

WOMEN
PROFESSORS
MONITOR
2019



A publication of the
Dutch Network of Women Professors

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ABOUT THE 2019 MONITOR

This is the Women Professors Monitor 2019. In a fixed number of annually recurring chapters, this Monitor provides insight into the current male-female distribution in science in the Netherlands and the percentages of female scientists and administrators at Dutch universities, university medical centres and other scientific organisations.

This Monitor offers good news: never before has the percentage of female full professors increased faster than in the period from the end of 2017 – to the end of 2018. During that year, the percentage of female full professors increased by 2.2 percentage points, from 20.9% to 23.1%. Much of this growth is, in all likelihood, attributable to the Westerdijk Talent Impulse, with 100 'additional' female full professors being appointed between February 2017 and February 2018.

In addition, we can see that, almost all universities should be able to meet their targets by 2020. In fact, a number of universities have already achieved their set objectives even though there is still no question of new, jointly set objectives. What will the universities do after 2020? With only one university with more than 30% female full professors the collective emphasis on gender diversity should remain high.

This Monitor also contains some news that is less positive: the proportion of women at each following step up the career ladder is still decreasing. In addition, the percentage of female associate professors is decreasing since 2017, for the first time since the beginning of the data-collection. One of the reasons for this, is that an additional 100 female full professors have been appointed (see 'Westerdijk' page 10). Increasing the percentage of female full professors artificially, and at an accelerated pace, naturally has an effect, but attention to the advancement of female assistant professors and associate professors and preventing the outflow of female full professors is just as crucial in order to maintain the percentage growth of female full professors in the long term.

Ongoing emphasis is also needed in other areas and there is still a great deal to be done. For example, there are alarming differences between the percentages of female students and female full professors per field of science. Moreover, if we look at pay scales, female full professors are still more likely to be in the lower scales compared to their male colleagues. Clearly, there is room for improvement in this area too. We see that universities are working in all sorts of ways to improve the inflow and advancement of women in science and to prevent their outflow. Last year, a one-off initiative from outside academia was added, and the Ministry of Education, Culture and Science made 5 million euros available for the appointment of 100 'additional' female full professors. This Westerdijk Talent Impulse seems to have left its mark on the developments in the M/F distribution among academic staff in the period 2017-2018. In this Monitor, the Westerdijk icon (W) is used to identify the programme's (potential) effects. However, we will not know until the end of 2020 whether the 'additional' 100 female full professors are truly an addition on top of the appointments that would have been made anyway within the framework of the set targets, and what the ultimate effect of this measure is.

We hope that you enjoy reading this Monitor and would like to take this opportunity to thank everyone – scientists, leadership, policy makers, supporter staff, Diversity Officers, ambassadors or otherwise – who are engaged in talent retention and gender equality in the sciences, or who, after reading this publication, feel compelled to do so. We would also like to express our gratitude to SoFokles, the social fund for the knowledge sector, without whose financial contribution this Monitor could not have been realised.

Dutch Network of Women Professors

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THE DISTRIBUTION OF FEMALE AND MALE SCIENTISTS IN THE NETHERLANDS

RISE IN FEMALE FULL PROFESSORS, BUT DECLINE IN FEMALE ASSOCIATE PROFESSORS

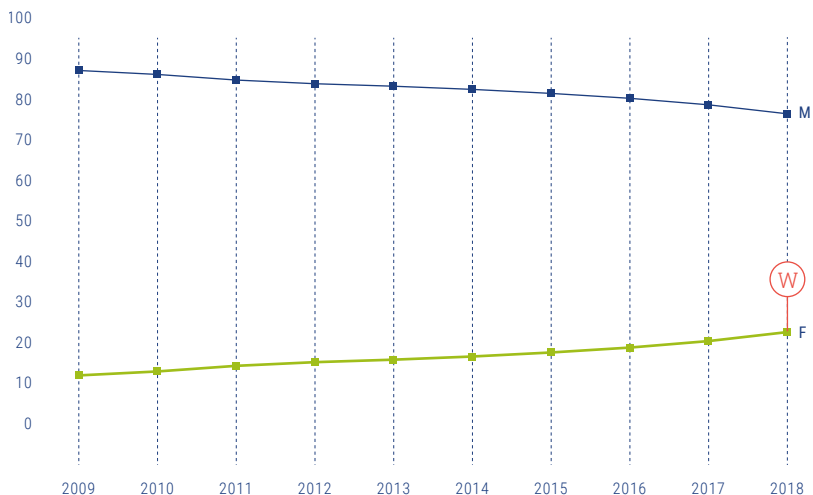
23.1% female full professors in 2018

At the end of 2018, there were, on average, 23.1% of female full professors at universities in the Netherlands. This is an increase of 2.2 percentage points compared to the 20.9% in 2017. This increase in the percentage of female full professors is the highest since the university personnel data collection in WOPI started in 1998.

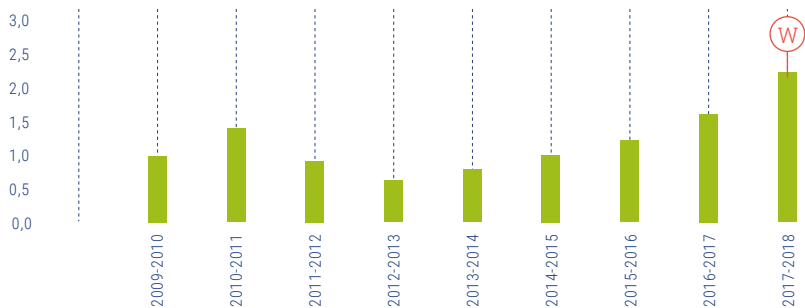
FIGURE 1.1

Percentage distribution of full professors by gender and increase in the percentage of female full professors compared to the previous year, in FTEs, at the end of 2009-2018.

PERCENTAGE OF FEMALE AND MALE FULL PROFESSORS



INCREASE IN THE PERCENTAGE OF FEMALE FULL PROFESSORS COMPARED TO THE PREVIOUS YEAR, IN FTEs, FROM THE END OF 2009 TO THE END OF 2018



Source: VSNU, WOPI, reference date 31-12, in FTEs. Excluding scientific field: Health Care.

The percentage of female full professors concerns regular full professors and personal professors with a paid employment contract. Previously, the LNVH was also able to publish information about the M/F distribution among endowed professors. However, since the end of 2017, data on endowed professors are no longer available from the Association of Universities in the Netherlands (VSNU).

FULL PROFESSORS IN FTE

The number of full professors that were added from 2017 to 2018 also shows a large increase in the number of full professorships that were bestowed on women. The total increase of the number of full professors from 2017 - through 2018 was 115.4 FTEs. 86.5 FTEs of these are filled in by female full professors. Both the total increase in the number of FTEs and the number of FTEs filled by female full professors was the highest - in a period of a year - since universities started registering personnel data in WOPI in 1998.

If we look at the percentage of the total increase (from 2017 through 2018) in the number of FTEs among women, we see that, at 75%, it has been higher in the past.

FULL PROFESSORS IN PERSONS

By the end of 2018, there were 3,350 full professors working at Dutch universities. These included 2,605 men and 745 women. We then see that 22.2% of full professors were women. Between the end of 2017 and end of 2018, the total of number of professors increased by 125. Of those, 94 were women and 31 were men. In percentage terms, this means that 75.2% of this increase went to women.

FEMALE FULL PROFESSORS ON AVERAGE HAVE A LARGER CONTRACT THAN MALE FULL PROFESSORS

In order to be able to say something about the scope of the employment contract of male and female full professors, we compare the number of full professors (FTEs) with the number of full professors (persons). This provides us with the following picture:

Female full professors make up 22.2% of the whole; in FTEs the percentage is 23.1%. The 2,605 men occupy a total of 2,170 FTEs. The 745 women occupy a total of 651 FTEs. The average scope in FTE per male full professor is 0.83, that per female full professor is 0.87. Thus, on average, female full professors have a larger scope of the employment contract than male full professors.

PROPORTION OF WOMEN IS STILL DECREASING PER SUCCESSIVE JOB CATEGORY

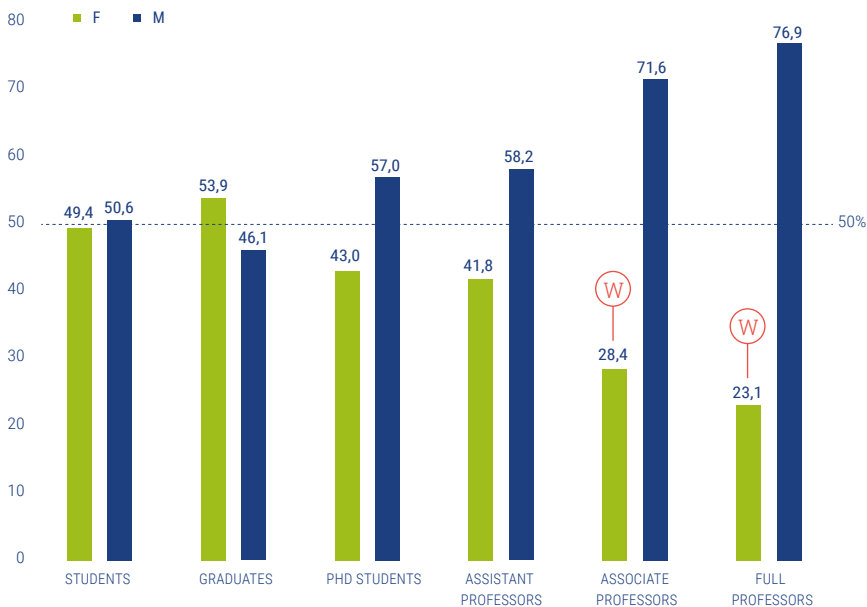
Development of graduates up to and including full professors

It is still the case that, for each job category, the proportion of women (in FTEs) is decreasing. The Netherlands has 53.9% female graduates, 43% female PhD students and 41.8% female assistant professors. These percentages are relatively close together. Subsequently, the percentage drops considerably to 28.4% female associate professors and 23.1% female full professors.

