

Women in leadership positions

Perspectives from research and practice

Technical University of Munich
Chair for Strategy and Organization

Diversity & Women in Leadership Initiative

<https://diversity.strategy.wi.tum.de>

Prof. Isabell M. Welp, Prof. Theresa Treffers,
Nadja Born, Dr. Ilse Hagerer & Ann-Carolin Ritter

GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung



DLR Projektträger



NATIONALER PAKT
FÜR FRAUEN
IN MINT-BERUFEN

We would like to express our sincere gratitude to the Federal Ministry of Education and Research (BMBF), the German Aerospace Center (DLR), and the National Pact for Women for their financial and organizational support for our research projects on diversity in companies and women in leadership positions.

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Research overview

01 Baseline position

Facts, figures, and data over time
and in an international comparison

02 Causes

Explanations and causes for the proportion
of women in leadership positions from a scientific
perspective

03 Impact

Effects of unconscious bias/stereotypes toward women
in leadership positions

The effects of more women in leadership positions

04 Interventions

What are companies doing to increase the
proportion of women in leadership positions?

(In)effectiveness of diversity interventions

05 New interventions

Impact on the individual

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06 The gold standard

Testing the effectiveness of interventions



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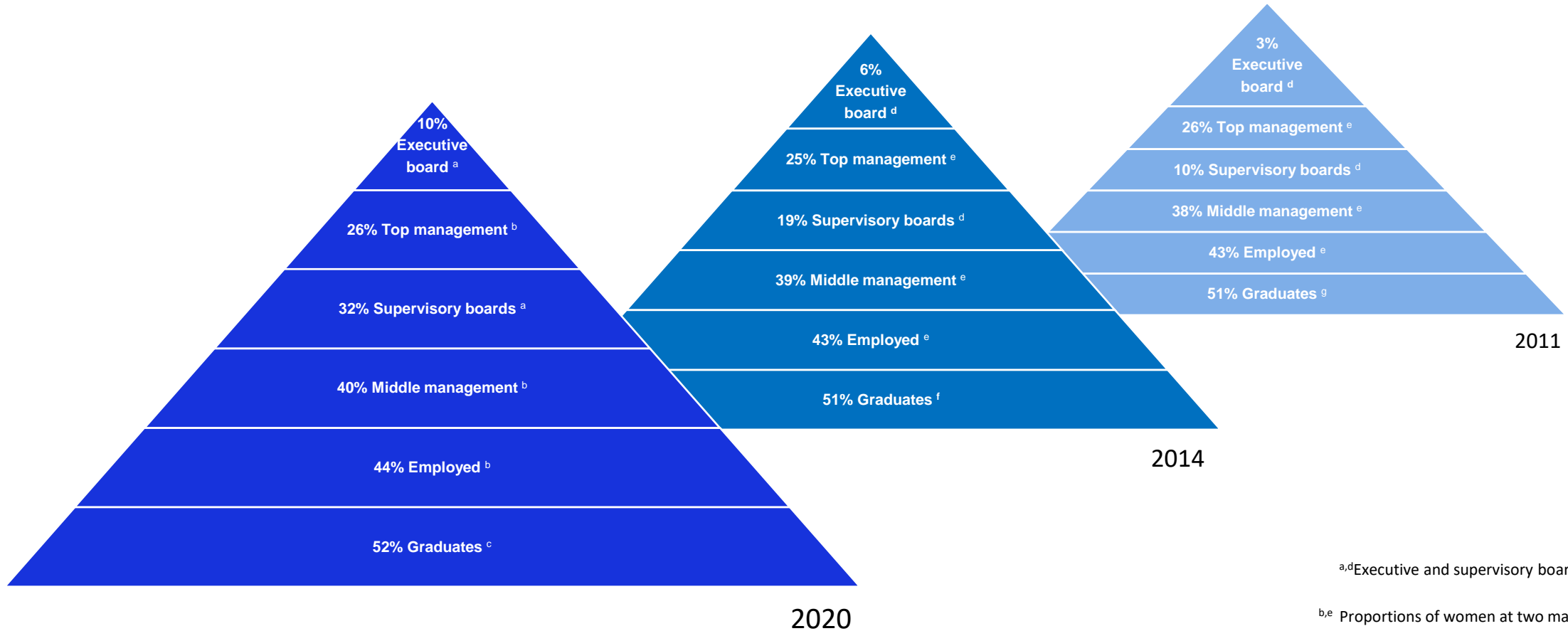
06 The gold standard

Testing the effectiveness of interventions



**How have the numbers of women
in the workforce changed?**

The proportion of women on executive boards rises by (only) 7 percentage points to 10% in 9 years



^{a,d}Executive and supervisory boards of DAX 30, MDAX, SDAX

^{b,e} Proportions of women at two management levels and in the entire workforce (private sector only)

^{c,f,g} Graduates are students who have passed their final examinations for their degree.

Women are more likely to be in highly skilled professions

Qualification level ¹	Overall	Women	Men
Leaders and managers	5%	3%	7%
Academic professions	18%	18%	18%
Technicians and equivalent non-technical professions	23%	29%	19%
Highly skilled professions overall	46%	50%	44%

50% of employed women were found in highly skilled professions, compared to 44% of men. The higher proportion among women is due to the relatively high number of female teachers and medical and technical assistants.

1: Persons in highly skilled occupations (ISCO major groups 1 - 3; International Standard Classification of Occupations); random sample; single-stage cluster sample; survey of 754,178 persons
Source: Destatis (2021): Erwerbstätige in hochqualifizierten Berufen.

Low proportion of women in leadership positions in the construction industry, and a high proportion in health care and social services

Sector	Proportion of women at leadership level (2014)	Proportion of women at leadership level (2019)
Health care and social services	43%	49%
Retail	38%	38%
Wholesale trade, automobile trade	15%	10%
Professional, scientific, and freelance services	22%	23%
Financial and insurance services	12%	16%
Information and communication	13%	13%
Accommodation and food service	39%	39%
Energy, water, waste, and mining	8%	15%
Transportation and storage	21%	18%
Manufacturing industry	14%	14%
Construction industry	7%	8%

The more employees a company has, the lower the proportion of women at leadership level



Proportions of women at two leadership levels and in the entire workforce and level of representation by company headcount in 2018 – **private sector only**

- 1) Level of representation = proportion of women at the respective leadership level / proportion of women in the entire workforce
- 2) Due to the small number of cases, no values are shown for the second leadership level.

Takeaways

The proportion of women on **executive boards** (DAX 30, MDAX, SDAX) rises by (only) 7 percentage points to **10%** in 9 years.

The proportion of women on **supervisory boards** (DAX 30, MDAX, SDAX) rises by 22 percentage points to **32%** in 9 years.

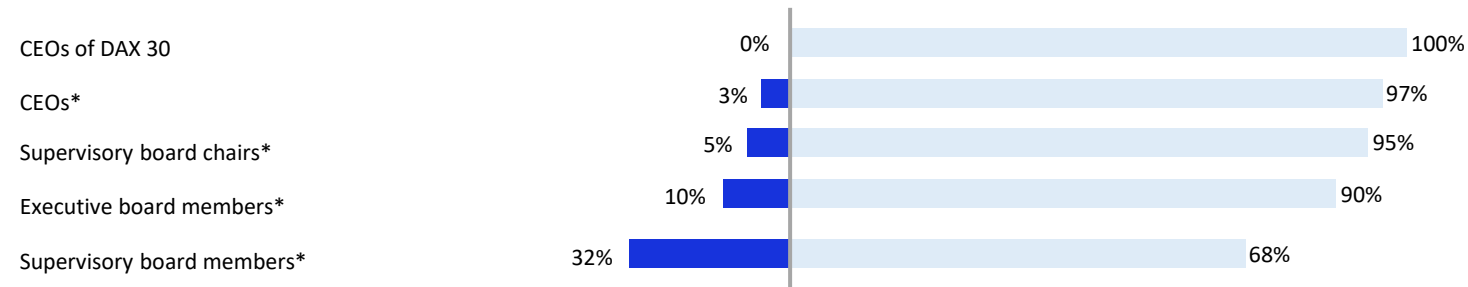
Women are mainly employed in **highly skilled professions**.

The **larger the company**, the **lower the proportion of women** at leadership levels.



What is the proportion of female chief executive officers (CEOs) and supervisory board chairwomen of DAX corporate groups?

In 2020, 10% of executive board members for 160 listed German companies were female



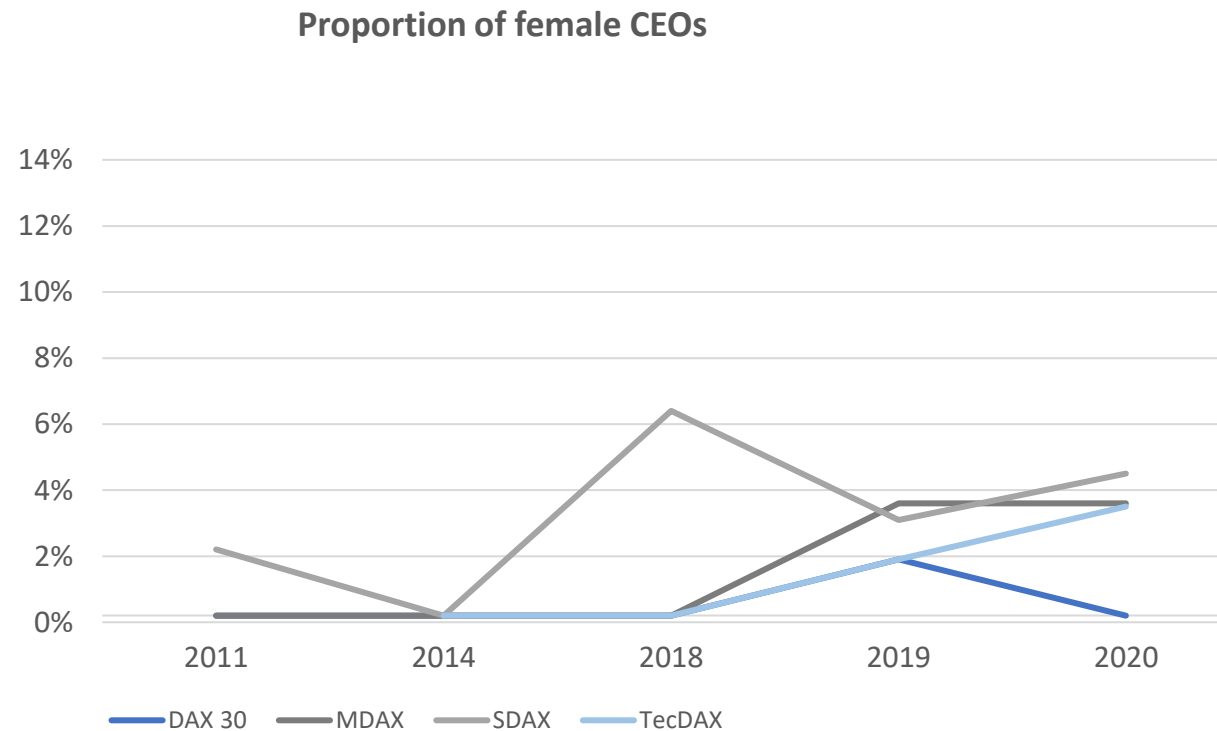
→ The higher and more powerful the position, the less often women are represented.

*Proportions of men and women on the supervisory and executive boards of the 160 companies listed on the German stock exchange as of September 1, 2020.

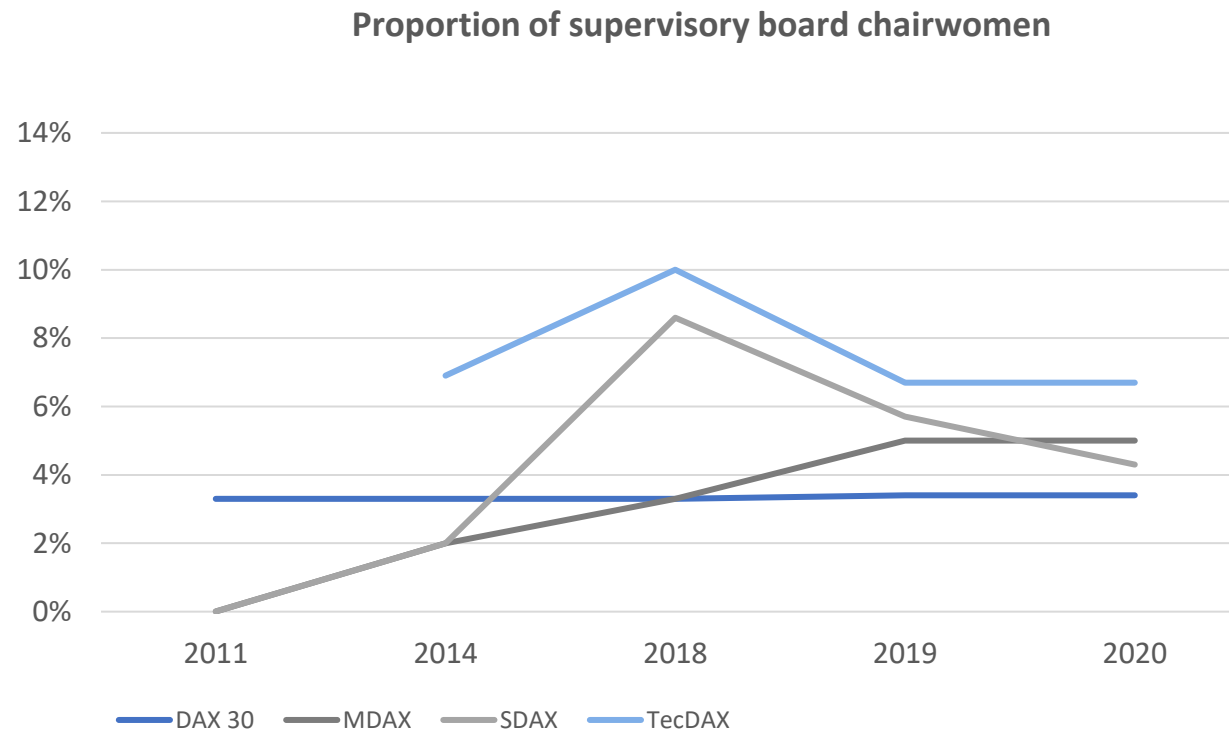
Source: Allbright Stiftung gGmbH (2020). Deutscher Sonderweg: Frauenanteil in DAX-Vorständen sinkt in der Krise.

Allbright Report (2020). Germany's special path - The Share of Women on DAX Executive Boards declines during the Crisis.

The proportion of female CEOs of DAX corporate groups is stagnating



The proportion of supervisory board chairwomen of DAX corporate groups is stagnating



Takeaways

0% of the CEOs of DAX 30 companies are **female**.

