

## Impact Story (Targeted) funding to improve the integration of gender dimension in research

### Impact Story

(Targeted) funding to improve the integration of gender dimension in research

### Intervention Definition

Studies have demonstrated that mainstream research, technology development and innovation has been gender blind for decades (European Commission 2013b, Spanier 1995) which means that gender or sex were not taken into account and that potential differences between men and women therefore were not perceived as relevant for the specific research projects. Nevertheless, in many cases sex/gender dimensions are neglected (based on stereotypical assumptions) because subconsciously the white man is perceived as the norm, however, no sound empirical research is conducted on this issue. Therefore, the integration of gender in research content is still often missing or implemented superficially; sometimes due to a lack of understanding of the concept of sex and gender (European Commission 2009, 13-14, Alpizar et al. 2010, 40, Keuken et al. 2007, 7). This short-coming can be economically, socially and personally harmful as research results are partial and potentially biased, e.g. when medical studies fail to include female participants or subjects for instance by considering differences between male and female anatomy, hormones, or socio-cultural life style etc. (Research Council of Norway, 8; Irish Research Council 2016, 12; European Commission 2011, 10).

Implementing gender in research content can therefore be seen as a democratic issue as the results of research should reflect and benefit the whole population. Recently, it was documented that multiple research projects from different scientific disciplines successfully delivered better research results and innovations by integrating sex/gender analysis (European Commission 2013b; Schiebinger 2008; Schiebinger and Schraudner 2011). Applying sex/gender analysis in research projects "has the potential to enhance human knowledge and technical systems by opening them to new perspectives, new questions and new missions" (Schiebinger 2008, 4). It therefore contributes to gender-responsible science and technology which leads to a better quality, innovative and relevant research and consequently to enhanced excellence (European Commission 2011, 15; 2013a, 33; 2016, 3; Schiebinger and Schraudner 2011). Ideally, gender is addressed in all scientific disciplines in all phases of the research process, from ideas and hypotheses over project design and research methodology, research implementation to the dissemination phase (European Commission 2011).

Therefore, research-funding organisations (RFOs) are taking measures to promote the integration of the gender dimension into research content. One strategy is to establish explicit funding schemes for gender-specific research like the funding program FEMtech Research Projects carried out by the Austrian Research Promotion Agency. Another is to mainstream the inclusion of sex/gender analysis into already existing funding programmes (e.g. by including a specific criterion on the gender dimension in the selection procedure or by indicating the relevance of research results with respect to gender issues) like it is done in the funding program COMET - Competence Centers for Excellent Technologies run by the Austrian Research Promotion Agency. Furthermore, RFOs are offering instructions on how to include gender in various research contexts (Johnson et al. 2014, 2; FFG and bmvit 2010, 7; GENDER-NET 2015, 6-7, 29-30; Keuken et al. 2007, 13).

### Intervention Definition Short

In order to promote the integration of the gender dimension into research content, RFOs can provide funding. One strategy is to establish funding schemes for gender-specific research. Another is to mainstream the inclusion of sex/gender analysis into existing funding programmes (e.g. by including a criterion on the gender dimension in the selection procedure).

