

## Impact Story Schemes for women returning from career breaks

<p><b>Impact Story</b></p> <p>Schemes for women returning from career breaks</p>
<p><b>Intervention Definition</b></p> <p>The knowledge required in fast-moving and competitive sectors such as Research, Technological Development and Innovation (RTDI) can be complex and subject to constant change. Work cultures are frequently focused on high-speed projects and long working hours. Constant training, productivity and publications are of major importance. The typical career path in RTDI is based on the male life course: a linear course of full-time employment without breaks. However, career breaks can occur for several reasons, such as raising children, accommodating spouses' careers, caring for elderly or disabled family members, recovering from an illness, etc. (Hewlett 2007). Therefore, making it in science is hard for anyone, and even more so for female scientists who often take more responsibility in care work, and wish to return to their research activity after a break, but get behind in their career advancement due to the time off. The great difficulties, which women scientists face in balancing family responsibilities with work largely, contribute to their insufficient participation and slow advancement in knowledge-based sectors (Mavriplis et al. 2010).</p> <p>The intervention "Schemes for women returning from career breaks" intends to address this persistent problem by initiating arrangements to re-attract and retain women in the scientific field, and to smooth their careers after longer breaks. The activities of the measure include the introduction of career development workshops and trainings; networking opportunities; flexible working hours; part-time and telework opportunities; longer term secure contracts and other contract arrangements; changes in the terms and conditions of scientific calls for proposals; reduced fees for society memberships and conferences; changes in the way résumés are reviewed by faculty search committees; alterations in the design and implementation of parental leave and childcare policies; etc.</p> <p>Recognising the fact that women mainly carry out childcare, which decreases their chances for competitive calls that have an age-limit, the Hungarian Academy of Sciences (HAS) introduced an age-limit extension for researchers with children in 2009. In the case of applicants who have been on parental leave, the age limit of every call, scholarship and grant of the HAS and its research institutes is extended by 2 years for each child under the age of 10. The aim of the Hungarian Academy of Sciences is to create a work environment that allows employees with children to carry out creative research. Compensating researchers for the time loss in their career advancement due to childcare is part of this endeavour.</p>
<p><b>Intervention Definition Short</b></p> <p>The intervention "Schemes for women returning from career breaks" aims at introducing programmes that compensate female employees in the highly competitive RTDI fields for the time loss in their careers, which is due to childcare or other responsibilities resulting in voluntary or involuntary career breaks; thus improving their work-life balance and job satisfaction, as well as fostering their career advancement.</p>
<p><b>Objectives</b></p> <ol style="list-style-type: none"> <li>(1) Increase the number of women in R&amp;I positions</li> <li>(2) Improve working conditions / work-life balance</li> <li>(4) Implement gender-fair organisational structures</li> </ol>

**Output**

The measure's aim in the short term is to launch initiatives, which help women re-enter scientific career fields. If research leaders and decision-makers instigate policy and practice to facilitate women's return from career breaks in Science, Technology, Engineering and Mathematics (STEM), a level playing field is created for male and female employees in STEM. Specific measures to smooth female professionals' way back to their career track, such as catch-up opportunities, career development possibilities, and systemic changes (e.g. in parental leave policies) contribute to greater gender equality in the scientific fields.

For example, the immediate effects of the programme initiated by the Hungarian Academy of Sciences are the equal opportunities that are created by the inclusion of the age-limit extension rule in the application package and the guidelines of the application process in case of all calls for proposals of the HAS and its research institutes, as well as the dissemination of information on the opportunity in the calls and internal newsletters.

**Output Short**

The output of the intervention "Schemes for women returning from career breaks" is constituted by the level playing field and the more equal opportunities for men and women in STEM careers. These are ensured by the initiatives, programmes and schemes that support female employees who wish to return to the labour market after career breaks.