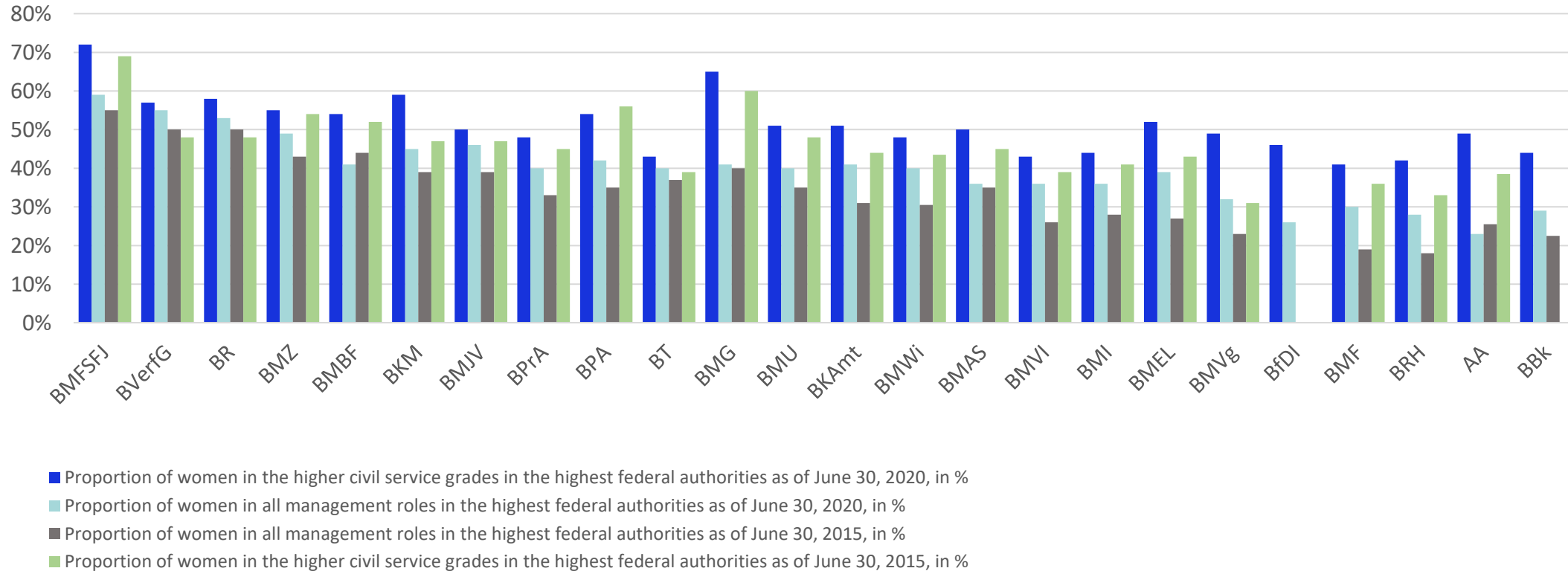
The number of **female CEOs** of DAX corporate groups is stagnating at **4%**.

The number of **supervisory board chairwomen** of DAX corporate groups is stagnating at **5%**.



What is the proportion of women in board positions in ministries, the civil service, administration, and politics in 2020?

The proportion of women in all management roles in the highest federal authorities increases from an average of 33% to 36% (2015-2020)



Data: Annual recording by the federal authority of the number of all women and men employed in the highest federal authority as of the reference date of June 30.

→ 2020: **30,819 persons** (16,691 (54%) women)

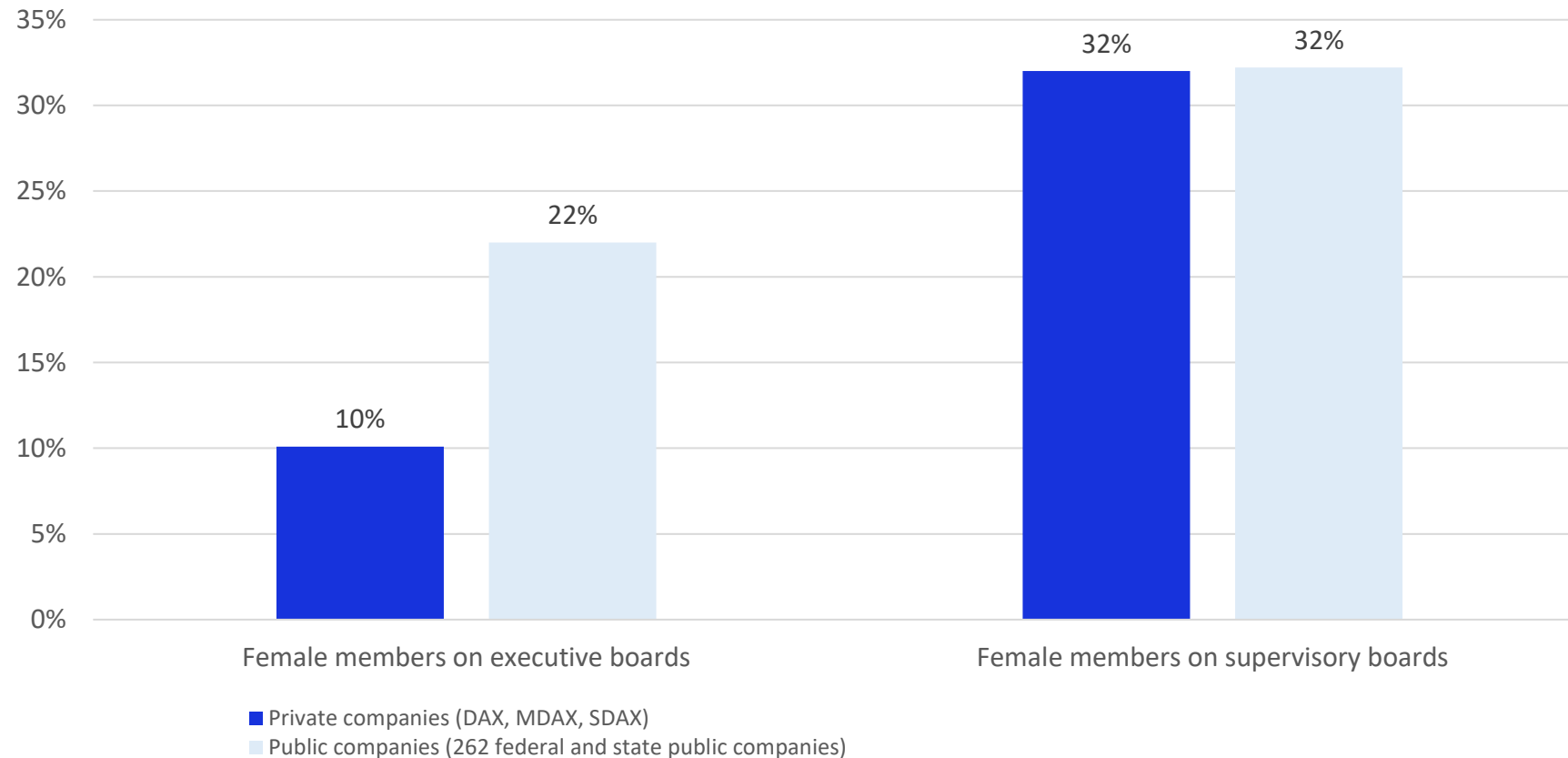
→ 2015: **23,637 persons** (12,624 (53%) women)

Source: Destatis (2021). Equality Index.

List of abbreviations of the highest federal authorities

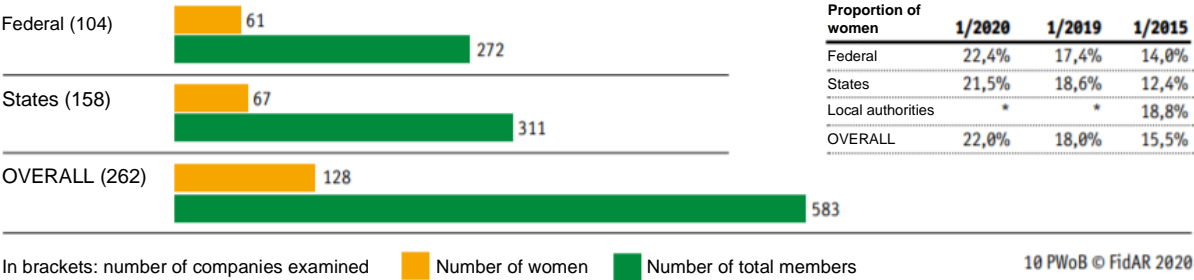
Abbreviation	Name	Abbreviation	Name
AA	Federal Foreign Office	BMJV	Federal Ministry of Justice and Consumer Protection
BBk	Headquarters of the German Federal Bank	BMU	Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety
BfDI	The Federal Commissioner for Data Protection and Freedom of Information	BMVI	Federal Ministry of Transport and Digital Infrastructure
BKAmt	Federal Chancellery	BMVg	Federal Ministry of Defense
BKM	The Federal Government Commissioner for Culture and the Media	BMWi	Federal Ministry for Economic Affairs and Energy
BMAS	Federal Ministry of Labor and Social Affairs	BMZ	Federal Ministry for Economic Cooperation and Development
BMBF	Federal Ministry of Education and Research	BPA	Press and Information Office of the Federal Government
BMEL	Federal Ministry of Food and Agriculture	BPrA	Office of the Federal President
BMF	Federal Ministry of Finance	BR	Secretariat of the Federal Council
BMFSFJ	Federal Ministry for Family Affairs, Senior Citizens, Women, and Youth	BRH	Federal Audit Office
BMG	Federal Ministry of Health	BT	Bundestag (German Federal Parliament) Administration
BMI	Federal Ministry of the Interior, Building, and Community	BVerfG	Federal Constitutional Court

German public companies have the same number of female members on their supervisory boards as private companies



The proportion of women in the top management of Germany's largest public companies increases by 7 percentage points (2015-2020)

10 Proportion of women in the top management bodies of the 262 largest public companies (as of 1/2020)

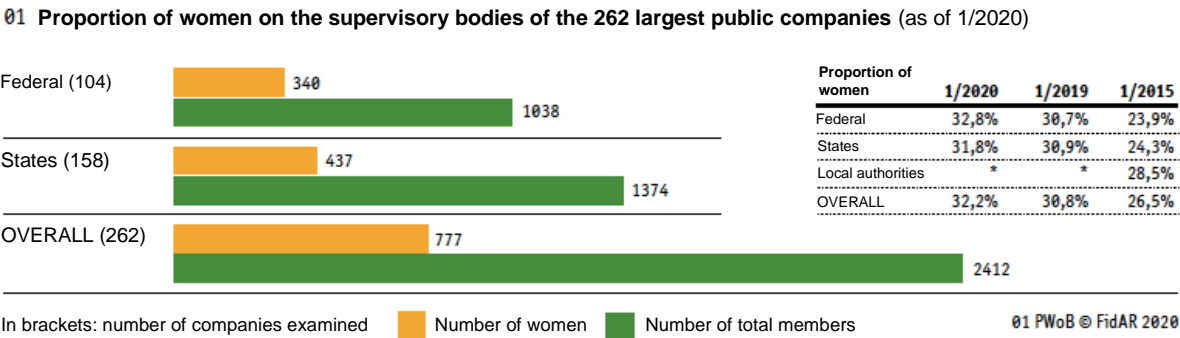


Examination of the 262 largest companies in Germany owned or part-owned by the federal or state governments, including water, lottery, and transportation companies, housing associations, and energy utilities.

Random sample: 262 largest public companies in Germany.

Source: FidAR (2020). Public women on board index.

The proportion of women on the supervisory bodies of Germany's largest public companies increases by 6 percentage points (2015-2020)



Examination of the 262 largest companies in Germany owned or part-owned by the federal or state governments, including water, lottery, and transportation companies, housing associations, and energy utilities.

The proportion of women on the supervisory boards of Germany's largest public companies is sector-specific



Public supervisory boards

Relatively **low representation** in:
Airports and seaports (28%),
Traffic and transportation companies (28%),
Property and building management (28%)



Supervisory bodies

Comparatively **high representation** in:
Education and academia (38%),
Housing (35%),
Hospitals (34%),
Cultural enterprises (33%)

Takeaways

The proportion of women in all **management roles** in the highest federal authorities is increasing on average.

The proportion of women in the **top management of public companies** is **22%**.

The proportion of women on the **supervisory boards of public companies** is **32%**.

The proportion of women on the supervisory boards of public companies is **sector-specific**.



How has the gender pay gap between women and men developed in business, administration, and academia between 2010 and 2020?

The gender pay gap refers to the difference in the average gross hourly earnings of men and women relative to the gross hourly earnings of men.

Gender pay gap

- The calculation of the gender pay gap (GPG) is regulated by harmonized European standards issued by Eurostat. This ensures that the GPG is calculated in the same way in all EU Member States.
- Quadrennial structure of earnings survey (SES) in 2002, 2006, 2010, and 2014.

Data (quarterly earnings survey)

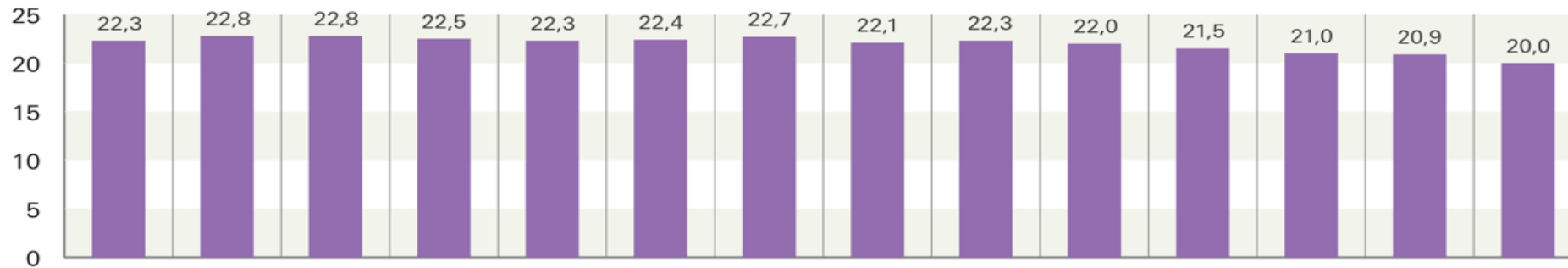
- Sections B to S of the Classification of Economic Activities 2008 (WZ 2008)
- Only enterprises with 10 or more employees
- No restrictions regarding age and working hours

In 2019, women in Germany earned 20% less than men per hour worked (~ €4.50) on average

