European Commission

SHE FIGURES 2024

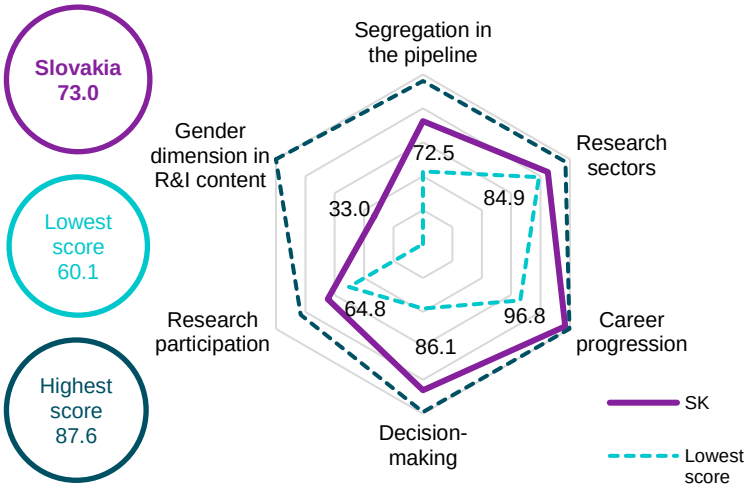
The road to gender equality in R&I

Slovakia

She Figures Index 2024

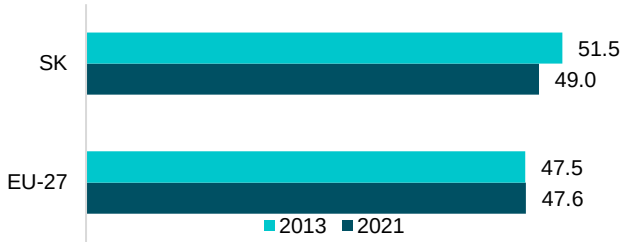
The **She Figures Index** is a tool to measure the extent to which European Union (EU) Member States have achieved gender equality in the European Research Area (ERA). It draws on She Figures indicators across six dimensions: segregation in the pipeline, research sectors, career progression, decision-making, 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, Slovakia ranks 15th overall, with a score of 73.0. The breakdown indicates a relatively high score on the dimension of career progression (7th), moderate scores on decision-making (13th), segregation in the pipeline (17th) and GDRIC (17th), and lower scores on research participation (20th) and research sectors (23rd).



Pool of graduate talent

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

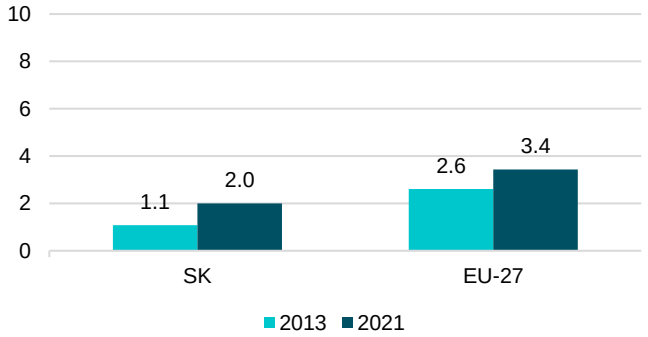


Notes: ISCED 8 = International Standard Classification of Education, Doctoral level or equivalent.
Source: Eurostat – Education Statistics (online data code: educ_uoe_grad02); Organisation for Economic Co-operation and Development (OECD) (Graduates by field).

She Figures 2024 shows that Slovakia has achieved gender balance in the proportion of women among Doctoral graduates. Between 2013 and 2021, the share of women among Doctoral graduates decreased slightly, from 52 % to 49 %. These percentages are above the average for the 27 European Union Member States (EU-27) for the same years (48 %). Slovakia ranks 18th among the Member States for proportion of women Doctoral graduates.

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 SK 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: lfsa_agan).

Women scientists and engineers (S&Es) account for 2 % of Slovakia's total labour force, based on 2021 data, compared to 1.1 % in 2013. The latest data show that women S&Es represent a smaller proportion of the total labour force

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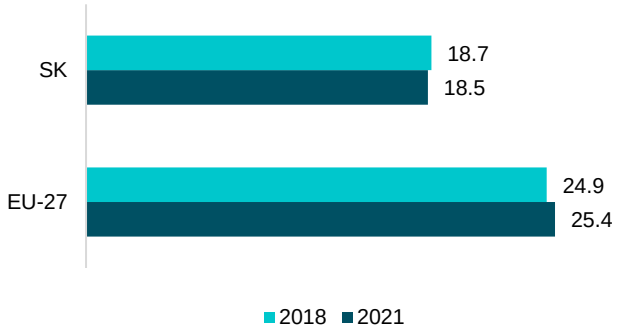
in Slovakia compared to the EU-27 average.

