

She Figures 2009 - major findings and trends

What has improved in the last 10 years, and how much?

The number of female researchers increased in Europe in all economic sectors: the Higher Education Sector, the Government Sector and the Business Enterprise Sector. In the former, the proportion of female researchers grew from 34% in 2000 to 37% in 2006. It is important to remember however that we are measuring the countries of the European Union, with a population that changed between 2001 and 2006 in size and number of countries concerned. The female researchers' population grew even more considerably in the Government sector, going from 31% in 2000 to 39% in 2006. Regarding private sector researchers, 15% in 2000 were women and 19% in 2006.

The number of female PhDs in Europe grew from 39.6% in 2001 to 43% in 2003 and 45% in 2006.

The balance of the presence of female PhDs across fields of sciences didn't change considerably between 2001 and 2006, with women being more numerous in the fields of Education, Humanities and Arts, Agriculture and Veterinary, and Health and Social Services. The Engineering, Manufacturing and Construction field had 20.6% of female PhDs in 2001, 21.90% in 2003 and 25% in 2006.

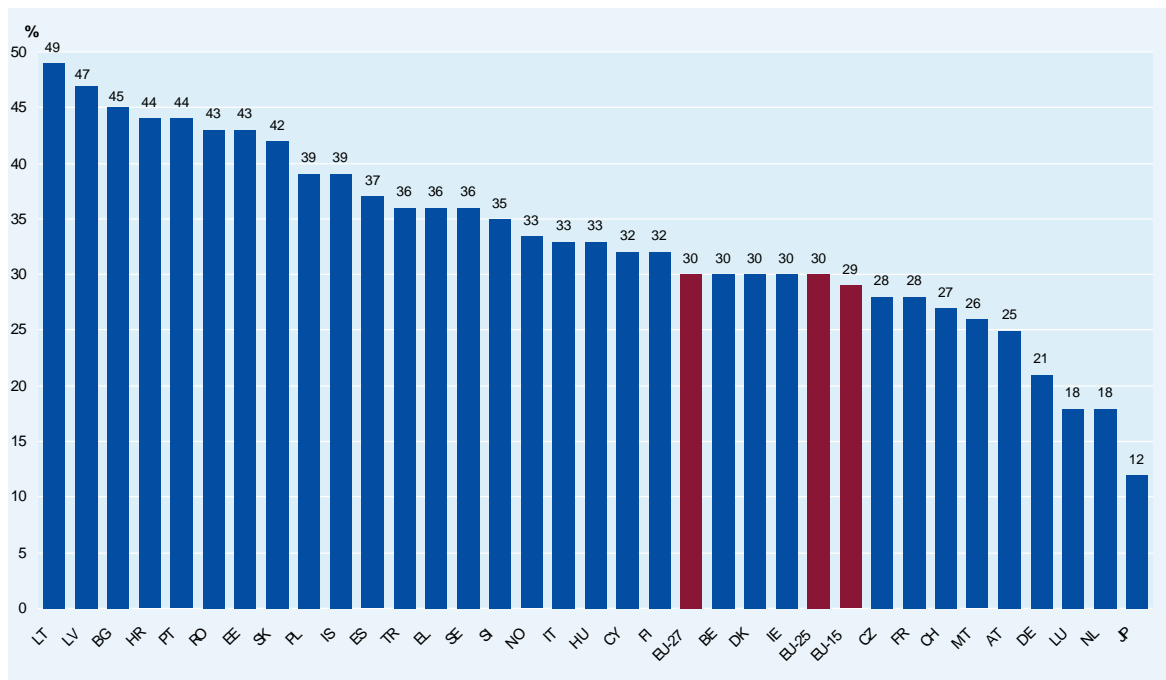
The proportion of women attaining the top level of an academic careers, defined here as "Grade A professorship", moved from 15.20% in 2000 to 15.3% in 2004 and 19% in 2007.

