



SHE FIGURES

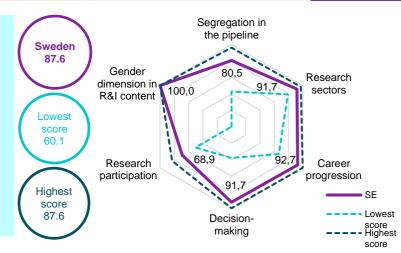
2024

The road to gender equality in R&I



The **She Figures Index** is a tool to measure the extent to which European Union (EU) Member States have achieved gender equality in the European Research Area (ERA). It draws on She Figures indicators across six dimensions: segregation in the pipeline, research sectors, career progression, decision-making, research participation, and incorporating a gender dimension in research and innovation (R&I) content (GDRIC).

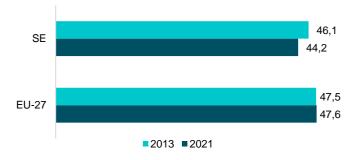
A score of between 0 and 100 is assigned to each dimension, as well as an overall score. A score of 100 denotes that gender equality has been fully achieved. Among the Member States, Sweden ranks 1st overall, with a score of 87.6. The breakdown indicates relatively high scores on the dimensions of GDRIC (1st), decision-making (6th) and segregation in the pipeline (8th), and moderate scores on research sectors (10th), career progression (12th) and research participation (13th).





Pool of graduate talent

Figure 1: Proportion (%) of women among Doctoral graduates (ISCED 8), 2013 and 2021



Notes: ISCED 8 = International Standard Classification of Education, Doctoral level or equivalent.

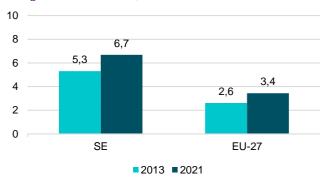
Source: Eurostat – Education Statistics (online data code: educ_uoe_grad02); Organisation for Economic Co-operation and Development (OECD) (Graduates by field).

She Figures 2024 shows that Sweden has achieved gender balance in the proportion of women among Doctoral graduates. However, between 2013 and 2021, the share of women among Doctoral graduates decreased from 46 % to 44 %. These percentages are below the average for the 27 European Union Member States (EU-27) for these years. Sweden ranks 23rd among the Member States for the proportion of women among Doctoral graduates.

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Participation in science and technology occupations

Figure 2: Proportion (%) of women scientists and engineers among total labour force, 2013 and 2021

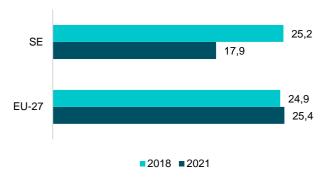


Notes: Break in time series for 2021 SE and EU-27 data. S&Es = scientists and engineers.

Source: Eurostat – Human resources in science and technology (online data code: hrst_st_ncat) and Eurostat – Labour Force Survey (EU-LFS) – Active population by sex, age and citizenship (online data code: Ifsa_agan).

In Sweden, the proportion of women among scientists and engineers (S&Es) in the total workforce is 6.7 %, based on 2021 data. This is the highest share among all 27 Member States, almost twice as high as the EU-27 average. The share of women in science and engineering roles among the total labour force was 5.3 % in 2013.

Figure 3: Proportion (%) of women among self-employed S&Es and ICT professionals, 2018 and 2021



Notes: Break in time series for SE and EU-27 data. ICT = information and communications technology.

Source: EU-LFS Annual Average Quarterly data.

Women comprise less than one-fifth (18 %) of self-employed S&Es and information and communications technology (ICT) professionals, according to 2021 data. Between 2018 and 2021, the share of women among self-employed professionals in these fields decreased by 7 percentage points (pp). Of the 22 Member States for which data are available, Sweden ranks 21st for the proportion of women among self-employed S&E and ICT professionals.



Labour market participation as researchers

Figure 4: Proportion (%) of women among researchers, by sector of the economy, 2013 and 2021



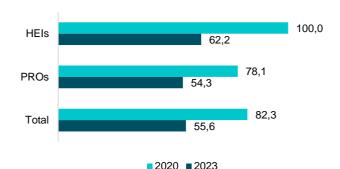
Notes: HES = higher education sector; GOV = government sector; BES = business enterprise sector; EU-27 data for 2021 are estimated; SE GOV and BES data for 2021 include a break in time series; SE data for 2013 for GOV are not available. Source: Eurostat — Research and development statistics (online data code: rd_p_persocc) and OECD-R&D personnel by sector and function.