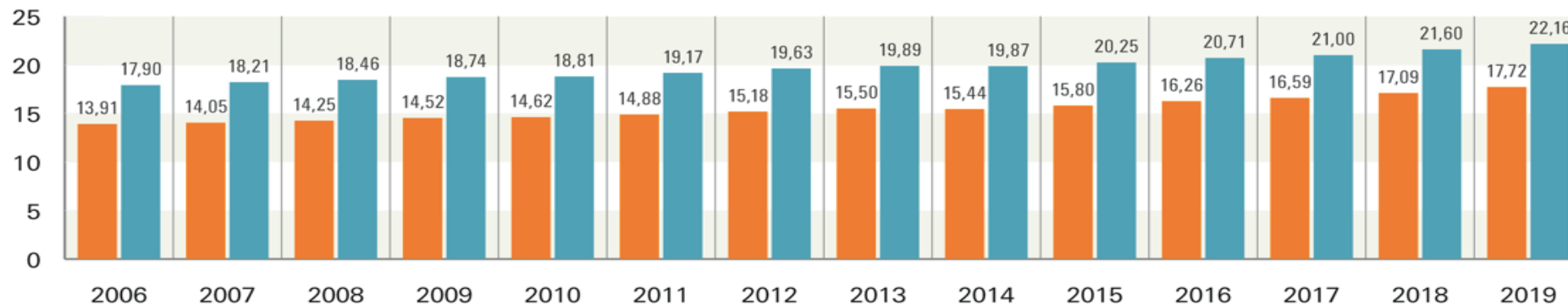
Gender pay gap and average gross hourly earnings of women and men in **Germany** (2006-2019), in percent and in euros



Germany



Gender pay gap
(in %)

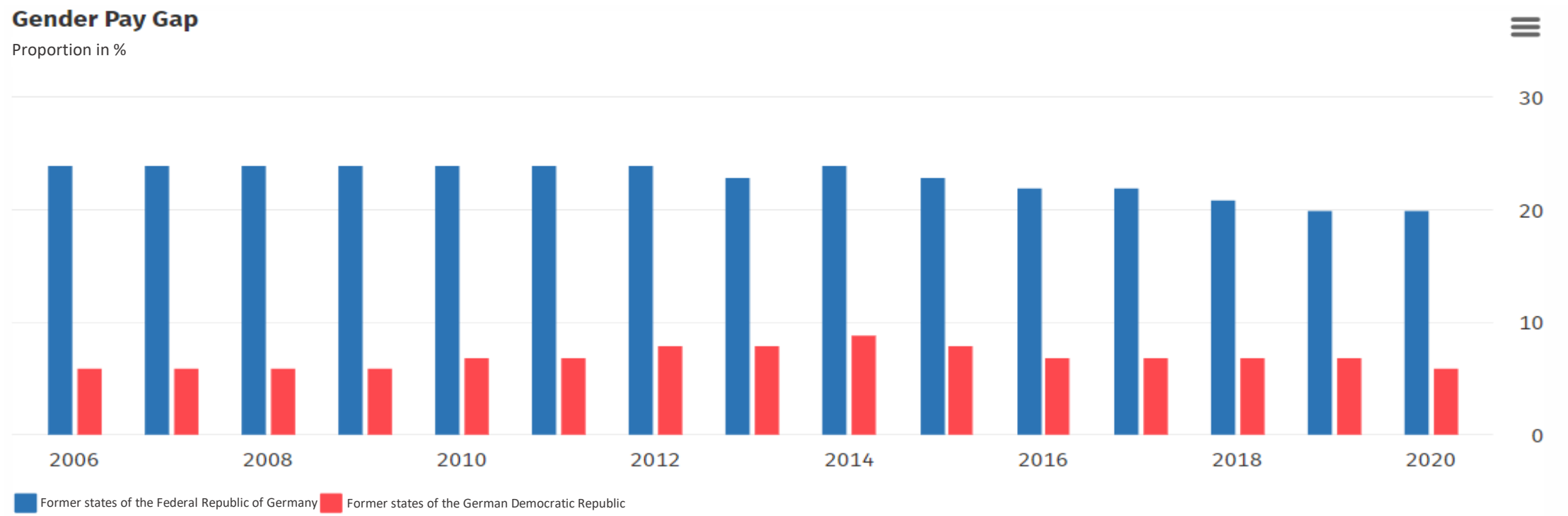


Average hourly
earnings (gross, in
euros)

Women
Men

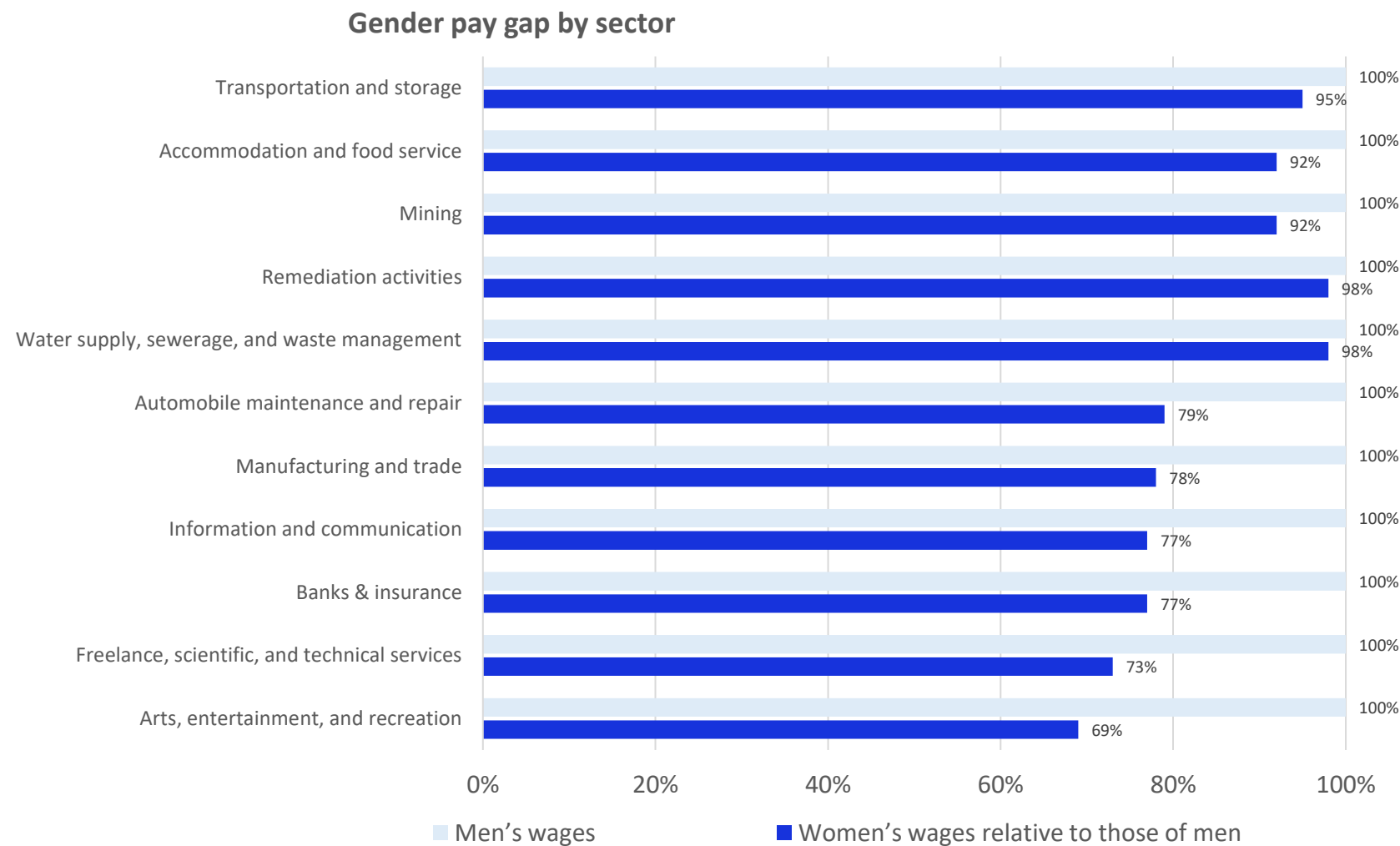
The gender pay gap is three times higher in West Germany than in East Germany

Percentage difference in the average gross hourly earnings of women and men, relative to the average gross hourly earnings of men.



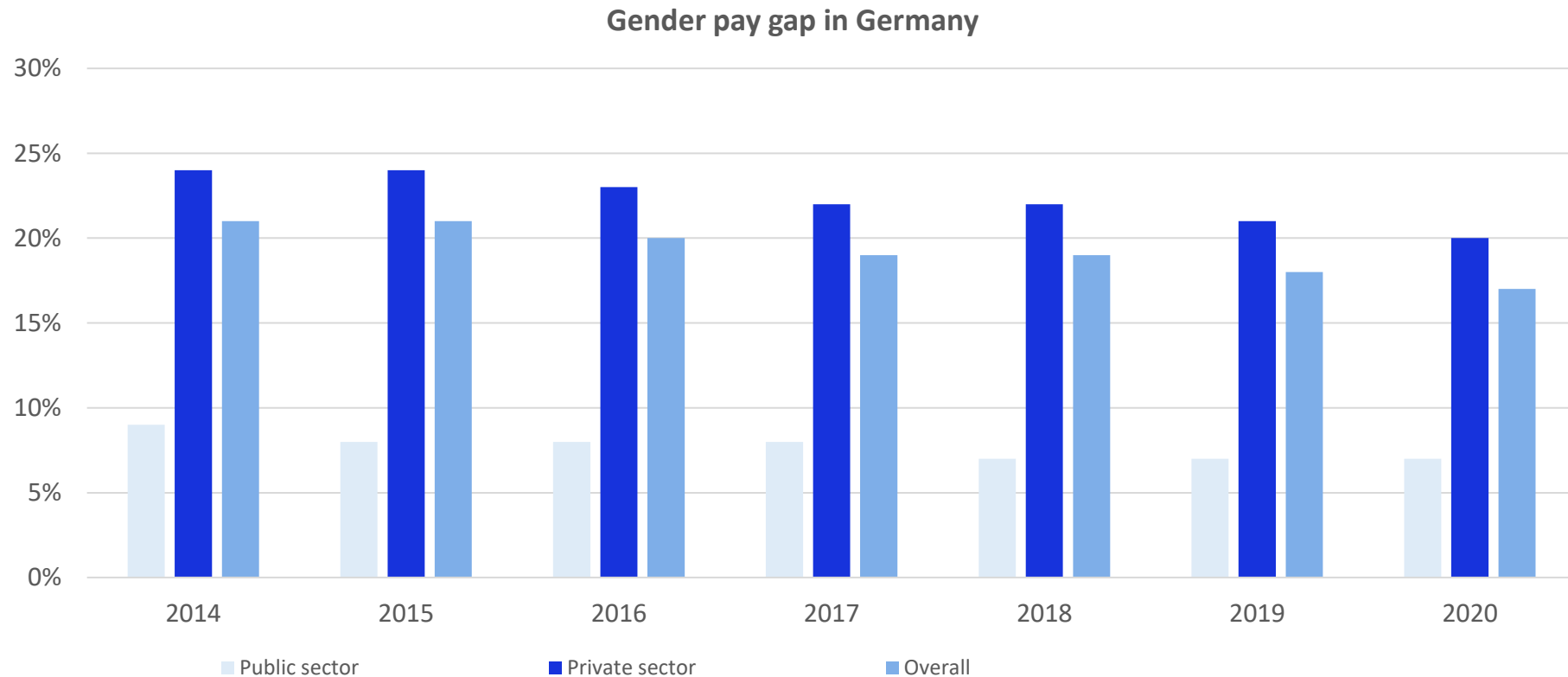
Source: Destatis (2021). Gender pay gap.

In every sector, men earn more than women



Source: Destatis (2021). Gender pay gap.

Pay gap less pronounced in the public sector than in private sector companies

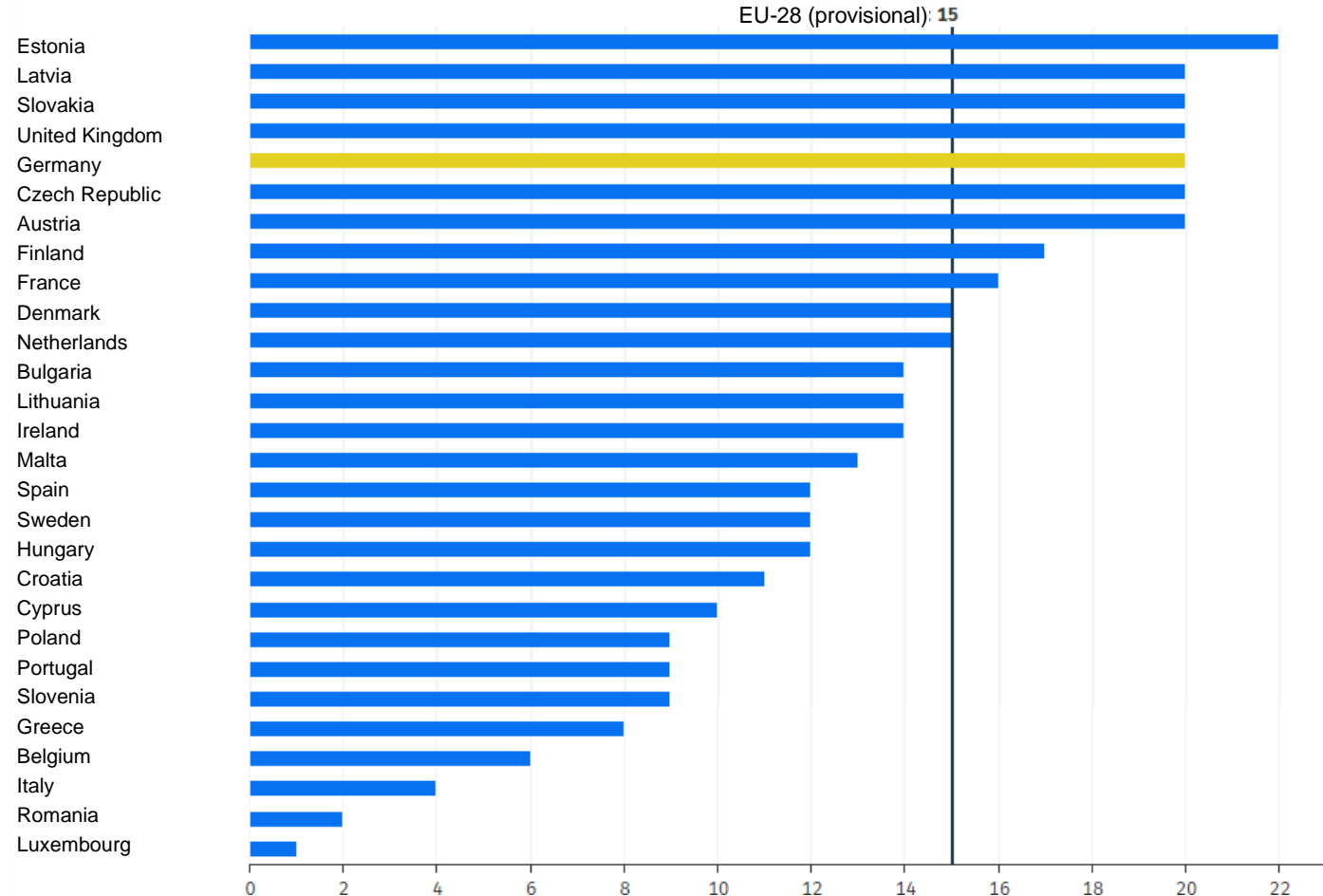


Data (quarterly earnings survey)