	She Figures 2003	She Figures 2006	She Figures 2009
Female researchers in HES	34%	35%	37%
Female researchers in GOV	31%	35%	39%
Female researchers in BES	15%	18%	19%
<i>Population</i>	EU-15	EU-25	EU-27
<i>Reference year</i>	2000	2003	2006
Female PhDs	39,60%	43%	45%
<i>Population</i>	EU-15	EU-25	EU-27
<i>Reference year</i>	2001	2003	2006
Female PhDs by field			
Education	55,40%	60,50%	64%
Humanities and Arts	48,90%	51,40%	52%
Science, Mathematics and Computing	35,70%	40%	41%
Agriculture and Veterinary	46,50%	49,60%	51%
Health and social services	49%	51,10%	54%
Engineering, Manufacturing and Construction	20,60%	21,90%	25%
Social sciences, business and law	39,30%	43,10%	47%
<i>Population</i>	EU-15	EU-25	EU-27
<i>Reference year</i>	2001	2003	2006
Female grade A professors	15,20%	15,3%	19%
<i>Population</i>	EU-15	EU-25	EU-27
<i>Reference year</i>	2000	2004	2007

What is the proportion of women researchers in Europe?

Generally speaking women in scientific research remain a minority. On average, they account for 30% of researchers in the EU in 2006. However, wide variations can be noted between countries. At the top of the country ranking, there are the Baltic States but also Bulgaria, Croatia, Portugal, Romania, and Slovakia, all of which have more than 40% of women in their research population. Sixteen other EU countries have a proportion of female researchers of between 26% and 39%. In four European countries, the proportion of women researchers drops at 25% or less.

Figure 1: Proportion of female researchers, 2006



Source: S&T statistics (Eurostat), Norwegian Institute for Studies in Innovation, Research and Education

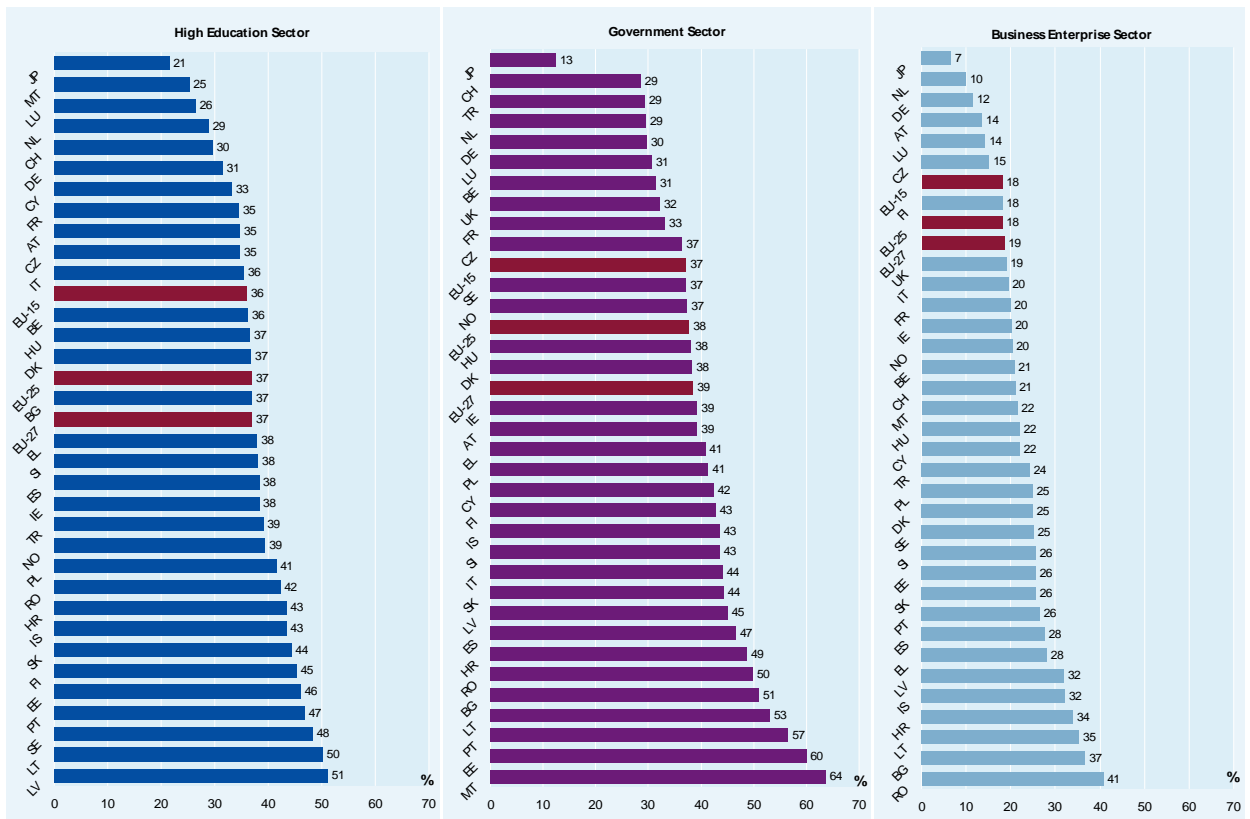
Exceptions to the reference year: CZ, EE, SK, NO: 2007; BE, DK, DE, IE, EL, LU, NL, PT, SE, IS, JP: 2005; CH: 2004 –

