Le disuguaglianze di genere nella scienza e nella ricerca: numeri, ragioni e meccanismi.
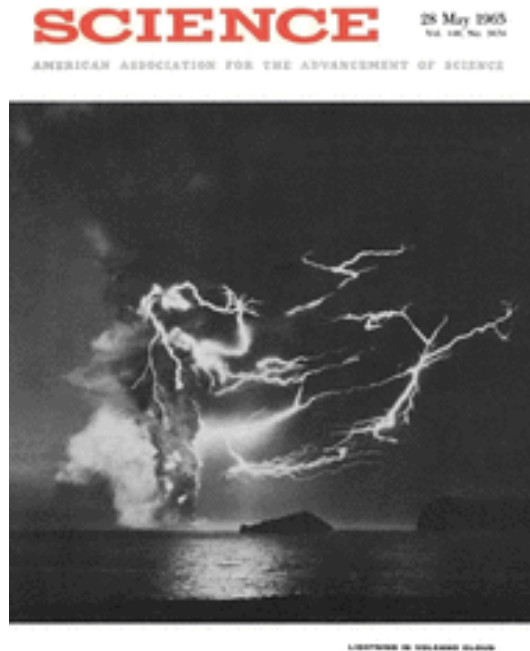
Camilla Gaiaschi
Università del Salento

**INAF- Osservatorio Astronomico di Brera
Merate, 23 September 2024**

Agenda

- **The « what » of gender inequalities**
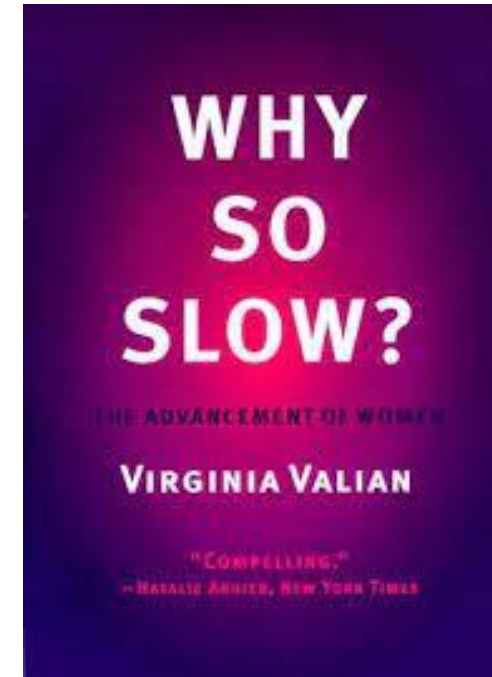- **The « why »**

