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Trans-Altai Sustainability Dialogue: Gender and Sustainability

Empowering Women through Higher Education: Women in STEM in the Digital Transformation Era

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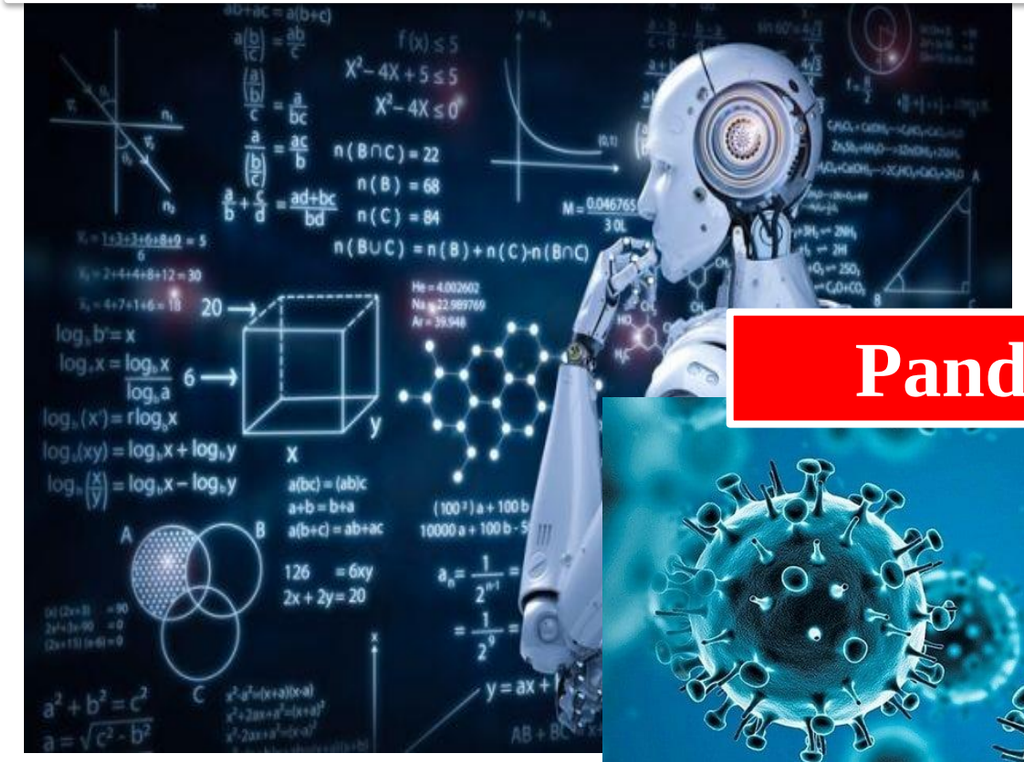
The Fourth Industrial Revolution

