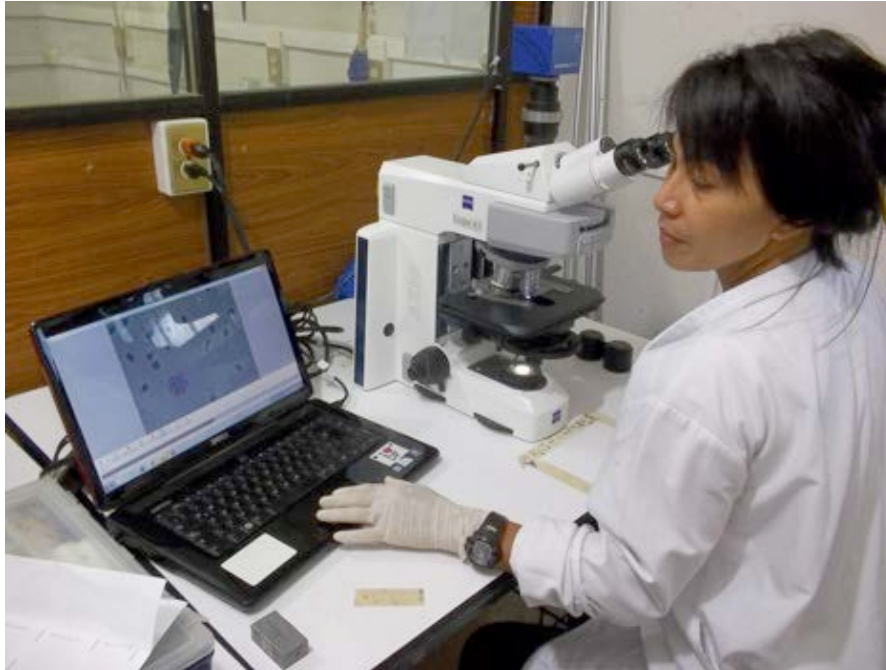


Gender Equality in the Knowledge Society: National Assessments on STI



Sophia Huyer,
Executive Director, WISAT

Gender Summit 8
April 28-29, 2016

National Assessments on Gender and STI

- A cross-national comparison of the status of women in national knowledge societies, including STI and the knowledge economy
- A collaborative initiative of Women in Global Science and Technology (WISAT), CGIAR Climate Change, Agriculture and Food Security Programme (CCAFS), the Elsevier Foundation, GenderInSITE, and the Organization for Women in Science for the Developing World (OWSD)





First Phase (November 2011 – May 2012)

Brazil

Alice Rangel de Paiva Abreu, Professora Emérita, Universidade Federal do Rio de Janeiro
Maria Coleta F A de Oliveira, Demography Department, Institute of Philosophy and Human Sciences, UNICAMP

India

Sudha Nair, Gender Advisory Board, United Nations Commission on Science and Technology for Development

Indonesia

Wati Hermawati, Researcher, PAPPIPTEK-LIPI, Indonesian Institute of Sciences (LIPI)

Republic of Korea

Young Ock Kim, Director, Labour-Statistics, Research Department, Korean Women's Development Institute

South Africa

Nelius Boshoff, Senior Researcher, Centre for Research on Evaluation, Science and Technology (CREST)/ South Africa Academy of Sciences (ASSAf)

USA

Rachel Ivie, American Institute of Physics



Second Phase (September 2013 – ongoing)

1. Latin America:

Argentina

Gloria Bonder, Director, Gender, Society and Policies Department, FLACSO ; and [UNESCO Regional Chair on Women, Science and Technology in Latin America](#)

Mexico

Judith Zubieta, Member, Board of Directors, Mexican Common Space of Higher Distance Education

2. East Africa

Ethiopia: Helina Beyene, University of California

Kenya: Natasha I. Froshina & Grace M. Mwaura, African Centre for Technology Studies

Rwanda: Verdiana Masanja, University of Kibungo

Uganda: Irene Murungi, Women of Uganda Network (WOUGNET)

