

In 2019, additional compliance policies were added, to ensure that the gender dimension has been considered in different parts of the research and innovation lifecycle, such as: The call/competition development, call documents, research team, and assessment panel.

The organization provides guidance and training for external assessors. As this is a new policy, UKRI envisages that lessons learned from the implementation of this policy will enable consideration of the gender dimension across other areas of funding.

US National Institutes of Health (NIH)

2016: NIH expects that sex as a biological variable will be factored into research designs, analyses, and reporting in vertebrate animal and human studies. Strong justification from the scientific literature, preliminary data, or other relevant considerations must be provided for applications proposing to study only one sex. Investigators are strongly encouraged to discuss these issues with NIH program staff prior to submission of applications. NIH does not have guidelines for considering gender as a cultural variable in research design.

World Health Organization (WHO)

WHO Gender Policy, 2002, states:

[...] in line with its long-standing concern with health equity WHO will, as a matter of policy and good public health practice, integrate gender considerations in all facets of its work. It will be the Organization's policy to ensure that all research, policies, programmes, projects, and initiatives with WHO involvement address gender issues.

In 2007, the World Health Assembly endorsed WHO's gender policy and urged member states to formulate national policies for addressing gender in health research.



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