The three questions
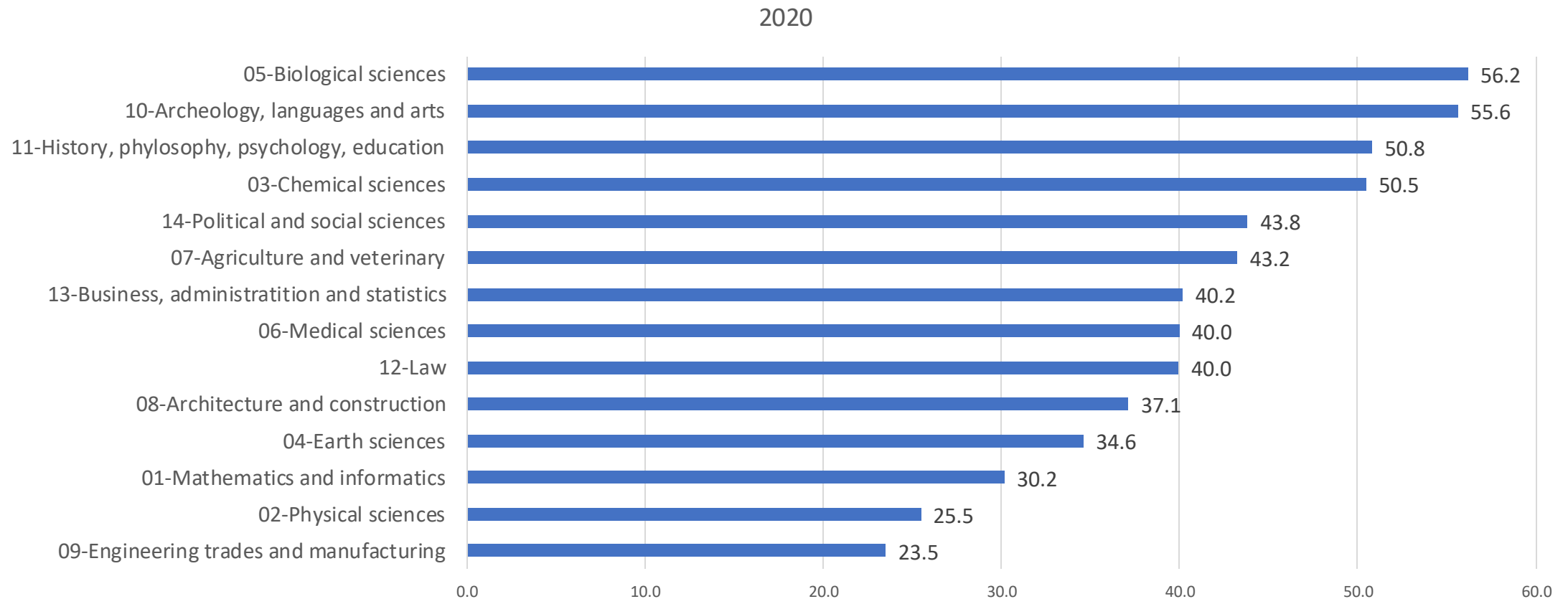

Why so few?
Alice Rossi, 1965
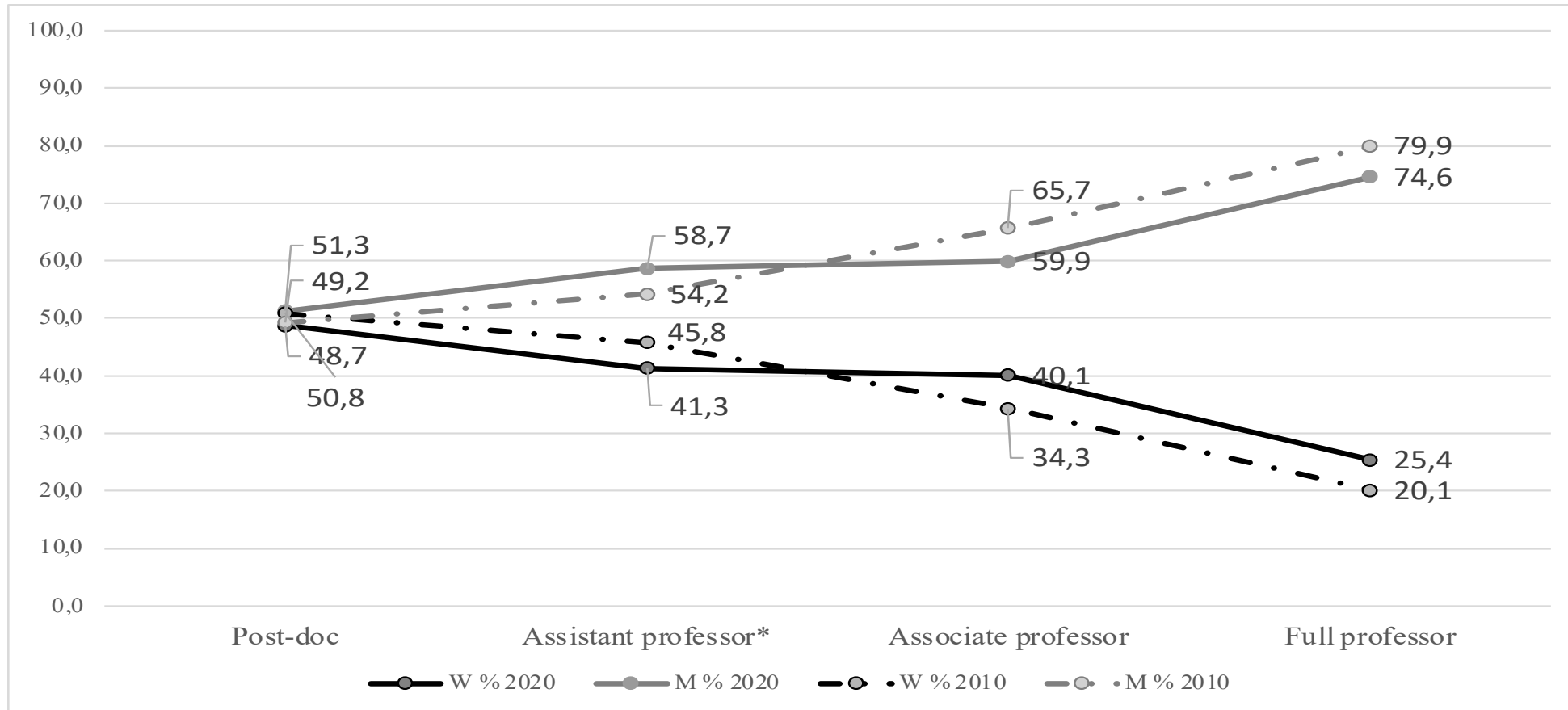

Why so low?
Inspired by:
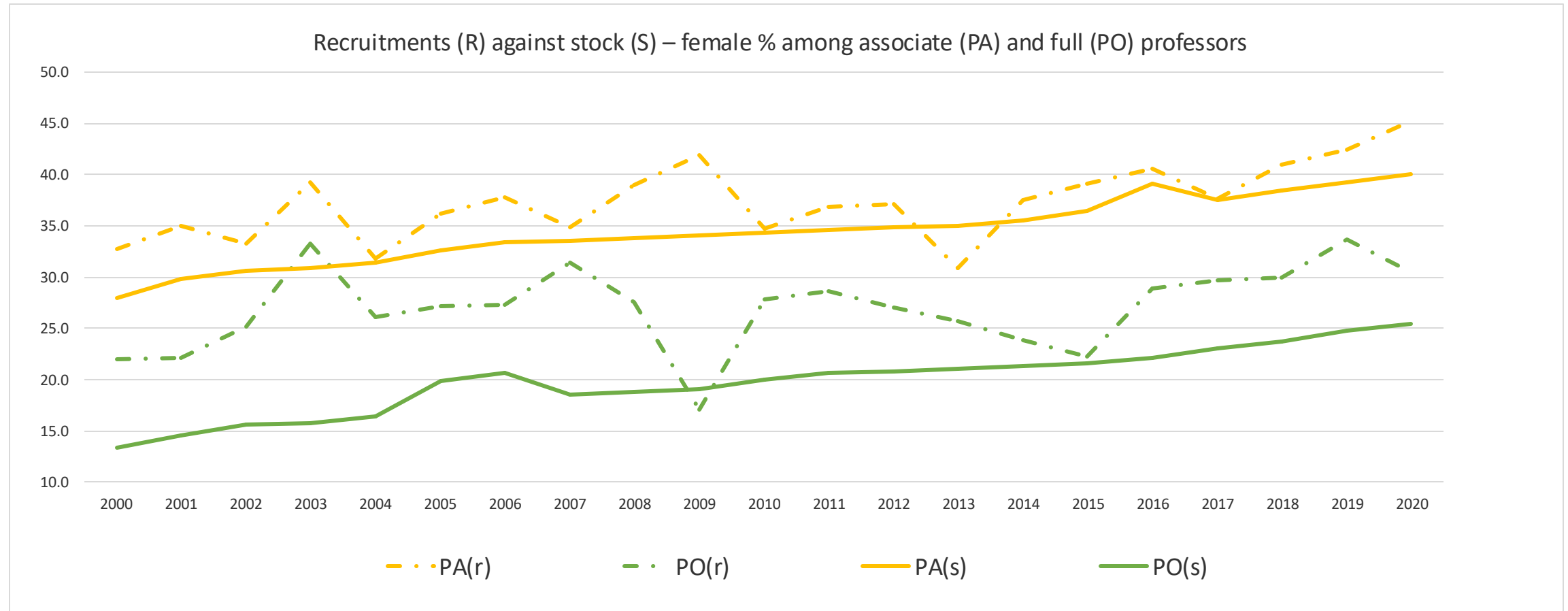Rossella Palomba, 2013

Why so slow?
Virginia Valian, 1999

Female rates across scientific field - Italy

2020

Field	Value
05-Biological sciences	56.2
10-Archeology, languages and arts	55.6
11-History, phylosophy, psychology, education	50.8
03-Chemical sciences	50.5
14-Political and social sciences	43.8
07-Agriculture and veterinary	43.2
13-Business, administratition and statistics	40.2
06-Medical sciences	40.0
12-Law	40.0
08-Architecture and construction	37.1
04-Earth sciences	34.6
01-Mathematics and informatics	30.2
02-Physical sciences	25.5
09-Engineering trades and manufacturing	23.5

Why so low – the scissor diagram

	Post-doc	Assistant professor*	Associate professor	Full professor
W % 2020	48,7	41,3	40,1	25,4
M % 2020	51,3	58,7	59,9	74,6
W % 2010	50,8	45,8	34,3	20,1
M % 2010	49,2	54,2	65,7	79,9

Why so slow: the case of Italy

Recruitments (R) against stock (S) – female % among associate (PA) and full (PO) professors

Source: MUR data - Gaiaschi and Musumeci, 2020, 2021

Watch out: how to measure inequalities?