It is striking here that the percentage of female full professors has grown the fastest ever in one year (20.9% to 23.1%) and the percentage of female associate professors has decreased for the first time (28.6% to 28.4%). This has to do with the Westerdijk Talent Impulse; there were 100 'additional' appointments of female full professors from February 2017 to February 2018.

FIGURE 1.2

Percentage of women and men from student to full professor, in FTEs and in persons, at the end of 2018.



Source students and graduates: 1cHO2018, October 2018, in persons. Excluding scientific field: Health Care.

Source personnel: VSNU, WOPI, end of 2018, in FTEs. Excluding scientific field: Health Care.

WESTERDIJK TALENT IMPULSE

On 10 February 2017, we celebrated the fact that the first female full professor, Prof. Johanna Westerdijk, was appointed in the Netherlands 100 years ago. In 2016, at 19.3%, the Netherlands still had one of the lowest percentages of female full professors in Europe (Monitor 2017). As an extra impulse for the use of all scientific talent in the Netherlands, Minister Jet Bussemaker, then Minister of Education, Culture and Science, decided to make a one-time sum of 5 million euros available for the appointment of 100 female full professors. An amount of €50,000 could be requested per appointment. This amount could be spent on salary increases associated with the promotion of an associate professor to full professor, or it could be added to the research budget of the appointed professor. With this extra investment in the 'Westerdijk Year', universities were encouraged to do more to increase the number of female full professors, in addition to the targets they had set for themselves for 2020. The final impact of this impulse can therefore only be fully assessed at the end of 2020. The idea for the 100 extra female full professors in the Westerdijk year came from Athena's Angels. NWO carried out this programme on behalf of the Ministry.



(Potential) effects of the Westerdijk Talent Impulse can be recognised by the Westerdijk icon.

DECREASE IN THE PROPORTION OF ASSOCIATE PROFESSORS

Highlighting the associate professors

If we zoom in on the figures, we see an increase of more than 50% in all job categories for women – in other words, more than half of the increase has gone to women. However, this is not the case with the associate professors. Only 20.9% of the total increase is accounted for by female associate professors. In order to increase the total percentage of female associate professors, the share of the increase in FTEs (20.9%) must be higher than the total share of female associate professors (28.6%). That is not the case, so the percentage of female associate professors is decreasing.

From 2017 through 2018, the number of associate professors increased by 71. Of these, 24 were women (33.8%) and 47 men (66.2%). However, if we look at the number of FTEs, we see that of the increase in FTEs, only 13 went to women. This means that the average employment contract of the total group of female associate professors has decreased. For men, the opposite is true: there was an increase of 47 male associate professors and 49.4 FTEs. Although the increase was due to both departing and incoming associate professors, it can be concluded that the increase in men was 1.1 FTE per person (=49.4 FTE/47 persons) and in women only 0.54 FTE per person (=13.1 FTE / 24 persons).

TABLE 1.1

Increase in FTEs by job category and gender from 2017 through 2018. And the percentage share of women of the total increase.

| | Total increase in FTEs '17-'18 | Increase of women in FTEs '17-'18 | Increase of men in FTEs '17-'18 | Percentage of total increase filled by women |
|---------------------|--------------------------------|-----------------------------------|---------------------------------|----------------------------------------------|
| FULL PROFESSOR | 115,4 | 86,5 | 28,9 | 75,0 |
| ASSOCIATE PROFESSOR | 62,4 | 13,1 | 49,4 | 20,9 |
| ASSISTANT PROFESSOR | 132,7 | 115,4 | 17,3 | 86,9 |
| PHD STUDENT | 130,8 | 81,9 | 48,9 | 62,6 |

Source: VSNU, WOPI, end of 2018, in FTEs. Excluding scientific field: Health Care.

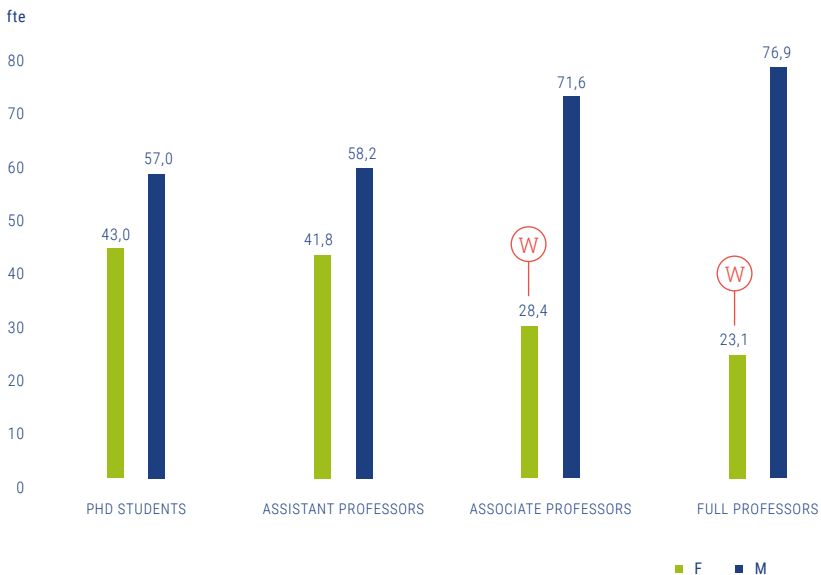
LARGE DIFFERENCES IN THE NUMBER OF FTES OF MALE AND FEMALE ASSOCIATE PROFESSORS AND FULL PROFESSORS

It is striking that there are considerably more men (2,170 FTEs) than women (651 FTEs) full professors when expressed in full-time equivalents. It is also striking that the talent pool for male associate professors compared to male full professors is not as well filled as that of women, assuming that all men would replace men, namely 1,703 FTE associate professors compared to 2,170 FTE full professors.

As far as the women are concerned, we see that there is a significantly lower total number of FTEs among associate professors and full professors than with men. However, the talent pool is relatively better filled, assuming that all women would actually replace women, namely 676 FTE female associate professors compared to 651 FTE female full professors.

FIGURE 1.3

Percentage of women and men scientists per job category in FTEs and in persons, end of 2018.



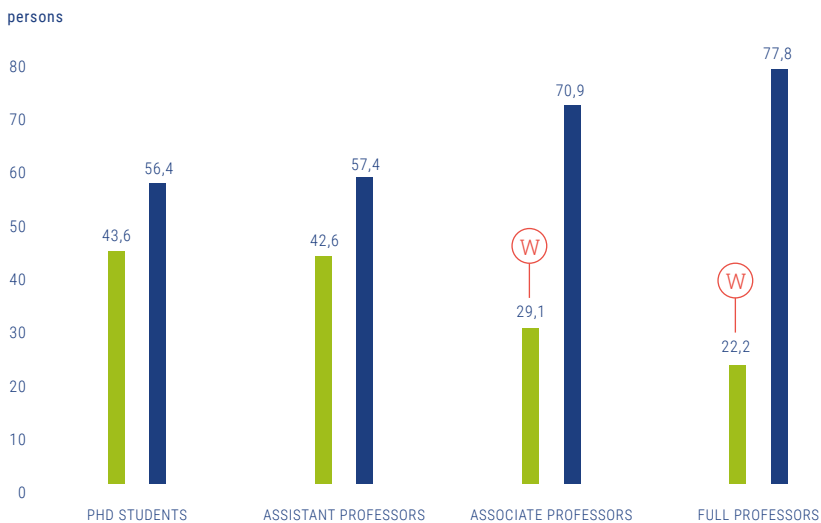
Briefly explained:

Assistant professors

While the increase in the number of female associate professors from 2017 through 2018 is lower than in the number of male associate professors, we see a striking increase in the number of women compared to the number of men among assistant professors. On balance, 134 more were added, of whom no less than 130 were women and only 4 men.

PhD students

In the Women Professors Monitor 2018, it was found that, since 2012, the percentage of female PhD students had decreased slightly year-on-year from 44.7% in 2011 to 42.7% by the end of 2017. At the end of 2018, there was a slight recovery and the percentage rose to the level of late 2016, i.e. 43.0%. Whether this is a coincidence or a structural improvement will have to be decided in the coming years.



Source: VSNU, WOPI, end of 2018, in FTEs and in persons. Excluding scientific field: Health Care.

GLASS CEILING INDEX FOR MEN AND FOR WOMEN

Since the publication of the Monitor, we have included a section on the Glass Ceiling Index (GCI). In this Monitor we present the development of the GCI since 2009, so that we can highlight a few striking issues.