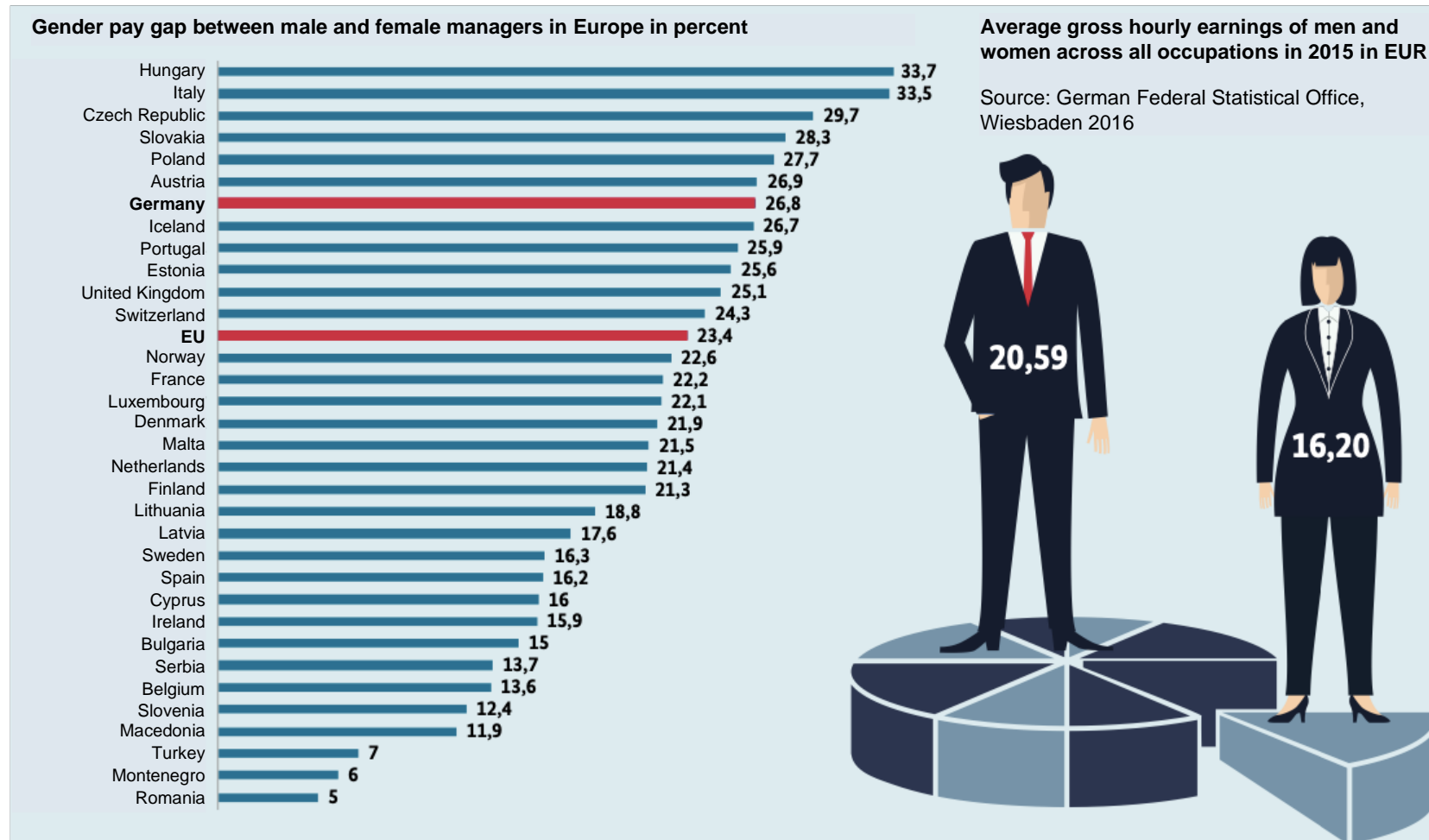
- Public service = Economic sections O (public administration and defense; social security) and P (education) of the Classification of Economic Activities, 2008 edition
- Representative, single-stage stratified random sample survey with obligation to provide information

Source: Destatis (2021). Geschlechtsspezifischer Verdienstabstand im öffentlichen Dienst und in der Privatwirtschaft (unbereinigt) ab 2014.

The gender pay gap in Germany is well above the European average



Gender pay gap among managers in Europe in 2015



*Management positions in companies from the industrial, construction, and service sectors with at least 10 employees are considered

Source: Federal Ministry for Economic Affairs and Energy (2017). For comparison: Unadjusted gender pay gap in Europe.

Takeaways

The gender pay gap in **Germany** has remained constant at **20%** for years.

The gender pay gap is **three times higher in West Germany** than in East Germany.

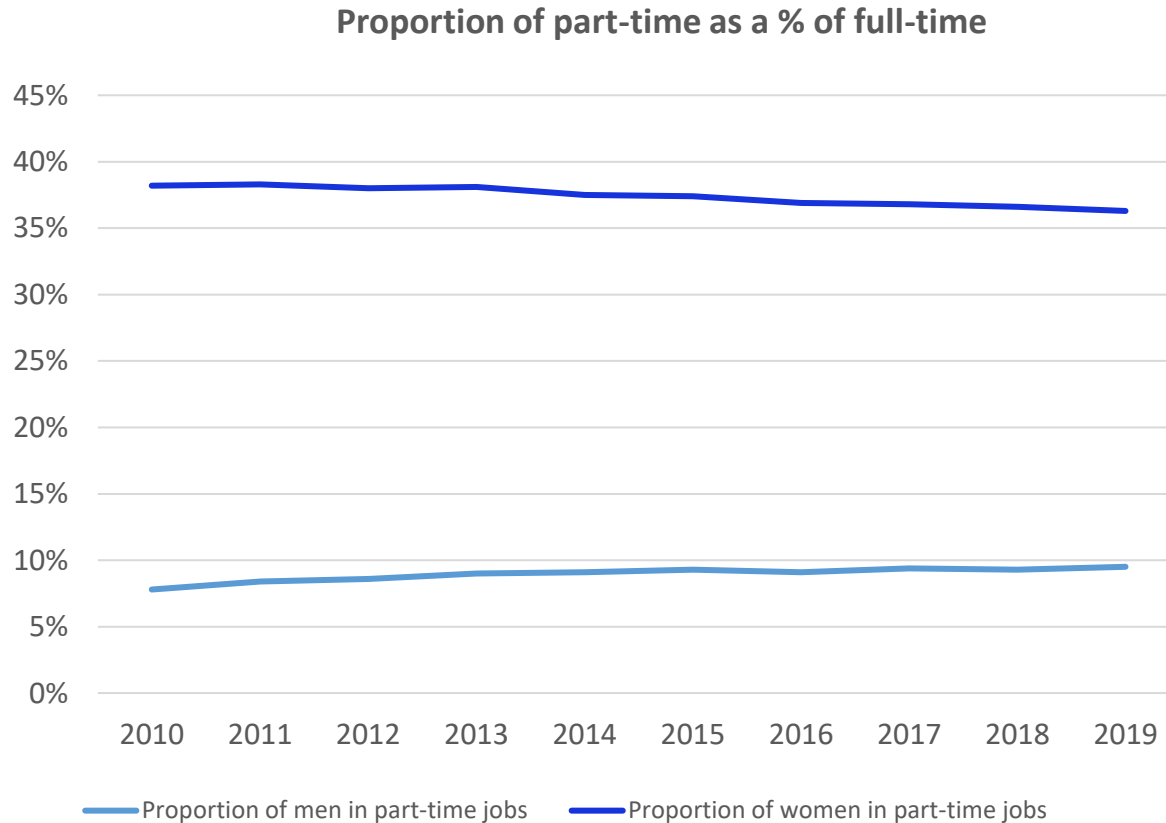
Men earn more than women **across all sectors**.

Germany is one of the **worst performers** in terms of the gender pay gap in a **European comparison**.



How has the proportion of part-time work between women and men evolved between 2010 and 2020?

Part-time employment remains a women's issue



One in two women and one in nine men work part-time – and this has remained constant over the last 10 years.

→ **A very large gender gap of almost 30 percentage points still remains**

Takeaways

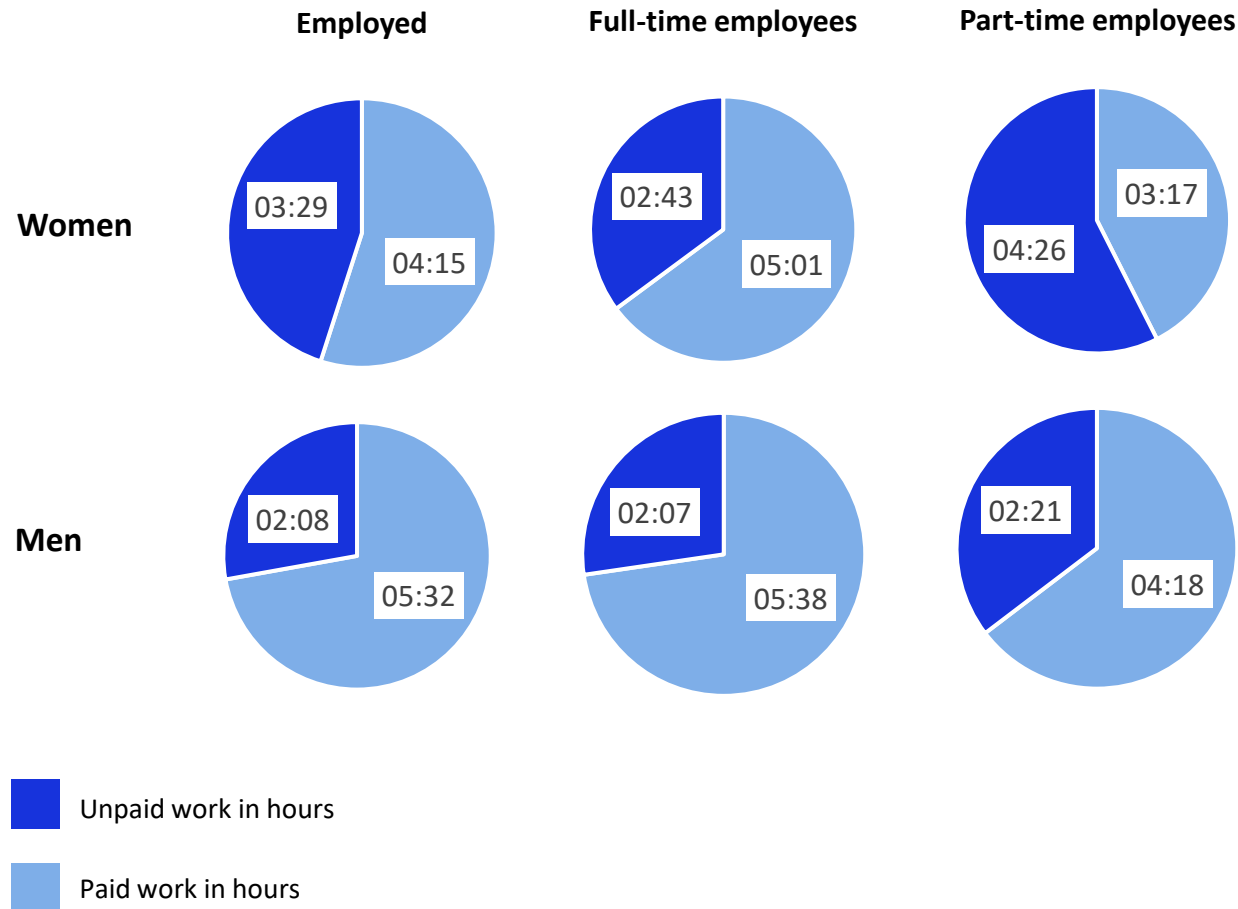
Part-time employment remains a **women's issue**.

The **gender gap** in part-time work remains constant at just under **30** percentage points.



**How is care work (housework,
children, family) divided between
women and men?**

Unpaid work accounts for 45% of total working time for women, but only 28% for men

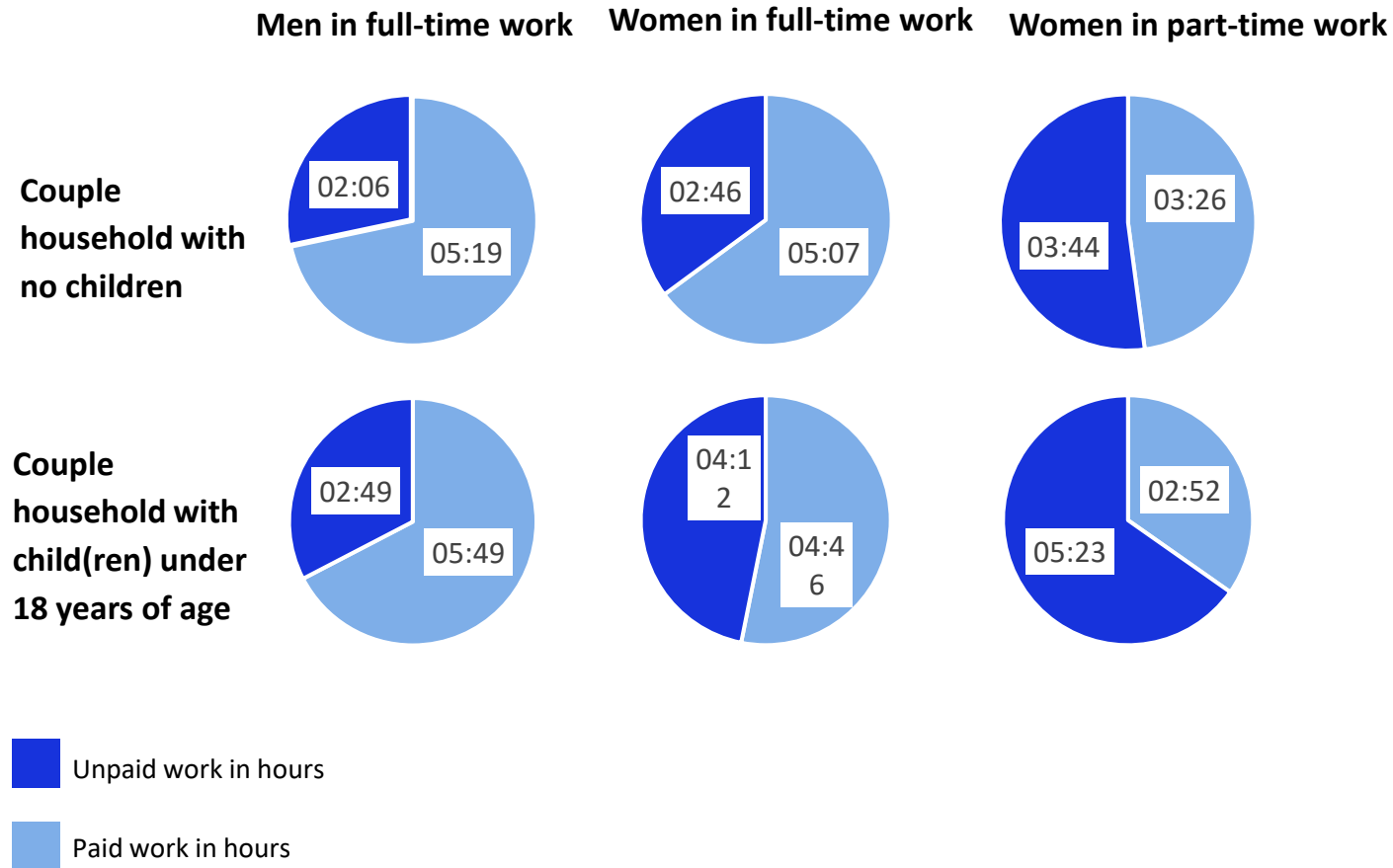


In 2012/2013, the time spent by men in Germany on **paid work** was roughly **1.2 times** greater than that spent by women.