Data unavailable: UK, IL

Provisional data: NL - Data estimated: EU-27, EU-15 (by Eurostat), EU-25 (by DG Research), EE Head count

On average in the EU-27, women represent 37% of all researchers in the Higher Education Sector, 39% in the Government Sector and 19% in the Business Enterprise Sector, however in all three sectors there is a move towards a more gender-balanced research population.

Figure 2: Proportion of female researchers by sector, 2006



Source: S&T statistics (Eurostat)

Exceptions to the reference year: SK, CZ, EE, MT (HES, GOV), IE (GOV): 2007; BE (HES, GOV), DK (BES), DE (BES), IE (BES), EL, LU, NL, PT, SE, IS, NO, JP: 2005; CH (HES, BES): 2004

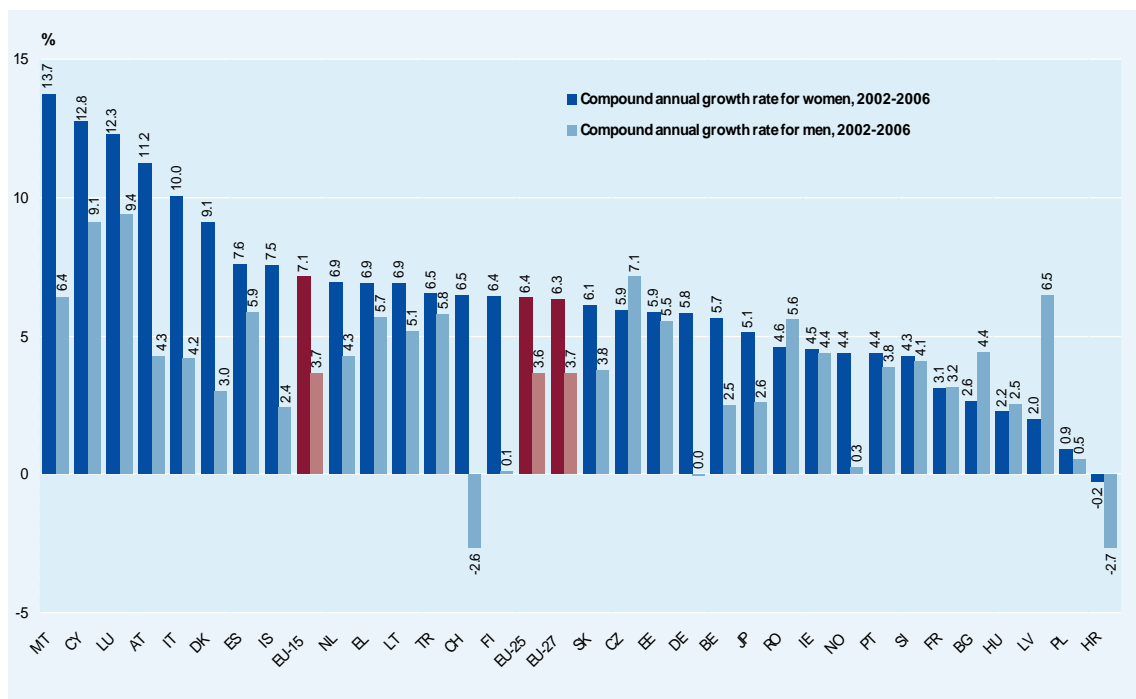
Data unavailable: IL, UK (HES)

Provisional data: HES: MT, NL; GOV: IE (total), MT, UK (total); BES: BE

Data estimated: EU-27, EU-25, EU-15 (by DG Research); HES: NL, CH; BES: EE, UK
Head count

In the EU, the proportion of women researchers is growing faster than that of men (6.3% annually over 2002-2006 compared with 3.7% for men); the same goes for the proportion of women among scientists and engineers (6.2% annually compared with 3.7% for men).