Gender Equality and the Knowledge Society

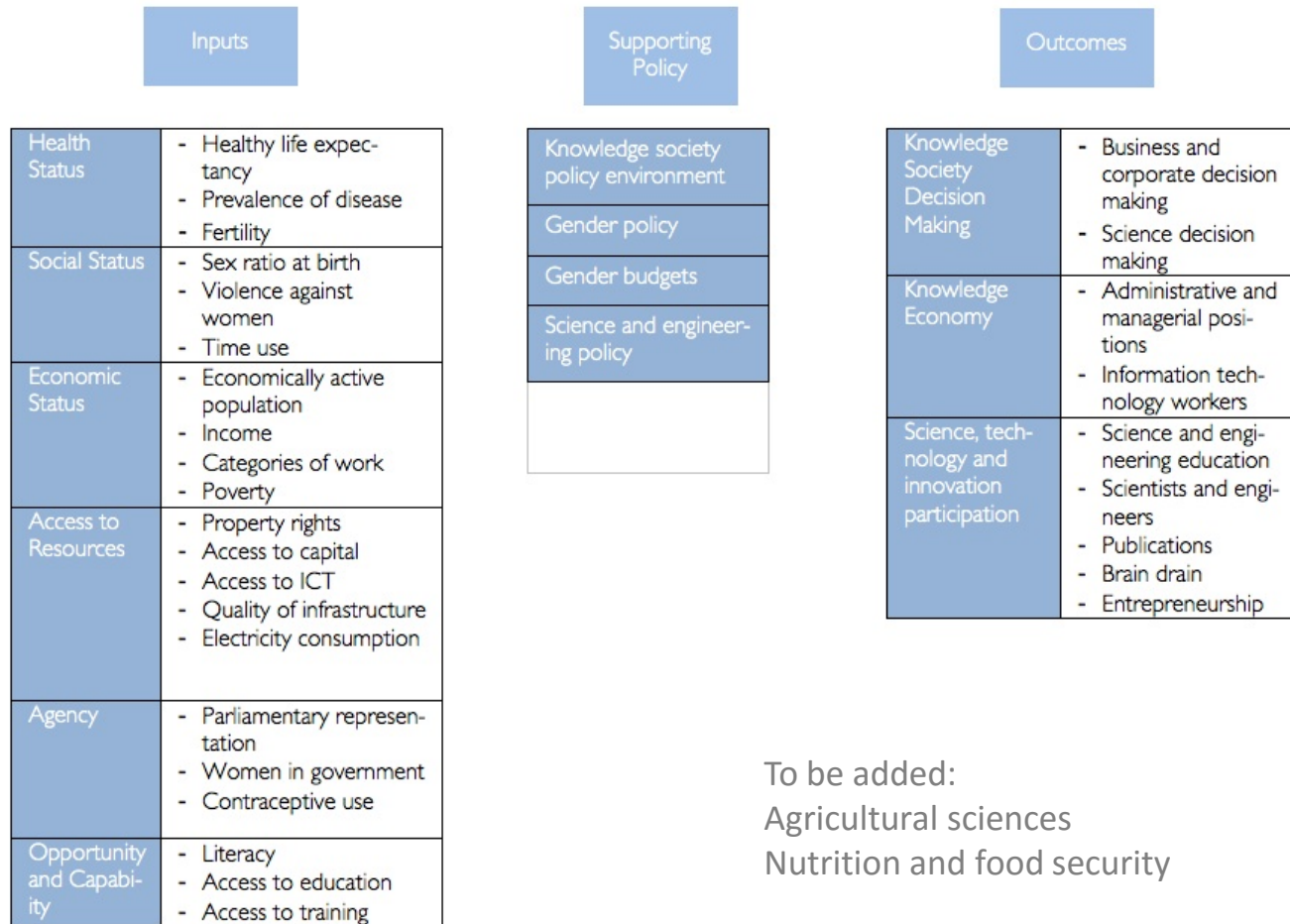
- Economies are increasingly relying on knowledge and a skilled workforce
- A gender imbalance in STI worldwide remains entrenched, and the leaky pipeline is still in effect (*UNESCO Science Report 2015*)
- Women play a central role in achieving the SDGs and their tasks tend to be unsupported by STI
 - *Applying a Gender Lens to Science, Technology and Innovation*, UNCTAD, 2011

What's different about the GE&KS approach?

- We know that educating women is insufficient : they are not getting to the higher levels of research and they are not going into STI to the same extent as men
- The National Assessments look at some of the contextual reasons for this
- Sex-disaggregated data across countries in the developing world is compared in a range of sectors to develop a more nuanced picture



GE&KS Framework

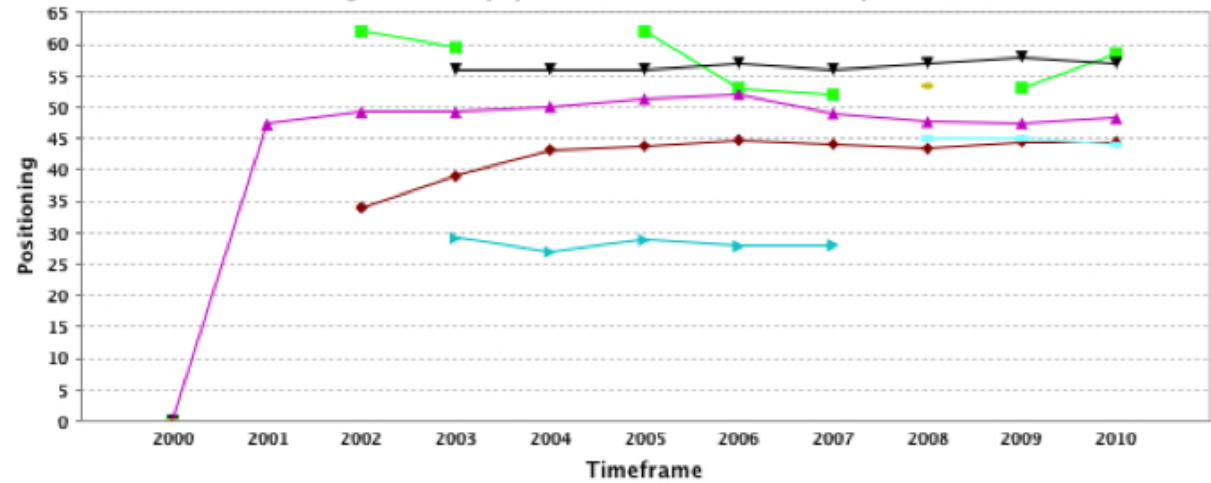


Findings to date

- A gender knowledge divide exists and flourishes in all countries, even those with a highly-developed knowledge economy
- Gendered barriers to participation in STI and technology exist -> this situation will not improve automatically with GDP, increased education or increased internet availability.
- Sex-disaggregated data is inconsistent and spotty