<p><b>Objectives</b></p> <p>(5) Integrate the gender dimension in research and teaching</p> <p>(6) Foster ethics, public engagement, science education, open access and/or governance</p> <p>(7) Increase R&amp;I outputs and impacts</p>
<p><b>Output</b></p> <p>The short term, immediate outputs of this measure are gender sensitive research projects (Schiebinger and Schraudner 2011) and their results. In the example of FEMtech, research projects the project results were measured by analysing project descriptions and identifying different types of results. The most commonly produced result in this case was the review of a product or service from a gender perspective. Less common were tutorials, didactic concepts/training concepts or manuals. Furthermore, the scientific output of this funding program was measured by counting different types of dissemination activities like presentations, scientific publications, conferences, master theses, seminars etc..</p> <p>Beside funded projects and their results, also researchers who collaborate on these projects in interdisciplinary teams and thereby are sensitized to the relevance of the gender dimension in their research and gain gender knowledge (Schiebinger and Schraudner 2011) can be seen as an output. This can be measured by conducted trainings for researchers and peer reviewers (GENDER-NET 2016, 27-29; Research Council of Norway 2014, 9; Keuken et al. 2007, 8; Johnson et al. 2014, 7) and by counting individuals who gained gender knowledge through trainings in the project or who learned to use gender sensitive participative methods.</p>
<p><b>Output Short</b></p> <p>The short term, immediate outputs of this measure are gender sensitive research projects (Schiebinger and Schraudner 2011) and their results. In the example of FEMtech research projects the project results were measured by analysing project descriptions and identifying different types of results (e.g. review of a product or service from a gender perspective, tutorials, didactic concepts, manuals). Furthermore, the scientific output of this funding program was measured by counting different types of dissemination activities like presentations, scientific publications, master theses, seminars etc..</p> <p>Researchers who collaborate on these projects in interdisciplinary teams and thereby are sensitised to the relevance of the gender dimension in their research and gain gender knowledge (Schiebinger and Schraudner 2011) can also be seen as output. This can be measured by conducted trainings for researchers and peer reviewers (GENDER-NET 2016, 27-29; Research Council of Norway 2014, 9; Keuken et al. 2007, 8; Johnson et al. 2014, 7) and by counting individuals who gained gender knowledge through trainings in the project or who learned to use gender sensitive participative methods.</p>
<p><b>Output indicators</b></p> <p>5.1.1 Number of publications in peer-reviewed high impact journals</p> <p>5.1.3 Researchers trained (inc. PhD, post-docs, gender balanced)</p> <p>5.2.1 Demonstrators of innovative solutions</p> <p>5.4.2 Number/Percentage of research projects including gender analysis/gender dimensions in the content of research</p> <p>5.4.3 People/employees feel empowered making research more participatory, creative and inclusive</p> <p>5.5.1 Explicitly dealing with gender issues in research projects (here the funded projects are relevant)</p> <p>5.5.3 Training of scientists / engineers</p>

### Outcome

With respect to gender equality, raised gender awareness and competence of researchers working on these projects can be seen as one kind of outcome (Wroblewski 2016, 24). In addition, the EFFORTI case study "FEMtech Research Projects" shows, that an outcome of the funding program is an increased gender competence of researchers, which is used to write better research proposals in other, funding schemes. The gained knowledge and competences regarding gender and/or new research methods were used in teaching, trainings and other research projects. Most interviewees also mention a sensitization of researchers regarding interdisciplinary and/or participative research through the projects. For the research organisation, the participation in research projects with a gender focus also means a reference for further gender project applications.

In addition, numerous case studies of gendered innovation projects (European Commission 2013b) have made evident that gender sensitive research approaches are contributing to increased quality and better research results. Therefore, it can be assumed that gender equality outcomes and research quality are very strongly connected (European Commission 2017, 11). According to Schiebinger and Schraudner (2011, 154 & 158), with respect to research performance, more interdisciplinary research, better quality and excellent research results are expected outcomes of gender sensitive research.

Other outcomes are the gender sensitive research methodologies and approaches developed and applied throughout the research project, as well as the gender sensitive scientific knowledge and the gender sensitive technological solutions or organisational forms generated, which are used further on. When analysing online project descriptions of funded projects that integrated the gender dimension, different forms could be identified on how project results are used further on: e.g. starting points for further research, plan of application of project results in practice, commitment to apply the project results, market launch of service/product developed, follow-up projects.

Funding programs to improve the integration of gender dimension in research can also have an unintended effect: There is evidence that the number of female project leaders is higher in gender-sensitive research projects and funding programmes (Wroblewski 2016, 35). If such a project is the first possibility for a young researcher to lead a project, this can be an important career move.

