

Gender Summit 2019

Analyzing the glass ceiling

policy use of data and statistics

Peter van den Besselaar

Vrije Universiteit Amsterdam
Teresa Mom Consultancy

Acknowledgement



H2020 GRANteD project

on gender bias in grant allocation and careers

2019-2023

The debate

- National newspaper **TROUW** publishes “academic careers of men go faster”
- National newspaper **NRC** does a *‘fact check’* and concludes that this is wrong: “academic careers of women go faster”
- Based a Rathenau Institute Report

The empirical input

Rathenau Instituut

Thema's ▾

Wetenschap in cijfers

Over ons ▾

Contact ▾

The screenshot shows a news article from the Rathenau Instituut. The header includes the logo 'Rathenau Instituut', navigation links 'Thema's ▾', 'Wetenschap in cijfers', 'Over ons ▾', and 'Contact ▾'. The article is dated '08 MAART 2019' and is part of the 'VITALE KENNISECOSYSTEMEN' series. The main headline is 'Share women among new professors increases faster than expected'. The background image shows a woman smiling. The article is categorized under 'WETENSCHAPSBELEID', 'VROUWEN', 'WETENSCHAP IN CIJFERS', and 'GENDER'.

NIEUWS VITALE KENNISECOSYSTEMEN 08 MAART 2019

Share women among new professors increases faster than expected

WETENSCHAPSBELEID VROUWEN WETENSCHAP IN CIJFERS GENDER

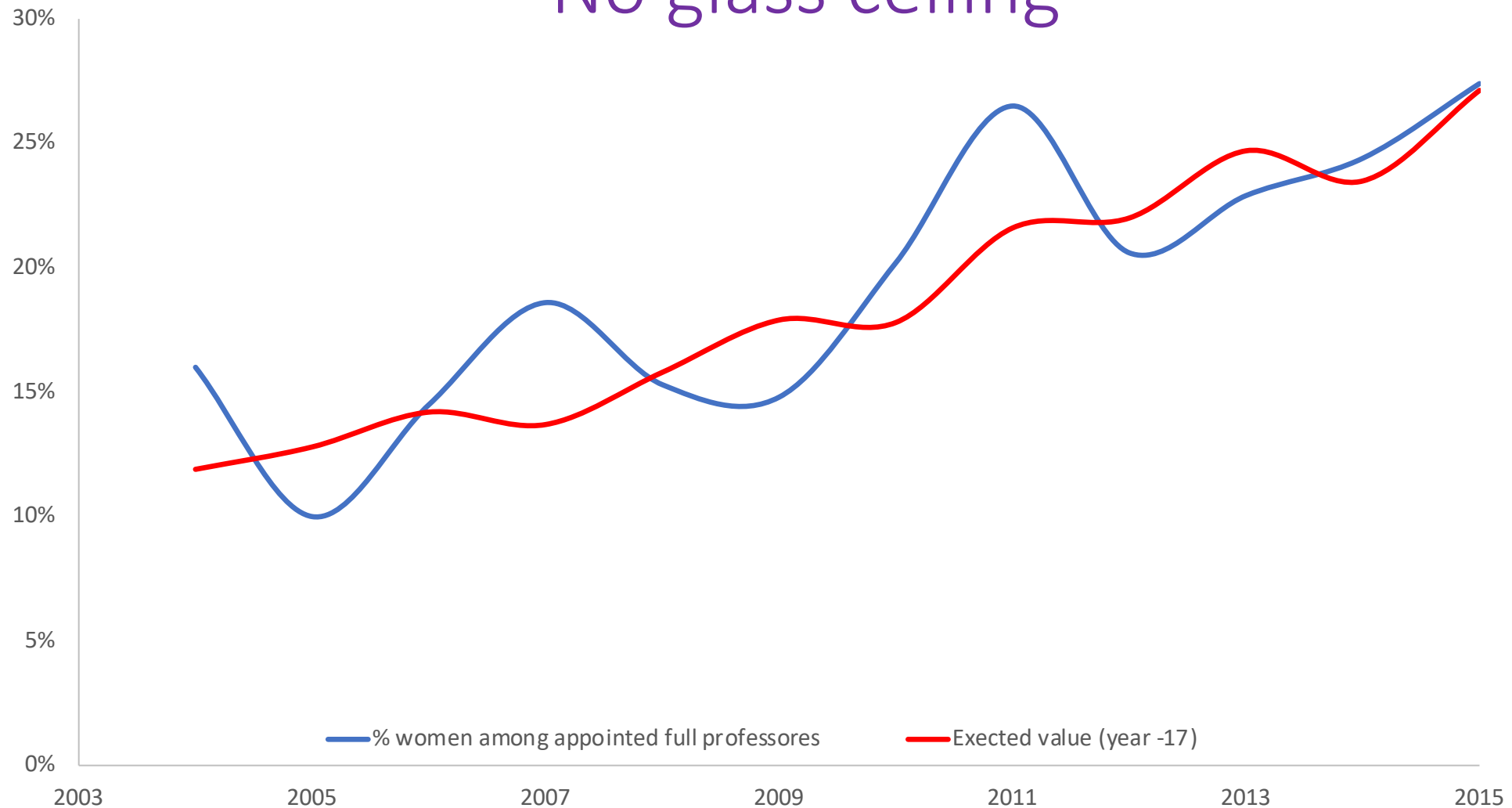
Relevance

- Rathenau Institute = advisory role for parliament and government
- NRC = one of the leading newspapers
- Reinforcing the opinion that no glass ceiling exists

The idea: labor market approach

- More men than women in higher academic positions
 - Self-selection in the past: few women got PhD in the *past*
 - Implication: low supply of female candidates for those positions *now*
- Career from PhD till full professor takes on average 17 years (RI)
 - The expected share of women among newly appointed full professors
= *the share of female PhD degrees 17 years ago*
- Glass ceiling exists only if the appointments remain lower than the expected number of appointments