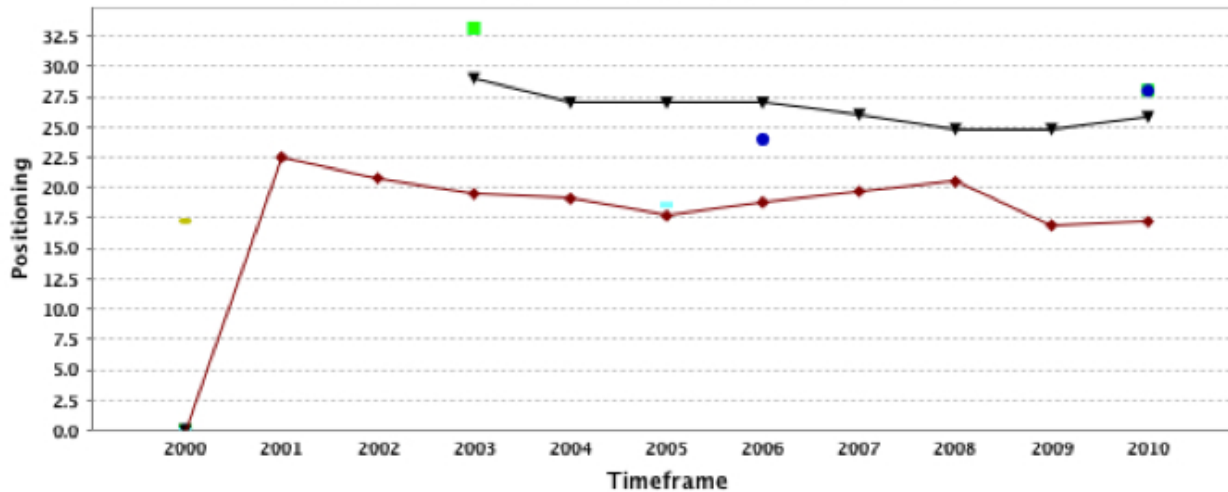
Knowledge economy

Knowledge economy: professional and technical positions



■ Brazil Female %
 ● India Female %
 ▲ Indonesia Female %
 ◆ Republic of Korea Female %
 ▲ South Africa Female %
 ▼ United States Female %
 ■ European Union Female %
 ▲ Argentina Female %

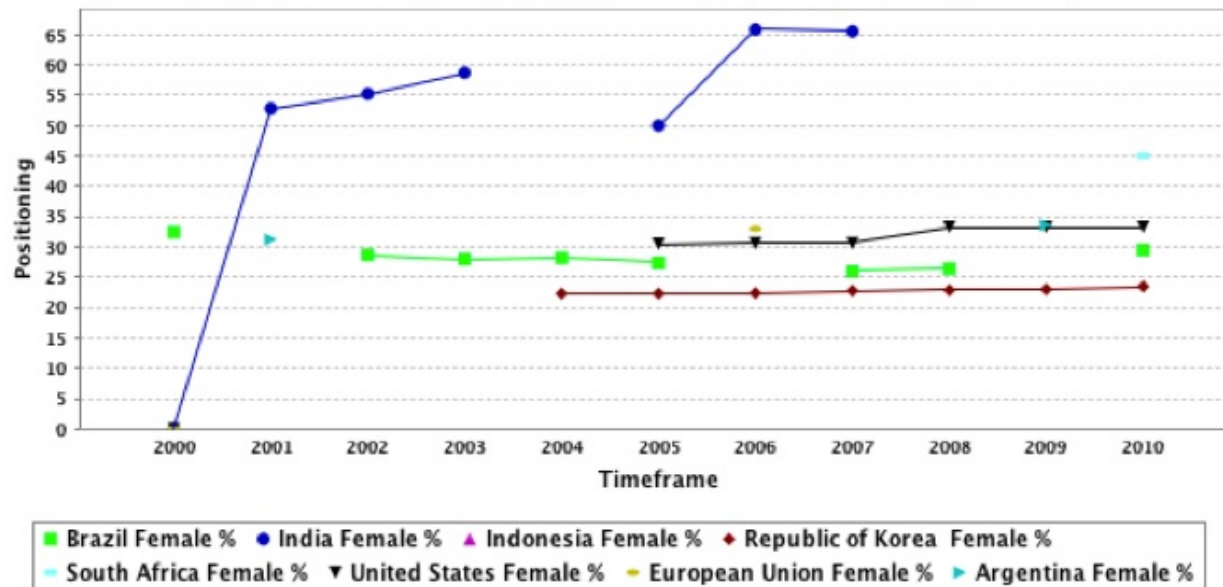
Knowledge economy: information technology workforce



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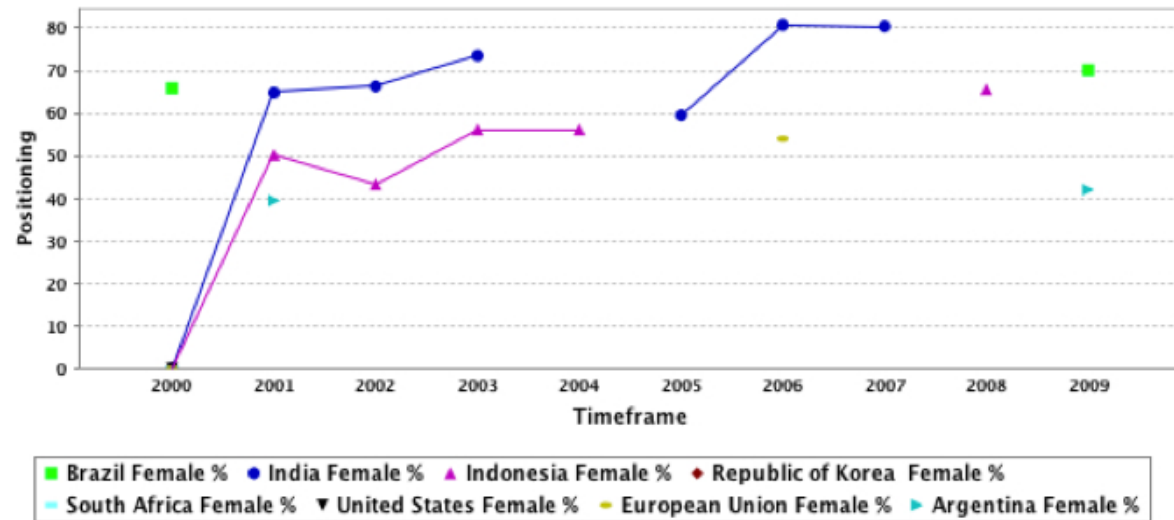
STI participation