- Descriptive statistics can only provide us with **unadjusted** gender inequality gaps (in the career progression, in pay, etc.).

- Inequality does not mean discrimination!

- In order to see if discrimination is occurring it is essential to measure the **adjusted** gender gap through, for example, experimental methods or econometric techniques!

The adjusted gaps in academia

- Women have a smaller – **adjusted** – probability of becoming full professor (i.e. Perna et al. 2005; Durodoye et al. 2020; IT), associate professor (i.e. Wolfinger et al. 2008; Box Steffenmeiser et al. 2015; Weisshaar 2017) and assistant professor (Groenwald et al. 2012; Wolfinger et al. 2008; Ginther e Kahn 2009).

- They are more likely to drop-out before obtaining tenure: Durodoye et al. 2020; Dubois-Shaik and Fusulier 2015.
  - ➤ Huang et al. 2020 on 83 countries across 40 years: women are more likely than men to leave academia (+19.5%)

- In Italy, the addjusted disadvantage has been measured only for the transition to full (Marini and Meschitti, 2018; Filandri and Pasqua, 2019) and associate professor (Filandri and Pasqua, 2019): the WIRED project is filling this gap!

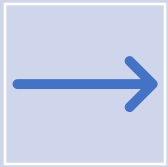# WIRED – Women in Research and higher Education

The italian field: the data collection

→ Register panel data *provided* by the MUR on academics, including post-docs across time (2005-2020) and ASN (2012-2018)
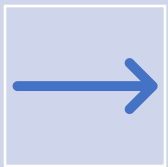
→ Webscrapped organizational data on :

1) 2017 Ranking of the departments of Excellence;

2) 2011-2014 & 2015-2019 ANVUR ranking

The italian field: the dataset

- Demographic information: gender, year of birth, nationality.

- Individual work information: position, field (14 « aree scientifiche »), sub-field (361 SSD or « settori scientifico-disciplinari »), NSQ (national scientific qualification or « ASN »), NSQ scores on productivity (three indicators originally), NSQ wave of application, NSQ SSD, NSQ year (in which it has been obtained or attempted).

- Organizational information: university, department, 2017 score in the « ranking of excellence » (department-based), 2011-2014 and 2015-2019 scores in the ANVUR ranking (universityXarea and SSD based).

The gender gap in recruitment - LPM

Breaking the glass door in academia? Looking at the role of scientific fields and contextual factors in moderating the gender gap in recruitment: evidence from Italy

Camilla Gaiaschi[1]

Abstract
Women's presence in academia has sharply increased in recent years, but gender inequalities in career progression persist. Italy makes no exception to this trend as different studies on the promotion gap to associate and to full professors have suggested. However, no measure of the adjusted gender differential in the previous steps of the career, that is in the transition from the post-doc to the assistant professor position, has been provided so far. This paper aims to fulfill this gap by means of an original, longitudinal, and multi-source dataset on the Italian academic population which has allowed to measure the female disadvantage in recruitment by controlling for a large set of confounding characteristics including individual productivity and, most especially, contextual factors, which have been under-explored so far. Results suggest that women face a small adjusted penalty, of around 3–4%, in academic recruitment. However, when disentangling the analyses by scientific field, strong differences emerge, with the gap reaching a maximum of ~10% in physics while being non-significant in many SSH. Within the STEMM, the life sciences, driven by medicine and biology, appear more gender unequal than many hard sciences. Moreover, a growing number of female full professors in the sub-field and working in a department with good financial resources represent two factors that have a moderate role in reducing the gap. All in all, this work sheds light on the importance of organizational and institutional factors in explaining the gender gap thus calling for structural interventions to make universities more inclusive towards women.

Keywords Academic careers · Glass door · Gender discrimination · STEM · Early career researchers · Gender and science

✉ Camilla Gaiaschi
camilla.gaiaschi@unisalento.it

[1] University of Salento, Lecce, Italy

			Unadjusted	Udjusted
M1	Post-doc > AP (j+s)	b	-0.0371***	-0.0422**
		SE	(0.00573)	(0.00531)
		N obs.	79,110	79,110
		N groups	17,534	17,534
M2	Post-doc > junior AP	b	-0.0279***	-0.0353***
		SE	(0.00599)	(0.00584)
		N obs.	63,722	63,722
		N groups	16,344	16,344
M3	Post-doc > senior AP	b	-0.0323***	-0.0281***
		SE	(0.00524)	(0.00400)
		N obs.	58,379	58,379
		N groups	16,192	16,192
M4	Junior AP > senior AP	b	-0.0273**	-0.0284***
		SE	(0.00929)	(0.00840)
		N obs.	36,119	36,119
		N groups	10,437	10,437

SE in parenthese: * $p<0.05$, ** $p<0.01$, *** $p<0.001$

> Three-level random intercept linear probability models (LPM) on 2010-2020 data
> Controls added: time (year), age, nationality, NSQ (y/n), NSQ (score), ERC field, % of female full professors by sub-field, university size, 2017 ranking of excellence, RQA score, RQA wave