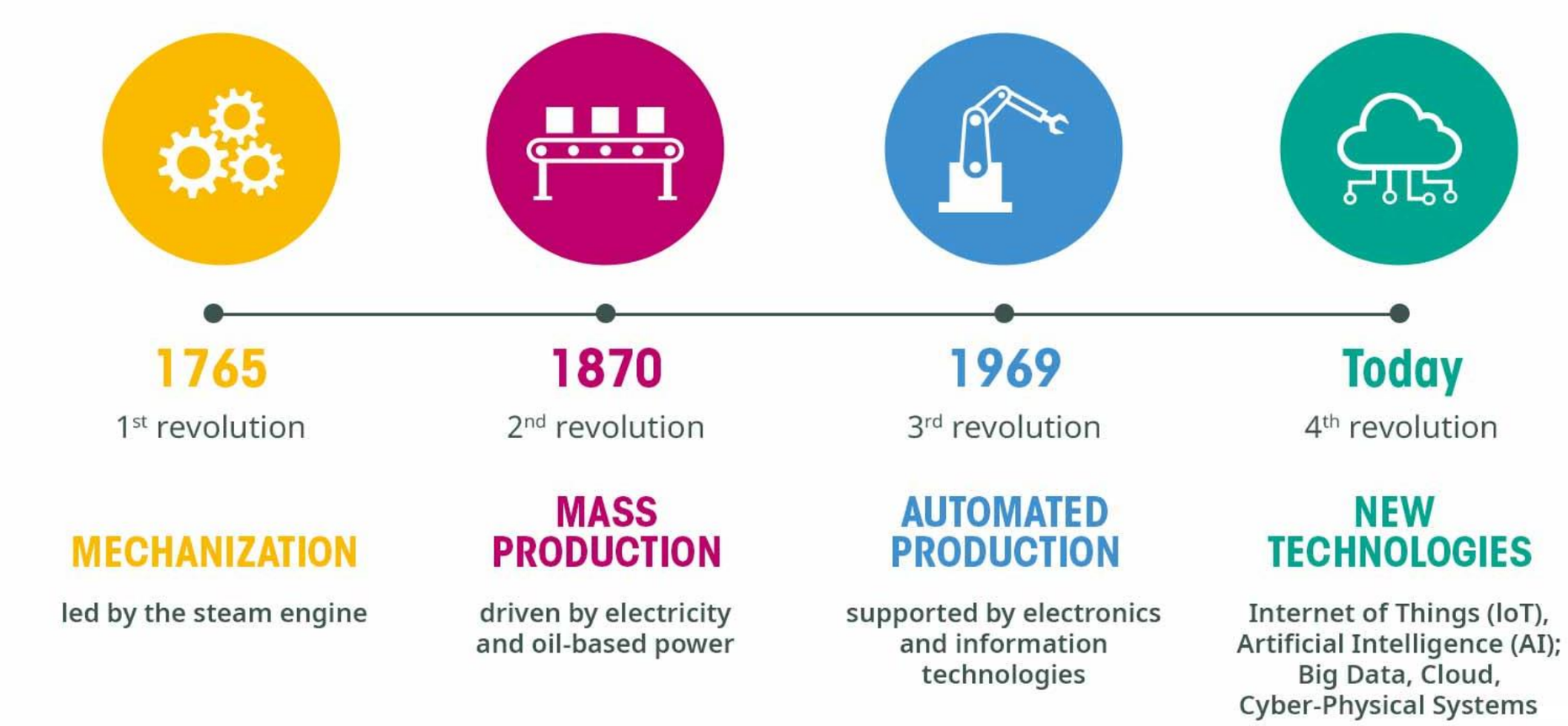


Pandemic

UN Sustainable Development Goals, 2016-2030

II. Digital Transformation and the Gender Gap

The Fourth Industrial Revolution – Digital Transformation



Source: Global Scientific Journals Volume 8, Issue 9, September 2020

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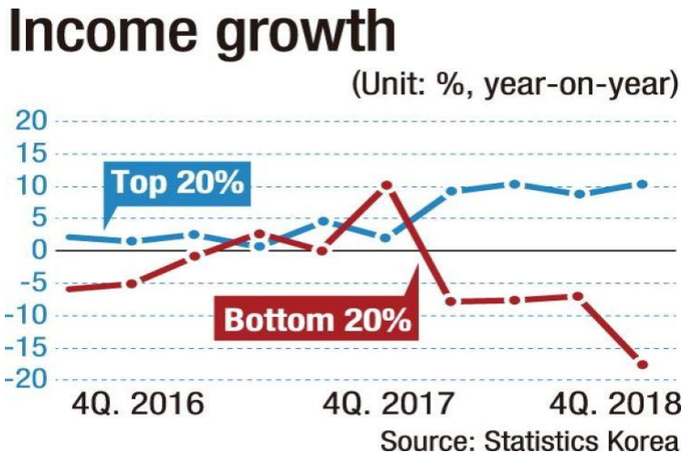
Digital Transformation & AI

- **Benefits of AI:**
  - The global AI market is predicted to snowball, reaching $190.6bn in 2025
  - The potential contribution to the global economy from AI could be $15.7tn in 2030