Science, technology and innovation participation: tertiary science and engineering enrollment

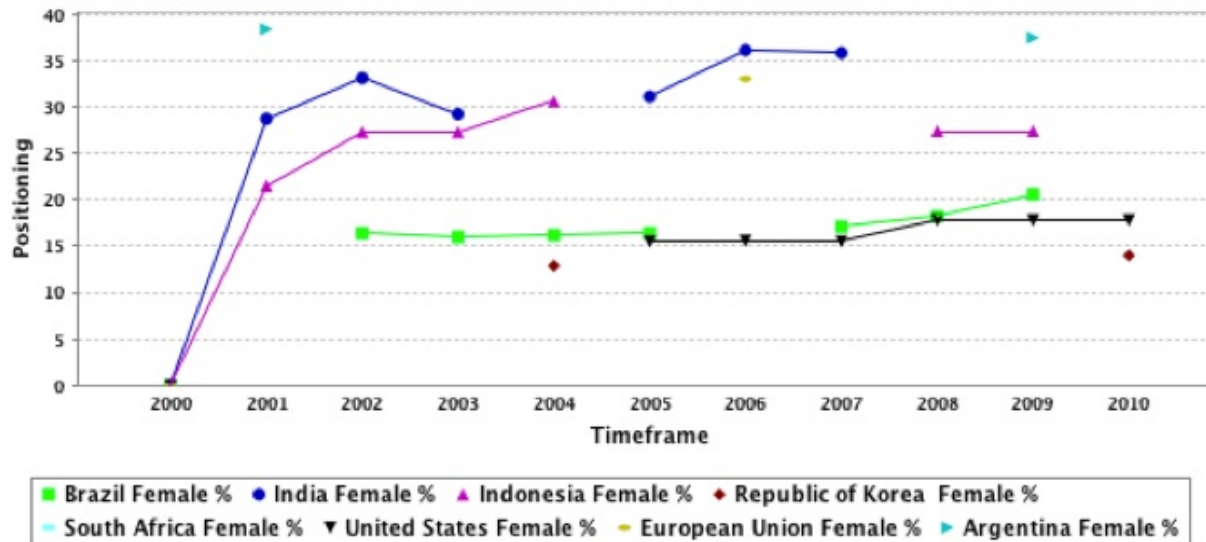


STI participation

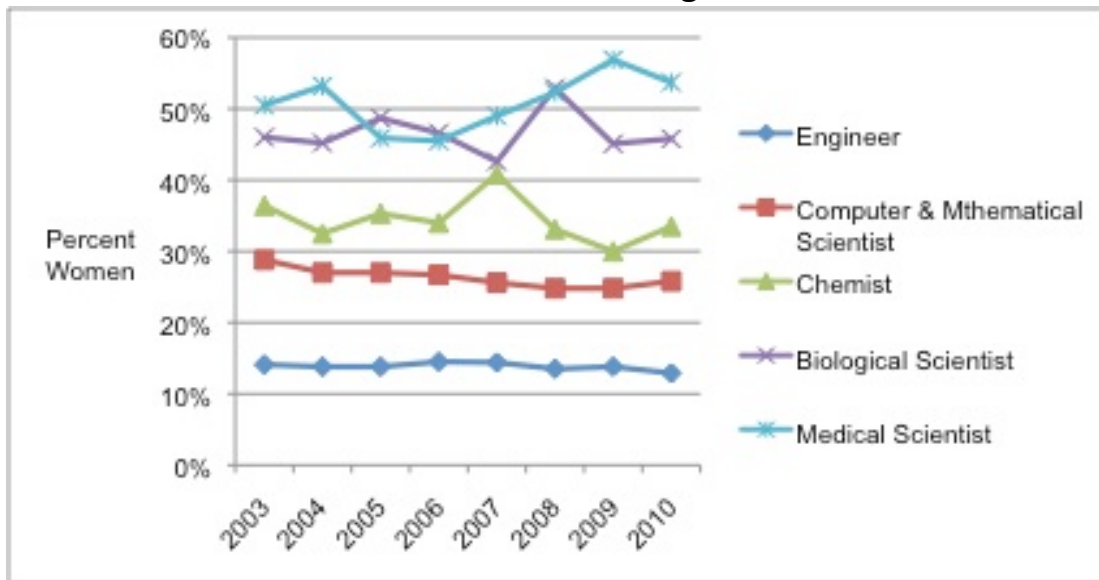
Science, technology and innovation participation: tertiary biology, medical, and life sciences enrollment



Science, technology and innovation participation: tertiary engineering and physics including computer sciences enrollment