WIRED
Women In Research and higher EDucation

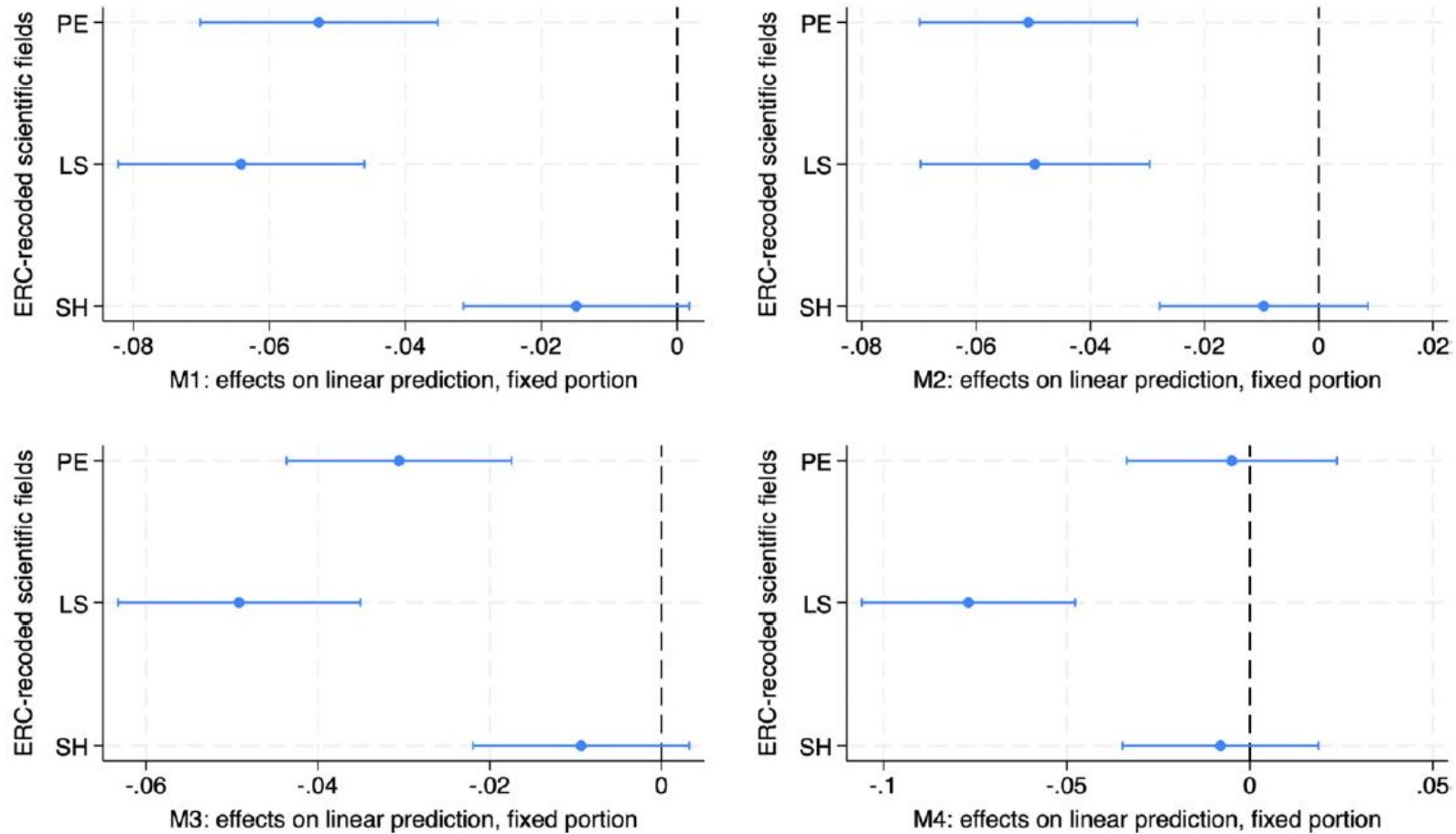# The gender gap by scientific field

Fig. 2 The scientific field (ERC codification): gender differences in predicted margins

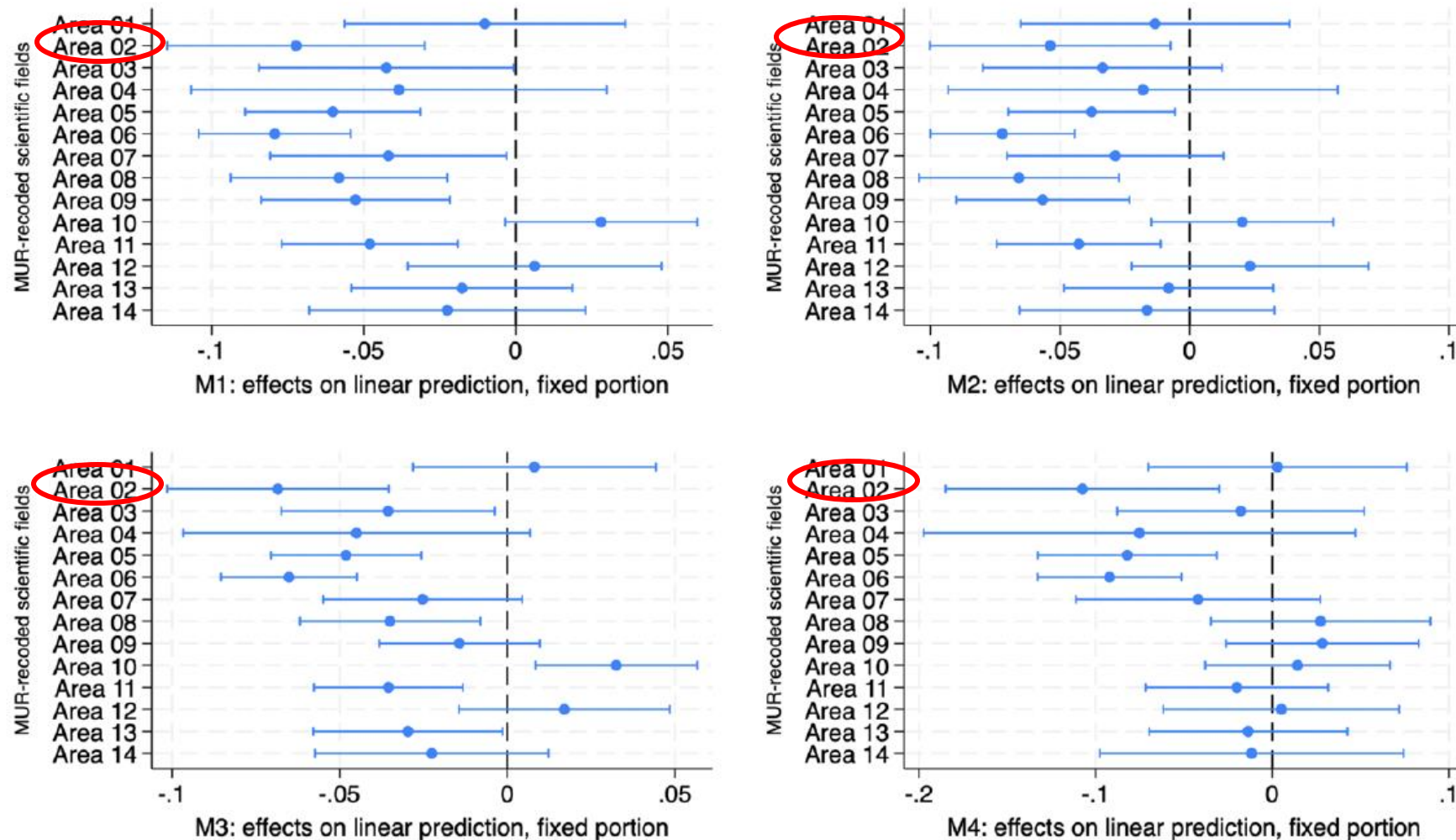# The gender gap by scientific field

Fig. 3 The scientific field (MUR codification): gender differences in predicted margins

How to measure the gap: the example of physicians

- EU FP7 Funder project STAGES – Structural Transformation to Achieve Gender Equality in Science, 2012-2015, University of Milan.
- Survey in 5 hospitals in the Lombardy Region (2014-2015)
- Population: 2205 physicians
- 1074 respondents (rate of response: 48.7%)
- Data analyzed using descriptives and multivariate statistics.