In 2012/2013, the time spent by women in Germany on **unpaid work** was roughly **1.6 times** greater than that spent by men.

Age range: 18-65 years

Part-time working mothers invest 2½ hours more than their male colleagues



Mothers working full-time invested more than **1 hours 20 minutes more in unpaid work** per weekday in 2012/2013 compared to fathers working full-time.

Mothers working full-time had the longest total hours worked per weekday (9 hours) of all parents in 2012/2013.

Age range: 18-65 years

Takeaways

Unpaid work accounts for **45%** of total working time for **women**, but **only 28% for men**.

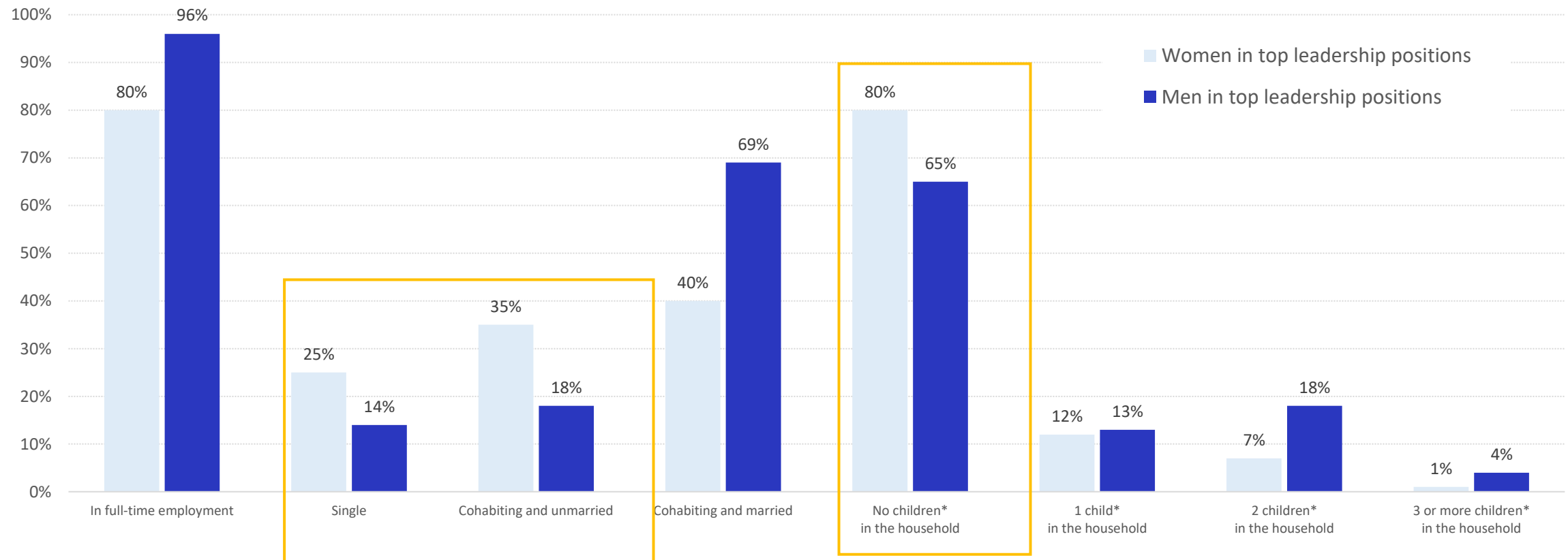
Part-time working mothers invest **2½ hours more** than their male colleagues.



**How many top managers have
partners and children?**

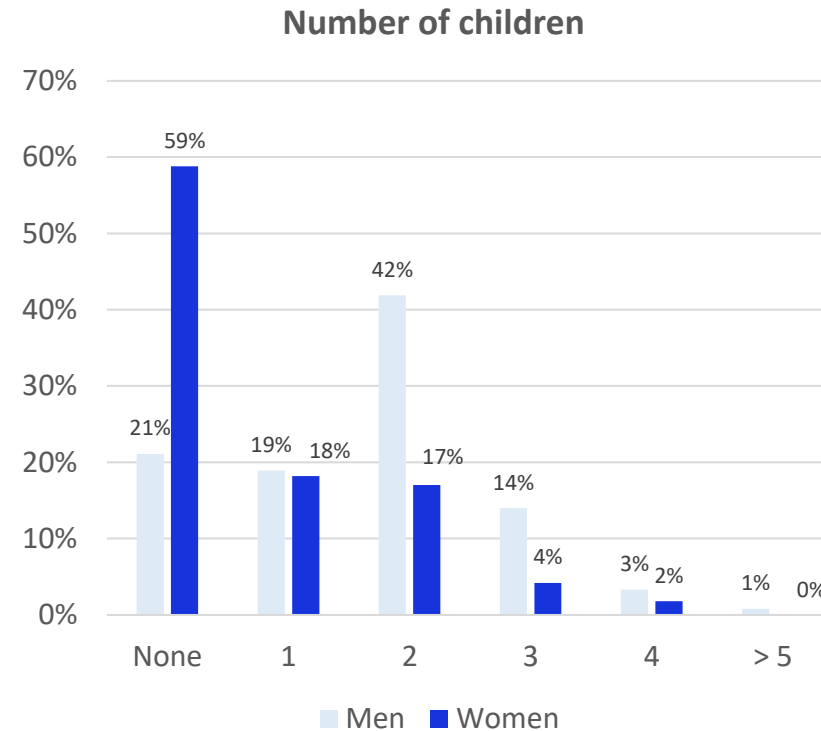
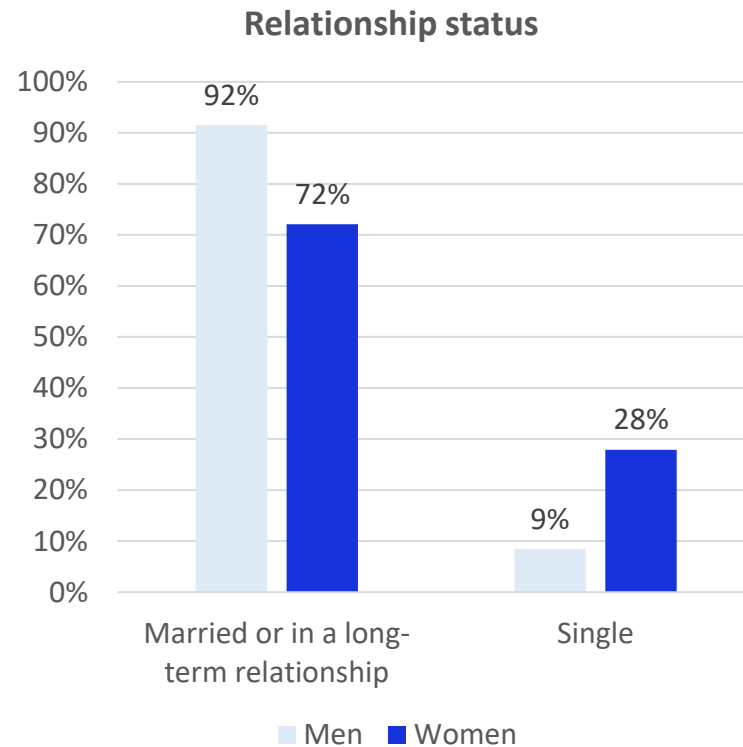
Women in top leadership positions are more often single and childless than men in top leadership positions

Family situation of top leaders by gender in Germany
(in %, mean 2001-2014)



*Children = children under 16 living in the same household

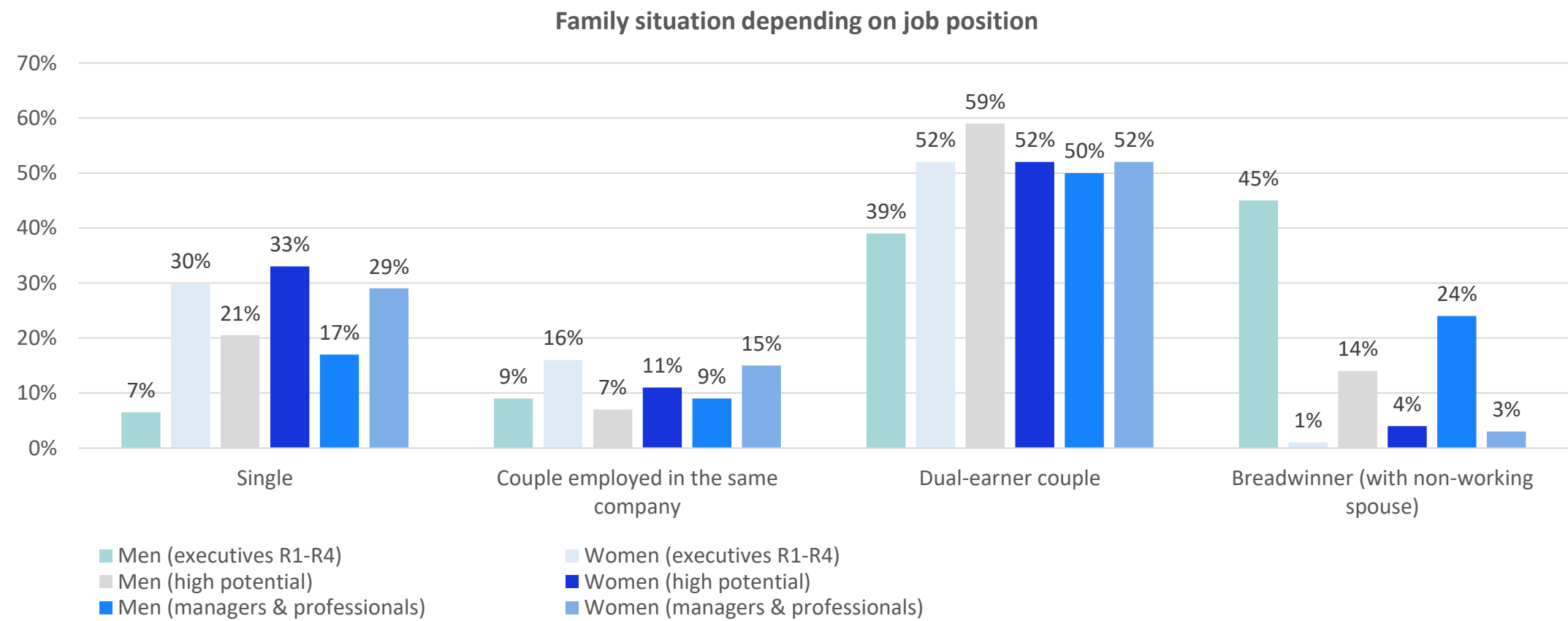
28% of female managers are single and 59% have no children



Data: Executive panel with 1,480 leaders from companies of various sizes and from all sectors from Germany, Austria, and Switzerland (D-A-CH)

Source: Odgers Berndtson (2020). Manager-Barometer Sonderbefragung Corona.

Most French top female managers are either single or part of a dual-earner couple



Random sample: 9,592 respondents (including 562 male and 63 female executive board members R1-R4; 116 male and 73 female high potentials; 6,540 male and 2,238 female managers and professionals) in France.

Source: Guillaume, C., & Pochic, S. (2009). What would you sacrifice? Access to top management and the work–life balance. *Gender, Work & Organization*, 16(1), 14-36.

Takeaways

28% of female managers are **single**.

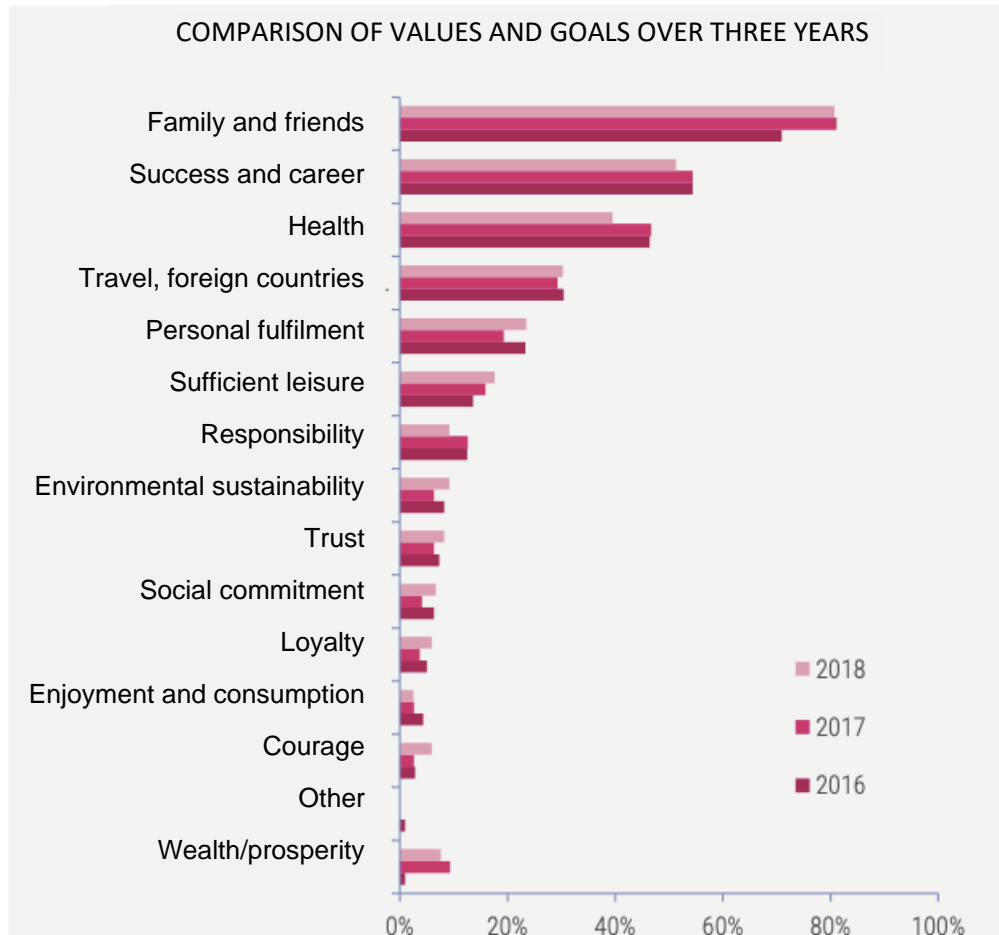
59% of female managers do **not** have **children**.