She Figures 2024 shows that women represent 34 % of researchers in Sweden, based on 2021 data. Gender balance is achieved in the higher education sector (HES) and government sector (GOV), with women representing over 40 % of researchers. However, women are underrepresented in the business enterprise sector (BES), where they account for just 25 % of researchers. Across all sectors, the proportion of women researchers in Sweden is above the EU-27 average in both years.

To promote equal opportunities for women researchers, the national Ordinance (last amended in 2024), which is a supplement to the Swedish Higher Education Act, states that equal gender representation must be ensured when considering applicants for teaching positions in the HES (i).

Working conditions of researchers

Figure 5: Proportion (%) of research organisations taking actions or measures towards gender equality, by type of organisation, 2020 and 2023



Notes: HEI = higher education institutions; PRO = public research organisations. Source: Web-scraping of HEI and PRO websites using SerpAPI, informed by ETER, Cordis and input from the national Statistical Correspondents of EU Member States and countries associated with Horizon Europe.

Approximately half of research organisations display information about their gender equality actions on their websites. Between 2020 and 2023, the proportion of research organisations mentioning these measures on their websites decreased significantly, from 82 % to 56 %. This information is more commonly showcased on the websites of higher education institutions (HEIs) than those of public research organisations (PROs).

While gender equality plans (GEPs) are not formally required, the Swedish National Agency for Gender Equality commissioned training courses for the public sector (including research organisations) on gender equality. The training focused on gender-responsive budgeting, gender and statistics, gender equality management in the public sector, and other relevant topics. Some of these learning activities were carried out online, and as of 2022, a web-based learning platform is being developed (ii).

To support equal access for women studying and working at research organisations, the Swedish Discrimination Act (amended in 2022) includes measures to prevent and combat gender-based discrimination. The Act stipulates that research organisations must document their measures to actively prevent discrimination and promote gender equality among employees and students (iii).



Career advancement and participation in decision-making

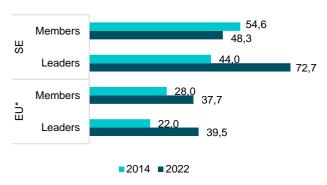
Figure 6: Proportion (%) of women among Grade A positions, 2013, 2019 and 2022



Notes: *EU-level data for 2013 refer to the EU-28 (EU-27 plus the United Kingdom (UK), while EU-level data for 2019 and 2022 refer to the EU-27). The data for SE refer to Grade A academic staff, while the data for the EU refer to Grade A researchers and academic staff. Grade A is the single highest grade/post at which research is normally conducted within the institutional or corporate system. Source: Women in Science (WiS) database, Directorate-General (DG) Research and Innovation - T1 questionnaires.

The proportion of Grade A positions held by women researchers increased from 24 % in 2013 to 31 % in 2022. Sweden continues to perform similarly to the EU-27 average for share of women researchers in these positions.

Figure 7: Proportion (%) of women on boards of research organisations (members and leaders), 2014 and 2022



Notes: Data for leaders are based on a small sample in 2022 (8/11) and 2014 (4/9); *EU-level data for 2014 refer to the EU-28, while EU-level data for 2022 refer to the EU-27.

Source: WiS database, DG Research and Innovation - T5 & T6_questionnaires.

She Figures 2024 shows that gender balance is achieved in the proportion of women members of boards. Women represent approx. half (48 %) of board members, according to 2022 data. Women are also overrepresented among board leaders, as they comprise nearly three-quarters (73 %) of leaders, compared to 44 % in 2014. Sweden continues to outperform the EU-27 average for share of women members on boards.

Sweden's Innovation Agency, VINNOVA, supports leadership opportunities for women. Operating under the Swedish government, it provides research and innovation (R&I) funding. Projects financed under VINNOVA are required to include a gender perspective and to report the project teams' gender composition, including the number of women project leaders. VINNOVA sets an example by ensuring that women are equally represented in the decision-making process as members of its review committee (IV).