Figure 3: Compound annual growth rate for researchers by sex, 2002-2006



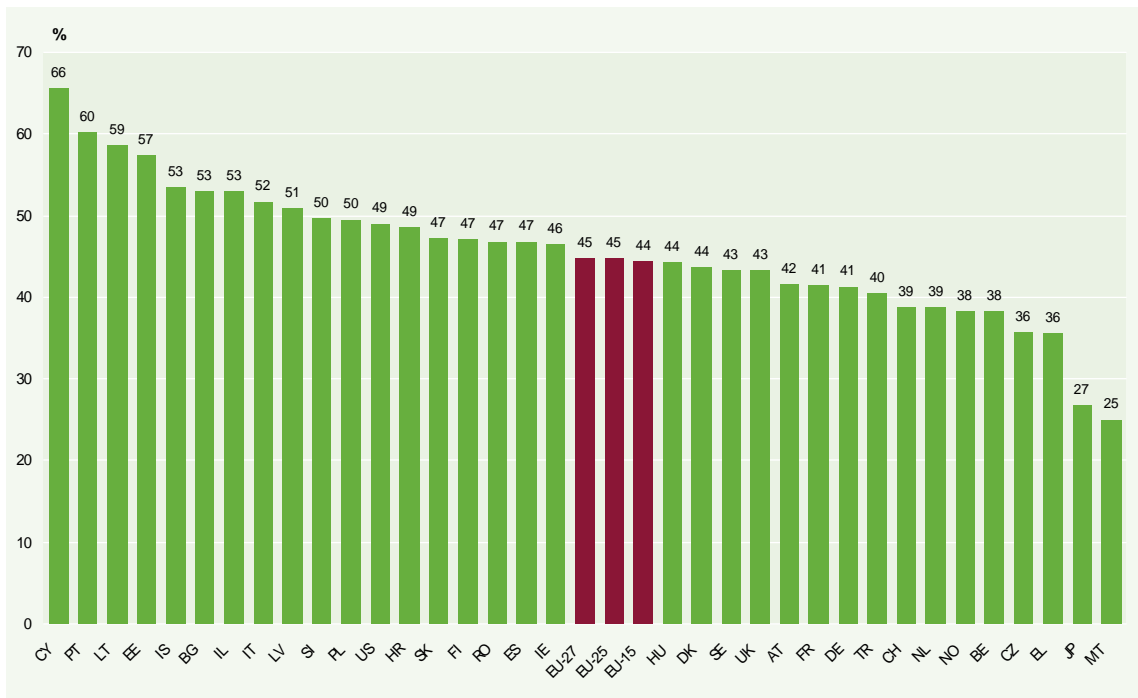
Source: S&T statistics (Eurostat), Norwegian Institute for Studies in Innovation, Research and Education

Exceptions to the reference year (s): SK, CZ, EE: 2002-2007; CH: 2000-2004; EL, IS, NO: 2001-2005; BE, DK, IE, PT, JP: 2002-2005; DE, LU, NL: 2003-2005; PL: 2003-2006; MT, FI: 2004-2006 - Data unavailable: UK, SE, IL - Break in series: MT (2004), DK (2002), FR (2002) - Provisional data: NL (2005) - Data estimated: EU-27, EU-25, EU-15 (by DG Research), LU (2003 - women), PT (2002), EE (2007) - Head count

What is the proportion of female PhDs?

As the graph shows, 45% of all PhD graduates are women in the EU-27; they equal or outnumber men in all broad fields of study, except for science, mathematics and computing (41%), and engineering, manufacturing and construction (25%).