Most top female managers are either **single** or **part of a dual-earner couple**.



**How high is women's and men's
career motivation after graduation
and later in life?**

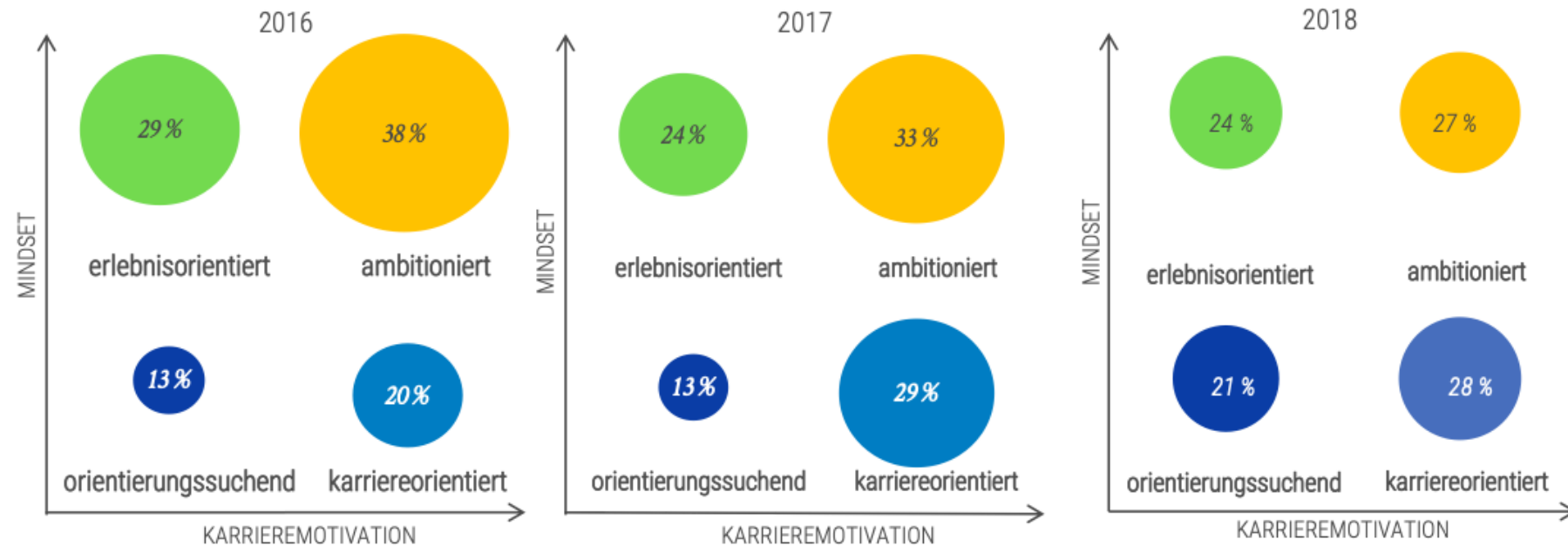
Family and friends, success and career are particularly important for Generation Y



The prioritization of values and goals remained essentially constant over the three years.

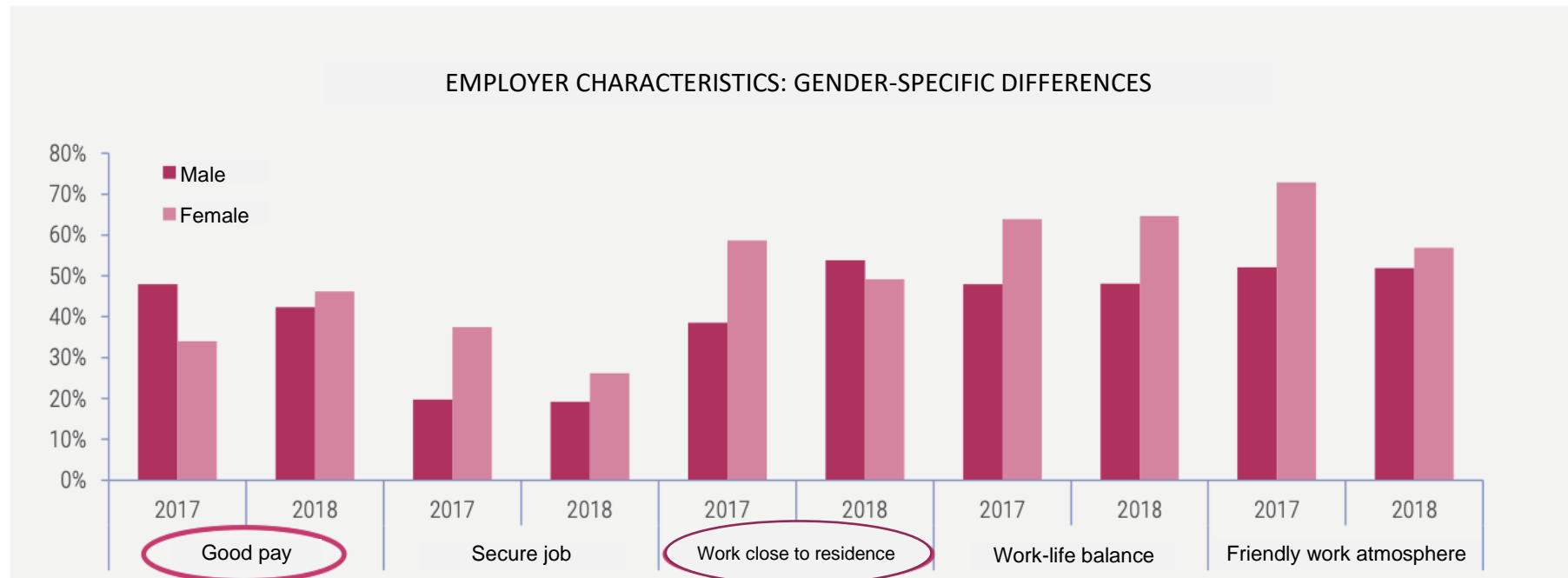
→ **Stable pattern for Generation Y**

In Generation Y, the ambitious type is the most represented, and the orientation-seeking type the least represented



→ Over all three years, the ambitious type is the most represented, and the orientation-seeking type the least represented; however, the relative ratios become less and less pronounced → Heterogeneous concept

Good pay is increasingly important to female graduates; male graduates value proximity to their place of residence



Anmerkungen: N = 270/119; Bis zu drei Mehrfachnennungen möglich. Angegeben sind die Häufigkeiten der Nennungen in Prozent.

Takeaways

Family and friends, success and career are particularly important for Generation Y.

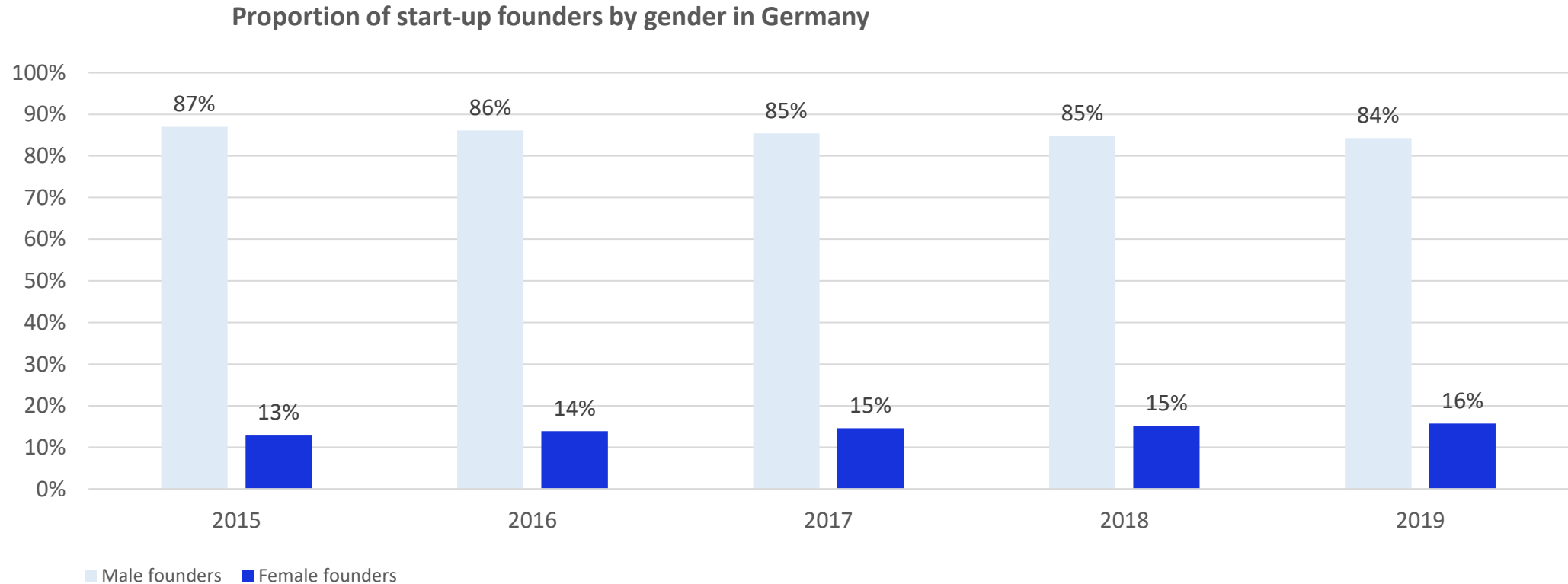
In Generation Y, **the ambitious type is the most represented**, and **the orientation-seeking type the least represented**.

Good pay is increasingly important to **female graduates**; **male graduates** value **proximity to their place of residence**.



What are the differences between women and men in venture capital funding for start-ups?

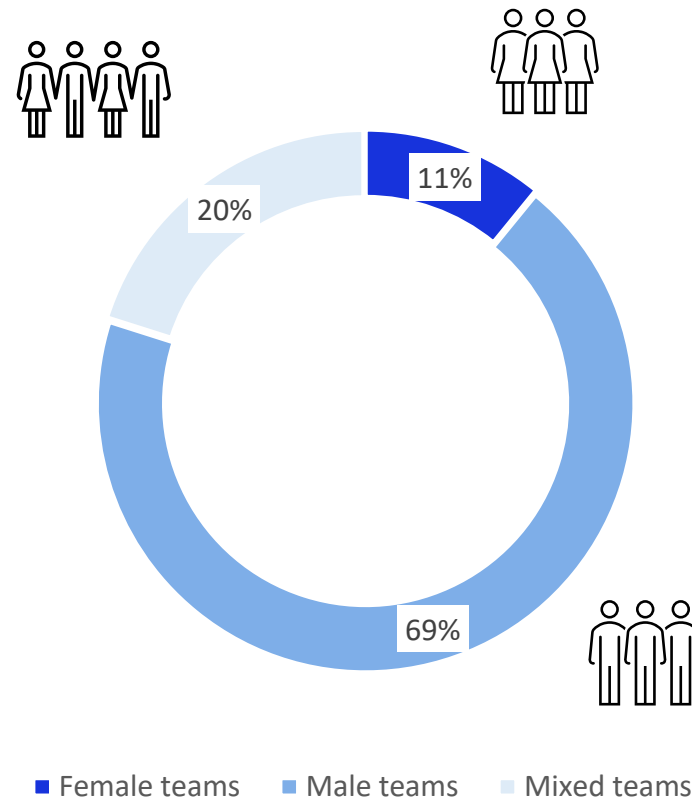
The German start-up scene remains male territory



Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019

Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

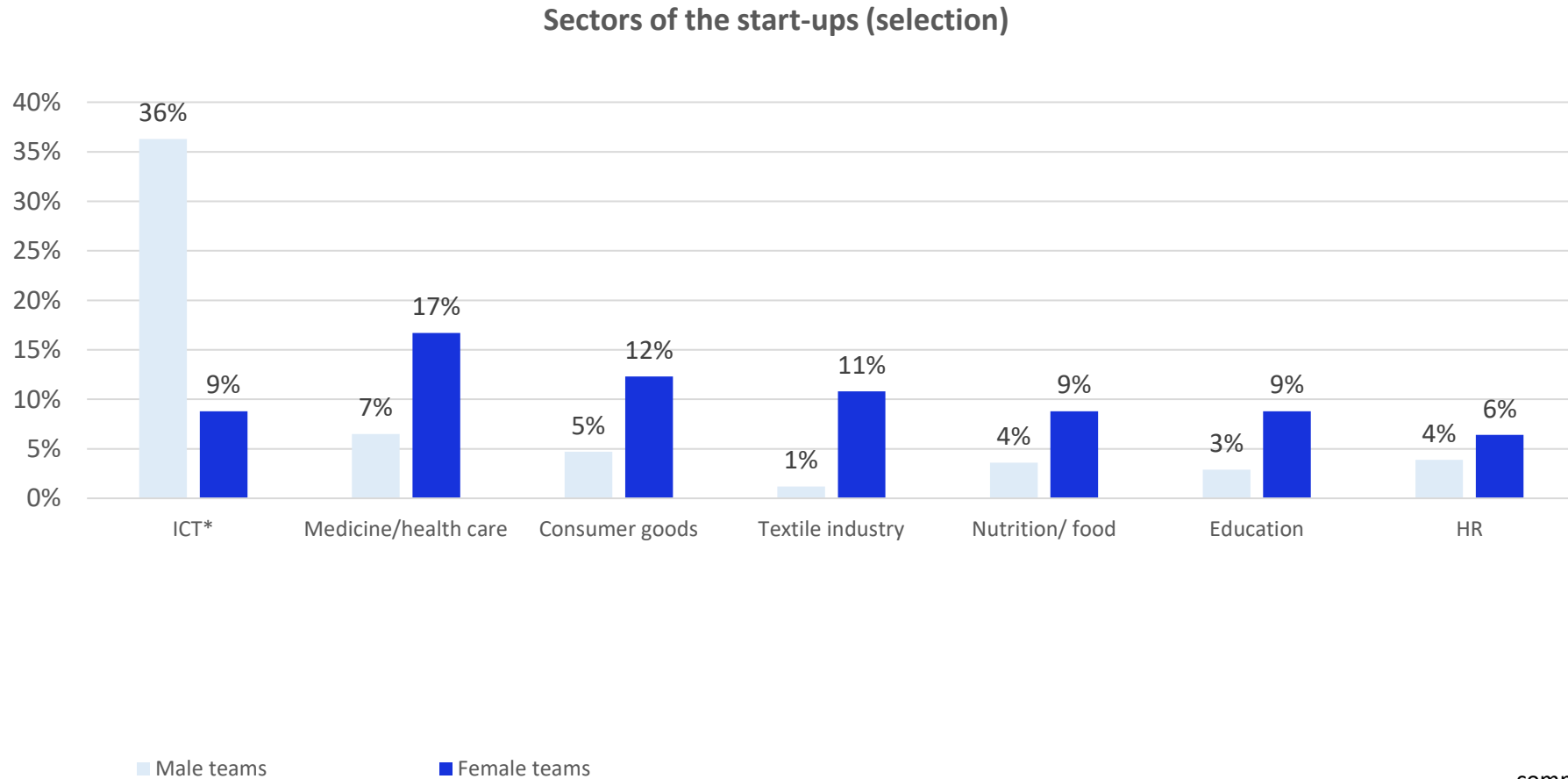
All-male start-up teams are clearly in the majority



Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019

Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

Only a low proportion of women in a key start-up industry – information and communications technology

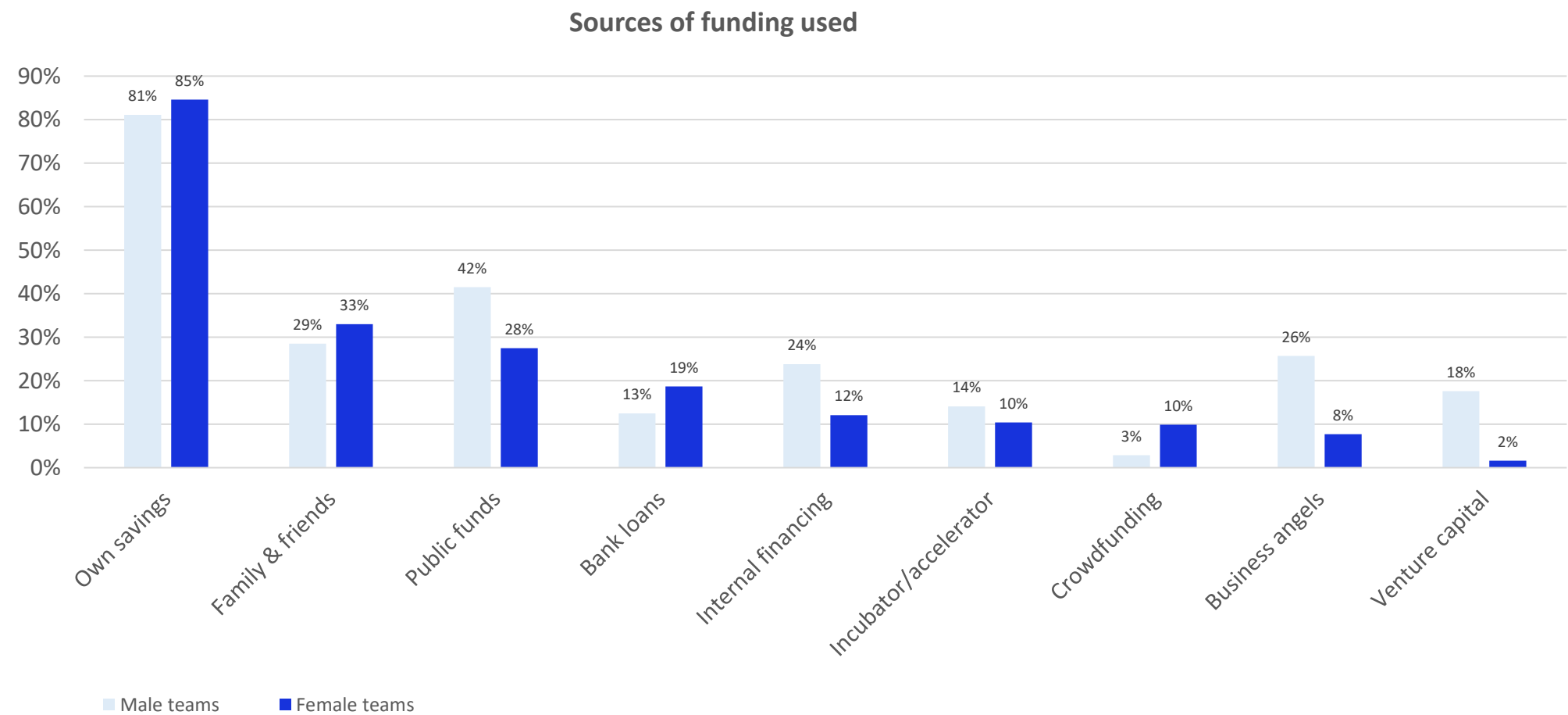


*ICT = Information and communications Technology

Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019

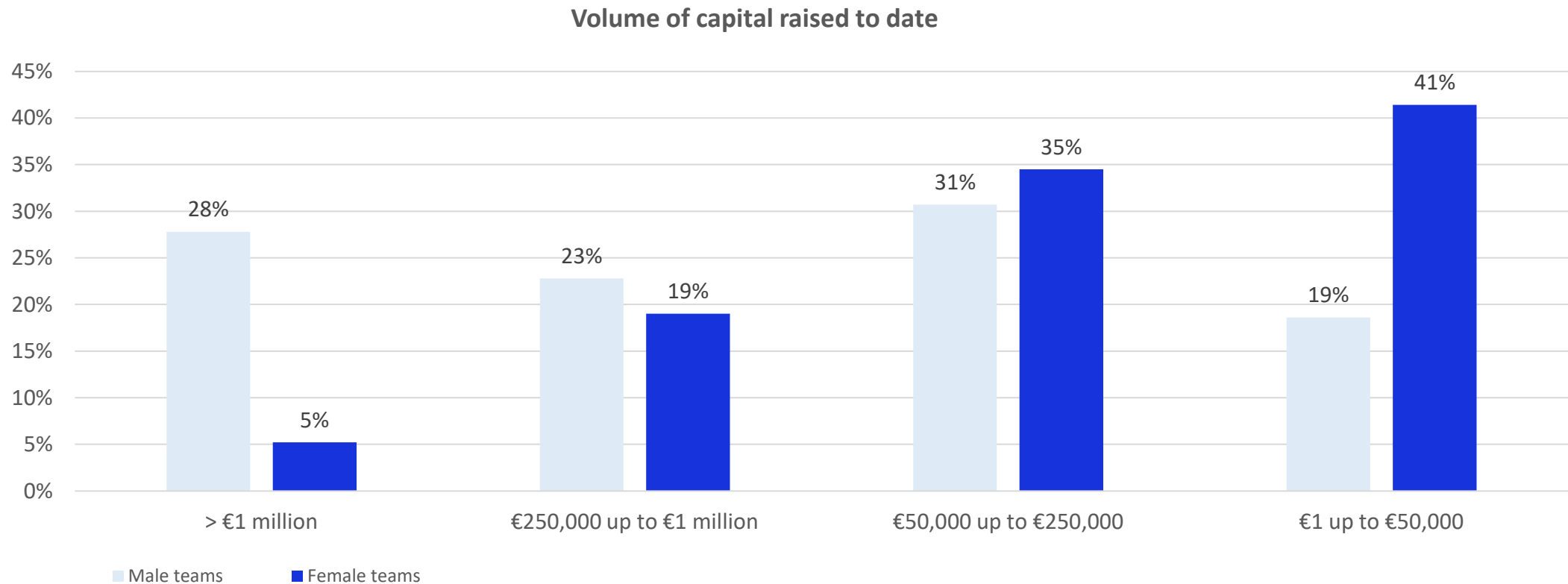
Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

Gender-based sources of funding



Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019
Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

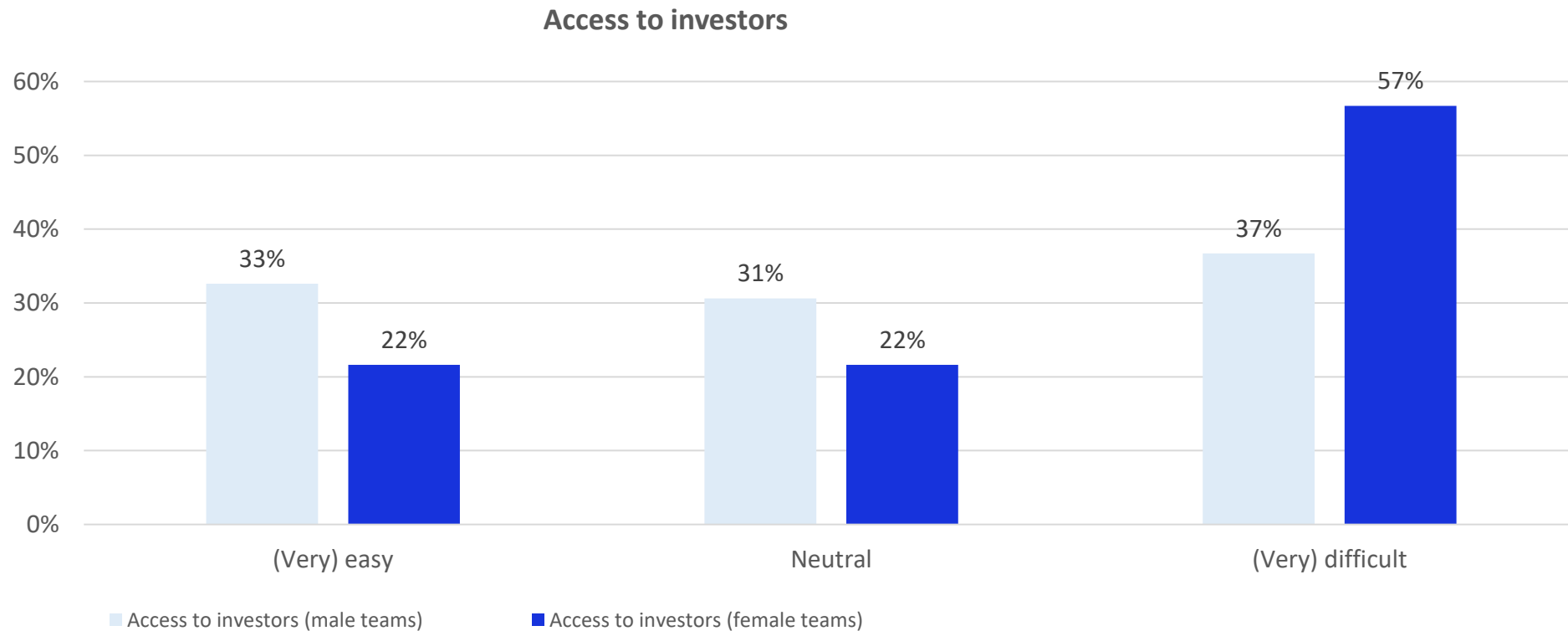
5% of female start-up teams have already received 1 million euros or more – compared to 28% of male start-up teams



Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019

Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

Female teams have less developed networks in terms of access to investors



Random sample: 4,670 people, including 731 female founders (16%) and 3,939 male founders (84%) in 2019

Source: Bundesverband Deutsche Startups e.V. (2020). Female founders monitor.

Takeaways

The German start-up scene remains **male territory**.

Male start-up teams predominate in Germany.

Choice of **funding sources** is **gender-specific**.

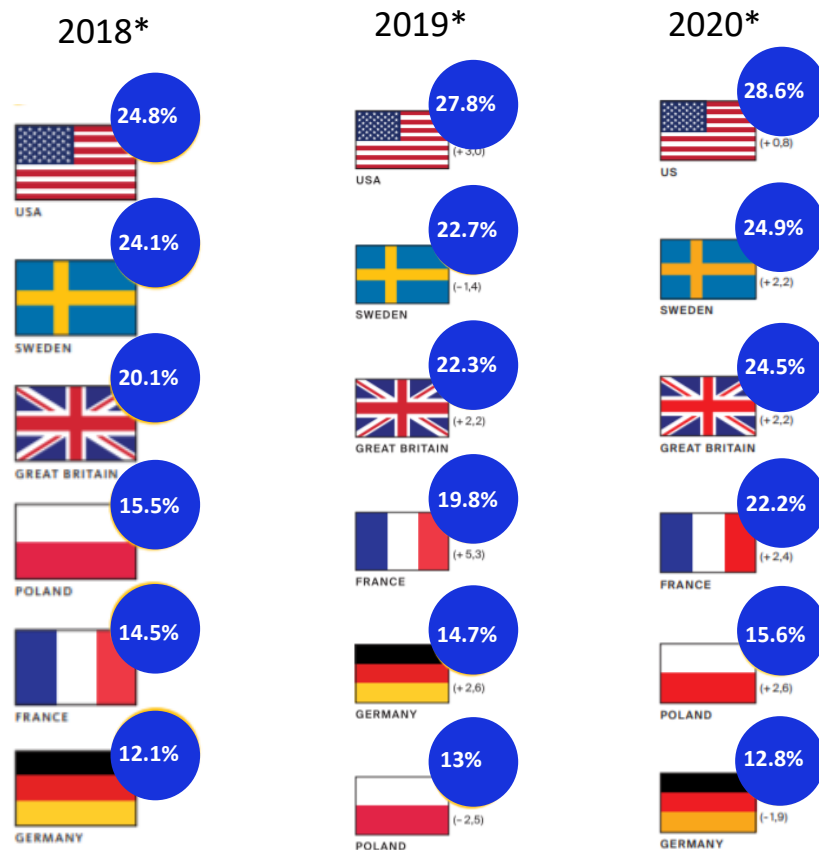
Male start-up teams receive **more capital** than female start-up teams.

Female teams have **less developed networks** in terms of access to **investors**.