Between 2009 and 2018, with some fluctuations, the GCI decreased for all job transitions. The GCI of PhD student to the assistant professor level has now reached a neutral 1.0. This means that the percentage of women in the assistant professor category is about as high as the percentage of women in the PhD category. However, we also see that the GCI between assistant professor and associate professor for women has increased slightly in recent years. This is because last year the percentage of female associate professors fell (from 28.6% to 28.4%) and the percentage of female assistant professors rose (from 40.7% to 41.8%). It is striking that, for the first time, the GCI between associate professor and full professor, at 1.2, is lower than the GCI between assistant professor and associate professor, at 1.4.

For men, the overall GCI for all job transitions from 2009 to 2018 is 1.0 or less. The GCIs for men did not change from the end of 2017 through the end of 2018.

The Glass Ceiling Index

The Glass Ceiling Index (GCI) is an indicator of the advancement, or lack thereof, of women to higher job categories. The GCI is greater than 1.0 when there is less representation of women at the higher level, compared to the level below. If the proportion of women is the same in two consecutive job categories, the GCI is equal to 1.0. This is a neutral GCI.

GCI >1.0 impeded throughput

GCI = 1.0 normal flow rate

GCI <1.0 easy throughput

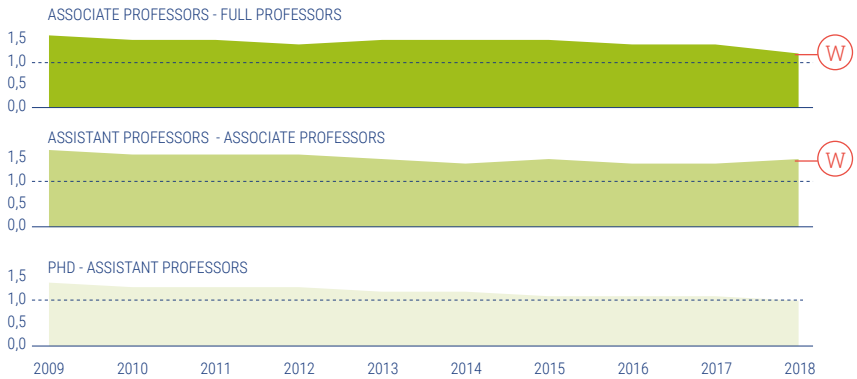
The GCI is calculated by dividing the percentage of women in job category x-1 by the percentage of women in job category x.

The GCI does not provide information about actual transition and is not the same as the probability of transition. The GCI was developed by research agency SEOR in 2002 on behalf of the Ministry of Social Affairs and Employment, as part of the development of a benchmark for identifying the position of women in senior and management positions.

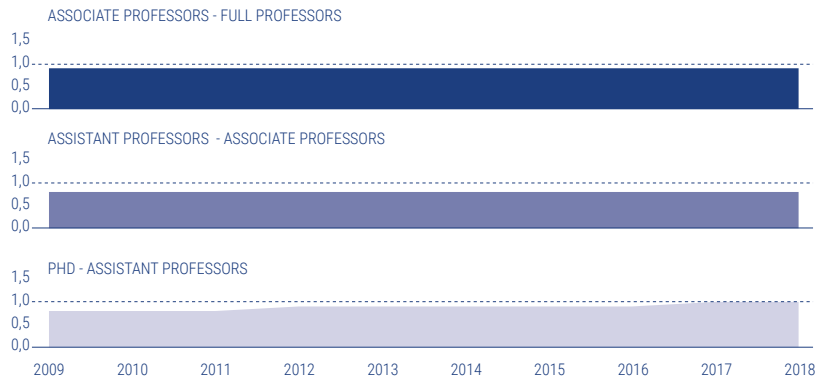
FIGURE 1.4

Glass Ceiling Index (GCI) women and men by job transition, in FTE, 2009-2018.

GCI women



GCI men



Source: VSNU, WOPI, reference date 31-12, in FTEs. Excluding scientific field: Health Care.

SALARY SCALES: FEMALE FULL PROFESSORS RANKED LOWER THAN MALE FULL PROFESSORS

Women are still systematically ranked lower in scales 15-16 than their male colleagues. The proportion of women in lower scales increased from 73.7% from late 2017 to 76.1% through 2018.

If we look at the highest salary scales (17 and higher), we see a decrease of 2 percentage points for women and a slight decrease of 0.4 percentage points for men. This decrease of 2 percentage points cannot be seen in absolute FTEs, where a slight increase can be seen, but due to the relatively large increase in FTEs among women in scales 15-16, the much smaller increase in the highest scales (17 and higher) translates into a small decrease in percentage terms.

TABLE 1.2

Distribution of women and men by job category and salary group, end of 2017 and end of 2018, in FTEs.

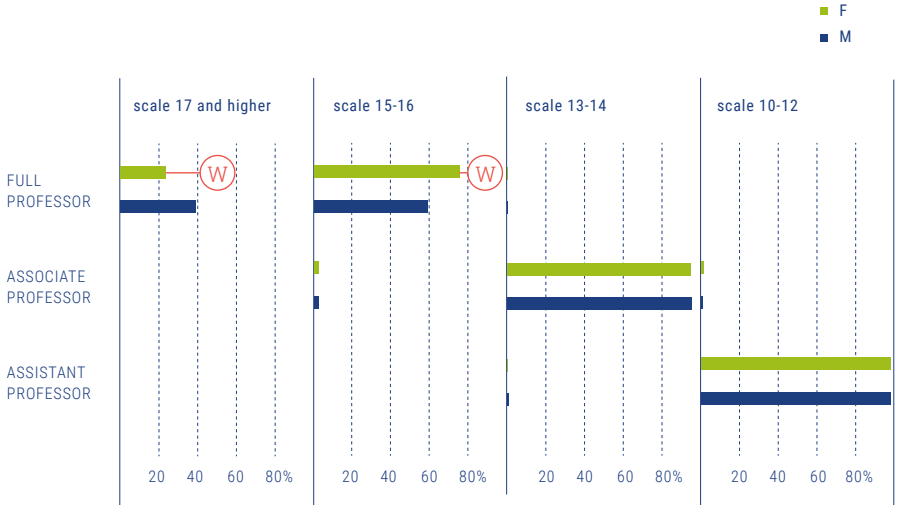
| | FULL PROFESSOR | | | | ASSOCIATE PROFESSOR | | | | ASSISTANT PROFESSOR | | | |
|----------------|----------------|------|------|------|---------------------|------|------|------|---------------------|------|------|------|
| | F | F | M | M | F | F | M | M | F | F | M | M |
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| SCALE 10-12 | | | | | 1,4 | 1,6 | 0,9 | 0,7 | 99,4 | 99,5 | 98,9 | 99,2 |
| SCALE 13-14 | 0,2 | 0,0 | 0,3 | 0,1 | 96,4 | 96,0 | 96,0 | 96,8 | 0,6 | 0,5 | 0,9 | 0,8 |
| SCALE 15-16 | 73,7 | 76,1 | 58,9 | 59,7 | 2,1 | 2,2 | 2,9 | 2,4 | | | 0,0 | |
| SCALE 17&> | 25,5 | 23,5 | 39,9 | 39,5 | | | | | | | | |
| MISCELLANEOUS* | 0,7 | 0,4 | 1,0 | 0,7 | 0,2 | 0,1 | 0,2 | 0,1 | 0,0 | 0,0 | 0,1 | 0,1 |

Source: VSNU, WOPI, end of 2017 and end of 2018, in FTEs. Excluding scientific field: Health Care.

* The category MISCELLANEOUS contains persons/FTE for which no salary scale is specified in the WOPI data.

FIGURE 1.5

Percentage of female and male scientists by salary group, in FTEs, at the end of 2018.



Source: VSNU, WOPI, end of 2018, in FTEs. Excluding scientific field: Health Care.

FEMALE FULL PROFESSORS ON AVERAGE ARE YOUNGER THAN MALE FULL PROFESSORS

If we look at the different age categories, we see an increase in the number of men in the category 55 - 65 years of age, i.e. from 1,190 to 1,226 and a small decrease in the category up to 55 years of age, from 1,239 to 1,199. This means that in the upcoming years there will be a large outflow of men heading for emeritus status which offers great opportunities for appointing women to these positions in the coming years.

Among women in the 55-65 age group, there is no clear growth or decline, with an increase of only 2, from 238 to 240. However, there is a clear increase in the age category up to 55 years: from 402 to 482.