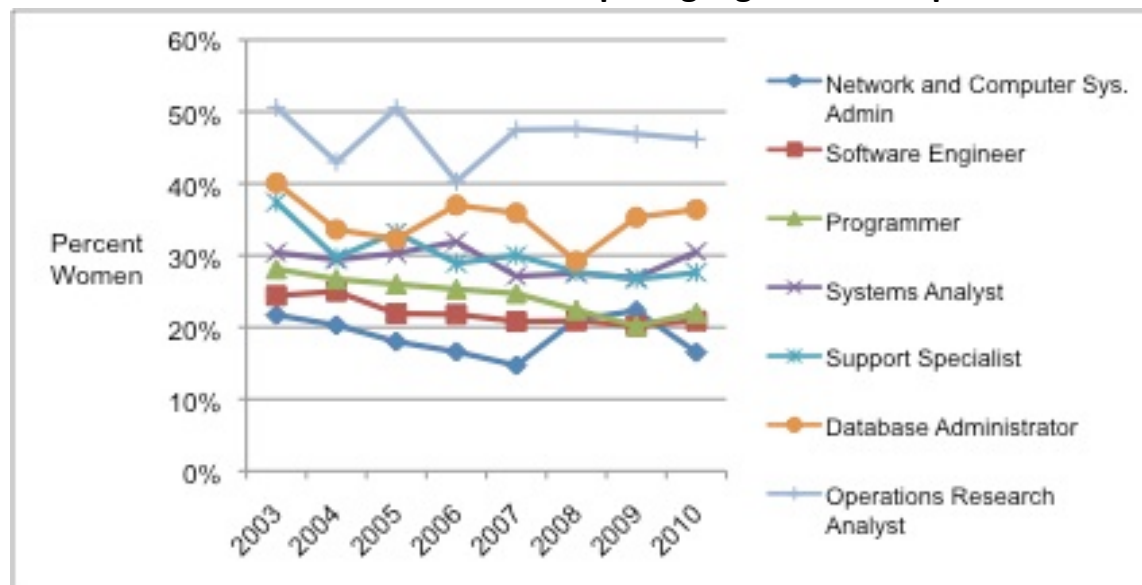


Percent of Women Scientists and Engineers in Selected Fields



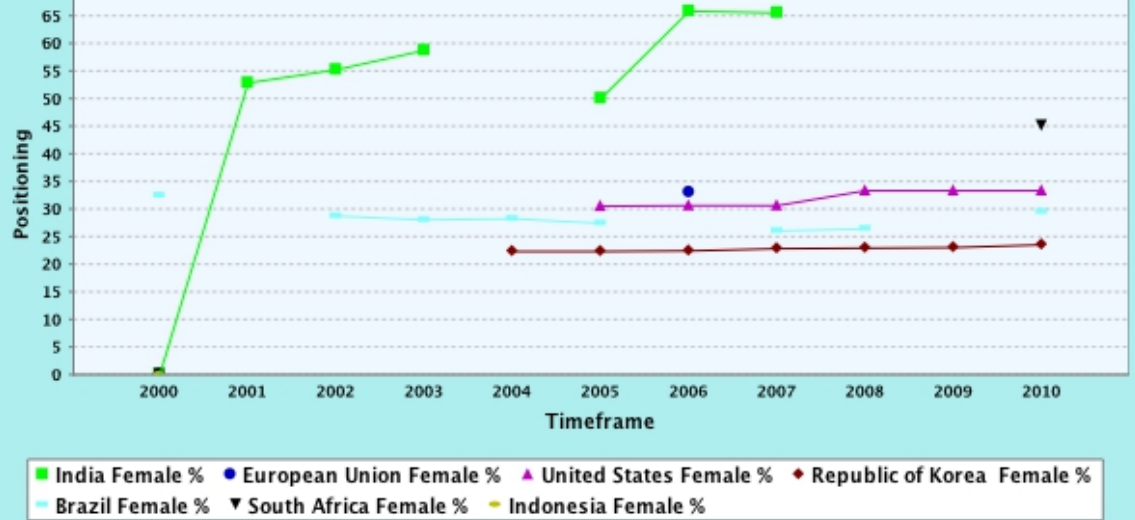
Declines in
some countries
and sectors

Women in selected fields requiring high-level computer skills

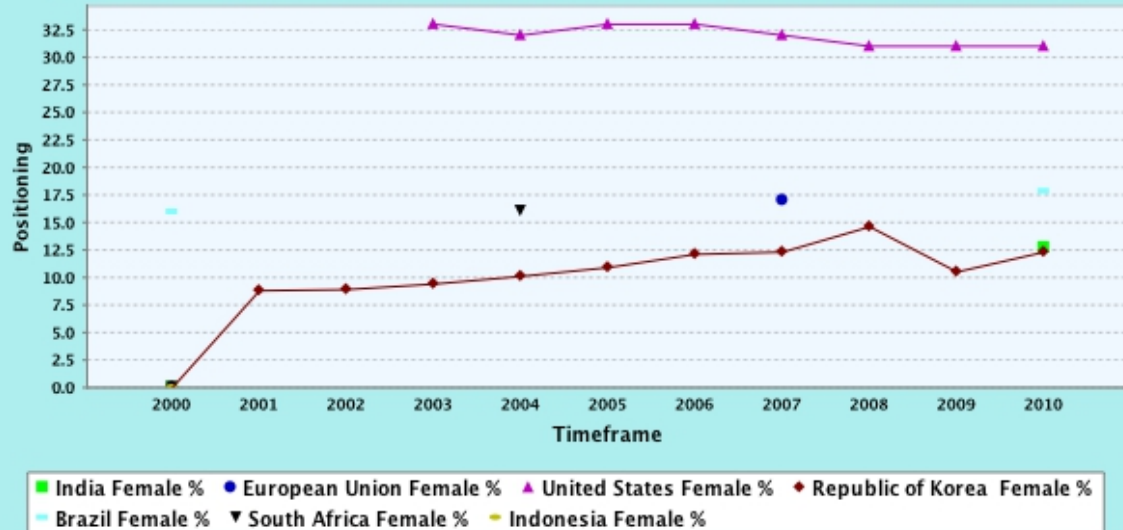


STI Enrollments vs Workforce

Science, technology and innovation participation: tertiary science and engineering enrollment

