Gender and Mobility: Insights into the field of Physics

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Introduction and Approach

This report is one of the outcomes of the Horizon 2020 Project GENERA (Gender Equality Network in the European Research Area) and constitutes Milestone M4.2. It is produced under Work Package 4 (WP4) that seeks to develop a more structured and tailored implementation of gender equality measures and instruments into the field of physics.

GENERA brings together 13 key research organizations and higher education institutes in Europe with a scientific focus on physics in Europe to help foster gender equality through customized and evidence- based Gender Equality Plans (GEPs). It is triggered by the well-documented and persistent problem of underrepresentation of women in physics. GENERA originates in the physics community, and thus is a project from physicists for physicists.

Today, scientists are asked to be more mobile than ever before. In some countries scientists are expected to spend some time abroad. Mobility is described as a crucial factor for career development.[1)] While international scientific experience offers many career-related benefits, it also can be challenging to make it happen.[2)] **Objective of the report** The focus of this report is to try to better understand some of the push and pull factors affecting scientists' decisions, in particular physicists, with regards to going abroad. The aim is to provide deeper insights into international mobility patterns

- among women and men - in various career positions - related to national differences in culture and work environment.

This report is not intended to contribute to the extensive academic debate on analysing mobility patterns or the impact of being mobile. It is a small sample that seeks to consider statements from physicists, from young to senior scientists, with regard to the general assumption that international mobility is crucial for scientific careers. Focused on international mobility in the field of physics, this report aims to give a deeper insight into views and opinions from physicists on the controversial issue of the necessity to be mobile.

Methodology

Semi-structured interviews with female and male scientists from the field of physics were conducted in summer 2017 by 12 GENERA partners in 8 countries.[3)] The reasoning idea behind this study was to explore the complex sociological portrait of gender equality policies in physics, built upon various standpoints and perspectives of physicists, of both women and men, who have experience of working in research organizations, including universities and non-academic institutes.

In total 82 interviews were conducted: 52 female and 30 male experiences were analysed according to gender-specific topics such as their career paths in physics with particular attention paid to

structural, political, organizational and cultural barriers. Further, the identification of factors that enhance the success was analysed.[4)]

For this report, a background report prepared by Sekuła, Struzik and Ciaputa (2017) was used and main themes in relation to international mobility are carved out. They are related not only to professional but also personal development, the need of flexibility and terms of career progression. We worked out meaningful statements and comparisons with relevant information found in the current literature. The intention of this report is to give insights on international mobility and influential aspects relating thereto the first-hand feedback from physicists in the European Research Area.

Structure of the report

Chapter 1 describes the understanding of gender and mobility within GENERA. Since there are numbers of dimensions of mobility this report focuses on international mobility. It provides a brief definition of key words and of international mobility only. Facts and figures on the state of the art of scientists' mobility worldwide reveal a number of trends illustrating mobility patterns.

Further on, in Chapter 2 and Chapter 3 the report focuses on experiences abroad within the field of physics and describes physicists' point of view on mobility as a requirement for scientists or for personal development. Mobility behaviour of women and men is given as a short outline.

Chapter 4 provides information on mobility in the context of being flexible. What does mobility mean for personal circumstances and family life? Apart from this question it reflects the need for flexibility across national/international structures.

Based on different work and life situations, Chapter 5 describes to what extent mobility plays a decisive role in the progression of scientific careers. It seeks to explore impact factors and linkages between mobility and career development - based on statements of young and senior scientists.

The final part of the report (Chapter 6) is a summary of the most important findings. It includes a section of useful information and proven measures related to international mobility in the field of physics (Chapter 7). This can be seen as kind of support for preparation for stays abroad or perhaps can be used as inspiration for implementation in research organization structures. A list of references can be found in (Chapter 8)

“Mobility is a must.”

“Mobility is important, but it becomes difficult when you are elder [...].”

“For me it has been a great experience and I would have not wanted to miss it.”

“I think that it is harder for women, psychologically.”

“It is not a necessity. It is a good experience.”

1)
Sekuła, P. et al., 2018; Appelt, S. et al., 2015
2)
http://www.sciencemag.org/careers/2011/08/international-mobility

3)

Based on an interview study methodological guideline prepared by Sekuła, Struzik, Krzaklewska, Ciaputa (2017)

4)

Sekuła, P. et al., 2018