In 2023, the Slovak Academy of Sciences launched a grant scheme to support women scientists returning from parental leave. Under the grant, parents can receive up to EUR 5 000 for their scientific projects following their parental leave ([i]).
To further promote and motivate women scientists, the Slovak Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Slovak Academy of Sciences, and the Slovak Organisation for Research and Development activities (SOVVA) work in partnership to deliver the Slovak edition of the L'Oréal - UNESCO Women in Science programme. Every year since 2016, selected women researchers in the fields of environmental sciences, physical sciences, mathematics, or computer science are awarded a monetary prize.

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

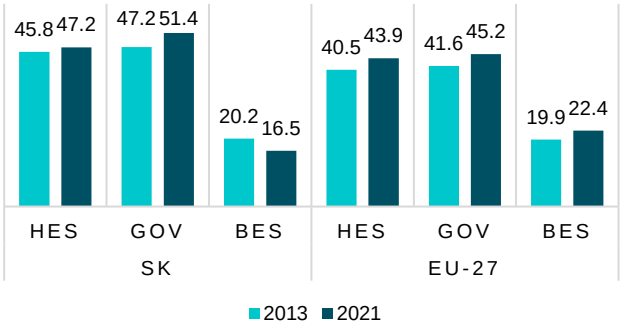


Notes: Break in time series for 2021 EU-27 data. SK data for 2021 refer to 2020. ICT = information and communications technology.
Source: EU-LFS Annual Average Quarterly data.

Between 2018 and 2021, the share of women among self-employed S&Es and information and communications technology (ICT) professionals remained relatively stable, with women comprising 19 % of self-employed professionals. Of the 22 Member States for which data are available, Slovakia ranks 20th 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



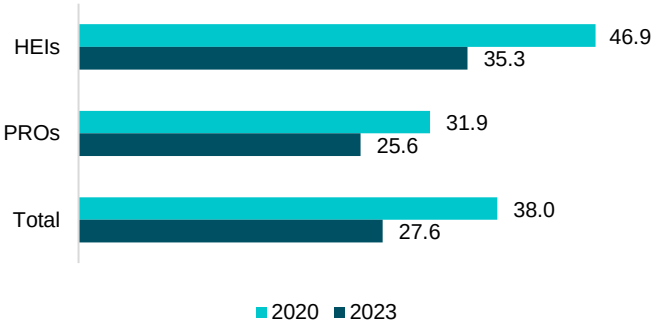
Notes: HES = higher education sector; GOV = government sector; BES = business enterprise sector, EU-27 data for 2021 are estimated.
Source: Eurostat – Research and development statistics (online data code: rd_p_persocc) and OECD-R&D personnel by sector and function.

She Figures 2024 shows that women represent 41 % of researchers in Slovakia, based on 2021 data. Gender balance is achieved in the higher education sector (HES) and government sector (GOV), where women account for over 40 % of researchers. However, women are underrepresented in the business enterprise sector (BES), comprising just 17 % of researchers.

To support women's equal access to career opportunities in research and innovation (R&I) and to mainstream gender equality principles, the Slovak Academy of Sciences commissioned training sessions in line with its Gender Equality Plan (GEP) (developed within the Horizon 2020 ATHENA project framework) ([ii]). Delivered in 2021 and 2022, the training focused on gender equality in R&I, gender equality in the recruitment process, gender-based violence, and gender dimension in research.

Working conditions of researchers

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

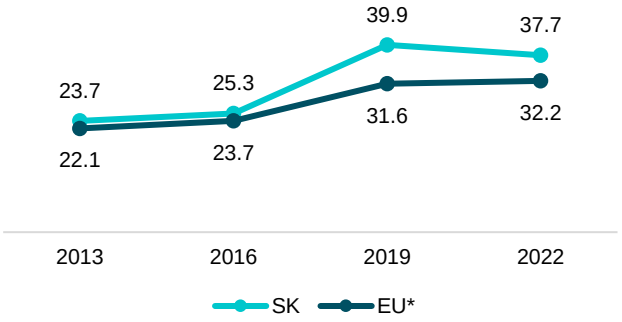


Notes: HEI = higher education institutions; PRO = public research organisations.
Source: Web-scraping of HEI and PRO websites using SerpAPI, informed by ETER, Cordis and input from the national Statistical Correspondents of EU Member States and countries associated with Horizon Europe.