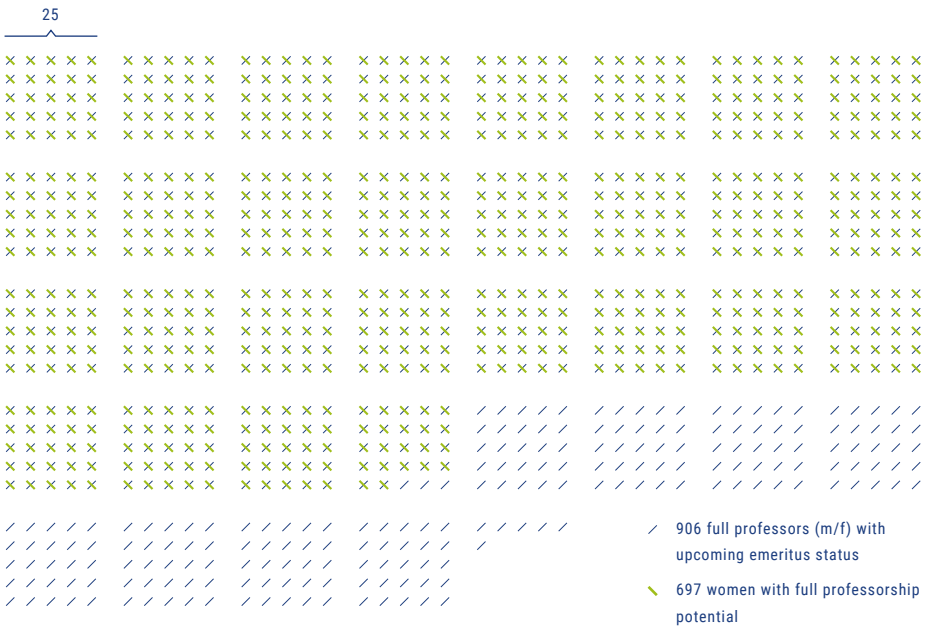
WELL-FILLED TALENT POOL

If we look at the current group of female associate professors, we see that there are 697 women with full professorship potential to succeed 906 full professors (men and women) who will retire in the coming years. Without distinguishing between fields of science, almost 77% of the outflow by retirement can be replaced by female associate professors.

In order to make more precise statements about the talent pool, breakdowns by university and by field of science are necessary, and other outflows should also be taken into account. However, these data were not included in the WOPI-data, end of 2018.

FIGURE 1.6

Potential of female associate professors who could replace full professors aged 60 and over.



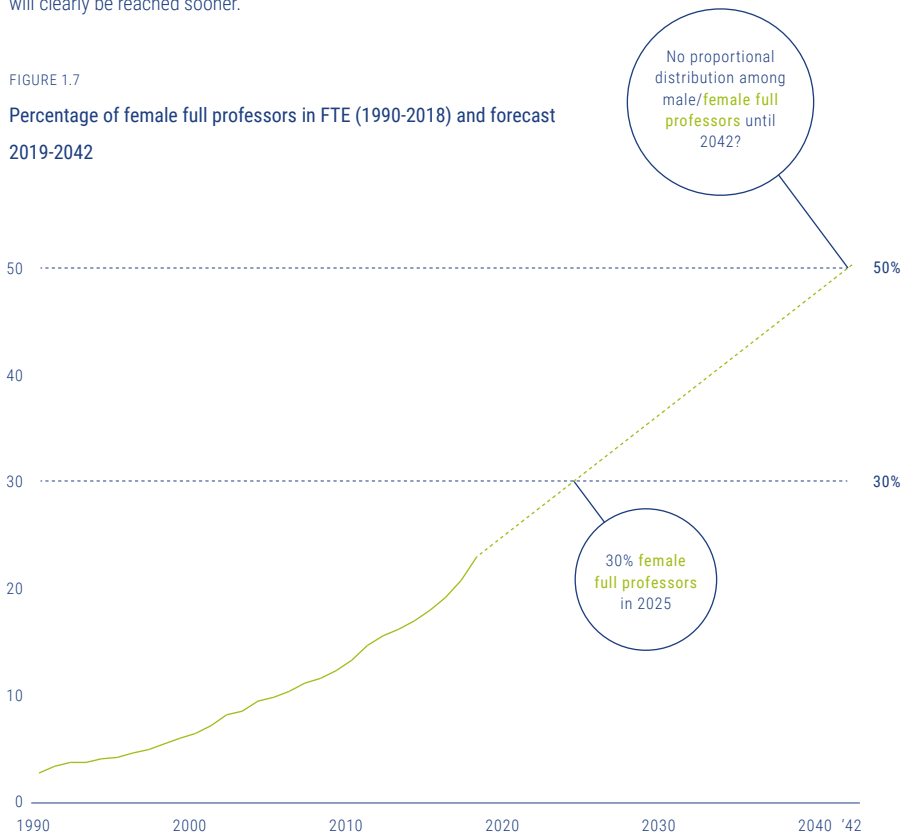
Source: VSNU, WOPI, end of 2018, in persons. Excluding scientific field: Health Care.

ARE WE GOING TO WAIT UNTIL 2042?

Due to the strong development in the percentage of female full professors over the past two years, we see that the average rate of increase in the percentage of female full professors has achieved a remarkable acceleration. Based on the average growth rate of the past 10 years (2009 - 2018), the 30% limit will be passed by the end of 2025. In the previous Monitor, this was projected at 2027. If the percentage of female full professors continues to increase at the same rate of growth, then by the end of 2042 we will have achieved a proportional M/F distribution among full professors. Last year, this forecast was still for 2048. If the rate of growth continues to rise as significantly as in recent years (2015: 0.99, 2016: 1.2%, 2017: 1.6% and 2018: 2.2%), the 50/50 proportion will clearly be reached sooner.

FIGURE 1.7

Percentage of female full professors in FTE (1990-2018) and forecast 2019-2042



Source: VSNU, WOPI, reference date 31-12, in FTEs. Excluding scientific field: Health Care.

THE NETHERLANDS IN EUROPEAN PERSPECTIVE

In 2018, the European Commission published a revised version of She Figures, which includes a ranking of a number of European countries based on the proportion of female full professors. She Figures 2018 compares the proportion of female full professors in the years 2013 and 2016. We then see that the Netherlands continues to lag behind. Within the EU-28 the Netherlands takes 24th place, just above Belgium, Luxembourg, the Czech Republic and Cyprus. Compared to 2013, the Netherlands has surpassed Luxembourg, but in 2016, as in 2013, it is still ranked quite low.

TABLE 2.1

Ranking of European member states by percentage of female full professors in 2016, in persons, 2016 and 2013.

| | country | 2016 | 2013 |
|----|-----------------|------|------|
| 1 | Romania | 54,3 | 48,4 |
| 2 | Latvia | 41,4 | 34,4 |
| 3 | Croatia | 40,6 | 38,0 |
| 4 | Malta | 40,0 | - |
| 5 | Lithuania | 39,3 | - |
| 6 | Bulgaria | 36,6 | 31,7 |
| 7 | Finland | 29,4 | 26,6 |
| 8 | Slovenia | 28,9 | 22,5 |
| 9 | United Kingdom | 26,4 | 25,2 |
| 10 | Portugal | 26,3 | 24,8 |
| 11 | Sweden | 25,4 | 23,8 |
| 12 | Slovakia | 25,3 | 23,7 |
| 13 | Estonia | 24,3 | 23,5 |
| 14 | Poland | 24,1 | 22,6 |
| 15 | Austria | 22,7 | 21,5 |
| 16 | Italy | 22,2 | 21,1 |
| 17 | France | 21,9 | 20,4 |
| 18 | Greece | 21,6 | 19,8 |
| 19 | Spain | 21,3 | 21,8 |
| 20 | Denmark | 20,7 | 19,2 |
| 21 | Ireland | 20,6 | 18,6 |
| 22 | Hungary | 20,1 | 24,1 |
| 23 | Germany | 19,4 | 17,3 |
| 24 | The Netherlands | 18,7 | 16,2 |
| 25 | Belgium | 18,3 | 15,6 |
| 26 | Luxembourg | 17,7 | 16,6 |
| 27 | Czech Republic | 14,6 | 14,3 |
| 28 | Cyprus | 13,0 | 12,2 |
| | EU-28 | 23,7 | 22,1 |

The Netherlands' percentage of female full professors is among the lowest in Europe

Source: Women in Science database, DG Research and Innovation, She Figures 2018, in persons. Please note: the period of data collection/ reference date may vary from country to country. For further background information and comments on the data collection, see the publication, She Figures 2018. The full version of She Figures 2018 and the information on the source data can be found at https://ec.europa.eu/research/swafs/index.cfm?pg=library&lib=gender_equality.

THE PROPORTION OF FEMALE PROFESSORS AT UNIVERSITIES

THE PROPORTION OF FEMALE FULL PROFESSORS IS INCREASING AT ALMOST ALL UNIVERSITIES

At the end of 2017, the Open University was the first university to cross the 30% threshold for female full professors. This year, this university is once again at the top with almost 35% female full professors. Radboud University (29.3%) is outpaced by Leiden University (29.7%) and Maastricht University (29.7%). At the bottom of the list is Erasmus University Rotterdam at 14.5%.