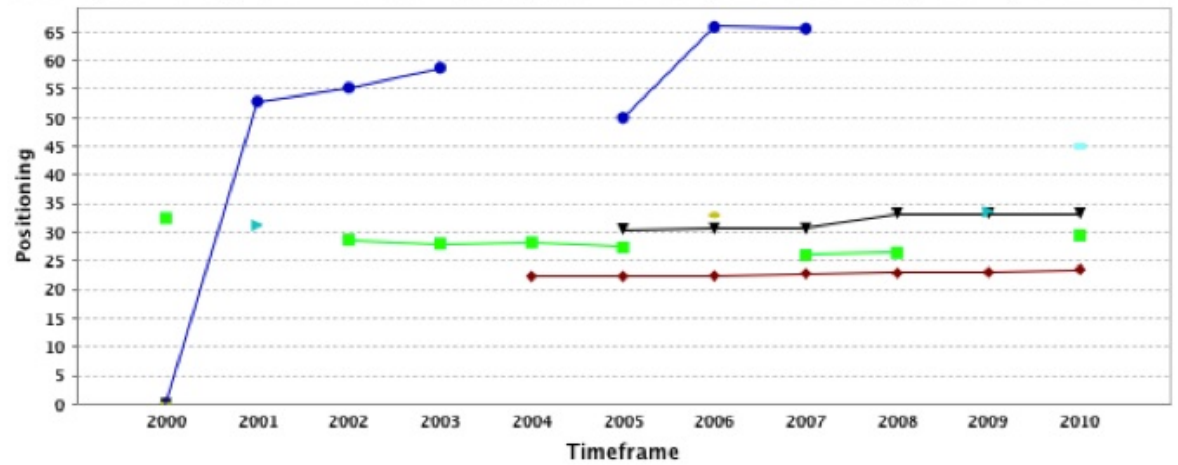


Science, technology and innovation participation: science and engineering labour force



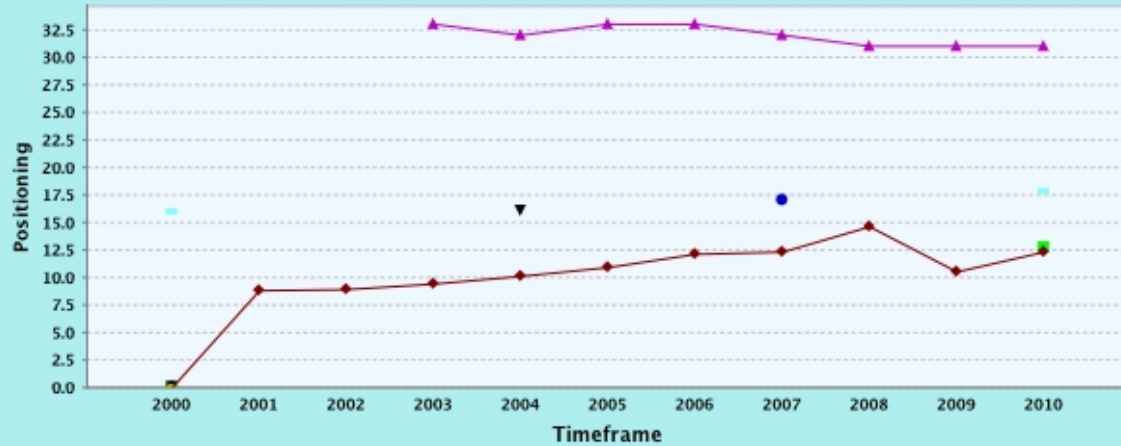
STI Enrollments vs Workforce

Science, technology and innovation participation: tertiary science and engineering enrollment