Approximately one-quarter of research organisations show information about their gender equality actions on their websites, according to the latest data. Between 2020 and 2023, the proportion of research organisations carrying out these measures decreased from 38 % to 28 %. This information is more commonly showcased on the websites of higher education institutions (HEIs) than those of public research organisations (PROs).

Career advancement and participation in decision-making

Figure 6: Proportion (%) of women among Grade A positions, 2013, 2016, 2019 and 2022

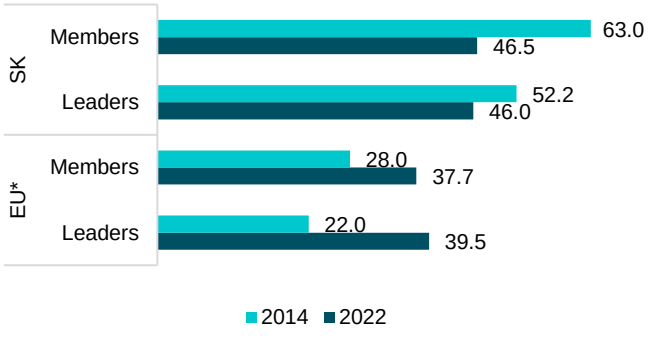


*Notes: *EU-level data for 2013 refer to the EU-28 (EU-27 plus the United Kingdom (UK), while EU-level data for 2019 and 2022 refer to the EU-27). The data for SK in 2013 and 2016 refer to Grade A academic staff, while the data for SK in 2019 and 2022 refer to Grade A researchers. The data for the EU 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 38 % in 2022. Slovakia continues to perform above the EU-27 average for the share of women researchers in these positions.

The Slovak State Strategy for Equality between Women and Men and Equal Opportunities 2021-2027 encourages the mainstreaming of gender equality in education, science, and research through the promotion of the appointment of women to the highest positions in academic institutions and increasing the representation of women in the domains of science, research, and higher education ([iii]).

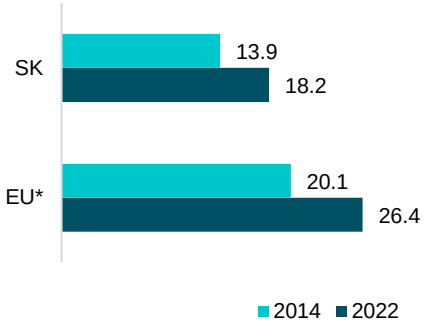
Figure 7: Proportion (%) of women on boards of research organisations (members and leaders), 2014 and 2022



*Notes: *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.

Gender balance is achieved in the share of women among board members. Between 2014 and 2022, the figure decreased from 63 % to 47 %. Gender balance is also achieved among leaders of boards, although, again, the share of women in these positions decreased from 52 % to 46 % during this period. Slovakia performs better than the EU-27 average for the proportion of women among board members and leaders.

Figure 8: Proportion (%) of women among heads of institutions in HES, 2014 and 2022

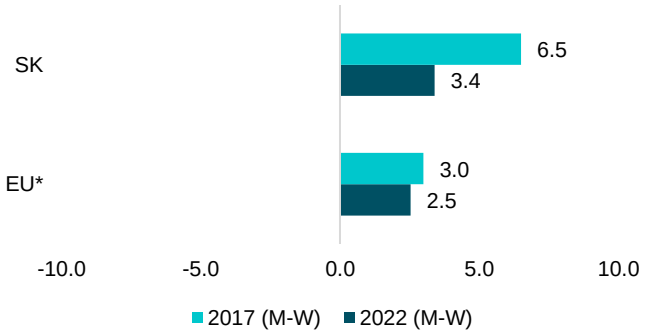


*Notes: *EU-level data for 2014 refer to the EU-28, while EU-level data for 2022 refer to the EU-27.*
Source: WiS database, DG Research and Innovation – T7_questionnaires.

Between 2014 and 2022, **there was progress in the proportion of women among heads of institutions in the HES**. In 2014, the proportion of women in this position was 14 %, compared to 18 % in 2022. However, She Figures 2024 data show that Slovakia performs below the EU-27 average for the proportion of women among heads of institutions in this sector.