  - Netflix's recommendation engine (powered by AI) is worth $1 billion a year
- **AI widens income gap and social inequality:**
  - The rich and high-skilled people taking advantage of the technological progress
  - Many others may lose jobs
  - Women and the other disadvantaged groups lose out
- **Digital gap & gender gap compounded and exacerbated during the COVID-19 pandemic**



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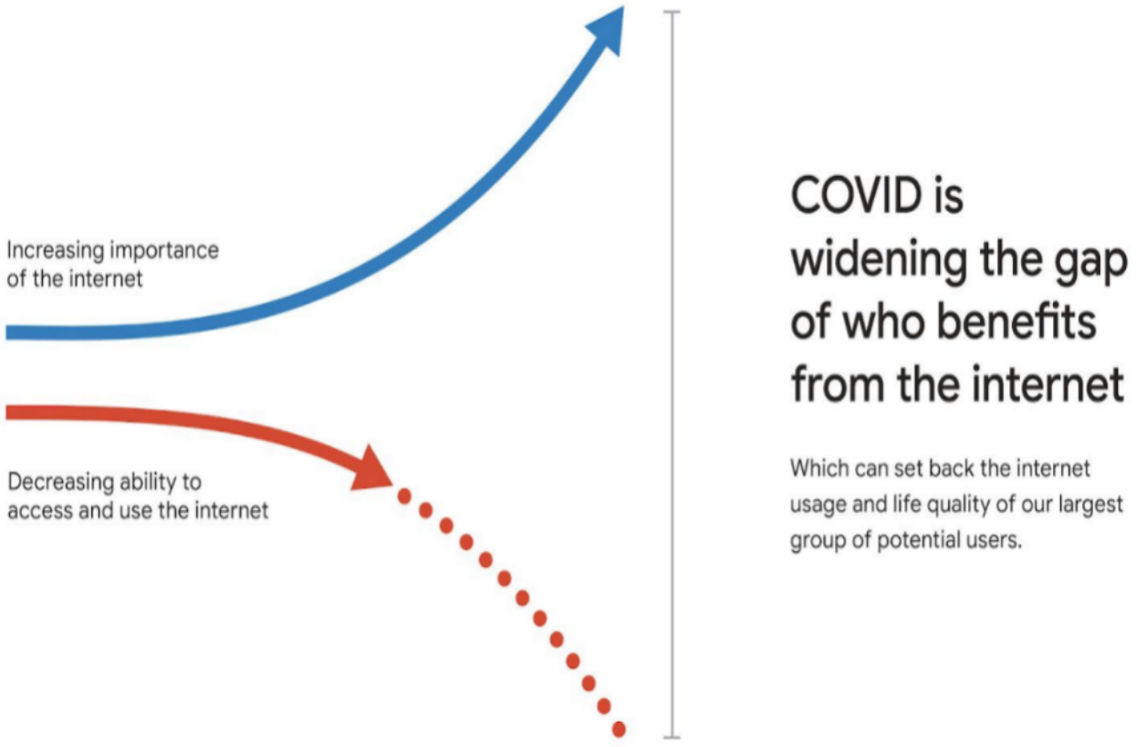
COVID-19 Pandemic & Digital/Gender Gap