Figure 8: Research funding success rate differences (pp) between women and men, 2017 and 2022

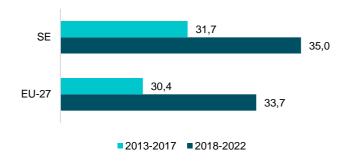


Notes: A positive difference means that men have a higher success rate. *EU-level data for 2017 refer to the EU-28, while EU-level data for 2022 refer to the EU-27. PP = percentage points.

Source: WiS database, DG Research and Innovation – T3_questionnaires.

She Figures 2024 shows that women are less likely to obtain research funding than men, based on 2022 data. However, between 2017 and 2022, the difference in the research funding success rate between women and men decreased from 2.4 pp to 1 pp, suggesting that the gap in accessing research funding is closing. Sweden performs better than the EU-27 average in both 2017 and 2022.

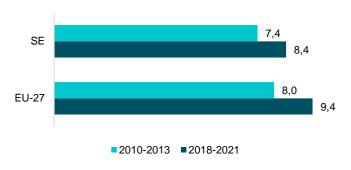
Figure 9: Average proportion (%) of women among authors on publications in all fields of R&D, 2013-2017 and 2018-2022



Notes: R&D = research and development. Source: Scopus.

The average share of women among authors of publications in all fields of research and development (R&D) in Sweden between 2018 and 2022 is 35 %. It has increased since the period 2013-2017, when women represented 32 % of authors on publications. According to the latest data, Sweden's results are above the EU-27 average for this indicator and ranks 14th among the Member States for the proportion of women among authors on publications in R&D fields.

Figure 10: Proportion (%) of women among inventors, 2010-2013 and 2018-2021



Source: Computed by using European patent applications (kind codes A1 and A2) in PATSTAT.

Women are significantly underrepresented among inventors on patent applications in Sweden and in the EU more broadly. Data from 2018 to 2021 show that women

only submit 8.4 % of patent applications in Sweden, and 9.4 % in the EU-27. This has improved since 2010-2013, when women represented just 7.4 % of inventors on patent applications in Sweden. Overall, the latest data show that Sweden ranks 20th among the Member States for the proportion of women among inventors.

Overall, findings from She Figures 2024 show improvements in the proportion of women among Doctoral graduates (Figure 1), the share of women S&Es among the total labour force (Figure 2), the proportion of women among researchers in the higher education and government sectors (Figure 4), as well as in decision-making positions as board leaders of research organisations (Figure 7). Over half of research organisations publish information on actions towards gender equality on their websites (Figure 5).

Nevertheless, further efforts are required to support women in Sweden to work as self-employed S&E and ICT professionals (Figure 3), to obtain Grade A positions (Figure 6), and to improve opportunities for successful research funding and inventorships (Figure 8 and 10).

About She Figures 2024

Gender equality – in all areas of life, and specifically within R&I – is a priority for the EU. She Figures is one of the flagship publications of DG Research and Innovation. Produced every three years, it presents comparable statistics on the state of gender equality in R&I across Europe. The publication provides comparable statistical data for more than 100 indicators to support the European Commission's policy initiatives promoting gender equality in R&I and the ERA. The chapters follow the 'chronological journey' of women and men, from graduating from Doctoral education to participation in the labour market and in decision-making roles. The publication also considers women's and men's relative working conditions and R&I outputs.

Gender Equality in Research and Innovation

Explore She Figures 2024 interactive report and Gender equality in research and innovation

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#GenderEquality

#UnionOfEquality

#EUResearchArea

⁽¹) Swedish Council for Higher Education, Higher Education Ordinance, 1993, amended in 2024, https://www.uhr.se/en/start/laws-and-regulations/the-higher-education-ordinance/

^(*) Swedish National Agency for Gender Equality, Training courses by the Swedish National Agency for Gender Equality, 2022, https://rm.coe.int/gec-2022-6-revised-1-implementation-of-the-ges-at-the-national-level-a/1680a9c66a

⁽iii) Equality Ombudsman, Swedish Discrimination Act 2022, https://www.do.se/choose-language/english/discrimination-act-2008567

^{(&}quot;) Swedish Innovation Agency (VINNOVA), Equal funding of innovations, 2024, https://www.vinnova.se/en/m/equal-innovation/