Figure 4: Proportion of female PhD (ISCED 6) graduates, 2006



Source: Education Statistics (Eurostat), Central Bureau of Statistics (Israel), Norwegian Institute for Studies in Innovation, Research and Education

Exceptions to the reference year: EL, IT: 2005 - **Data unavailable:** LU - **Data estimated:** EU-27 (by Eurostat), EU-25, EU-15 (by DG Research)

Countries with small numbers of female PhD graduates: CY (19), IS (8), MT (1)

Most tertiary students study abroad and are not included: CY

Most PhD (ISCED 6) graduates study abroad and are not included: IS

Table 1: Proportion of female PhD (ISCED 6) graduates by broad field of study, 2006

	Education	Humanities & arts	Social sciences, business & law	Science, mathematics & computing	Engineering, manufacturing & construction	Agriculture & veterinary	Health & welfare
EU-27	64	52	47	41	25	51	54
EU-25	64	52	47	41	25	52	54
EU-15	64	52	47	40	25	52	54
BE	50	32	38	40	26	35	49
BG	52	68	58	56	33	54	56
CZ	62	42	41	39	20	41	43
DK	-	50	46	34	25	61	63
DE	53	51	37	35	14	60	51
EE	100	77	39	47	59	100	68
IE	64	52	57	45	26	61	57
EL	47	52	33	31	25	27	86
ES	57	48	46	48	25	44	54
FR	59	54	48	37	27	65	46
IT	68	59	52	52	36	55	62
CY	100	67	29	75	-	-	-
LV	67	69	54	36	43	50	48
LT	-	50	68	63	40	75	69
HU	61	49	52	39	29	45	39
MT	0	-	-	100	0	-	0
NL	:	40	44	29	20	38	51
AT	64	45	49	38	21	55	60
PL	:	54	51	57	24	54	54
PT	76	67	60	55	39	55	69
RO	30	47	47	62	35	46	49
SI	75	66	54	60	22	57	47
SK	54	46	52	44	33	38	65
FI	75	55	55	39	24	51	65
SE	58	54	42	37	29	46	62
UK	59	48	51	38	22	48	55
HR	64	48	54	58	38	42	44
TR	41	35	38	38	36	38	55
IS	100	0	0	60	100	-	40
NO	65	42	42	31	23	52	52
CH	67	49	38	33	19	68	46
JP	45	51	35	22	11	26	29
US	65	46	57	38	21	41	73

Source: S&T statistics (Eurostat)

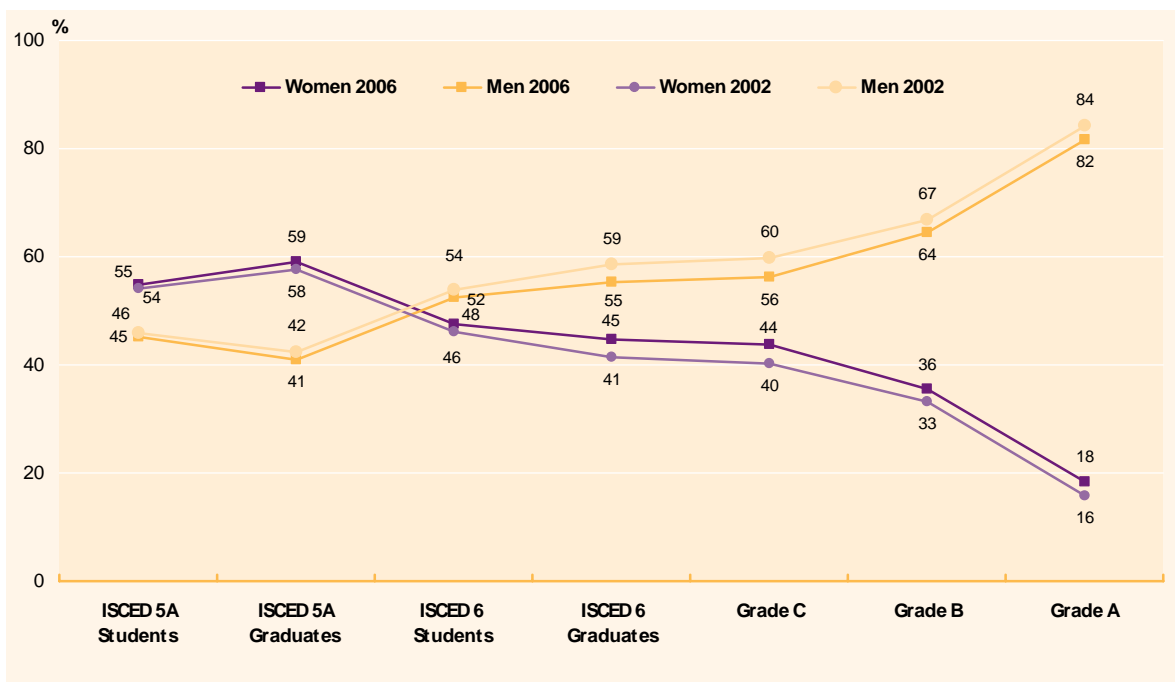
Exceptions to the reference year: IT: 2005; EL: 2005 - Data unavailable: IL, LU - Data estimated: EU-27, EU-25 (by Eurostat), EU-15 (by DG Research)