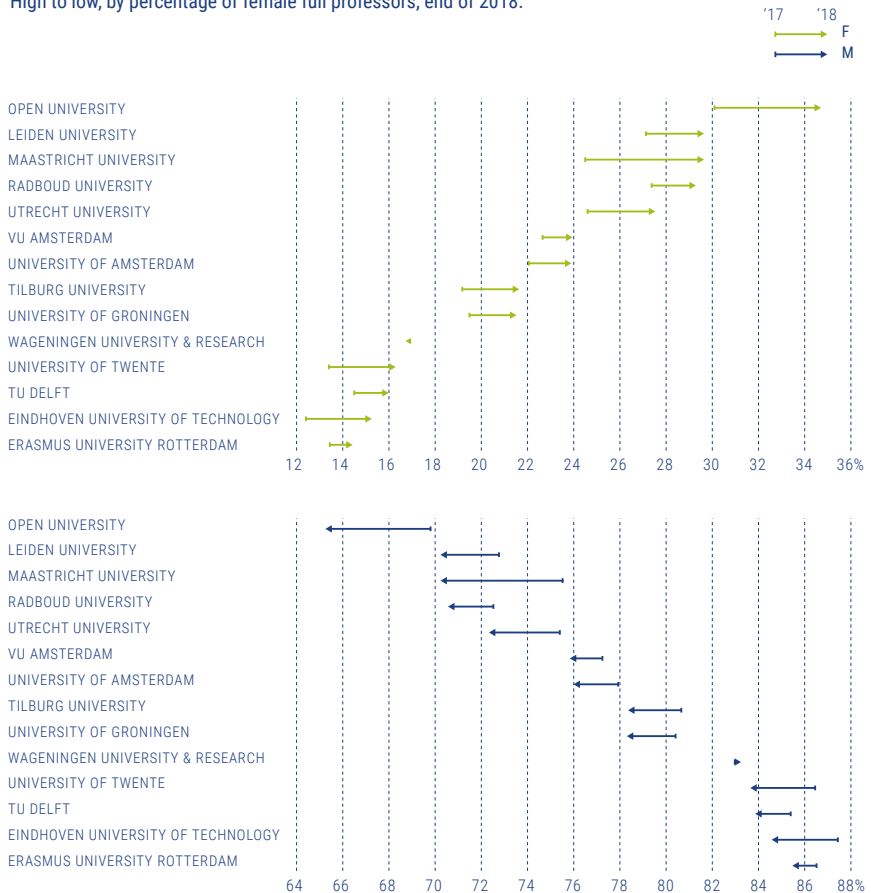
The place in the ranking does not, however, say everything. It is important to look at the increase in the percentage of female full professors per institution from the end of 2017 through the end of 2018. This is also shown in Figure 3.1. We can observe that 7 out of 14 universities show a higher growth rate than the average growth rate of 2.2 percentage points. Maastricht University stands out at 5.2 percentage points, the Open University at 4.2, Utrecht University at 3.0 and Eindhoven University of Technology and the University of Twente at 2.8%. Wageningen University & Research is the only university with a slight decrease in the percentage (-0.1%).

At the end of 2018, there were 10 full professors employed at the University of Humanistic Studies, of whom 6 were women and 4 men. In terms of FTE, this is a total of 6.2 FTE, of which 4.1 FTE were women and 2.1 FTE were men. The University of Humanistic Studies has 66.1% female full professors (in FTEs).¹

FIGURE 3.1

Percentage of female and male full professors in FTE, end of 2017 through the end of 2018.

High to low, by percentage of female full professors, end of 2018.



Source: VSNU, WOPI, end of 2017 and end of 2018, in FTEs. Excluding scientific field: Health Care.

1. Source: requested from the Executive Board of the University of Humanistic Studies October 2019, reference date 31 December 2018. The personnel data of the University of Humanistic Studies are not included in the WOPI data of the VSNU. Therefore, they cannot be included in the regular data analysis underlying the representations in this Monitor.

TABLE 3.1

Growth in the percentage of female full professors per university, end of 2017 and end of 2018, in FTEs.

| | percentage point of growth % female full professors '17-'18 | % female full professors 2018 | % female full professors 2017 |
|------------------------------------|-------------------------------------------------------------------|----------------------------------|----------------------------------|
| OPEN UNIVERSITY | 4,5 | 34,7 | 30,1 |
| LEIDEN UNIVERSITY | 2,5 | 29,7 | 27,2 |
| MAASTRICHT UNIVERSITY | 5,2 | 29,7 | 24,4 |
| RADBOUD UNIVERSITY | 1,9 | 29,3 | 27,4 |
| UTRECHT UNIVERSITY | 3,0 | 27,6 | 24,6 |
| VU AMSTERDAM | 1,4 | 24,1 | 22,7 |
| UNIVERSITY OF AMSTERDAM | 1,9 | 24,0 | 22,0 |
| TILBURG UNIVERSITY | 2,3 | 21,7 | 19,3 |
| UNIVERSITY OF GRONINGEN | 2,1 | 21,7 | 19,6 |
| WAGENINGEN UNIVERSITY & RESEARCH | -0,1 | 16,9 | 16,9 |
| UNIVERSITY OF TWENTE | 2,8 | 16,4 | 13,6 |
| TU DELFT | 1,5 | 16,1 | 14,6 |
| EINDHOVEN UNIVERSITY OF TECHNOLOGY | 2,8 | 15,4 | 12,6 |
| ERASMUS UNIVERSITY ROTTERDAM | 1,0 | 14,5 | 13,5 |

Source: VSNU, WOPI, end of 2017 and end of 2018, in FTEs. Excluding scientific field: Health Care.

THE PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITIES IN EACH JOB CATEGORY

In order to ensure that women get to the top positions in science, it is of crucial importance to look at the growth of female scientists within their own university. The following figure shows the percentages of women per job category per university.

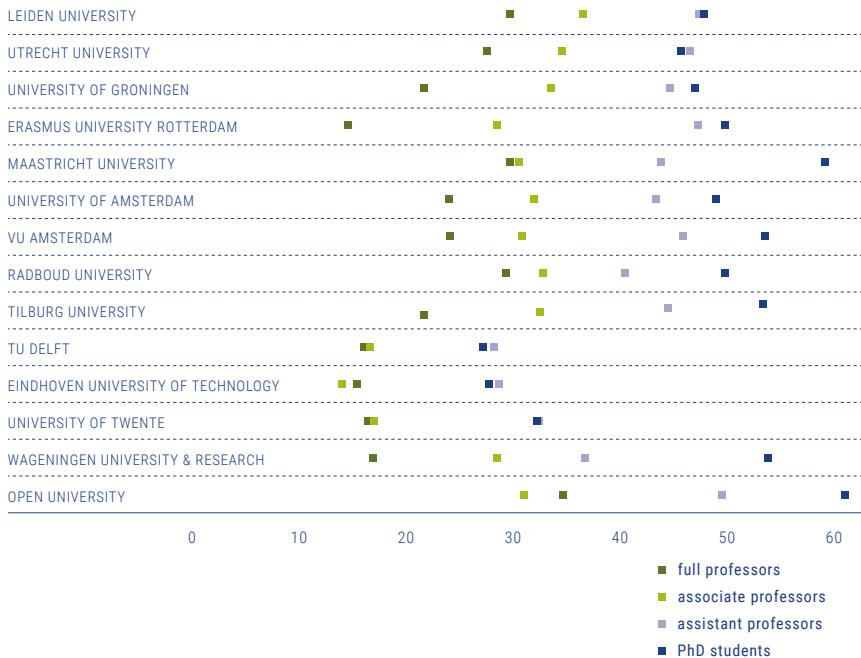
We highlight one striking case:

Although Erasmus University Rotterdam (EUR) ranks last when it comes to the percentage of female full professors, the percentage of PhD candidates and assistant professors at EUR is relatively high. The unexpectedly low percentage of female full professors is remarkable. It is striking that, of the increase of 13.2 full professor FTEs between the end of 2017 and the end of 2018, only 3.2 were awarded to female full professors.

FIGURE 3.2

Percentage of women by job category per university, in FTEs, end of 2018.

Source: VSNU, WOPI, end of 2018, in FTEs. Excluding scientific field: Health Care.



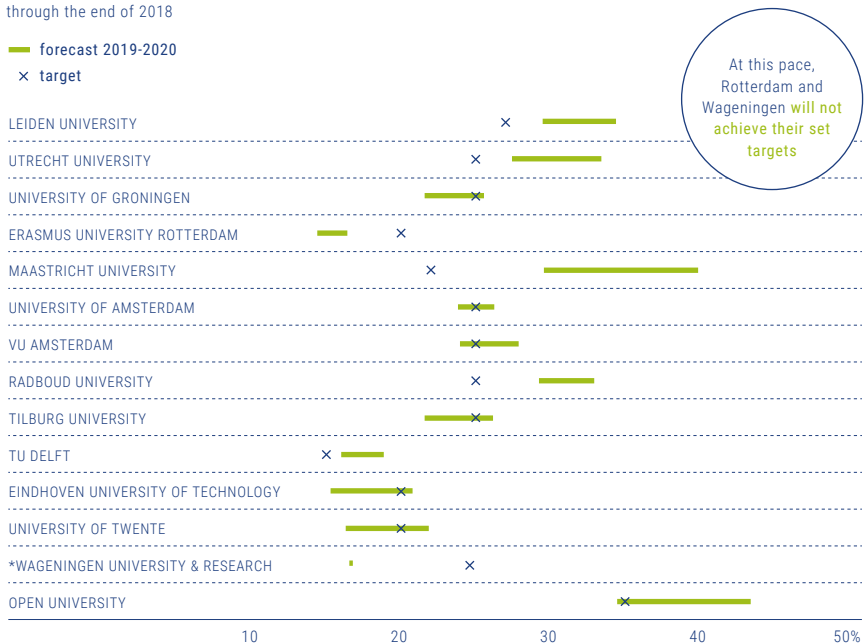
TARGETS – POSSIBLE FOR ALMOST ALL UNIVERSITIES TO ACHIEVE THE SET OBJECTIVES

In 2015, universities set targets for the percentage of female full professors that they should employ by 2020. The figure below shows that a number of universities has already achieved the set targets and that a large number of them has nearly achieved them.

FIGURE 3.3

The forecast and targets for the percentage of female full professors per university by 2020.