**Output indicators**

2.1.1. Range of institutional support (child-care; partner/spousal hiring; health accommodations; career planning; etc.)

2.1.1. Modified duties in response to personal needs

2.1.1. Support for returning from career breaks

2.1.1. Regulations and initiatives supporting parents returning to work

2.1.1. Flexibility of parental leave arrangements

2.1.1. Employment by full-time and part-time status, sex

2.2.2. Satisfaction with career

2.2.4. Main differences of working hours between men and women in full time employment

2.2.4. Time spent on unpaid work

2.2.4. Actual weekly working hours of full-time employed persons in academic/ scientific professions by gender and country

**Outcome**

The measure's outcome aims at supporting female employees to reach a healthier work-life balance after returning to science following voluntary or involuntary career breaks by helping them reconcile research and family responsibilities. The intervention "Schemes for women returning from career breaks" also gives opportunity for flexible career planning that takes into account major life events like childbirth, caring for relatives or further education (Laursen et al. 2015). A higher level of gender equality and a sense of being appreciated in RTDI boost the confidence of female employees in the sector and lead to increased job satisfaction and well-being. These can be measured by indicators that reflect the experienced work-family conflict, the ability to balance private life and work, etc.

A good example of this is the initiative covered by the case study "Harmonizing opportunities for female researchers". The main outcome of the intervention is that researchers with children, who are slightly above the age limit can still apply for grants, therefore the time they had spent on parental leave does not hinder their careers. According to the beneficiaries of the measure,

childbearing changes the new parents' attitudes towards research work. The life of young researchers with children becomes less predictable, which makes it more difficult to keep strict time schedules and deadlines. By making it possible for researchers with children to apply for grants and fellowships after they exceeded the age limit, the measure compensates for the time loss in the professional career of these researchers that stems from childcare responsibilities.

#### **Outcome Short**

The measure's most important medium term effects are the improved work-life balance, job satisfaction and professional well-being of researchers returning to STEM careers after longer breaks due to childcare or other responsibilities.

#### **Outcome indicators**

- 2.1.1. Extent of experienced work-family conflict
- 2.1.1. Perceived challenges in balancing private life and work
- 2.1.1. Satisfaction with current work-life balance
- 2.1.1. Perception of influence of career break on career progress
- 2.1.1. Ability to balance work-life
- 2.1.1. Perceived interpersonal conflicts related to family obligations ("mothers leave earlier from work" etc.)
- 2.3.3. Considerations about leaving current positions

#### **Impact**

If talented female researchers are not held back by the lack of help with care work, it enables an easier career planning that takes into account major life events like child birth, care work for relatives, etc. (Greenhaus and Beutell 1985). This in turn might prevent career interruptions and disruptions that occur because of family care responsibilities and obligations. The elevated level of professional well-being and satisfaction of female employees that can be related to the measure in the medium term can positively influence the number and proportion of women researchers in the long run. Encouraging women returning from career breaks helps retain talented and competent researchers in the scientific field, which has direct positive effects on women's participation in RTDI, thus addressing the leaky pipeline phenomenon, that is, the continuous loss of women along the hierarchy in STEM (Etzkowitz and Ranga 2011).

Besides, by showing young girls that a healthy work-life balance is attainable for female scientists, the intervention "Schemes for women returning from career breaks" might increase the number of girls considering a career in STEM, which, in turn, can contribute to a more equal proportion of women in RTDI, thus leading to more responsible research and innovation policies and practices, which are able to address major societal challenges (European Commission 2010).

The case study "Harmonizing opportunities for female researchers" points out that all of the beneficiaries of the intervention work in research teams. Therefore, obtaining grants that they wouldn't be entitled to apply for if the age limit extension measure did not exist, not only contributes to their own professional advancement, but as an indirect effect it also enhances both the career opportunities of their co-workers and the overall research performance of their teams.

#### **Impact short**

The most important long-term impact of the intervention "Schemes for women returning from career breaks" is the increased number of women in RTDI positions, which can lead to an enhanced research performance as well as more responsible scientific research.

### Impact indicators

- 1.1.1. Composition of academic positions per team
- 1.1.1. Horizontal/vertical gender segregation in occupations and in economic sectors
- 1.1.1. Proportion of women in grade A positions
- 1.1.1. Proportion of women grade A staff by main field of science
- 5.1.1. Percentage of publications from projects which are among the top 1 % highly cited
- 5.1.1. Number of publications in peer-reviewed high impact journals
- 5.1.1. Percentage of publications published in the top 10% impact ranked journals
- 5.1.1. Publication's interdisciplinarity
- 5.1.1. Number of citations / field-specific citation rates
- 5.1.1. Percentage of women that are first authors of research papers