': not available; '-': not applicable - Most tertiary students study abroad and are not included: CY - Most PhD (ISCED 6) graduates study abroad and are not included: IS - Countries with small numbers of female PhD graduates: CY (19), IS (8), MT (1)

Do the academic careers of men and women follow similar patterns?

Women's academic careers remains markedly characterised by strong vertical segregation: the proportion of female students (55%) and graduates (59%) exceeds that of male students, but men outnumber women among PhD students and graduates (the proportion of female students drops back to 48% and that of PhD graduates to 45%). Furthermore, women represent only 44% of grade C academic staff, 36% of grade B academic staff and 18% of grade A academic staff.

Figure 5: Proportions of men and women in a typical academic career, students and academic staff, EU-27, 2002/2006



Definition of grades:

A: The single highest grade/post at which research is normally conducted.

B: Researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders.

C: The first grade/post into which a newly qualified PhD graduate would normally be recruited.

ISCED 5A: Tertiary programmes to provide sufficient qualifications to enter into advanced research programmes & professions with high skills requirements.

ISCED 6: Tertiary programmes which lead to an advanced research qualification (PhD).

Source: Education Statistics (Eurostat); WiS database (DG Research); Higher Education Authority for Ireland (Grade A)

Exceptions to the reference year (s): **ISCED 5A Graduates 2002:** DK (2003), FR (2003); **ISCED 6 Graduates 2006:** IT (2004); **2002:** DK (2003), FR (2003), RO (2003); **WiS 2006:** EE (2004), IE (Grade A: 2002-2003), EL (2000), MT (2004), PT (2003), SI (2007), SK (2007), FI (2007); **2002:** IE (2004), EL (1999), NL (2003), UK (2003)

Data unavailable: **ISCED 6 students 2006:** DE, LU; **2002:** DE, LU, RO, SI; **ISCED 5A - 6 Graduates LU;** **WiS 2002:** LU, IE (2004 - no grade A); Grade C unavailable: BG, RO (included in B)

Break in series: CZ (2005)

Provisional data: ES

Data estimated: EU-27 (by DG Research) for WiS, ISCED 6 students, ISCED 5A-6 graduates; SI Head count (Grades A, B, C)

Can we observe a generation effect in the presence of women professors?

At the level of the EU-27, women account for 23% of grade A academics among 35 to 44-year-olds, 21% among 45 to 54-year-olds and 18% among those aged over 55. The situation thus appears marginally more favourable for the youngest generations of female academics but the gender gap is still persistent.

Table 2: Proportion of female A grade staff by age group, 2007

	<35	35-44	45-54	55+	Total
EU-27	25	23	21	18	19
EU-25	22	18	18	16	17
EU-15	23	18	18	15	17
BE	i	14	13	8	11
BG	i	38	26	23	24
DE	28	17	14	7	12
IT	i	20	20	18	19
LT	i	13	17	14	14
AT	39	24	20	8	14
PL	i	21	17	21	20
RO	28	45	34	26	32
SK	i	22	22	19	20
FI	24	21	28	21	23
SE	i	16	17	19	18
UK	15	17	20	15	17
HR	i	41	32	23	26
TR	i	30	31	24	28
IS	i	17	22	16	19
NO	i	20	19	17	18
CH	39	27	21	13	22

Source: WiS database (DG Research)

Exceptions to the reference year: BE (French-speaking community), HR: 2008; RO, UK: 2006/2007; AT: 2006