Highly Skilled Women Reaching the Top: A Cost-free Achievement? Analyzing the Gender Promotion Gap in the Medical Profession

Camilla Gaiaschi, *University of Lausanne, Lausanne, Switzerland and University of Milan, Milan, Italy*

This paper investigates the gender promotion gap in a particular highly skilled profession, that of physicians. The following analyses are based on a dataset of more than a thousand doctors working in Italy, a country in which hospitals play a central role in the national health care system. Given a three-step career ladder—first level, vice, and head—this research finds that women are 8% less likely than men to be promoted from the first level to vice, whereas no significant disadvantage is found in the promotion from vice to head. This suggests that the vertical segregation is due more to a sticky floors mechanism than to a glass ceiling effect. Moreover, no motherhood penalty occurs. Private organizations appear to be more gender equal than public ones and similar, albeit weaker, findings come from the analysis of the specialties, cautiously suggesting that the male-dominated area of surgery is more gender equal than the female-dominated area of medicine. These findings point out that women in highly skilled professions may encounter fewer obstacles to promotion than in the general labor market. Furthermore, they may encounter fewer obstacles within the most competitive organizations and specialty areas than across the profession in general. This is not, however, because of a greater number of opportunities, but because they represent a highly selected and career-oriented population. These results shed light on the costs of such achievement for women, both in terms of effort and in terms of equality among women themselves.

Introduction

The medical profession has gone through a process of feminization of its work force in all major Western economies (Boulis and Jacobs 2010). Nonetheless,

Results: the glass ceiling vs the sticky floor hypothesis

FL   V   H

-16% unadj
-8% adj

-16% unadj
- NO SIG adj!

-20% unadj
-5% adj
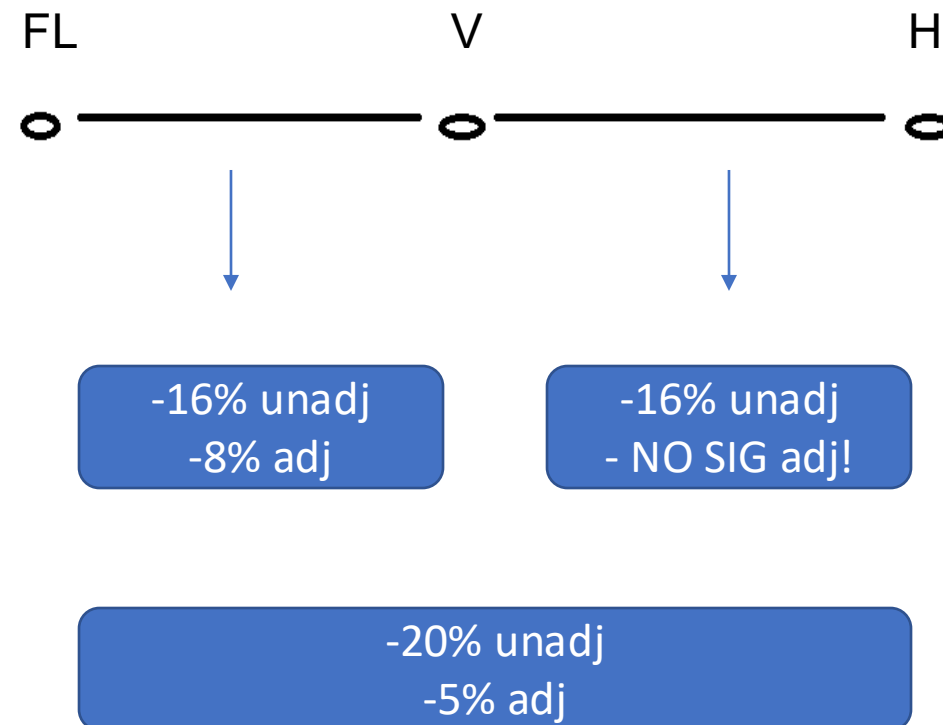
The adjusted logit models control for: educational credentials (final grade at medical school), human capital characteristics (experience, on-the-job training, work hours without private practice, hours of private practice - h/w), institutional work characteristics (sector, specialty, type of contract), family characteristics (the marital and the parental status) and work-life balance arrangements (domestic and care work hours and outsourced domestic and care work hours – h/w).

Watch out: the selection bias

- The failing short of the female disadvantage in the last step is likely to be due to the fact that it persists in the previous level

- Women « surviving » the first selection and arriving at the vice level are likely to be more competent: their higher human capital offsets the gender discrimination

- **The equality that we witness at the end of the ladder is due to a sharper selection at the beginning**