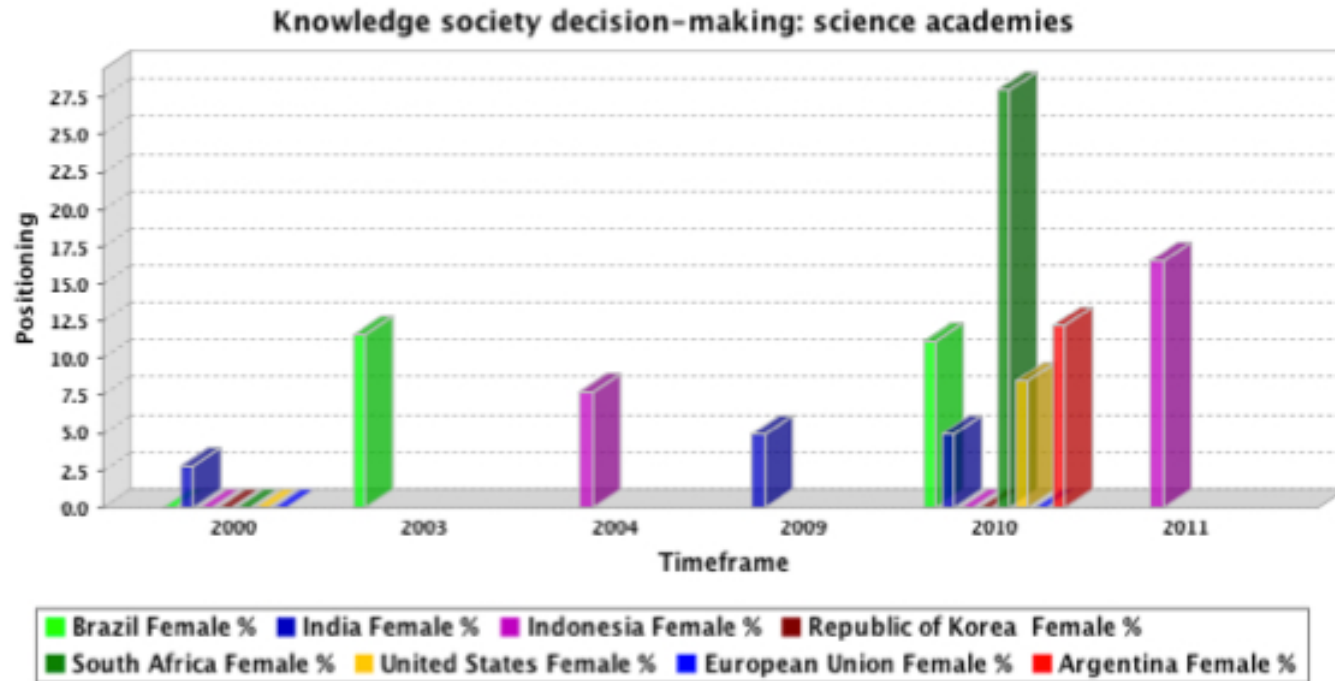
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Science, technology and innovation participation: science and engineering labour force



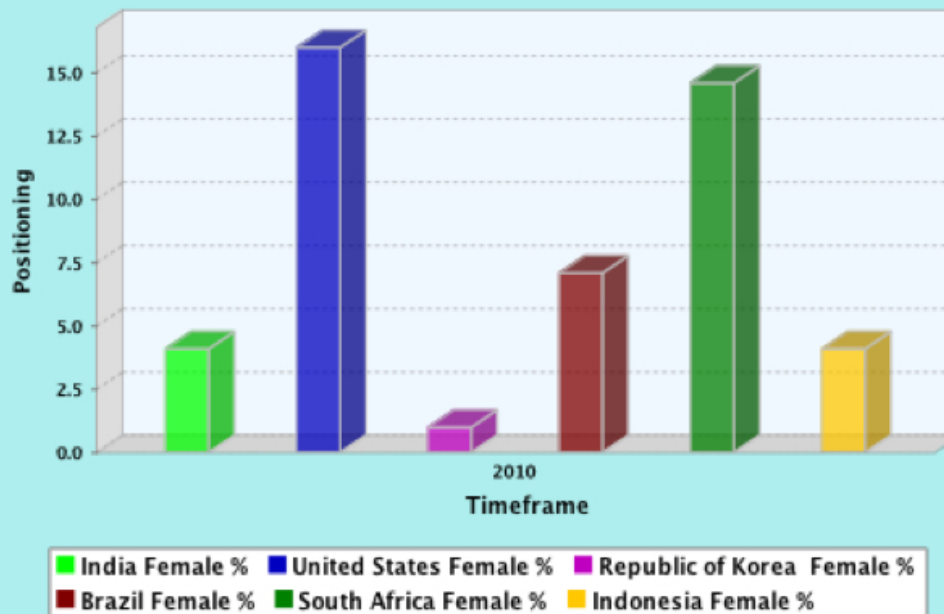
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KS Decision Making