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### Outcome indicators

- 1.1.2 Increase in leadership positions by women who participated in the programme
- 5.4.2 Existence/absence of knowledge on sex and gender in research field
- 5.2.1 Awareness on market and end-user needs
- 5.1.1 New, altered or improved research tools & techniques, models and simulations

5.1.1 New advanced capabilities, methods, systems, infrastructures and technologies

5.5.1 Considering gender aspects in the research design

5.1.1 Number of citations / field-specific citation rates

### **Impact**

There is hardly any research available on the long-term effects of targeted funding programmes to promote the integration of gender dimension in research. These are formulated on a very abstract and general level: the new gender sensitive methodologies, knowledge and technological solutions/innovations should contribute to enhancement of gender equality in the society as a whole. More gender sensitively developed products, innovations and technologies should reduce existing gender gaps in health risks, technology use etc. and thereby contribute to a more equal and fair society (European Commission 2017, 11). However, measuring the effects of targeted funding programmes on this very general impact level is hardly possible.

Wroblewski (2016, 24) reports three effects of a targeted funding programme promoting the inclusion of gender in research content: anchoring gender knowledge in (application oriented) research; raising the awareness of the relevance of gender research and establishing gender competence in RPOs; contribution to higher standards of quality assurance in research.

The case study "FEMtech Research Projects focused on measuring the funding programs contribution to anchoring gender knowledge in application oriented research. A comparison of the different call-specific networks of organisations working together in the funded projects showed that the group of beneficiaries increased from call to call - very rarely are similar consortia promoted twice. The inclusion of unfamiliar cooperation partners such as gender experts in research projects within FEMtech research projects had sometimes also resulted in sustainable und interdisciplinary cooperation (AU\_CS2\_4). Also, some interviewees reported that they have to know new promising cooperation partners. Monitoring data also shows that the funding program becomes more and more attractive for applicants as their number is growing and competition for funding is increasing. Interviewees claim that the funding program has started a learning process in the scientific community. Over the years, applications have improved greatly in terms of quality and deal now intensely with the gender dimension (AU\_CS2\_03, AU\_CS2\_04). The funding program has helped to generate knowledge about how gender can be considered professionally. The topic now plays a more important role in juries as well (AU\_CS2\_04). Moreover, FEMtech Research Projects contributed to the implementation of gender criteria in other funding programs (AU\_CS2\_01, AU\_CS2\_02, AU\_CS2\_04).

Furthermore, targeted funding for gender sensitive research can also contribute to making research more responsive to society and its needs or challenges (Schiebinger and Schraudner 2011, 155; European Commission 2017, 11). It might also lead to new research priorities and forms of public engagement. However, there is no evidence yet to prove this and to establish empirically grounded causal links.

### **Impact short**

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### Impact indicators short

- 5.5.1 Explicitly dealing with gender issues in research projects
- 5.6 More effective promotion of gender equality and the gender dimension in research and innovation content
- 5.5.1 Share of RPOs with gender in research content
- 5.4.2 Share of RFOs promoting gender content in research

### Policy Context

One important context factor for funding programs that aim to improve the integration of gender dimension in research is other national activities regarding this issue (e.g. gender criteria in other funding programs). Is the integration of the gender dimension into research generally promoted or ignored by the policy on Research, Technological Development and Innovation (RTDI) (Reidl et al. 2017, 77)?

Moreover, the level of inclusion of the gender dimension in teaching/curricula is another important context factor because it indicates if researchers gain any gender knowledge in their education, which they can build on in their research. This level of inclusion of the gender dimension in teaching can be measured by the proportion of universities, which offer degrees with a specific module on gender (Verges 2017, 16), gender studies and/or compulsory courses with gender focus in certain areas of study. In addition, it is relevant whether the science policy of a country considers gender equality and gender mainstreaming as key quality factors to be considered in reviews (Swedish Higher Education Authority 2016, 17) or not.

### Organisational Context

Could not identify organisational context factors

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