

Women in Science – How to increase women’s participation in science?

On the 21st of November 2017 the conference “Women in Science – How to increase women’s participation in science?” was held at the premises of the Permanent Representation of the Slovak Republic to the EU. The event was organized by the Slovak Liaison Office for Research and Development (SLORD) in cooperation with the Permanent Representation of the Slovak Republic to the EU. The conference brought together 60 professionals from 13 countries across the Europe to share their experiences, to learn from one another and to debate the women’s participation in science and research, main challenges facing female scientists and key factors behind the low participation of women in leading positions.

A wide range of participants: researchers, educators, policy makers, representatives of umbrella organizations and other interested in gender equality into their work and policies attended the event which was divided into two parts. The overall objective of the conference was to find some recommendations on what we can do together to keep doors open for female scientists and to make these doors even larger to let more women in science and help them to realise their full potential as scientists.

The aim of the first part of the event was to present current statistics on women scientists in the EU and global research landscape. Three main keynote speakers, [Stephane Berghmans](#), [Viviane Willis-Mazzichi](#) and [Alexandra Bitušíková](#) presented key numbers, initiatives and different analytical view-points on the issue of gender equality in science and research. The second part had a form of panel discussion where female scientists discussed the main problems, barriers and necessary changes to be made at all levels.

Peter Javorčík, Permanent Representative of the Slovak Republic to the EU, opened the event with words stressing the importance to recognize scientists, researchers and innovators whatever their gender. He also highlighted the need to support the diversity of environments where the research is done since the diverse workforce creates innovations and it offers flexibility and creativity necessary to come up with new ideas.

Women scientists in the EU and global research landscape

Proportion of women among researchers and inventors is increasing. According to last statistics of ELSEVIER, the proportion of female scientists in the EU is 41%, however, among inventors women represent only 12%. Nevertheless, 19% of the EU patent applications list a woman among their authors – a higher proportion than Australia, Japan and the UK.

One of the biggest remaining problems is leadership especially in engineering where women researchers are significantly outnumbered by men (24%). It is evident that women researchers are still increasingly underrepresented as they move up the stages of an academic career. In 2014, only 20% of heads of higher education institutions were women.

The proportion of women also varies depending on scientific domains. Women tend to specialize in the life and health scientists while men are dominant in the physical sciences. According to last data from She Figures 2015, women are also still visibly predominant in education (64%) and humanities and arts (55%). The biggest concentration of women in those fields is in Latvia and Austria (80%) but also in Belgium (83%), Slovakia and Finland (79%).

When it comes to the participation of women in Horizon 2020, Interim evaluation of Horizon 2020 showed that 40.3% of women are in project workforce and 31% of the project coordinators are women. Nevertheless, women tend to spend more time on teaching and less on research and apply for smaller grants than men.

The importance of a topic of gender equality is reflected in a number of research papers on gender. During 2011-2015, there were over 23.000 research papers on gender published (35% of the world's EU scholarly output) which represents increase by 14 percentage points from the earlier period (1996-2000).

Slovak Republic

Slovakia can boast favourable statistics according to She Figures 2015. Proportion of female PhD graduates is 49% and women researchers in higher education sector account for 45,1%. However, as prof. Bitušiková mentioned, international mobility of Slovak female postdocs accounts for only alarming 1,1% while for example in Germany it is 20%. There is also a gender pay gap taking into account that women researchers earn 20,4% less than men. Proportion of women heads of institutions covers 13,9% compared to 20,1% in the EU.

In Slovakia, there are not any specific national strategies and action plans on gender and science and most of activities aiming at promoting the field of gender and science have been EU project-based. However, despite a number policy papers and recommendations based on project activities, topic of gender equality is not considered as fully relevant for the policy makers and institutional academic leaders and for many researchers in Slovakia gender equality is not a problem.

One can assume that relatively favourable proportion of women in science and research in Slovakia is caused by the fact that scientific work is very much performed at universities where tariff salaries are still comparable low and on the top of that women are employed in the scientific fields with the lowest expenditure incurred.

Suggestions for improvement

In the second part of the conference keynote speakers along with female scientists - prof. Monika Rychtáriková, PhD. and prof. Viera Stopjaková, PhD. and Carole Paleco from the European Platform of Women Scientists discussed the factors behind the under-representation of female scientists and recommendations on how to increase women's participation in leading positions. It is further noted that as it was mentioned above, although it is widely acknowledged that the proportion of female researchers increased across the world from the late 1990s, female researchers and inventors are generally under-represented and also female researchers in leading positions. Hence, there is still enough space for an improvement and some changes and reforms that can be done at all levels to achieve gender equality. Therefore, we collected ideas, insights and recommendations raised by participants of the conference which can possibly enabled towards creation of a balanced science and research environment for both women and men.

We believe that it is very important be vocal about what needs to be done to retain female in science after graduation and support them in their career development and path.

1. EU initiatives and directives

The EU should continue in its initiatives and action plans and gender equality strategies in the European research and innovation policy. The EU could possibly play an important role in achieving the gender equality in the Member States and public institutions. Equal opportunities on the labour market go hand in hand with this.

2. Transparency in recruitment process

In order to ensure more women in leading positions transparency in recruitment process really matters. Since there are still cultural trends in our society which have been formed for many years, it is necessary to ensure that scientists are hired, especially to leading positions based on their experiences, education and skills regardless of gender. Thus we cannot omit the importance of composition of recruitment board which should be gender balanced.

3. Women and girls' education and training

To achieve gender equality for female scientists it is necessary to provide them with an effective training and education they need to be able to compete at all levels and in all scientific domains.

4. Good examples and soft tools

There are many institutions and universities around the world which have implemented gender action plans and internal strategies to achieve gender equality. Positive examples as these might be followed by other institutions and universities. Furthermore, use of soft tools (for example a label HRS4R) might also be useful. .

5. University leadership engaged

University leadership should be fully engaged and should be aware of the importance of the gender equality and also importance of necessary measures that are able to create a welcoming environment for female scientists (maternity leave, work-life balance).

6. Gathering data and evidence/Monitoring

It is significant to gather evidence and data on gender equality showing that gender agenda should be taken more seriously. Data and statistics reflect the state of play which is not favourable for women in science and innovations and their representation in leading positions. Subsequently, these data may contribute towards evidence-based policy making.

7. Role models and mentoring

Mentors and role models can have a positive impact on female scientists and on girls who want to step in the scientific career. This is also very important in society and modern culture where stereotypes are still present. Along good mentors, support of family and friends is essential.

8. Work-Life balance

It is not enough to say that we need more women in science and more women in leading positions. We have to try to change the conditions female scientists have. Member States, organisations and universities should show women that they are willing to support them, for example with their maternity leave or childcare, among others. These issues are not exclusive to women of course, but they do affect women more.

9. Equal treatment

Having a good support system in place and making sure that every person is treated fairly is a very important step to keep women in academia and increase their participation in leading positions.