Agenda

- **The « what » of gender inequalities**
- **The « why »**

Explaining the gender gap in promotion
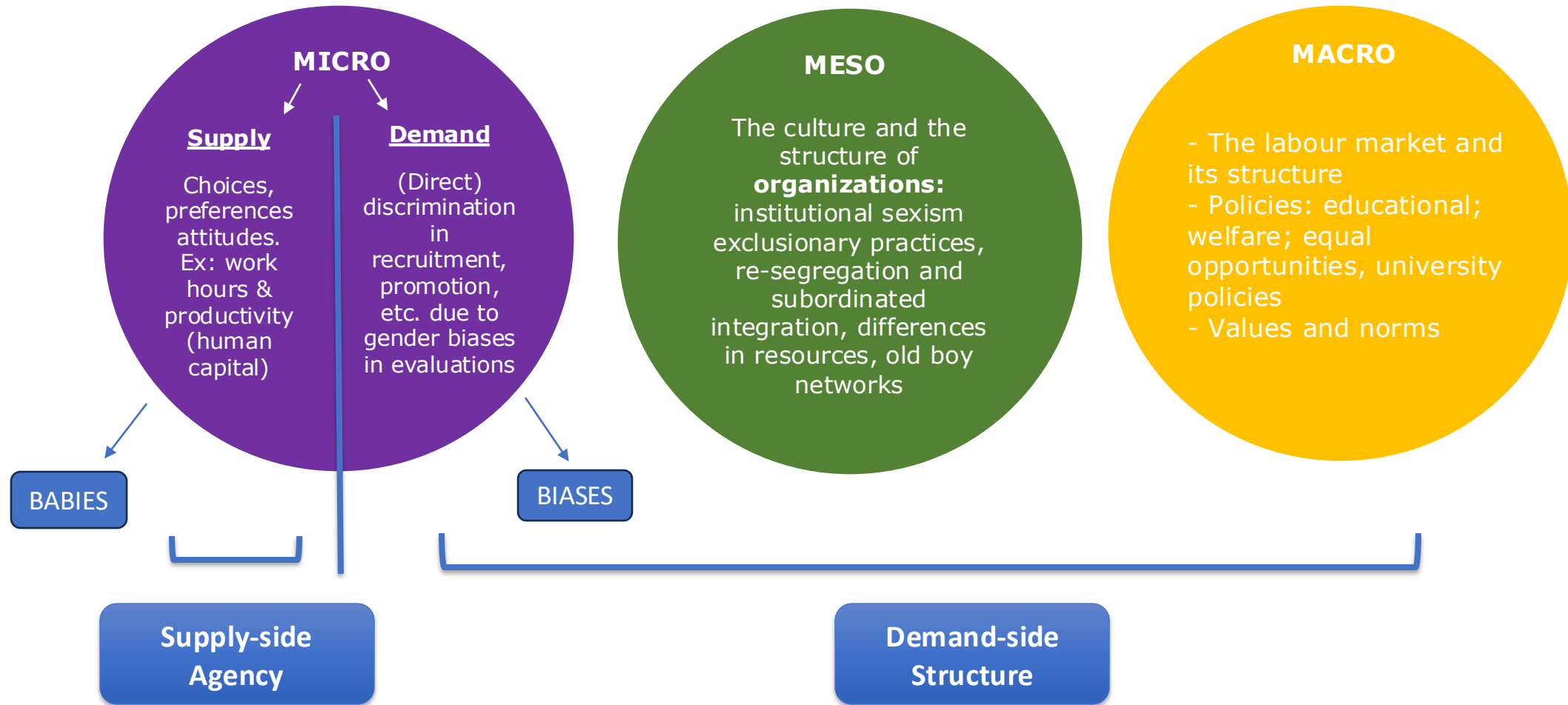
The reasons:

- Supply-side, micro:

    1. Differences in scientific and mathematical abilities and attitudes
    2. Differences in family responsabilities (*babies*)
    3. Differences in scientific productivity
    4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

Supply-side: math abilities

- The international PISA test undertaken in upper secondary schools indicate that boys still outperform girls in math (OECD-PISA 2019), but girls have outreached boys in science and outperform them.

- BUT: there no gender differences in mathematical and quantitative skills during early childhood (**Hyde et al. 1990** and 2009; Kersey et al., 2018) >> see Hyde meta-analysis!

- **The gender gap in math occurs at a certain age.** Most of the studies point out to secondary school (Hyde et al. 1990; Xie, Shauman, 2003), while a recent account (Contini et al. 2017) suggest it occurs in primary school.

- **The gap changes over the years** (it's shrinking).

- **The gap also varies from country to country** (Stoet and Geary, 2015).

- So: If the gap «occurs» at a certain age, if it varies over time and geographically, it means that the differences in mathematical skills are due to social and cultural factors: they are not biological!

- There is more: the gap does not justifiy the progressive reduction of girsl/women all along the educational and career steps – that is the leaky pipeline (Jacobs, 1989; Etzkowitz et al. 1994; Blinkenstaff, 2004).

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

Supply-side: maternity

- Most of the studies on the labor market show that having a child has opposite effects for men and women: it decreases pay and career advancement for women, it increases it for men (Buding and England 2000; Hodges and Budig 2010).

- These mechanisms are called: maternity penalty and paternity premium.

Supply-side: maternity

- **According to human capital theory, this is perfectly rational:** women reduce their motivation and commitment to work (and thus their human capital) because they are more engaged in care and domestic work (Becker, 1985).

- **Critical studies, however, have shown that the maternity penalty occurs even when working hours are the same** (between mothers and non-mothers) (Glauber, 2007), while the paternity bonus occurs even when fathers work less than childless men (Lundberg & Rose, 2000).

Supply-side: maternity

- Moreover, research on highly skilled professions, including science and research, has partly mitigated the mechanism behind the maternity penalty, pointing out that the maternity effect is more complex: it depends on the number and age of children, on the role of the partner or it vanishes (Sack et al. 2002; Pripic, 2002; Stack, 2004; Fox, 2005;Wolfinger et al. 2008; Goldin 2014, Zippel, 2017, Gaiaschi 2021).

An example: the failing short of the maternity penaly among physicians

Table 4. Marginal Effects of the Interaction Terms Included in Models M1_i and M3_i

	M1_i: vice vs first level						M3_i: head vs first level					
	Men		Women		W-M		Men		Women		W-M	
Private hospital: no	0	(.)	0	(.)	−0.073*	(0.025)	0	(.)	0	(.)	−0.058*	(0.018)
Private hospital: yes	0.133	(0.077)	0.080	(0.241)	−0.126	(0.145)	0.163**	(0.002)	0.177**	(0.002)	−0.043	(0.498)
Specialty: diagnostic + public health	0	(.)	0	(.)	−0.099	(0.072)	0	(.)	0	(.)	−0.018	(0.677)
Specialty: medicine	−0.027	(0.589)	−0.023	(0.661)	−0.094*	(0.024)	−0.016	(0.657)	0.064	(0.067)	−0.066*	(0.020)
Specialty: surgery	−0.022	(0.609)	0.042	(0.527)	−0.034	(0.606)	0.005	(0.894)	−0.049	(0.374)	−0.072	(0.181)
Spouse or cohabiting partner: no	0	(.)	0	(.)	−0.015	(0.828)	0	(.)	0	(.)	−0.113*	(0.018)
Spouse or cohabiting partner: yes	0.105	(0.103)	0.026	(0.586)	−0.095**	(0.008)	−0.019	(0.645)	0.053	(0.102)	−0.041	(0.125)
Children: no	0	(.)	0	(.)	−0.056	(0.327)	0	(.)	0	(.)	−0.032	(0.434)
Children: yes	0.056	(0.306)	0.023	(0.621)	−0.089*	(0.019)	0.060	(0.113)	0.025	(0.471)	−0.067*	(0.020)

$* p < 0.05$
$** p < 0.01$
$*** p < 0.001$

Note: this table shows the differences in the predicted margins (partial changes) for men, women, and between men and women, with respect to the variables reported in the first column. The table is based on the interaction models M1_i and M3_i, reported in Table A2 of the Appendix. In both models, the variable gender (0 = man; 1 = woman) is interacted with the variables sector (0 = public; 1 = private), specialty (0 = diagnostic and public health; 1 = medicine; 2 = surgery), spouse or cohabiting partner (0 = no; 1 = yes), and children (0 = no; 1 = yes). Marginal effects on the interaction terms are then computed. The DV is a dummy, based on the position held by the respondent: in M1_i, 1 = vice and 0 = first level, and in M3_i 1 = head and 0 = first.