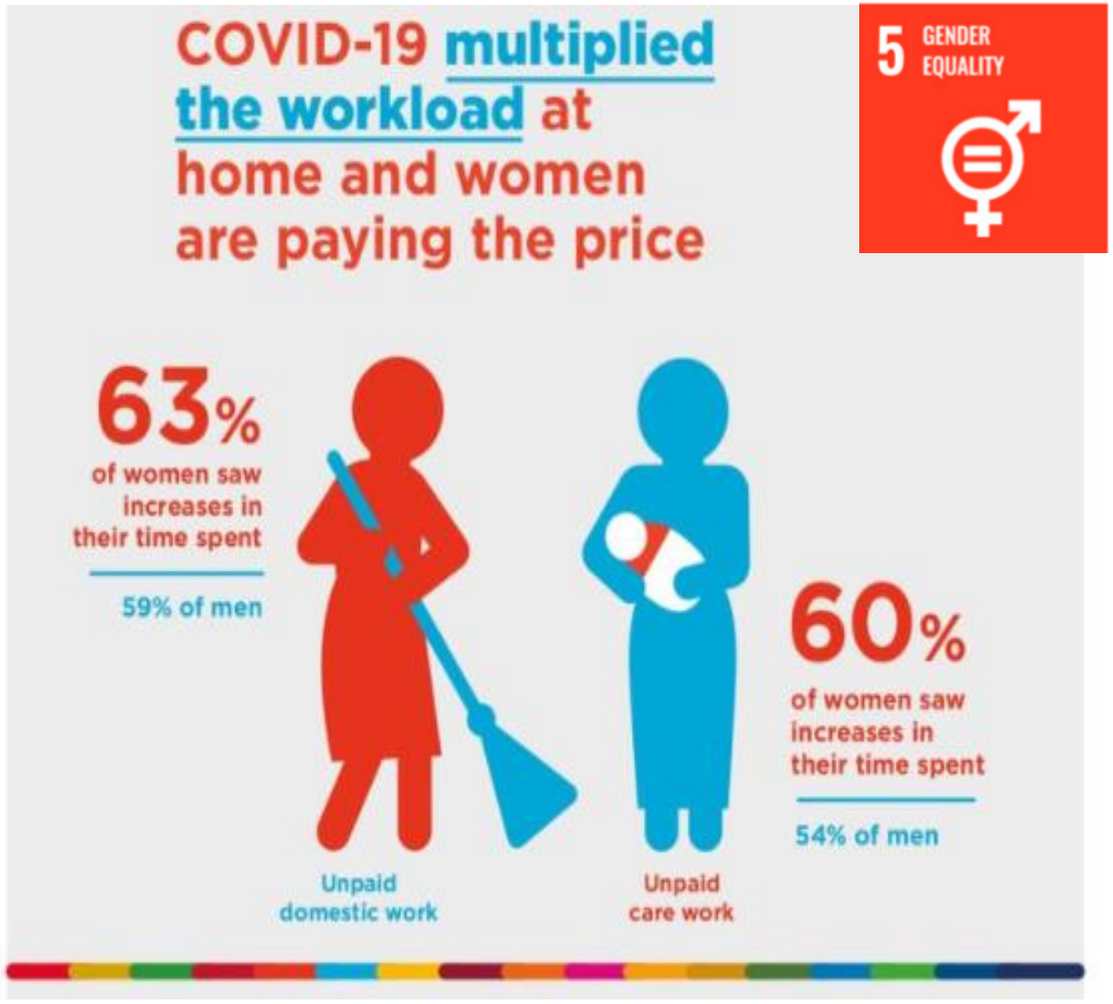
1. Digital Gap Widened



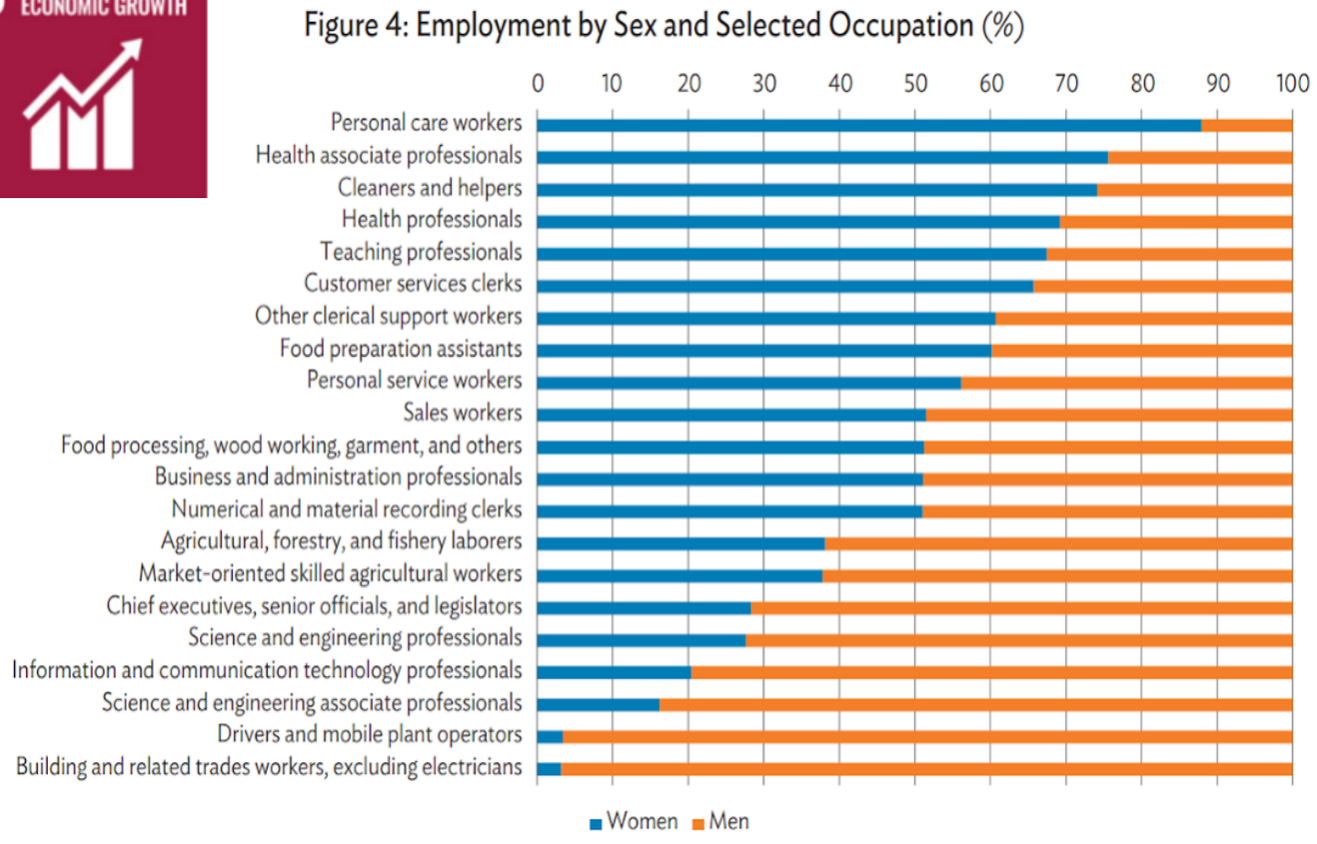
- Customer Interactions that are Digital: 2008 20%, 2019 38%, 2020 58% (McKinsey & Co.)
- **Cost of Internet Use**:
  - Developed Country Consumers: 2% of monthly GNI per capita
  - Developing Country Consumers: 5-6 times more of their income than above. E.g., Zimbabwe: 1 GB 10.06% of GNI per capita
  - Of 46 least developed countries, only 4 have affordable internet (Bangladesh, Bhutan, Myanmar, Nepal)
- **Internet Connectivity**: Became less affordable in 2021 due to decrease in income (Affects developing countries more due to greater economic vulnerability)

Sources: Google Next Billion Users Initiative, Impact of COVID-19 on New Internet Users; McKinsey & Co.; UN Broadband Commission; International Telecommunication Union (ITU); Alliance for Affordable Internet