Data unavailable: CZ, DK, EE, IE, EL, ES, FR, CY, LV, LU, HU, MT, NL, PT, SI, IL

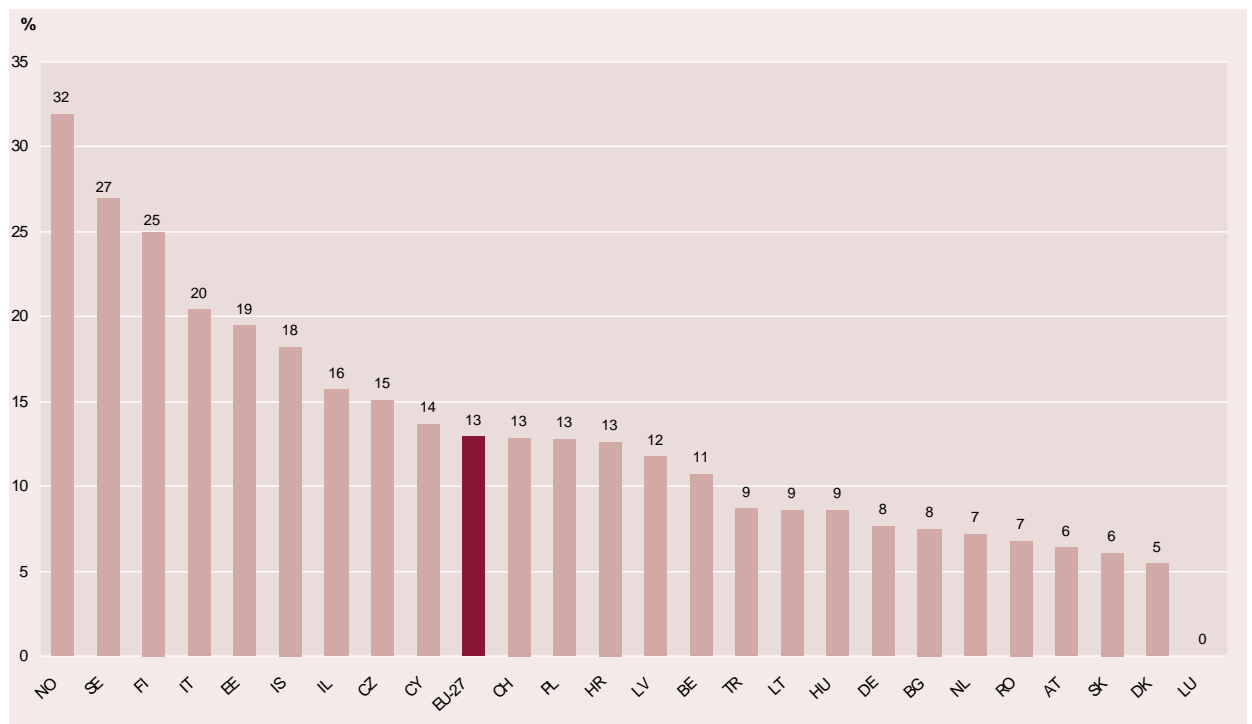
Data estimated: EU-27, EU-25, EU-15 (by DG Research)

Head count - i: Countries with less than 10 members of academic staff not shown

What is the representation of women at the Head of Research institutions in Universities?

On average throughout the EU-27, 13% of institutions in the Higher Education Sector are headed by women. The six countries where it is highest (equal or above 18%) are Norway, Sweden, Finland, Italy, Estonia and Israel. By contrast, in ten European countries this figure drops to 10% or lower. This situation of female under-representation at the head of institutions is even more pronounced when only universities are taken into account, meaning only institutions able to award PhD degrees. On average throughout the EU-27, just 9% of universities have a female head.

Figure 6: Proportion of female heads of institutions in the Higher Education Sector (HES), 2007



Source: WiS database (DG Research)

Exceptions to the reference year: IT: 2009; BE (Dutch-speaking community), DE, EE, HU, AT, PL, SK, FI, SE, HR, CH, IL: 2008; DK, CY: 2008/2007; RO: 2007/2006

Data unavailable: BE (French-speaking community), IE, EL, ES, FR, MT, PT, SI, UK

Data estimated: EU-27 (by DG Research)

BE data refer to Dutch-speaking community

See also [IP/09/1815](#)

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