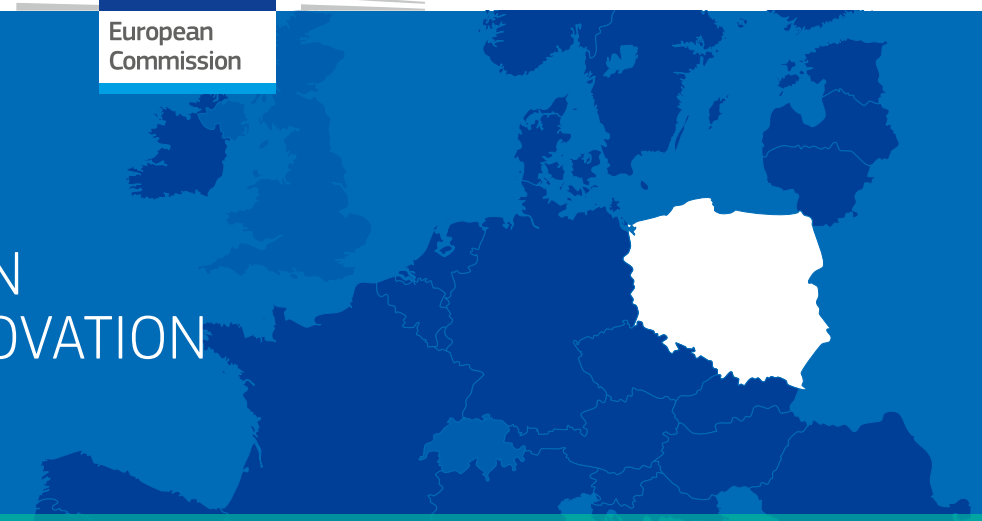
European Commission

# SHE FIGURES 2021
## GENDER EQUALITY IN RESEARCH AND INNOVATION

# POLAND



**About She Figures 2021**

The She Figures publication, first released in 2003 and updated every three years since, presents data on many of the European Commission's gender equality priorities in the field of research and innovation policy. She Figures 2021 presents data and analysis for approximately 88 indicators to monitor the state of gender equality in research and innovation across Europe. 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. Women and men's relative working conditions and research and innovation outputs are also considered. This country fiche presents a selection of results from the She Figures 2021 publication following the career trajectory of women and men in research and innovation.

Poland ranks 23rd in the EU on the Gender Equality Index, scoring 56.6 out of 100 points (EIGE, 2021). Within EIGE's Gender Equality Index, the domain of power measures gender equality in decision-making positions across the political, economic and social spheres, where Poland has a score of 31.5 out of 100 points. Recent data from She Figures 2021 find that there have been only slight improvements in women's representation at the highest level of academia (grade A) (from 23% to 25%), among board members (from 24% to 25%) and leaders (16% to 19%) and among heads of institutions in the Higher Education Sector (HES) (18% to 20%) between the reference years examined.

### Table 1: Proportion (%) of women among doctoral graduates, 2010 and 2018

| Country | Women ISCED 8 graduates (%) 2010 | Women ISCED 8 graduates (%) 2018 |
|---|---|---|
| PL | 49.29 | 56.25 |

Source: Eurostat – Education Statistics (online data codes: educ_grad5 and educ_uoe_grad02), UNESCO Institute for Statistics (Tertiary graduates by level of education).

The results from Poland show that in 2018, women represented 56.3% of doctoral graduates, a proportion which was above the European average of 48.1%. In 2010, Poland had almost achieved gender parity among doctoral graduates (women: 49.3%). In 2018, women's representation increased, with 56.3% of doctoral graduates being women. Overall, the proportion of women among doctoral graduates in Poland ranked as the 2nd highest in the EU-27 in 2018.

### Table 2: Percentage (%) of self-employed women among S&E and ICT Professionals, 2018

| Country | Percentage (%) of self-employed women among S&E and ICT Professionals |
|---|---|
| PL | 17.41 |

Notes: Data are based on weighted values in thousands.
Source: Eurostat – Labour Force Survey Annual Average Quarterly data 2018.

Considerable gender inequalities persist in the labour market. Women represented only 17.4% self-employed professionals in Science and Engineering (S&E) and Information and Communication Technologies (ICT) in 2018 which is considerably below the European average (24.9%). Across 24 EU Member States and Associated Countries with available data, Poland ranked third lowest in terms of the percentage of self-employed women among S&E and ICT professionals.

## Table 3: Proportion of RPOs that have taken measures and actions to promote Gender Equality, by type of organisation, 2020

| | Proportion of websites with info on actions/ measures towards Gender Equality | | |
|---|---|---|---|
| Country | HEIs | PROs | Total |
| PL | 36.7 | 13.83 | 30.75 |

Source: information scraped from the websites of higher education institutions listed in the European Tertiary Education Register (ETER), and of public bodies and research organisations that participated in projects under FP7 and H2020 and/or that were indicated by the Statistical Correspondents.

One way to improve working conditions for women and men researchers and promote gender equality in research careers is through institutional reform. Polish law does not impose requirements for Gender Equality Plans (GEPs) in public Higher Education Institutions (HEIs) and/or Research Performing Organisations (RPOs) (ERAC SWG GRI, 2021). Data from She Figures shows that in 2020, only 36.7% of HEIs and 13.8% of Public Research Organisations' (PROs) in Poland mentioned measures and actions to strengthen gender equality on their websites.