This paper investigates the gender promotion gap in a particular highly skilled profession, that of physicians. The following analyses are based on a dataset of more than a thousand doctors working in Italy, a country in which hospitals play a central role in the national health care system. Given a three-step career ladder—first level, vice, and head—this research finds that women are 8% less likely than men to be promoted from the first level to vice, whereas no significant disadvantage is found in the promotion from vice to head. This suggests that the vertical segregation is due more to a sticky floors mechanism than to a glass ceiling effect. Moreover, no motherhood penalty occurs. Private organizations appear to be more gender equal than public ones and similar, albeit weaker, findings come from the analysis of the specialties, cautiously suggesting that the male-dominated area of surgery is more gender equal than the female-dominated area of medicine. These findings point out that women in highly skilled professions may encounter fewer obstacles to promotion than in the general labor market. Furthermore, they may encounter fewer obstacles within the most competitive organizations and specialty areas than across the profession in general. This is not, however, because of a greater number of opportunities, but because they represent a highly selected and career-oriented population. These results shed light on the costs of such achievement for women, both in terms of effort and in terms of equality among women themselves.

Introduction

The medical profession has gone through a process of feminization of its work force in all major Western economies (Boulis and Jacobs 2010). Nonetheless,

Watch out on the auto-selection

- In highly qualified professions, women "choose" to reduce an eventual maternity penalty by: not having children, having only one child, delaying motherhood.

- Critical approaches to motherhood as a major and primary explanation for the disadvantages in academic careers: Cech and Blair-Loy 2014; Zippel 2017.

- This sheds light on the costs of «equality»!

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

Supply-side: scientific productivity

- Most of the studies say that women are less productive than men in terms of number of scientific publications (Xie, Shauman, 2003; Stack, 2004; Abramo et al., 2009a, 2021; van Arensebergen, 2012; Larivière et al., 2011, De Paola et al., 2017)

- On the other hand:
  - ✓The gender gap is shrinking over time (Xie, Shauman, 2003; Leahey, 2006; Abramo et al., 2009)
  - ✓It fails shorts among the youngest (Symonds et al. 2006; van Aresebergen et al. 2012
  - ✓It fails short controlling for: years of experience (Huang et al. 2020); positions and leaves (Mairesse and Pezzoni, 2015) and resources (Xie and Shauman, 2003).
  - ✓If its computed on the median and not the mean (Abramo et al. 2021).

- The point is that very few studies compute the **adjusted** gap in **productivity**!

- Moreover: it is important to look at the conditions of productivity, which depends on resources: **in terms of funds, time and network/social capital. None of these elements is gender neutral > the micro level depends on the meso level.**

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

Supply-side: self-promotion

- Application to scientific qualifications – the Italian ASN: Abramo et al. 2015; De Paola et al. 2017; Pautasso 2015.

- Self-citations: King et al. 2017; Nielsen 2016 (for medical sciences only)

- Self-evaluations: Reuben et al. 2013.

- Promotion: Kelly and Grant, 2012.

Watch out the supply-side!

- «Supply-side» theories emphasize the role of individual choices, propensities, attitudes, preferences, motivations in explaining (or justifying?) gender inequalities!

- However, these are highly problematic concepts!

- Supply-side characteristics can be seen in two diametrically opposed ways: considering or not the context in which they are generated, with «supply-side» (individualistic) or with «demand-side» (constructivist) lens.

«Constraints into preferences» (Correll, 2004) and the sell-fulfilling prophecy

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

CV studies and experiments

Moss Racusin et al. 2012

- CV study using equivalent pairs of CVs
- Simulation of a selection for a position as a lab manager
- Participants: 127 recruiters, in that case a sample made up of professors from prestigious research universities who had to evaluate CVs
- Participants had to rate candidates in terms of: 1. competence (on a scale); 2. "level" of recruitment (on a scale: how much can be assumed?); 3. of initial salary
- Results: The evaluators rated the women with lower scores (in terms of "competence" and "employability") and wages compared to equivalent male candidates: the women were rated as less competent and less "employable".
- There were no differences in the assessment between male and female recruiters.

And so on…

- **Reuben, Sapienza and Zingales (2013):** indicate that men were twice as likely to be hired for the same math performance. In the case in which the result of the math test had to be communicated to the recruiters by the candidates themselves, male candidates tended to self-evaluate themselves better than women.

- **Spelke and Grace (2007):** on obtaining a tenured position: when a (equivalent!) resume is associated with a male name, 70% of recruiters (both men and women) tend to recommend tenure. The percentage decreseases to 40% for female candidates.

- Further studies go in the same direction (Steinpreis et al., 1999; Northon et al. 2004; Bagues et al. 2017).

Biases occur also:

- In letters of reccomandations: Madera et al. 2009; Trix, Psenka, 2003.

- In tasks assigments (i.e. in conferences presentations): Towers (2008)

- In teaching evaluations (Mengel et al. 2019; Sinclair, Kunda, 2000; Miller, Chamberlin, 2000).

- In research evaluation: Witteman et al. 2019; Wanneras et Wold, 1997; Jappelli et al. 2017 (on VQR).

Biases and the composition of the commission

- More women in commissions = more gender equality: Lincoln et al. 2009; Corrice 2009; Lincoln et al. 2012; Van den Brink et al. 2010; De Paola and Scoppa 2015; Zinovyeva and Bagues 2015; Abraham et al. 2015 (but only in the case of a female president)

- More women in commissions = less gender equality: Bagues et al. 2014; Bagues et al. 2017.

- In any case: the size of the commission is important: we are more exposed to biases when we decide by ourselves compared to decisions taken in groups (Bonhet et al. 2016).

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

Network, collaborations and climate

- Many contributions indicate that men and women differ in collaborations and co-authorships, with negative effects in terms of productivity (Leeman, 2010, Araujo, Fonainha, 2017; Nielsen 2016; Akbaritabar et al. 2018).

- The type of network is also different: men tend to network with **gate-keepers.** Women tend to create a network of **"peers"**, in which they seek professional but also social and emotional support (Milem et al., 2001).

- Research suggests that young female researchers are **less likely than their male colleagues to have an early career mentor (**Tierney, Bensimon 1996; Picardi, Agodi 2020; Fuchs et al., 2001).

- The « **chilly climate**» in science: women are more dissatisfied (Belle et al., 2014; Britton et al., 2012; Rosser, 2004; Sonnert, Holton, 1995; Smith, Calasanti, 2005), they talk less with their male colleagues about their work (Fox, Xiao, 2013), they have the impression that their work and skills are frequently questioned (Pasupathy, Siwatu, 2014).