2. Gender Gap Worsened



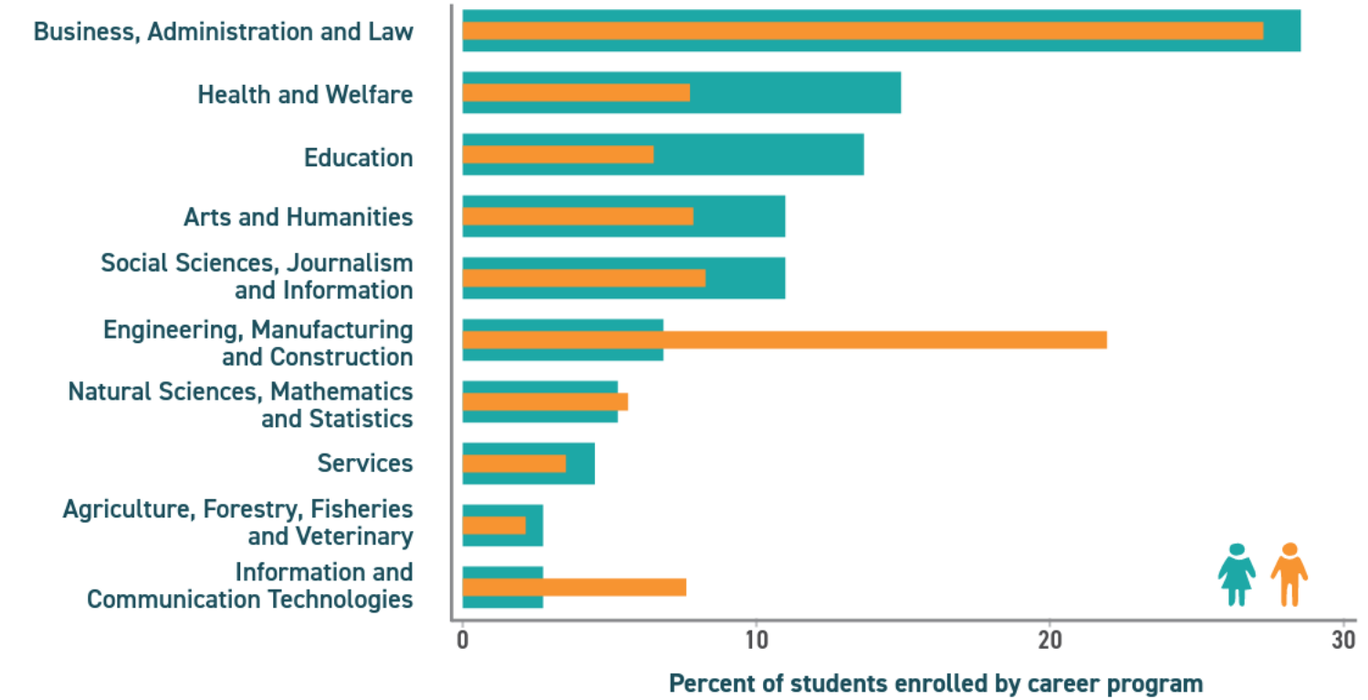
Source: UN Women



Source: International Labour Organization. ILOSTAT. https://ilostat.ilo.org/these-occupations-are-dominated-by-women/ in https://www2.deloitte.com/us/en/insights/economy/impact-of-covid-on-women.html)

Gender Gap in STEM Education

FIGURE 2. Women are less likely to major in STEM



Source: UNESCO Institute for Statistics in World Bank (2020) The Equality Equation

Note: Most recent data point between 2015-2019 (unweighted averages).

Low share of female students in STEM

- ICT: 3%
- Science, Math & Statistics: 5%
- Engineering, Manufacturing & Construction: 8%

