

New gender benchmarking study finds women greatly under-represented in South Korean science and technology

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In the first gender benchmarking study of its kind, researchers have found that numbers of women in the science, technology and innovation fields are alarmingly low in the world's leading economies, and are actually on the decline in others, including the United States. South Korea's low ranking in the study results reflects a substantial underrepresentation of females in public and economic life.

South Korean ranks last of the countries in the study in female [economic status](#), access to resources, supportive policy, and participation in the knowledge and STI sectors. While it shows strong participation of [women](#) in education at all levels, the country is failing to adequately support women to participate in its growing economic success. A low level of female participation in the knowledge society overall demonstrates a clear lack of [correlation](#) between a country's [GDP](#) and gender equality.

The full gender benchmarking study maps the opportunities and obstacles faced by [women in science](#) in Brazil, South Africa, India, the Republic of Korea, Indonesia, the US, the EU. The study was conducted by experts in international gender, [science](#) and technology issues from Women in [Global Science](#) & Technology (WISAT) and the Organization for Women in Science for the Developing World (OWSD), and funded by the Elsevier Foundation. The research was led by Dr. Sophia Huyer, Executive Director of WISAT and Dr. Nancy Hafkin, Senior Associate of WISAT.

Despite efforts by many of the countries in this study to give women greater access to science and technology education, research shows negative results in the areas of engineering, physics and computer science. In [South Korea](#):

- Women remain severely under-represented in degree programs for these fields – less than 30% in most countries – and less than 15% in South Korea.
- Overall science and engineering enrollments (including bio and health sciences) are under 21%. In addition, the numbers of women actually working in these fields are declining across the board, dropping to 11% in South Korea.
- Even in countries where the numbers of women studying [science and technology](#) have increased, it has not translated into more women in the workplace.
- In Korea, the share of women in professional fields remains substantially lower than men, and at less than 50%, is well below the average for member countries of the OECD.
- Women make up less than 18% of IT workers.
- In the private sector progress has also been slow, with women making up less than 1% of corporate board directors, and the percentage of women-run businesses with more than one employee at 21%.

"These economies are operating under the existing paradigm that if we give girls and women greater access to education they will eventually gain parity with men in these fields," states Sophia Huyer, the lead researcher and founding executive director of Women in Global Science & Technology. "This has dictated our approach to the problem for over a decade and we are still only seeing incremental changes. The report indicates that access to education is not a solution in and of itself. It's only one part of what should be a multi-dimensional policymaking approach. There is no simple solution."

The data show that women's parity in the science, technology and innovation fields is tied to multiple empowerment factors, with the most influential being participation in the labour force, larger roles in government and politics, access to economic, productive and technological resources, quality healthcare and financial resources. Findings also show that women have greater parity in countries with government policies that support childcare, equal pay, and gender mainstreaming. One of the main findings is that few countries collect consistent and reliable sex-disaggregated data in all of these areas, which inhibits their ability to implement effective supporting policies and programs.

Provided by Elsevier

"We found that the absence of any one of these elements creates a situation of vulnerability for economies that want to be competitively positioned in the knowledge economy," Huyer says. "No one country or region is ticking off all the boxes, and some are falling dismally short. This is a tremendous waste of resources. We are wasting resources educating women without following through, and we are missing out on the enormous potential that women represent."

"This broad and ambitious assessment is a critical starting point for measuring the participation of women and girls in science, technology and innovation in emerging and developing worlds," said David Ruth, Executive Director of the Elsevier Foundation, "This study identifies key areas of national strength and weakness, and we hope it will help form the basis of evidence-based policy making and aid going forward."

The report, funded by The Elsevier Foundation, which provides grant programs targeting women scientists in the early stages of their careers, was also supported by futureInnovate.net, a non-profit that supports initiatives that strengthen innovation systems in Canada and around the world.

More information: The project summary and Key Findings, the Gender Equality and the Knowledge Society Scorecard, as well as graphical scorecards for each country studied, can be found at www.wisat.org

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