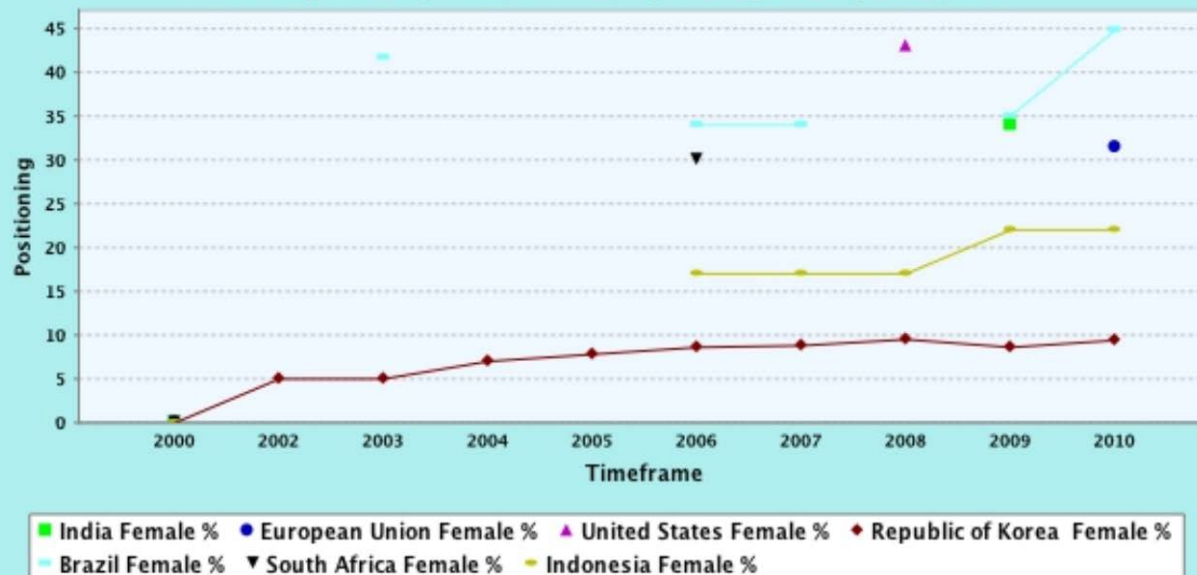


KS Decision Making

Knowledge society decision-making: participation on corporate boards: 2010

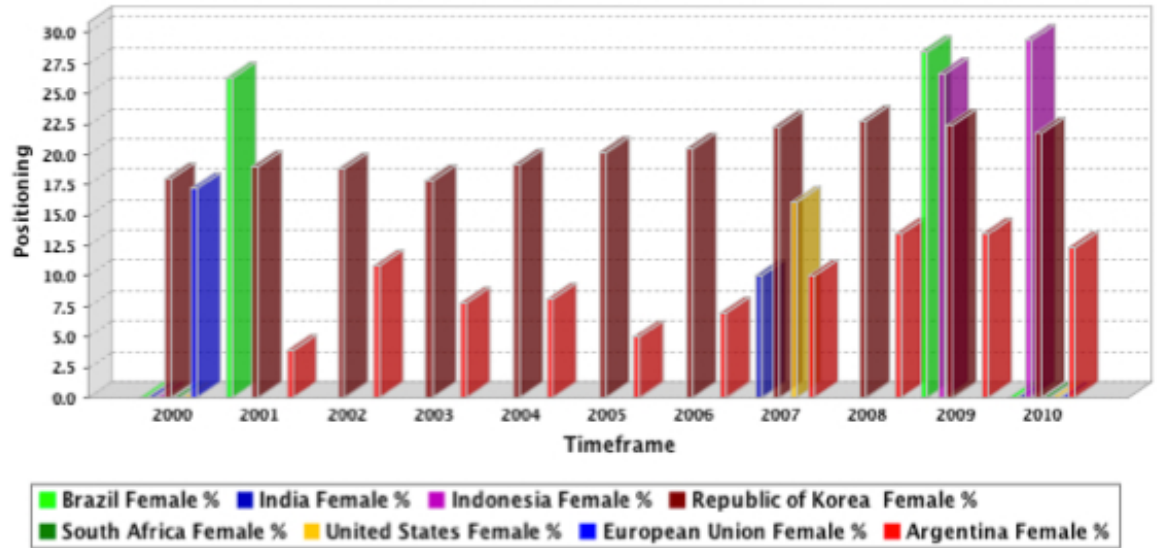


Knowledge society decision-making: management participation

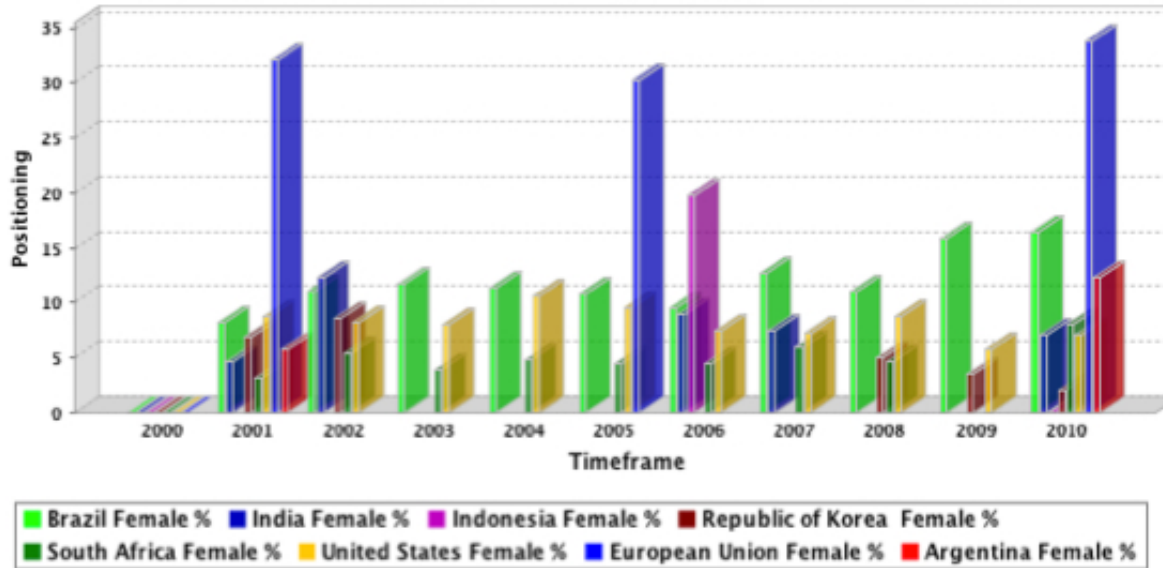


STI participation

Science, technology and innovation participation: business leadership



Science, technology and innovation participation: entrepreneurship



Key Findings

- Need for more consistent longitudinal sex-disaggregated data in all sectors
- Approximate parity in some countries in S&E overall but also surprising results for some advanced countries
- Under-representation in engineering, physics and computer science — lower than 30%, South Korea 11%
- Declining representation of females in the IT and STEM labourforce in most countries
- Low representation in STI decision making and entrepreneurship

There is no simple solution

- “Getting women into science education” is insufficient and needs to be supported by a multi-dimensional approach
- **Critical influencing factors:** participation in decision making / agency / access to resources, economic empowerment; domestic life support
- Policy makers need to understand the benefits of **valuing and supporting the participation of women** in this sector, as does the private sector

Thank you.

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