The forecast at the end 2020 is calculated on the basis of the growth from the end of 2017 through the end of 2018



Source personnel: VSNU, WOPI, end of 2017 and end of 2018, in FTEs. Excluding scientific field: Health Care. Source of targets: VSNU letter of 17 December 2015 to Minister Bussemaker of Education, Culture and Science. *Wageningen University's target includes personal professors and cannot be compared with the percentage of female professors in WOPI.

Compared to the end of 2017, all universities, with the exception of the Wageningen University, have made progress. It will, nonetheless, be difficult, but not impossible, for a number of universities to achieve the set targets by 2020: Erasmus University Rotterdam, University of Groningen, Tilburg University, Eindhoven University

of Technology, the University of Twente and Wageningen University & Research still have a lot of work to do in this area. However, if the increase in the percentage of female full professors per university between 2017 and 2018 continues through 2019 and 2020, it will be possible for all universities, with the exception of Wageningen University and Erasmus University Rotterdam, to achieve the targets by the end of 2020. There is – as yet – no joint initiative by universities to set new targets for 2025.

THE PERCENTAGES OF FEMALE STUDENTS AND FEMALE FULL PROFESSORS IN EACH FIELD OF SCIENCE VARY WIDELY

The percentages of female full professors per field of science vary widely. However, it is also interesting to look at the percentages of female students in these fields of science and to compare these percentages with each other. How far apart do they lie?

If we compare the two previous years, we can see that in all areas of science, with the exception of agriculture, there is a slightly favourable increase in the ratio between the percentage of female students and the percentage of female full professors. The large differences between the percentages of female students and the percentages of female full professors in the fields of agriculture and economics are striking.

TABLE 3.2

Percentage of female full professors and female students by field of science at the end of 2018, and the ratio between the percentage of female students and the percentage of female full professors within a field of science, end of 2018 and end of 2017.

| | Female students | Female full professors | Ratio of female full professor and female student, end of 2018 | Ratio of female full professor and female student, end of 2017 |
|--------------------------------|-----------------|------------------------|----------------------------------------------------------------|----------------------------------------------------------------|
| AGRICULTURE | 56,3 | 17,1 | 3,3 | 3,3 |
| NATURAL SCIENCES | 38,8 | 16,2 | 2,4 | 2,8 |
| ENGINEERING | 25,7 | 15,0 | 1,7 | 2,0 |
| ECONOMICS | 36,1 | 12,2 | 3,0 | 3,2 |
| LAW | 60,8 | 30,4 | 2,0 | 2,1 |
| BEHAVIOURAL SCIENCES & SOCIETY | 69,6 | 33,4 | 2,1 | 2,3 |
| LANGUAGE & CULTURE | 61,5 | 32,8 | 1,9 | 2,0 |

Source: VSNU, WOPI, end of 2017 and end of 2018, in FTEs. Excluding scientific field: Health Care.

— 04 —

THE PROPORTION OF FEMALE PROFESSORS AT UNIVERSITY MEDICAL CENTRES

INCREASE IN THE PROPORTION OF FEMALE FULL PROFESSORS AT ALMOST ALL UNIVERSITY MEDICAL CENTRES

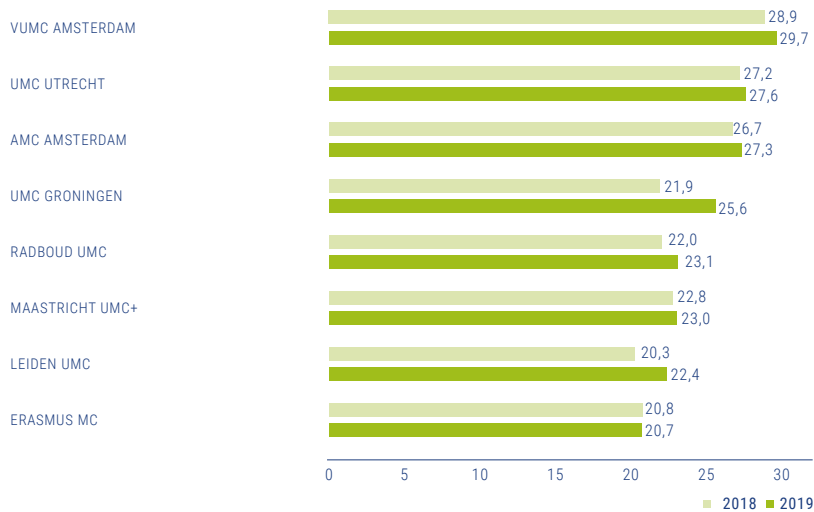
Almost all UMCs have experienced an increase in the percentage of female full professors. Only at Erasmus MC did we see a slight decrease of 0.1%. Erasmus MC has the lowest percentage of female full professors (20.7%) at a UMC, while Erasmus University Rotterdam has the lowest percentage of female full professors at a university (14.5%).

If we look at the total percentage of female full professors at the UMCs (24.9%), we see that it is higher than at universities, where the percentage stood at 23.1% at the end of 2018.

The large percentage difference between female full professors (24.9%) and female students (68.9%) within the field of science of Health Care is striking². For an overview of the differences in the percentages of students - full professors by field of science, see page 27, Table 3.2..

FIGURE 4.1

The percentage of female full professors per UMC in 2018 and 2019.



Source: Provision of separate UMCs, in persons, reference dates between 31 Dec. 2017 and 1 July 2018, and 31 Dec. 2018 and 1 July 2019.

2. The percentage of female professors at UMCs covers the vast majority, but not the entire, HOOP area of Health Care. The comparison should therefore be read here as an indication.

TABLE 4.1

Number of female and male full professors who are department heads, per UMC, in 2019.

| | F | M | Total | Percentage of women |
|-----------------|-----------|------------|------------|---------------------|
| LEIDEN UMC | 4 | 32 | 36 | 11,1 |
| UMC UTRECHT | 12 | 29 | 41 | 29,3 |
| UMC GRONINGEN | 6 | 26 | 32 | 18,8 |
| ERASMUS MC | 9 | 39 | 48 | 18,8 |
| MAASTRICHT UMC+ | 6 | 42 | 48 | 12,5 |
| AMC AMSTERDAM | 4 | 17 | 21 | 19,0 |
| VUMC AMSTERDAM | 7 | 29 | 36 | 19,4 |
| RADBOUD UMC | 8 | 38 | 46 | 17,4 |
| TOTAL | 56 | 252 | 308 | 18,2 |

Source: Provision per separate UMC, in persons, reference dates between 31 Dec. 2018 and 1 July 2019.

If we look at the number of female full professors who are heads of departments within the UMCs, we see very divergent percentages from 11.1% at Leiden UMC to 29.3% at UMC Utrecht. On average, 18.2% of all full professors at UMCs who are department heads are women.

FEMALE ASSOCIATE PROFESSORS AND ASSISTANT PROFESSORS WITHIN THE UNIVERSITY MEDICAL CENTRES

Because of a more extensive data request and supply for the Monitor 2019, it is for the first time that we can say something about the male-female distribution, among associate professors and assistant professors within the UMCs. The total percentage of female associate professors at the UMCs is 39%. The total percentage of female assistant professors is 51%, although it should be noted that it was not possible for UMC Utrecht and AMC Amsterdam to provide data on assistant professors.

TABLE 4.2

Number of female and male associate professors and percentage of female associate professors at UMCs, in 2019.

| | F | M | Total | Percentage of women |
|-----------------|------------|------------|------------|---------------------|
| LEIDEN UMC | 37 | 76 | 113 | 32,7 |
| UMC UTRECHT | 76 | 106 | 182 | 41,8 |
| UMC GRONINGEN | 33 | 54 | 87 | 37,9 |
| ERASMUS MC | 53 | 76 | 129 | 41,1 |
| MAASTRICHT UMC+ | 38 | 69 | 107 | 35,5 |
| AMC AMSTERDAM | 21 | 23 | 44 | 47,7 |
| VUMC AMSTERDAM | 40 | 48 | 88 | 45,5 |
| RADBOUD UMC | 40 | 76 | 116 | 34,5 |
| TOTAL | 338 | 528 | 866 | 39,0 |

Source: Provision per separate UMC, in persons, reference dates between 31 Dec 2018 and 1 July 2019.

TABLE 4.3

Number of female and male assistant professors and proportion of female assistant professors at UMCs, in 2019.

| | F | M | Total | Percentage of women |
|-----------------|------------|------------|------------|---------------------|
| LEIDEN UMC | 58 | 46 | 104 | 55,8 |
| UMC UTRECHT | - | - | - | - |
| UMC GRONINGEN | 42 | 64 | 106 | 39,6 |
| ERASMUS MC | 75 | 70 | 145 | 51,7 |
| MAASTRICHT UMC+ | 166 | 157 | 323 | 51,4 |
| AMC AMSTERDAM | - | - | - | - |
| VUMC AMSTERDAM | 42 | 33 | 75 | 56,0 |
| RADBOUD UMC | 46 | 44 | 90 | 51,1 |
| TOTAL | 429 | 414 | 843 | 50,9 |

Source: Provision per separate UMC, in persons, reference dates between 31 Dec. 2018 and 1 July 2019. UMC Utrecht and AMC Amsterdam have not provided data on assistant professors.