R&I output

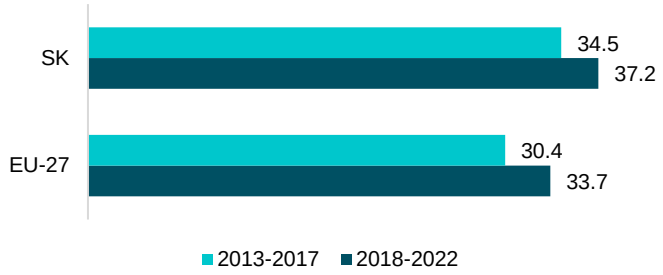
Figure 9: Research funding success rate differences (pp) between women and men, 2017 and 2022



*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 than men to obtain research funding, based on 2022 data**.** However, between 2017 and 2022, the difference in the research funding success rate between women and men decreased from 6.5 percentage points (pp) to 3.4 pp, suggesting that the gender gap in accessing research funding is closing. This latest difference rate is similar to the EU-27 average in 2022.

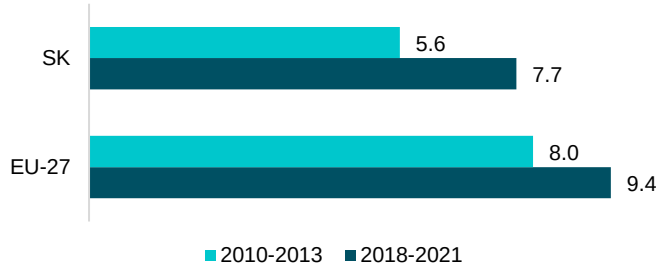
Figure 10: Average proportion (%) of women among authors on publications in all fields of R&D, 2013-2017 and 2018-2022



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 Slovakia between 2018 and 2022 is 37 %, according to the latest data**.** This figure has increased since 2013-2017, when women represented 35 % of authors on publications. According to the latest data, Slovakia outperforms the EU-27 average for this indicator and ranks ninth among the Member States for the proportion of women among authors on publications in R&D fields.

Figure 11: 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 Slovakia and in the EU more broadly. Data from 2018 to 2021 show that women only submit 7.7 % of patent applications in Slovakia, and 9.4 % in the EU-27. Nevertheless, this figure has improved since 2010-2013, when women represented 5.6 % of inventors on patent applications in Slovakia. Overall, the latest data place Slovakia 22nd among the Member States for the proportion of women among inventors.

To support the promotion of women inventors, the government-issued Scientist of the Year award includes a category for the Innovator of the Year – Woman Innovator. Commissioned by the Centre of Scientific and Technical Information of the Slovak Republic, in partnership with the Slovak Academy of Sciences and the Association of Slovak Scientific and Technical Societies, the awards recognise outstanding Slovak scientific achievements in all fields of science and technology ([iv]).

She Figures 2024 suggests significant improvements regarding gender equality in leadership and decision-making positions for women in Slovakia (Figure 7), as well as across high academic (Grade A) positions (Figure 6), albeit to a lesser degree. In 2021, Slovakia performs above the EU-27 average for women's participation as researchers in the higher education and government sectors (Figure 4), achieving gender balance. Women are also equally represented among Doctoral graduates (Figure 1).

However, more needs to be done to ensure that women have equal access to career opportunities, particularly in the business enterprise sector, science, and technology occupations, and key positions among heads of institutions in the higher education sector. Slovakia can also improve gender balance in terms of access to research funding and inventorships (Figures 9 and 11), and can increase the proportion of research organisations that display actions towards gender equality on their websites (Figure 5).

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 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

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([i]) Slovak Academy of Sciences, Grant scheme for female (and male) scientists returning from parental leave, 2023, https://vedanadosah.cvtisr.sk/ine/grantova-schema-sav-ulahci-cerstvym-rodicom-navrat-do-vedeckeho-zivota/
([ii]) Slovak Academy of Sciences, Training within the Gender Equality Plan of the Slovak Academy of Sciences planned in the framework of the Horizon 2020 ATHENA project, 2022, https://www.sav.sk/uploads/dokumentySAV/MonitoringPRR-2022.pdf
([iii]) Government of Slovakia, Slovak State Strategy for Equality between Women and Men and Equal Opportunities 2021-2027, 2021, https://www.employment.gov.sk/files/sk/ministerstvo/spolocny-sekretariat-vyborov/vybor-rodovu-rovnost/dokumenty-udalosti/strategia-rovnosti-z-m-2021-27.pdf
([iv]) Centre of Scientific and Technical Information, Scientist of the Year award, 1997, https://www.cvtisr.sk/buxus/docs//NCP/Statut_VR_SR.pdf