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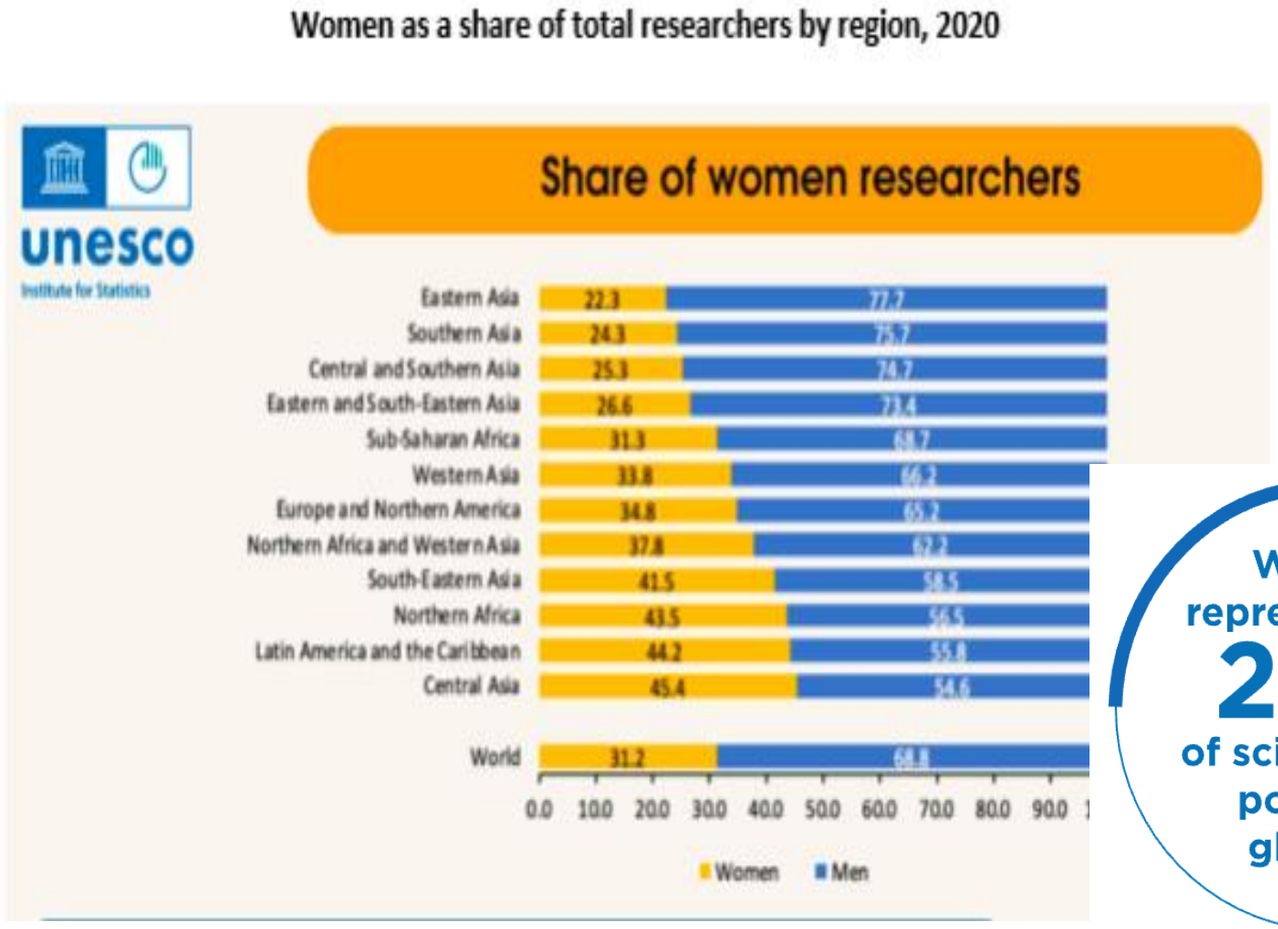
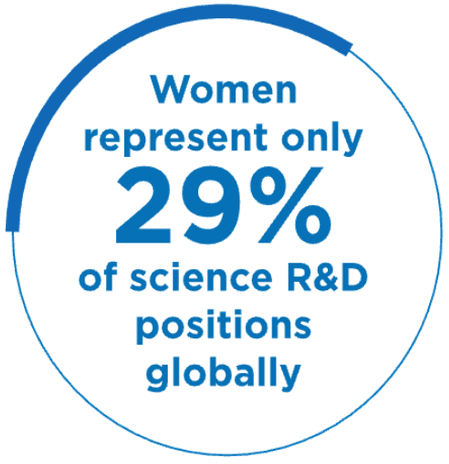
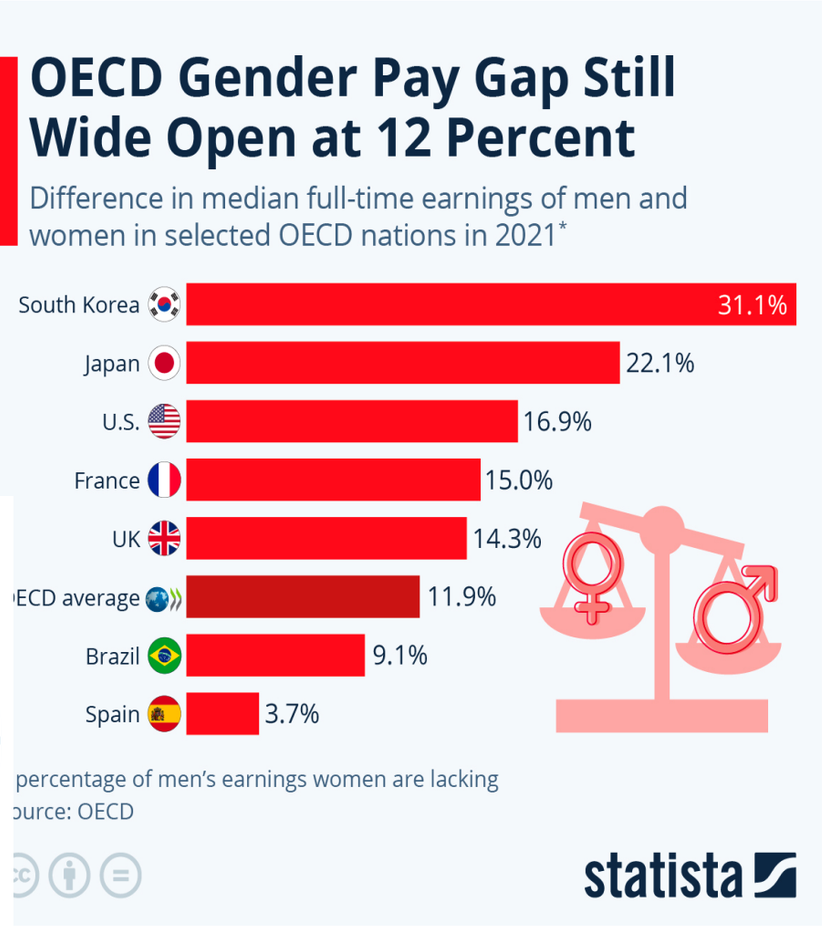
Gender Gap in STEM Workforce







