



GENDER EQUALITY IN STEM IN EUROPE AND CENTRAL ASIA REGION: RECOMMENDATIONS TO FOSTER A STEM ECOSYSTEM

SUMMARY BRIEF

A more diverse and inclusive STEM ecosystem is more important now than ever not only because of the accelerating impacts of technology, automation and artificial intelligence, but also because women's hard-won rights in the workplace are at risk due to the impacts of COVID-19. The pandemic has exposed structural gender inequalities in the social, economic and political spheres, underlining the importance of designing responses with a gendered, intersectional lens to prepare for a post-COVID-19 labour market. Governments and companies, for example, must do more to propagate a gendered, shared approach to employment post-COVID-19, through measures such as public investment in social care

infrastructure, flexible and remote-work culture and family-friendly leave policies, to preserve the progress women have made and dismantle the barriers which prevent them from advancing in STEM.

An integrated approach is needed to tackle barriers to women's advancement in STEM, linked to addressing overall gender inequalities in the labour market. This will require medium- to long-term actions, in addition to the measures adopted as part of the COVID-19 response. To name a few, traditional norms still prevent girls from choosing STEM programmes in education, inconsistent care policies and women's disproportionate care burden impede them from re-entering the labour market after

maternity leave, a lack of mentorship opportunities and role models prevent women from building advantageous partnerships, legal, social and practical barriers hamper women's access to assets key to economic empowerment, non-transparent company policies preclude women's equal remuneration and promotion.

Combating entrenched gender stereotypes and gender bias in STEM also requires a multidimensional approach – from awareness-raising to skill-building, policy development to fostering entrepreneurship – that stimulates deeper collaboration among stakeholders across different sectors. The following are some major actors who can create pathways toward gender equality in STEM, by aligning 21st-century STEM and entrepreneurial curriculum; creating inclusive school environments; in STEM departments, especially engineering and technology;

opening access to and rise in careers, promoting entrepreneurship and women's networks; implementing active labour market programmes, tackling STEM shortages; and building communities for support and encouragement along the way:

- academic institutions (primary to higher education)
- local and national governments
- private and public STEM companies
- local civil society organizations
- international non-governmental organizations
- multilateral banks and inter-governmental organizations
- foundations
- finance institutions
- business, professional, trade and scientific associations
- women role models in STEM
- gender equality champions in STEM sectors

Recommendations

The following actions could foster a STEM ecosystem, engaging multiple actors to advance gender equality:

Awareness-raising

- Raise awareness of the skill needs of the labour markets of the future, encourage and support women to pursue STEM occupations and undertake campus campaigns to explain the diversity of STEM opportunities, which are likely to thrive in the digital age.
- Conduct high-profile research activities on the consequences of digitalization and advanced technologies on women's employment prospects and establish an early warning system of the gender gaps that may spark timely policy responses, if necessary.
- Advocate and promote wider social recognition for women STEM champions and leaders who serve as role models.

Skill-building, research and innovation

- Develop programmes for supporting formal and non-formal training in STEM fields, including extracurricular activities in museums, science centres, STEM festivals and camps, libraries.

- Build partnerships among governments, institutions responsible for formal and non-formal training and the private sector, to support women's participation in STEM education and access to scholarships and fellowships.
- Promote STEM-related curricula in skilling and upskilling programmes, and other forms of adult education. Programmes might also include relevant issues like digital safety and privacy for women and girls.
- Allocate more funds and develop programmes and actions to support research and development in STEM-related sectors by women.

Fostering entrepreneurship

- Foster women's entrepreneurship in knowledge-based industries by supporting web-based entrepreneurship networks and establishing high-quality online platforms for mentoring and coaching of new entrepreneurs.
- Popularize digital finance and innovative web-based instruments for women entrepreneurs to access to financial capital, such as high-quality digital platforms for angel investors, venture capital investors or equity crowdfunding that bring together female entrepreneurs and female investors.
- Lower the ICT and high-tech sector's entry/start-up costs for necessity-driven¹ women entrepreneurs.
- Support start-ups offering innovative digital solutions, especially those owned by young women, also through long-term mentoring activities provided by experts with proven track record in business development and running.

Policy development

- Promote an inclusive and equal work environment, incentivizing the adoption of transparent employee recruitment, promotion and remuneration policies and the development of mentoring programmes and initiatives.
- Promote the adoption, and effective implementation, of anti-sexual harassment policies by companies and institutions.
- Create and ensure inclusive environments in STEM departments, especially engineering and technology, through the adoption of university policies for gender equality and equal opportunities.
- Invest in both private and public childcare and eldercare services and programmes, in order to encourage women's labour force participation, and provide economic and social incentives to promote an equal division of unpaid work.
- Ensure and promote flexible work arrangements for all genders, especially in the context of the COVID-19 crisis and its aftermath, to enable more equal sharing of unpaid work and care responsibilities and enhance women's productivity.

¹ Global Entrepreneurship Monitor (2019). [Opportunity and necessity entrepreneurship](#). Necessity-driven entrepreneurs are those who are pulled to entrepreneurship by opportunity and because they desire independence or to increase their income.

United Nations Development Programme (UNDP)

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