## Table 4: Evolution of the proportion (%) of women among Grade A positions, 2013, 2015 and 2018

| Country | 2013 | 2015 | 2018 |
|---|---|---|---|
| PL | 22.57 | 23.90 | 25.22 |

Notes: (2015 & 2018 data): Data are Headcounts (HC); Other: Academic staff based on UOE definition. (2013 data): see She Figures 2018 (Figure 6.3).
Source: Women in Science database, DG Research and Innovation - T1_questionnaires

Across all periods examined above, women in Poland were considerably under-represented in top academic positions (grade A). In 2015 and 2018, the proportion of women in top academic positions (grade A) in Poland was close to the European average (26.2% in 2018), falling only 1 percentage point behind in 2018. There has been slight progress towards increasing women's representation since 2013 where the proportion of women among grade A positions increased from 22.6% to 25.2% in 2018.

## Table 5: Proportion (%) of women on boards, members and leaders, 2017 and 2019

| | 2017 | | 2019 | |
|---|---|---|---|---|
| Country | Leaders | Members, incl. leaders | Leaders | Members, incl. leaders |
| PL | 16.07 | 23.57 | 19.35 | 24.91 |

Notes: (2019 data): Data are Headcounts (HC). (2017 data): see She Figures 2018 (Figure 6.9).
Source: Women in Science database, DG Research and Innovation - T5 & T6_questionnaires.

## Table 6: Proportion (%) of women among heads of institutions in the Higher Education Sector (HES), 2017 and 2019

| Country | 2017 | 2019 |
|---|---|---|
| PL | 18.16 | 19.58 |

Notes: (2019 data): Data are Headcounts (HC). (2017 data): see She Figures 2018 (Figure 6.8).
Source: Women in Science database, DG Research and Innovation - T7_questionnaires

Women in Poland continue to be under-represented in decision-making and leadership positions in research, however some small improvements have been made between 2017 and 2019. In 2019, 24.9% of board members and 19.4% of board leaders were women, representing a 1.3 and 3.3 percentage point increase since 2017 (Table 5). Both these values are lower than European average in 2019, which was 31.1% for members and 24.5% for leaders. Women in Poland were also under-represented among heads of institutions in the HES, with the proportion of women only increasing from 18.2% in 2017 to 19.6% in 2019 (Table 6). Despite some progress, the proportion of women among heads of institutions is lower than the European average of 23.6% in 2019.

## Table 7: Research funding success rate differences between women and men, 2017 and 2019

| Country | 2017 (W-M) | 2019 (W-M) |
|---|---|---|
| PL | -2.74 | -2.59 |

Notes: (2017 data): See She Figures 2018 (Figure 7.13). Other: Values were calculated from headcounts and only from the institutes that provided both applicants and beneficiaries; positive values represent that success rate is higher for women while negative values that success rate is higher for men.
Source: Women in Science database, DG Research and Innovation - T3_questionnaires

Further differences between women and men in research can also be observed in terms of access to research funding. The data at the European level showed that a higher number of men compared to women were successful in obtaining research funding in 2019 (3.9% more chances for men). A similar trend was observed in Poland with the success rate of men being around 2.7 and 2.6 percentage points higher than women's for 2017 and 2019, respectively. However, this difference in success rate is lower in Poland than at European level.

## Table 8: Average proportion of women among authors on publications in all fields of R&D, 2015-2019

| Country | Average proportion of women among authors on publications | Margin of error |
|---|---|---|
| PL | 0.37 | 0.13 |

Notes: Values represent the proportion for publications during the period 2015-2019. A value of 0.5 indicates gender parity. The lower limit of the margin of error corresponds to the value of the proportion if all authors whose gender could not be inferred were men, while the upper limit corresponds to the value of the proportion if all authors whose gender could not be inferred were women. The average proportion of authors to which a gender could be assigned varies. For EU-27, the average proportion of authors for whom gender could be inferred was 0.75, with the lowest value among EU-27 Member States being 0.61 for Croatia and Slovakia and the lowest value among all regions being 0.29 for China.
Source: Computed by Elsevier using Scopus data.

Differences in funding success rates for women and men can further exacerbate the gender gap in research and innovation output, as it may lead to a vicious cycle where lower funding could lead to lower publication and innovation output, which in turn could lead to reduced chances of being funded. Data at the European and world level showed that men were more highly represented on publication teams than women between 2015-2019 (average proportion of 0.30 and 0.25 respectively). The average proportion of women among authors on publications in Poland was slightly higher than the European average at 0.37. However, this is still below the proportion representing gender parity (0.5) on publication teams.

### Table 9: Women to men ratio of inventorships, 2013-2016 and 2015-2018

| Country | 2013-2016 | 2015-2018 |
|---|---|---|
| PL | 0.22 | 0.13 |

Notes: (2013-2016 data): see She Figures 2018 (Figure 7.11).
Source: Computed by using European patent applications (kind codes A1 and A2) in PATSTAT

Similarly, women were under-represented among inventors (on patent applications) in both time periods shown in Table 9. Between 2015-2018, the ratio at the European level was 0.12, which indicates that for every 100 patent applications held by men, only 12 were held by women. Across both time periods, the women to men ratio of inventorships in Poland was higher than at European level. However, the ratio declined from 0.22 to 0.13 between 2013-16, and 2015-18 indicating a decrease in women's representation among inventors.

Overall, She Figures 2021 finds that Poland performed above the European average in terms of proportion of women among doctoral graduates and the average proportion of women among authors on publications. However, Poland performed below the European average in terms of women's representation among self-employed S&E and ICT Professionals, in top academic positions (grade A), among board leaders and members and as heads of institutions in the HES.



References:

EIGE (2021) Gender Equality Index: https://eige.europa.eu/gender-equality-index/2021/compare-countries
ERAC Standing Working Group on Gender in Research and Innovation (SWG GRI) (2021). Gender Equality Plans as a catalyst for change. https://data.consilium.europa.eu/doc/document/ST-1202-2021-INIT/en/pdf