Source: UNESCO Institute for Statistics 2023, UNESCO 2019 Report, OECD (2023) Gender Wage Gap Indicator

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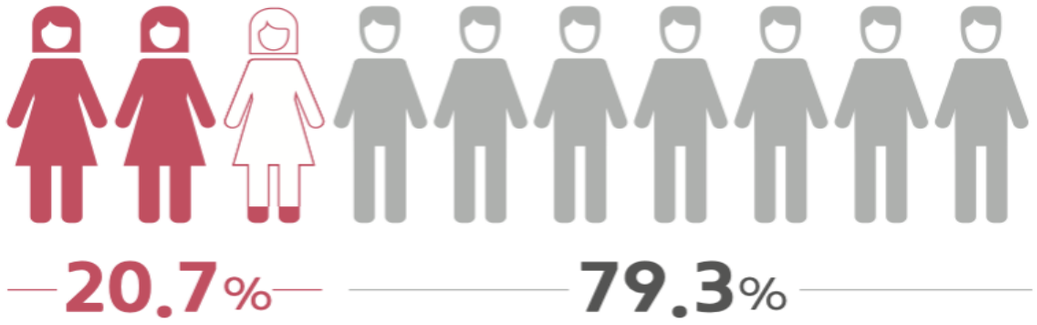
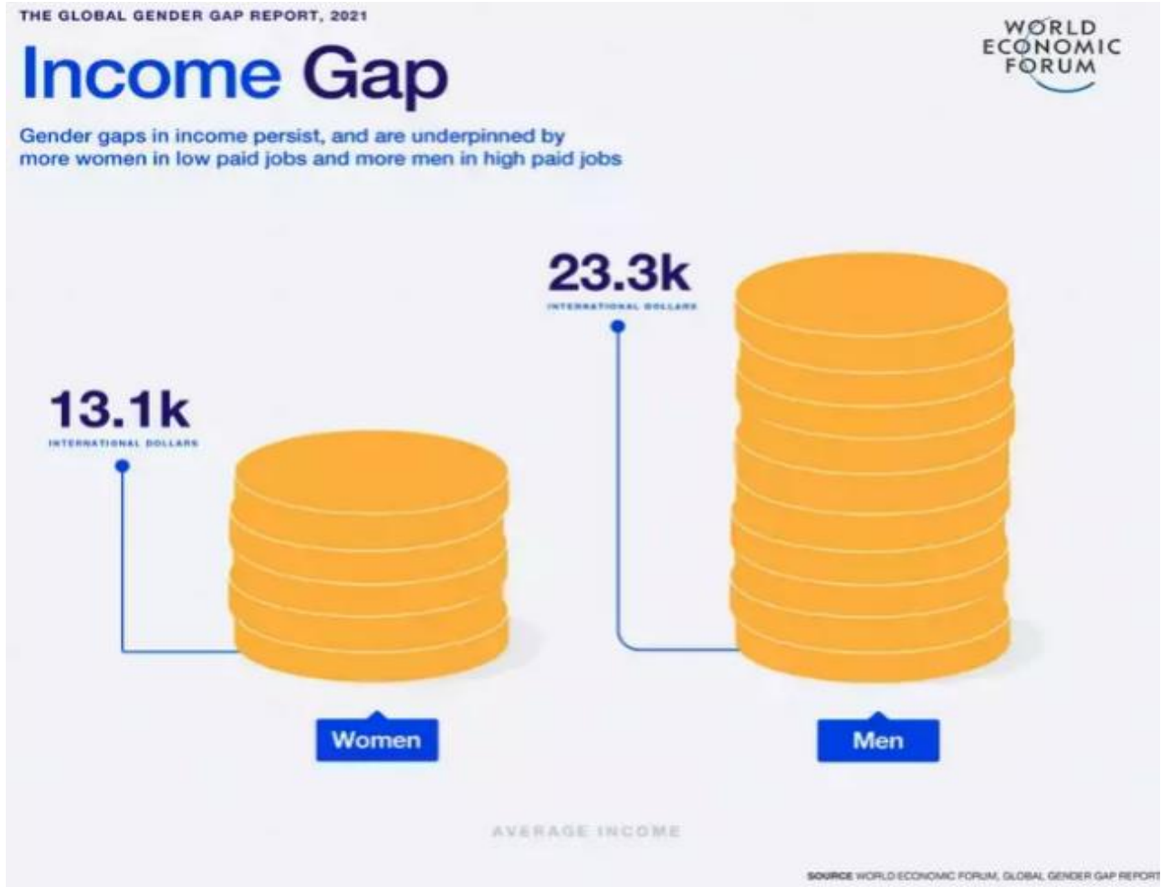
STEM Work, Income, Poverty & Gender

Gender Share of the STEM R&D Workforce





Source: Women & Men in Science, Engineering & Technology 2010-2019

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III. Women's Empowerment in Higher Education: The History of Ewha Womans University

Ewha's Record of Firsts

First of Ewha

- 1886: Modern Education for Women
- 1887: Women's Hospital
- 1910: Higher Education Courses for Women
- 1946: University Accreditation
- 1950: Graduate School
- 1971: International Summer College
- 1996: College of Engineering – First in the World