— 05 —

WOMEN AT THE HIGHEST LEVELS OF ACADEMIC MANAGEMENT AND GOVERNANCE IN SCIENTIFIC ORGANISATIONS

INCREASE IN THE PROPORTION OF WOMEN ON UNIVERSITY EXECUTIVE BOARDS AND SUPERVISORY BOARDS

Earlier versions of the Monitor presented data on deans, directors of research and educational institutions. Unfortunately, data on gender distribution of these job categories are no longer available for the Monitor because some universities have decided, due to possible traceability to individuals, that this information will no longer be included in WOPI data. For academic management and scientific organisations, this Monitor is based on data published on the websites of the organisations.

UNIVERSITIES

Executive Boards:

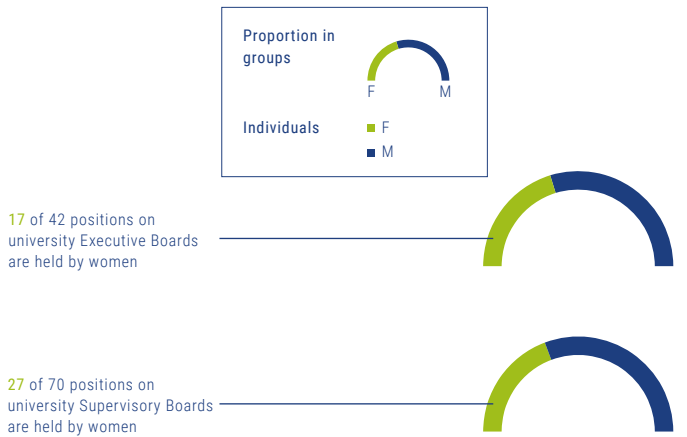
At Dutch universities, there are a total of 42 administrative positions on the Executive Boards. Of the 42 positions, 17 are held by women and 25 by men. The number of women has increased by 3 (from 14 to 17) compared to 2018. The number of male members on Executive Boards has decreased from 27 to 25. This brings the average percentage of women on Executive Boards to 40.5% in 2019. This is a significant increase (6.4%) compared to the 34.1% in 2018.

Supervisory Boards

There are a total of 70 administrative positions on Supervisory Boards. As of 2019, 27 are held by women and 43 by men. This brings the percentage of women on Supervisory Boards to 38.6% which is an increase of 0.9% compared to 2018.

FIGURE 5.1

Number of women and men on Executive Boards and Supervisory Boards of the Dutch universities in 2019.



| | Executive Boards | | Supervisory Boards | |
|------------------------------------|------------------|---|--------------------|---|
| LEIDEN UNIVERSITY | 1 | 2 | 3 | 2 |
| UTRECHT UNIVERSITY | 1 | 2 | 2 | 3 |
| UNIVERSITY OF GRONINGEN | 1 | 2 | 2 | 3 |
| ERASMUS UNIVERSITY ROTTERDAM | 2 | 1 | 2 | 2 |
| MAASTRICHT UNIVERSITY | 1 | 2 | 2 | 3 |
| UNIVERSITY OF AMSTERDAM | 2 | 1 | 2 | 3 |
| VU AMSTERDAM | 2 | 1 | 1 | 4 |
| RADBOD UNIVERSITY | 1 | 2 | 3 | 3 |
| TILBURG UNIVERSITY | 1 | 2 | 1 | 4 |
| TU DELFT | 1 | 2 | 2 | 3 |
| EINDHOVEN UNIVERSITY OF TECHNOLOGY | 1 | 2 | 1 | 4 |
| UNIVERSITY OF TWENTE | 1 | 2 | 2 | 3 |
| WAGENINGEN UNIVERSITY & RESEARCH | 1 | 2 | 2 | 4 |
| OPEN UNIVERSITY | 1 | 2 | 2 | 2 |

Source: websites Dutch universities, in persons, reference date 11 Sept. 2019.

UNIVERSITY MEDICAL CENTRES

Executive Boards

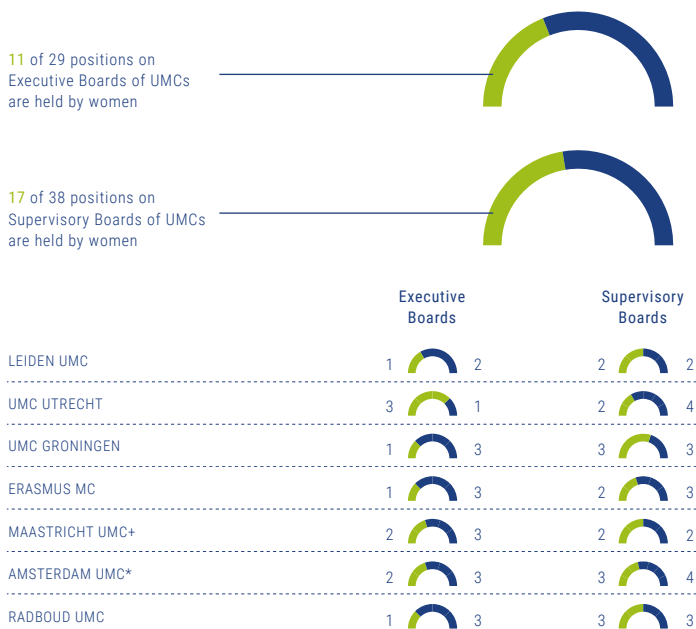
The total number of members of Executive Boards of the Dutch UMCs increased in 2019 by 1 from 28 to 29. Of the 29 members of Executive Boards, 11 are women and 18 are men, which is 37.9% women and an increase of 5.8 percentage points from 2018, when the percentage was 32.1% women.

Supervisory Boards

In total, there are 38 members of Supervisory Boards at the Dutch UMCs. This is one more than last year. The proportion of women on Supervisory Boards rose by 4.2 percentage points, from 40.5% in 2018 to 44.7% in 2019.

FIGURE 5.2

Number of women and men on Executive Boards and Supervisory Boards of the Dutch University Medical Centres in 2019.



Source: websites Dutch UMCs, in persons, reference date 23 Sept. 2019.

*The Academic Medical Center and VU Medical Center merged to form Amsterdam UMC on 7 June 2018 and have a joint Executive Board

ROYAL NETHERLANDS ACADEMY OF ARTS AND SCIENCES (KNAW)

Members

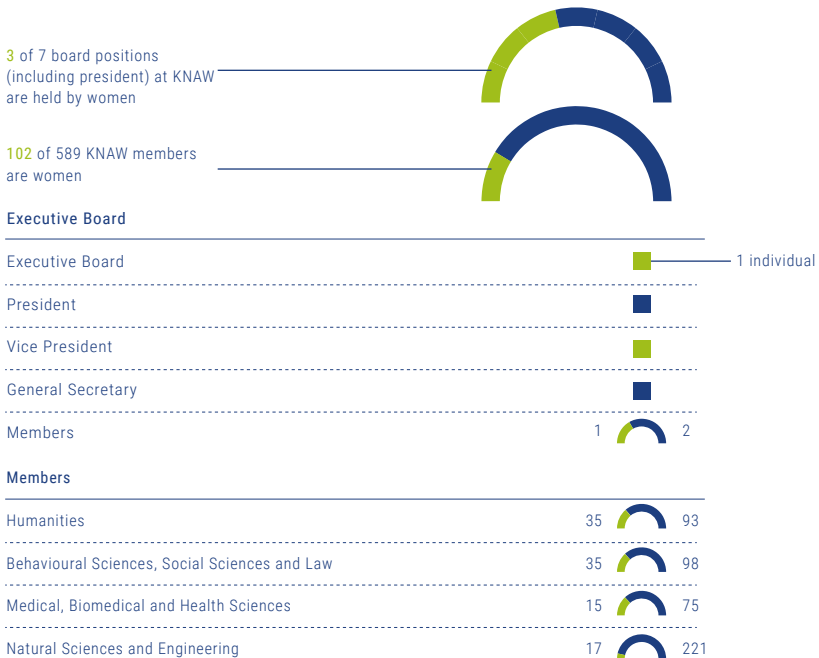
The KNAW has 102 women among the total number of 589 members, which represents 17%. This is an increase of 0.8 percentage points compared to the 16.2% in 2018. This increase is considerably lower than the increase of 1.3 percentage points in the year 2017-2018, when targeted action was taken to increase the proportion of female KNAW members through an additional selection round. KNAW members are appointed for life: there are 247 members under the age of 65, 75 of whom are women (30%). This is an increase of 1 percentage point compared to last year.

Management and governance

The Executive Board of the KNAW has seven positions. The situation has remained unchanged compared to 2018, which means that the presidency is held by a man and 2 women and 4 men hold the other positions.

FIGURE 5.3

Number of female and male members of the Royal Academy of Arts and Sciences (KNAW) in 2019.



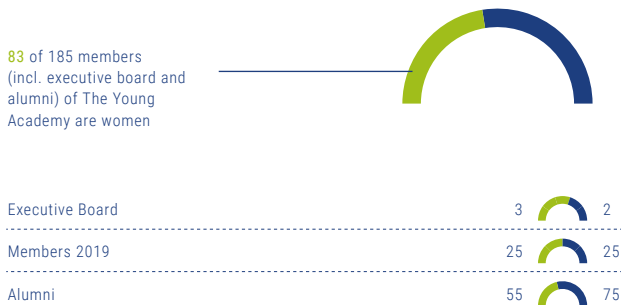
Source: Academy Bureau KNAW, in persons, reference date 15 Sept. 2019.