Re-segregation and subordinated inclusion

- Women do more « **service work** »: they devote more time to administrative and managerial activities (Jacobs, Winslow, 2004; Bird et al., 2004; Bailyn, 2004; Guarino, Borden, 2017; Zippel, 2017).

- They do more teaching and dedicate more time to support and mentor students (Collins, 1998; Jacobs, Winslow 2004; Winslow, 2010; Misra et al., 2011, 2012; Barrett, Barrett, 2011; Babcock et al., 2017), they do more « emotional work » (Bellas, 1999; Tunguz, 2016).

- Academic organizations are based on a sexual division of work: they reproduce forms of segregated work (Reskin, Ross).

- Watch out for the « **academic housework** » trap (Heijstra et al. 2017)!

The « how » of gender inequalities

Obstacles in organizations are not only invisibile: they also tend to have a cumulative pattern.

Robert Merton: *The Mathew effect in science* (1968).

The effect explains the over/under-recognition of scientists who are at the top/at the bottom of the scientific hierarchy.

From the Matthew to the Matilda effect (Rossiter, 1995)

- The Mathilda effect suggests that since in scientific organizations women are more likely to accumulate disadvantages and men are more likely to accumulate advantages, women will be more likely to be under-recognized for their scientific production while men will be more likely to be over-recognized.
- The mechanism of "over" and "under" recognition takes on a gender perspective.

Margaret Rossiter (1993). *The Matthew Matilda effect in science.*

The reasons:

- Supply-side, micro:

  1. Differences in scientific and mathematical abilities and attitudes
  2. Differences in family responsabilities (*babies*)
  3. Differences in scientific productivity
  4. Differences in self-promotion

- Demand-side, micro: *biases* in evaluation processes

- Demand-side, meso: resources, networks, segregation, work-place climate.

- Demand-side, macro: neo-liberal university transformations

The transformations of italian academia

MATERIAL CHANGE
Increasing job insecurity

CULTURAL CHANGE
New managerial academic culture

1. The precarization of the assistant professor position (L. **240/2010**)
2. The 2007-2017 cut in the turn-over

Stable contracts have fallen and unstable have increased (Bozzon et al. 2017; Gaiaschi and Musumeci 2020)

3. Adoption of systems of evaluations of productivity since the **mid-2000'.**
4. Increasing reliance on external funds due to the reduction in the public-national research schemas.

Emphasis on hyper-productivity and entrepeunership

The material side of the coin: increasing job insecurity
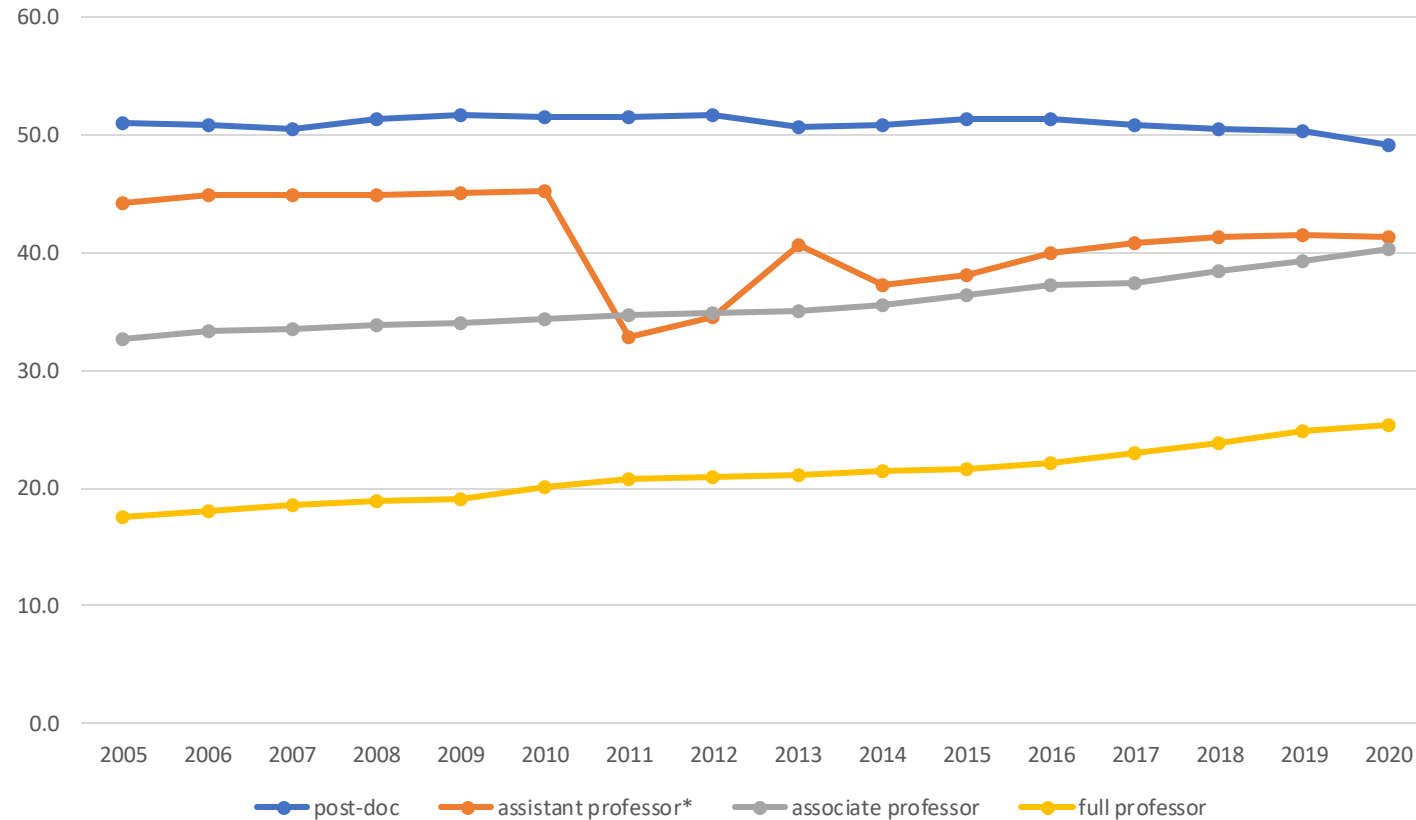
Source: Mur 2005-2020 data – Female % by position across time – author's elaborations
* Assistant professors: RU (2005-2010); RTDb (2011-2020)

The ambivalent « meritocratic » turn

Two main results:

- The conflict between the «old» (cooptation-based) and the «new» («meritocratic») academia enatiling two career models: internal vs mobile.

- The (gendered) golden goose effect: for women, opportunities come with costs.