1886
Ewha Haktang founded as the first women's educational institute in Korea

1887
Korea's first women's hospital Pogoonyogoan established

1910
Four-year College courses launched

1946
Korea's first university to receive government accreditation

1996
World's first Women's engineering college established

2008
Ewha Campus Complex (ECC) constructed

2019
Ewha Womans University Seoul Hospital opened

2023

Ranked 1st among South Korean universities in Gender Equality in the Times Higher Education

The College of Artificial Intelligence (2023)
The Graduate School of Data Science (2022)

25,000 Students
250,000 Alumni
15 Undergraduate Colleges
15 Graduate Schools
2 Teaching Hospitals (1,000 beds each)

1) College of Artificial Intelligence (2023)

➢ Why AI at Ewha?

- Leading Field in the Fourth Industrial Revolution
- Global Need to Reduce AI Gender Gap
- Gender Sensitivity in AI Research, Education, and Social Practice/Regulation

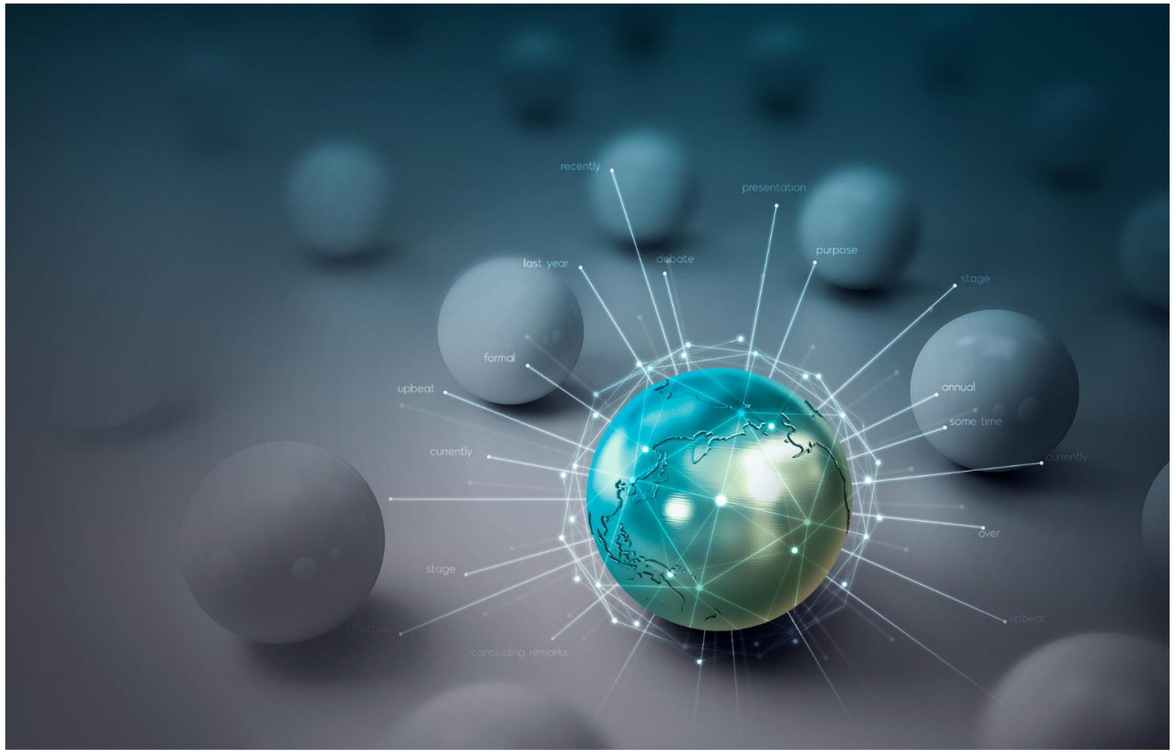
➢ Ewha's AI (Research/Education/Global Role)

(1) AI Core Technology
(2) AI Convergence and Application
(3) Human-Centered AI with a Special Focus on Gender Sensitivity

➢ **2023 College of AI:** AI; Computer Science; Cyber Security; Data Science

2) Graduate School of Data Science (2022)

- Graduate School designed for retraining graduates in data science with interdisciplinary fields of business, finance, medicine, etc.
- Hybrid and online classes
- Interdisciplinary education on curriculum from computer science, big data, statistics, management, etc.
- Tailor-made hands-on Capstone projects



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IV. Conclusion

1. World Economic Forum (2022)'s *The Global Gender Gap Report:* It will take 132 years to reach gender equality in the world.
2. Sustainable Development Goals (SDGs) cannot be achieved without gender equality. The UN *Global Sustainable Development Report 2019* identified social inequality as one of four main obstacles that can derail SDGs by 2030 if not corrected immediately. Gender inequality is a key challenge, which has exacerbated during the COVID-19 pandemic.
3. The digital gap has been compounded with the gender gap during the pandemic.
4. Recommendation: Support the Global South and the World with **women and girls in STEM and higher education to reduce digital/gender gap**.

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Thank you very much!