### Policy Context

As the case study "Harmonizing opportunities for female researchers" suggests, the effects of the intervention "Schemes for women returning from career breaks" are affected by a series of factors at the macro level. Most importantly, the typical length and the voluntary or involuntary character of career breaks due to childcare responsibilities in a given country is influenced by the paid maternity/paternity/parental leave regulations and practices, as well as the available childcare facilities. E.g. long maternity leave, which is supported socially and financially in some European countries alienates mothers from the labour market, therefore women face serious difficulties when returning to work. Besides the devaluation of their knowledge, the loss of social capital and the discrimination of young mothers in the labour market also contribute to the fact that women with small children have scarce opportunities for part-time work and for sufficient childcare services. The impact of motherhood on the employment rate of women (that is, the percentage point difference between the employment rates of women aged 20-49 with children up to 6 years old, and without children) in the countries of the Organisation for European Economic Co-operation (OECD) is 10% on average. A more general factor that affects the chances of re-entering STEM positions after career breaks is the flexibility of labour markets.

In several European countries, there is still a strong support for traditional family structures and gender roles within the society. This is mirrored by the fact that the time spent with unpaid work is almost double in the case of women compared to men according to the OECD average. These social norms and prevailing values also influence the impacts of the intervention.

On the other hand, research states that the pipeline metaphor can lead to the perception that any woman leaving the scientific field is a tragedy. A goal of 100% retention is unrealistic and potentially coercive: people change fields and interests throughout their lives, and they should be free to do so (Etzkowitz and Ranga 2011). Moreover, if only later leaks in the pipe are patched, there will still be a relatively small number of women leaders at the end, because of earlier leaks from the pipeline. Finally, schemes for women returning from career breaks should be accompanied by other gender equality policies. The success of the measure may be impeded by a lack of harmonisation with other policy elements that aim to address gender inequalities in the scientific field.

### Organisational context

The measure is about every male and female researcher having equal opportunities. Therefore, the aim of the initiative should not be to create an undue advantage for women who have taken voluntary or involuntary career breaks or discriminate men or women who have had a linear course of full-time employment, but simply to remove barriers to a level playing field within organisations. Many other factors play a role in women's success as researchers and

leaders. Consequently, the measure should be accompanied by other actions at the organisational level to support outstanding female researchers. It is also of great importance that the focus should stay on real performance and research should remain excellent-based.

In case of improper advertising or the lack of promotion and information on the intervention within the organisation there is some chance that the possibility of participating in such programmes is overlooked by employees who are entitled to the given benefits. Transparency of this kind of measures is key to their success.

### Sources

Etzkowitz, Henry, Carol C. Kemelgor and Brian Uzzi. 2000. *Athena Unbound: The Advancement of Women in Science and Technology*. Cambridge, MA: Cambridge University.

Etzkowitz, Henry and Marina Ranga. 2011. Gender dynamics in science and technology: from the 'leaky pipeline' to the 'vanish box'. *Brussels Economic Review*, Vol. 54 (2/3), Summer-Autumn.

European Commission, Directorate-General for Research. 2010. *Stocktaking 10 years of 'Women in Science' policy by the European Commission 1999-2009*. Edited by Marina Marchetti and Tiia Raudma, Publications Office of the European Union, Luxembourg, Accessed November 22, 2018. [https://ec.europa.eu/research/swafs/pdf/pub\\_gender\\_equality/stocktaking-10-years-of-women-in-science-book\\_en.pdf](https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/stocktaking-10-years-of-women-in-science-book_en.pdf)

Greenhaus, Jeffrey H. and Nicholas J. Beutell. 1985. Sources and conflict between work and family roles. *Academy of Management Review*, 10(1), pp. 76-88.

Hewlett, Sylvia Ann. 2007. *Off-Ramps and On-Ramps: Keeping talented women on the road to success*. Harvard Business School Press, Cambridge.

Laursen, Sandra L., Ann E. Austin, Melissa Soto, and Dalinda Martinez. 2015. Strategic Institutional Change to Support Advancement of Women Scientists in the Academy. In *Women in the geosciences: Practical, positive practices toward parity*, edited by Mary A. Holmes, Suzanne O'Connell, Kuheli Dutt, and Ann E. Austin. Special Publications 70. Washington, District of Columbia, Hoboken, New Jersey: American Geophysical Union. Wiley.

Mavriplis, Catherine, Rachelle Heller, Cheryl Beil, Kim Dam, Natalya Yassinskaya, Megan Shaw and Charlene Sorensen. 2010. Mind the Gap: Women in STEM Career Breaks. *Journal of Technology Management & Innovation*, Vol. 5, No. 1.