THE YOUNG ACADEMY (DJA)

At The Young Academy, the m/f distribution has traditionally been nearly proportional. The executive board of The Young Academy consists of 3 women (60%) and 2 men (40%). In total, there are 50 members in The Young Academy. There are 25 women and 25 men, which is a 50/50 percentage. The Young Academy has 130 alumni, of whom 55 (42%) are women and 75 (58%) men.

FIGURE 5.5

Number of female and male members of The Young Academy in 2019.



Source: Academy Bureau KNAW, in persons, reference date 15 Sept. 2019.

NETHERLANDS ORGANISATION FOR SCIENTIFIC RESEARCH (NWO)

The administrative structure of the NWO consists of an Executive Board, a Supervisory Board and four domain boards. The m/f composition of the Executive Board consists of six positions of which 5 are filled by men and 1 by a woman, which is one less than last year. The Supervisory Board has 6 members and the m/f distribution is 50/50. The chair of the Supervisory Board is a man. If we look at the domain boards, we see the following:

| | |
|--------------------------------------------------------------------------|----------------------------------------------------|
| Science | 7 positions, of which 2 women and 4 men (1 vacant) |
| Social Sciences and Humanities | 9 positions, of which 4 women and 4 men (1 vacant) |
| Applied and Engineering Sciences | 6 positions, 3 women and 3 men |
| The Netherlands Organisation for Health Research and Development (ZonMw) | 9 positions, 5 women and 4 men |

FIGURE 5.6

Number of women and men on the Executive Board of the Netherlands Organisation for Scientific Research (NWO) in 2019.



Executive Board

| | | | |
|----------------------------------------------|---|---|---|
| President | 1 | ■ | 4 |
| Portfolio holder for Operations and Finances | 1 | ■ | 4 |
| Domain Chairs | 0 | ⤿ | 4 |

Domain boards

| | | | |
|--------------------------------------------------------------------------|---|---|---|
| Science | 2 | ⤿ | 4 |
| Social Sciences and Humanities | 4 | ⤿ | 4 |
| Applied and Engineering Sciences | 3 | ⤿ | 3 |
| The Netherlands Organisation for Health Research and Development (ZonMw) | 5 | ⤿ | 4 |

Source: NWO Executive Board Bureau, in persons, reference date 1 Sept. 2019.

COMPARISON OF SUPPORT AND MANAGEMENT STAFF (OBP) AND SCIENTIFIC STAFF (WP)

TOTAL PROPORTION OF WOMEN IN SUPPORT POSITIONS AND SCIENTIFIC POSITIONS HAS NEVER BEEN THIS HIGH

The total number of support staff increased from 18,336 to 18,811 FTEs between 2017 and 2018. This represents a total increase of 475 FTEs in one year, of which 409 FTEs for women and 66 FTEs for men. The percentage of women in support staff positions (55.2%) has never been this high.

If we look at the total number of support staff (WP), we see an increase there as well, from 25,481 FTEs at the end of 2017 to 25,991 FTEs at the end of 2018. The percentage of women in total WP was 39.5% at the end of 2019.

APPENDIX – SOURCE DATA

WOPI

Since 1990, universities have been collecting staff data in a structured manner and according to a fixed reference date (31 December). This data collection has been coordinated by VSNU since 1999 and is termed WOPI (Wetenschappelijk Onderwijs Personeel informatie - Scientific Education Personnel Information). The information in this Monitor is based on this information, and the files contain data on staff employed by universities, categorised since 2003 in university job classification system profiles (UFO). In WOPI, data on personnel is collected both in persons and in FTEs, based on the scope of the employment contract(s). FTE stands for full-time equivalent and is a unit of account that can be used to express the scope of the employment contract. A full working week equals 1 FTE.

The WOPI files contain the population of staff employed by the universities on the reference date. This is explicitly not a cohort study. Every employee is included in WOPI with an encrypted, anonymous number that varies from one university to another. If an employee changes university in the course of his or her career, he or she will receive a new encrypted number in WOPI at the new university. This means that it is not possible to establish career links between universities. For the above reasons, it is not possible to use WOPI data to determine exactly which growth or decline in population in a given year can be attributed to inflow, advancement or outflow.

Students and graduates

Data on students and graduates comes from the Central Register of Higher Education Enrolments (CRI-HO), which includes data on inflow, enrolment and exams. For students, it concerns main enrolments on 1 October of the year in question. For graduates it contains Master's and doctoral degrees awarded per academic year. Of the students enrolled on the reference date 1 October 2018, 98.1% studied full-time, 1.7% part-time and 0.2% work-study.

University Medical Centres

With the transition of almost all staff from university medical faculties to university medical centres from 1998 to the present, the view on the entire science field of Health Care in WOPI has been lost. Data on the vast majority of that field of science in this Monitor has been provided by the individual university medical centres. The remaining personnel data in the HOOP field of Health Care in the WOPI data have not been taken into account in this Monitor.

Scientific fields

The Higher Education and Research Plan (HOOP) of the Ministry of Education, Culture and Science includes a division into academic fields, which are called HOOP fields. The HOOP distinguishes nine fields of study: Agriculture, Natural Sciences, Engineering, Economics & Business, Law, Healthcare, Behavioural & Social Sciences, Humanities & Linguistics and Education. The students and graduates are classified in the source files according to the nine areas of study. In the WOPI files, university staff is divided into eight areas plus a 'Miscellaneous' category. The field of Education is not used for the classification of university staff. Where reference is made in this Monitor to scientific fields, this refers to the HOOP fields. Only those students and full professors who are affiliated with a single scientific field are included in the analyses. In the case of students, the field of Education has been excluded, and in the case of full professors, the Miscellaneous category has been left out, unless otherwise stated.

Academic management and scientific organisations

With respect to academic management and scientific organisations, this Monitor is based on data published on the websites of the organisations in question. Unfortunately, data on the female/male distribution for deans, directors of research institutes and directors of educational institutes are no longer available for the Monitor because a number of universities have decided, in connection with privacy issues, that such data will no longer be provided as standard in the WOPI data.

APPENDIX – COOPERATING PARTNERS

Dutch Network of Women Professors (LNVH)

www.lnvh.nl

The LNVH foundation, a lobbying, networking and knowledge organisation, aims to promote a proportional representation of women within the Dutch university community by contributing structurally and sustainably to the improvement of the position of women in science. The LNVH tries to achieve this goal by, among other things, strengthening the bond between women scientists in the Netherlands and offering support in all activities related to career development towards full professorships. In addition, the LNVH is committed to promoting the advancement of women to higher academic ranks (both scientific and administrative top positions), as well as preventing the premature outflow of women. In order to achieve these objectives, the LNVH is involved in:

- Monitoring the career advancement of female scientists by publishing relevant figures in the Women Professors Monitor.
- Publishing research reports on relevant themes related to gender diversity.
- Policy development and influencing by setting up and supporting projects relating to the advancement and appointment of female academics.
- Relationship management with national and international organisations both within and outside the academic community.
- Chairing the platform of advisors and policy makers for gender/diversity/talent policy of all Dutch universities and UMCs, NWO and KNAW.
- The nomination of female scientists for science awards, stipends, grants and positions.
- Organising mentoring, intervision, workshops, conferences and symposiums.
- Increasing the visibility of our own network and the impact of our activities.
- Initiating networks and identifying best practices.

Association of Universities in the Netherlands (VSNU)

www.vsnu.nl

VSNU manages and develops information on education, research, personnel and finance for policy development, accountability, benchmarking and quality assurance. Key figures in the field of personnel are part of the WOPI file (Wetenschappelijk Onderwijs Personeel Informatie - Information on scientific education personnel).

Netherlands Federation of University Medical Centres (NFU)

www.nfu.nl

The Netherlands Federation of University Medical Centres (NFU) represents the eight collaborating UMCs in the Netherlands, as an advocate and employer of 65,000 persons. In doing so, the NFU is committed to the continuity of care and the safety of patients with often serious, rare and difficult to treat conditions. The partnership provides the UMCs with even more opportunities to treat their patients according to the latest insights of medical science, to give care providers forward-looking training and to do scientific research on a global scale. Leading motives include: a sense of responsibility for patients and the ambition to innovate.

SoFoKles

The Monitor 2019 was co-financed by a contribution from SoFoKles.

SoFoKles, the Social Fund for the Knowledge Sector, sponsors projects and research and subsidises activities in the academic labour market. The fund shares its knowledge with the Dutch universities, research institutes and university medical centres (UMCs).

De Beauvoir Foundation – in remembrance

Since 2003, the Women Professors Monitor has been published every three years by the De Beauvoir Foundation in collaboration with the Dutch Network of Women Professors (LNVH). In 2015, the LNVH incorporated the de Beauvoir Foundation. The 'De Beauvoir Monitor' has thus become the 'LNVH Women Professors Monitor'. The LNVH is very grateful to the De Beauvoir Foundation for all that the Foundation and the Board of the Foundation have done for the advancement of women to the higher echelons of science.

PUBLISHING DETAILS

Content

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Thea Verdonk worked at VSNU from 2007 to 2011, during which time she was responsible for, among other things, the management and development of the WOPI file, the main source for the Monitor. She is also a coach at DPM-Coaching and focuses on coaching in choice processes and on giftedness.

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