Appointed versus expected female full professors: No glass ceiling



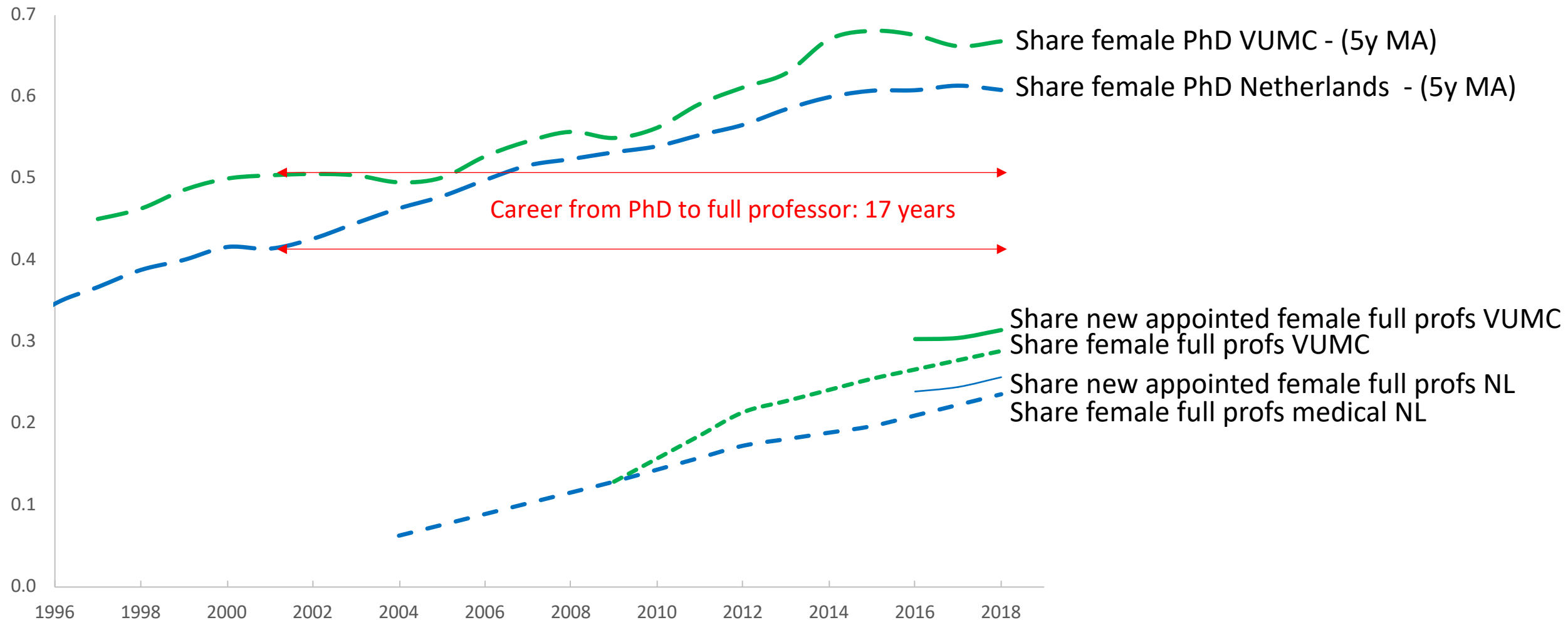
Problems

- Duration between PhD and appointment as full professor for men and women: 19 or 17 years?
- The RI study does not cover medical/life sciences (=almost 40% of the science system)
- Statistics

Data and method

- Analysis of RI based is on micro data (which they do not make available)
- Aggregated data from RI, some Statistics Netherlands data, micro data over the last years for one of the academic medical centers (VUMC)

Medical and life sciences



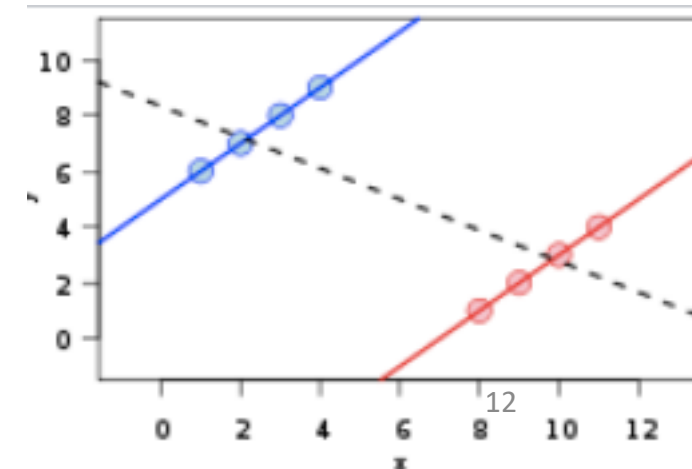
Glass ceiling in medical and life sciences

- Expected value = 50% of the appointed professors are female
- Realized value = 32% of the appointed professors are female
- Huge difference, suggesting a thick glass ceiling

And the other fields?

19 years time lag	Hum	Soc Sci	Science	Techn	Agri/Vet	Total	Med	All	VU
% female profs. appointed 2003-2015	26.7 %	21.6 %	12.8 %	11.5 %	14.0 %	18.9 %	'16-'18	27.0 %	31.0 %
% female PhDs granted 1984-1996	25.9 %	23.7 %	13.6 %	6.7 %	20.8 %	17.2 %	'97-'99	40.7 %	47.8 %
Realized (100%=neutral)	103 %	91 %	94 %	171 %	67 %	110 %		66 %	65 %

The average positive finding is the effect of the Simpson paradox



And with the corrected time lag

17 years time lag	Hum	Soc Sci	Science	Techn	Agri/Vet	Total	Med	All	VU
% female profs. appointed 2003-2015	26.7 %	21.6 %	12.8 %	11.5 %	14.0 %	18.9 %	'16-'18	27.0 %	31.0 %
% female PhDs granted 1986-1998	28.7 %	26.5 %	15.9 %	8.6 %	23.0 %	19.5 %	'99-'01	40.7 %	47.8 %
Realized (100%=neutral)	93 %	82 %	81 %	134 %	61 %	97 %		66 %	65 %

The almost neutral average finding again
is the effect of the Simpson paradox

Conclusions

- Both the approach and method are useful – but the data do not support the conclusion that the glass ceiling has disappeared
- Policy advice organizations should be more careful in jumping to conclusions
- And newspapers should probably use more than one source when reporting on disputed issues

Thanks for your attention

Questions / comments?