**How does Germany compare
internationally and to other European
countries?**

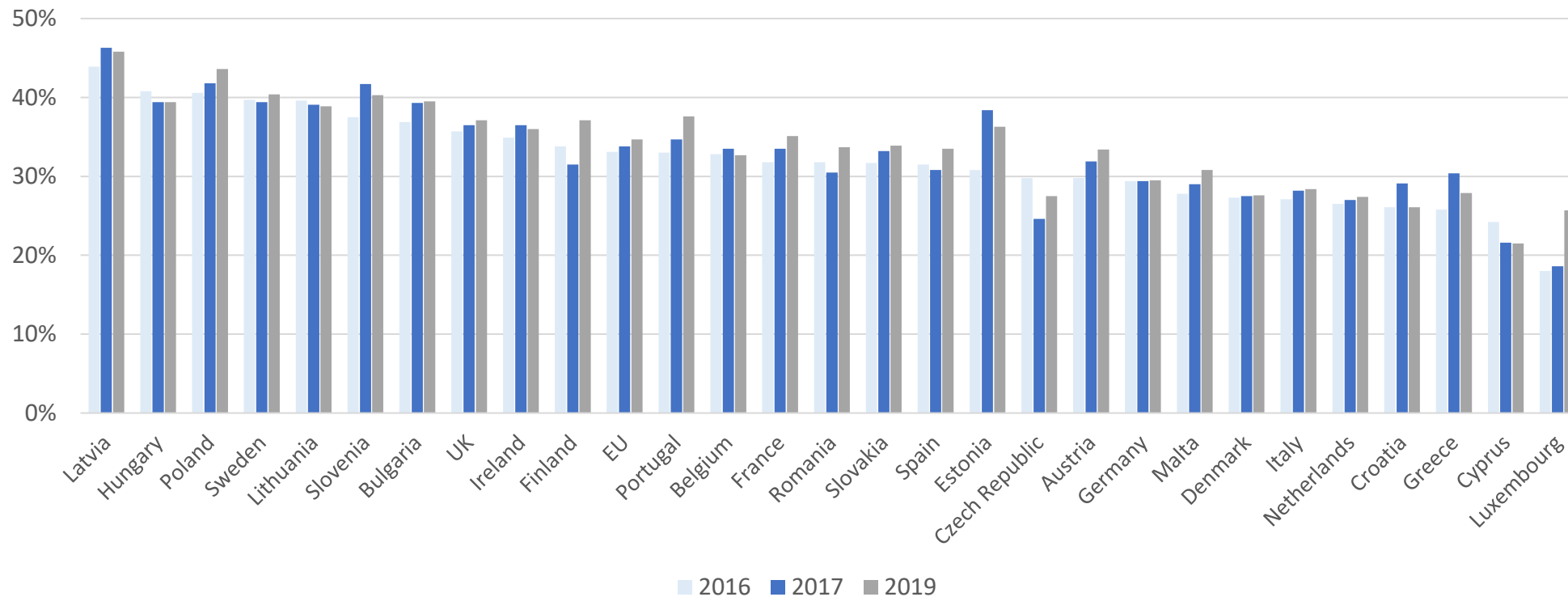
Compared to other countries, Germany is regressing with regard to the proportion of women on executive boards



→ Where international competitors have long since achieved a significant proportion of women on company boards, **many German companies still have no women at all in their top management.**

*Percentage of women on the executive boards of the respective 30 largest companies in the national benchmark index as of September 1, 2018/2019/2020; figures in parentheses: change since September 2018/2019

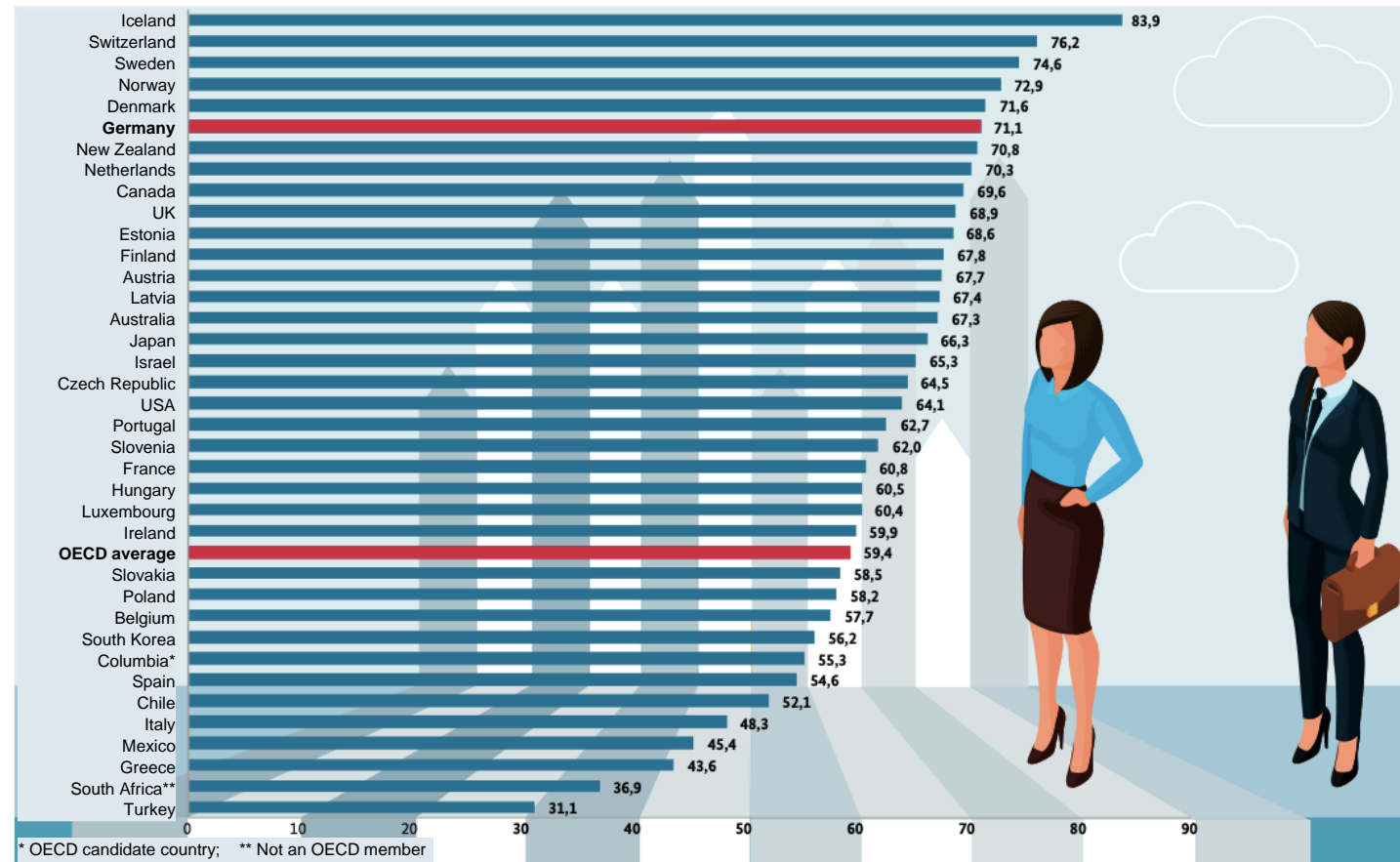
Germany continues to lag behind the EU average in terms of the proportion of women on executive boards...



*All female board members, managing directors, and executives in trade, production, and services in the EU

Source: Federal Ministry for Economic Affairs and Energy (2020). Women in executive positions in an EU comparison. Statista (2016). Statista (2016). Frauen in Führungspositionen im EU-Vergleich.

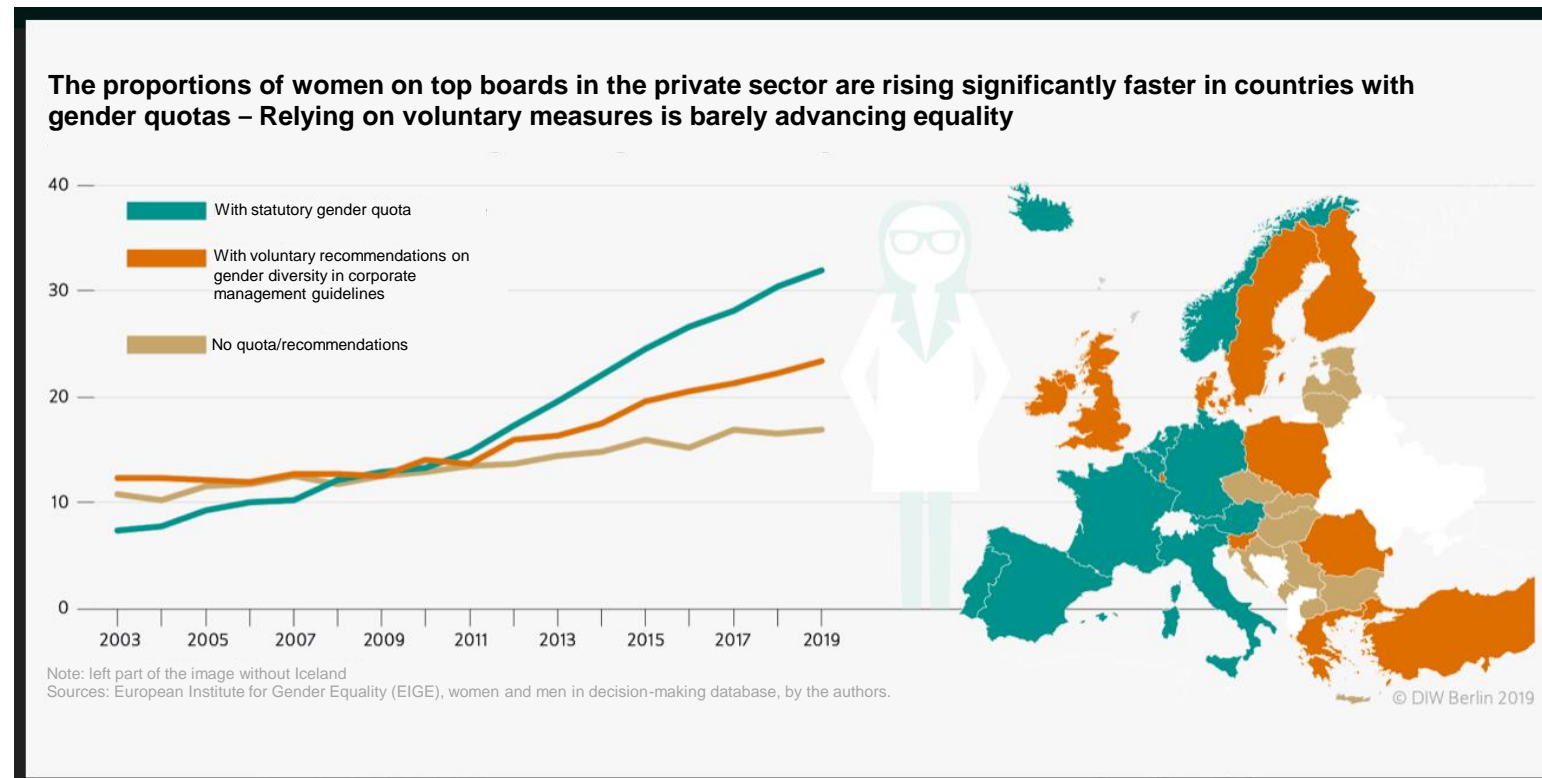
... despite having a high proportion of women in employment



*Proportion of the total female working-age population (women aged 15-64) in gainful employment

Source: Federal Ministry for Economic Affairs and Energy (2017). Employment rate among women in an international comparison.

Relying on voluntary measures is barely advancing equality



Takeaways

Germany is one of the **worst performers** internationally in terms of the proportion of women on executive boards.

The **proportion of women** on top boards in the private sector is rising significantly faster in **countries with gender quotas**.

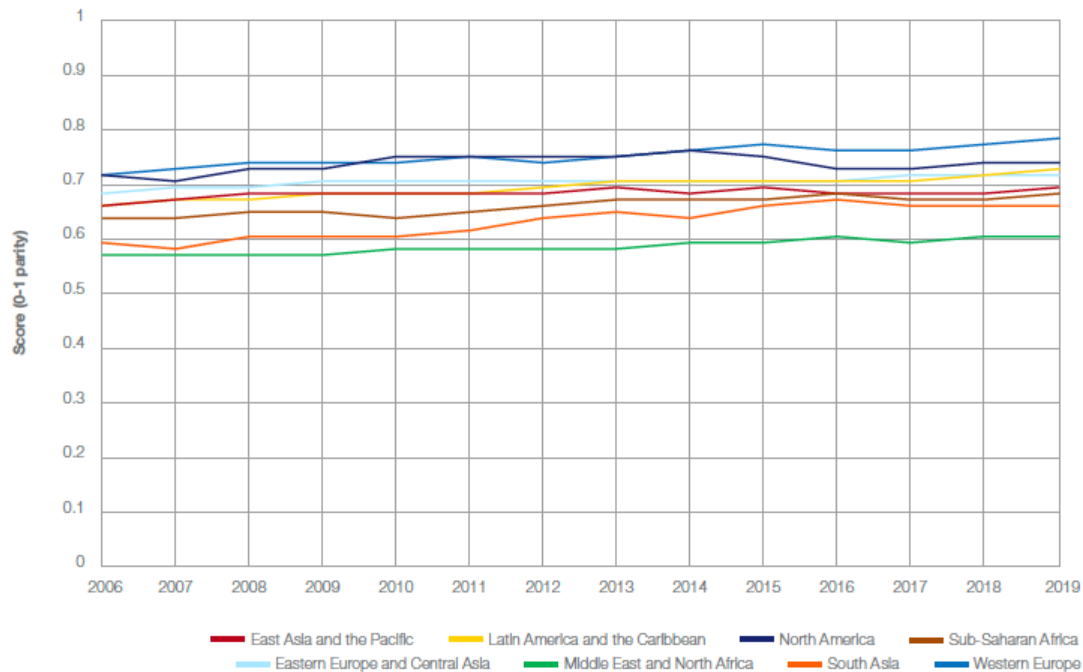


Is equality on the rise worldwide?

All 8 regions have reduced their gender gaps by at least three decimal places in 2019

Figure 7 Evolution of the Global Gender Gap Index by region over time

Evolution in scores, 2006-2020



Index framework



Economic participation and opportunity



Educational attainment



Health and survival



Political empowerment

Global gender gap index

0 = large gender gaps

1 = no gender gaps

Takeaways

Gender gaps are **narrowing**, but **slowly**.



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(In)effectiveness of diversity interventions

05 New interventions

Impact on the individual

Impact on society

Impact on the company

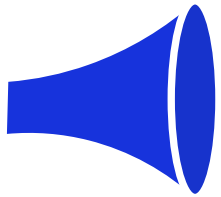
06 The gold standard

Testing the effectiveness of interventions



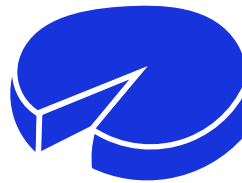
What are the possible explanations for the low proportion of women in leadership positions?

General explanations



Pipeline theories

“There are not enough **suitable women.**”



Deficit theories

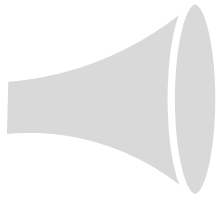
“Women **don’t have what it takes** for leadership positions.”



Unconscious bias/ stereotypes

The same behavior, competence, and performance are not (always) equally valued, rewarded, and recognized.

General explanations



Pipeline theories

“There are not enough **suitable women.**”



Deficit theories

“Women **don’t have what it takes** for leadership positions.”



Unconscious bias/ stereotypes

The same behavior, competence, and performance are not (always) equally valued, rewarded, and recognized.

Most important explanation

We are all perpetrators and victims of stereotypes



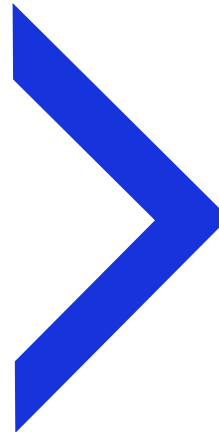
Female stereotype

Friendly, sensitive, helpful, respectful, supportive, etc.



Male stereotype

Assertive, independent, rational, decisive, etc.



Descriptive effect

Women are seen as less suitable for leadership positions than men.

Prescriptive effect

Male leaders who ask for help are seen as less competent.

Prohibitive effect

Women should not be dominant.

Men should not ask for work-life balance.

Stereotypes also affect **many other social groups** (ethnic origin, nationality, age, disability, religion, sexual identity)

Takeaways

While the **pipeline theory** claims that there are not enough suitable women, the **deficit theory** presupposes that women do not have what it takes.

The **most important** explanation for the low proportion of women is **unconscious bias/stereotypes**.



Do men and women have different abilities, competencies, and traits?

There are more similarities between men and women than there are differences in most psychological aspects



= **Gender similarities hypothesis**

Exceptions:

- **Motor behaviors**
(e.g., throwing distance)
- Some aspects of sexuality

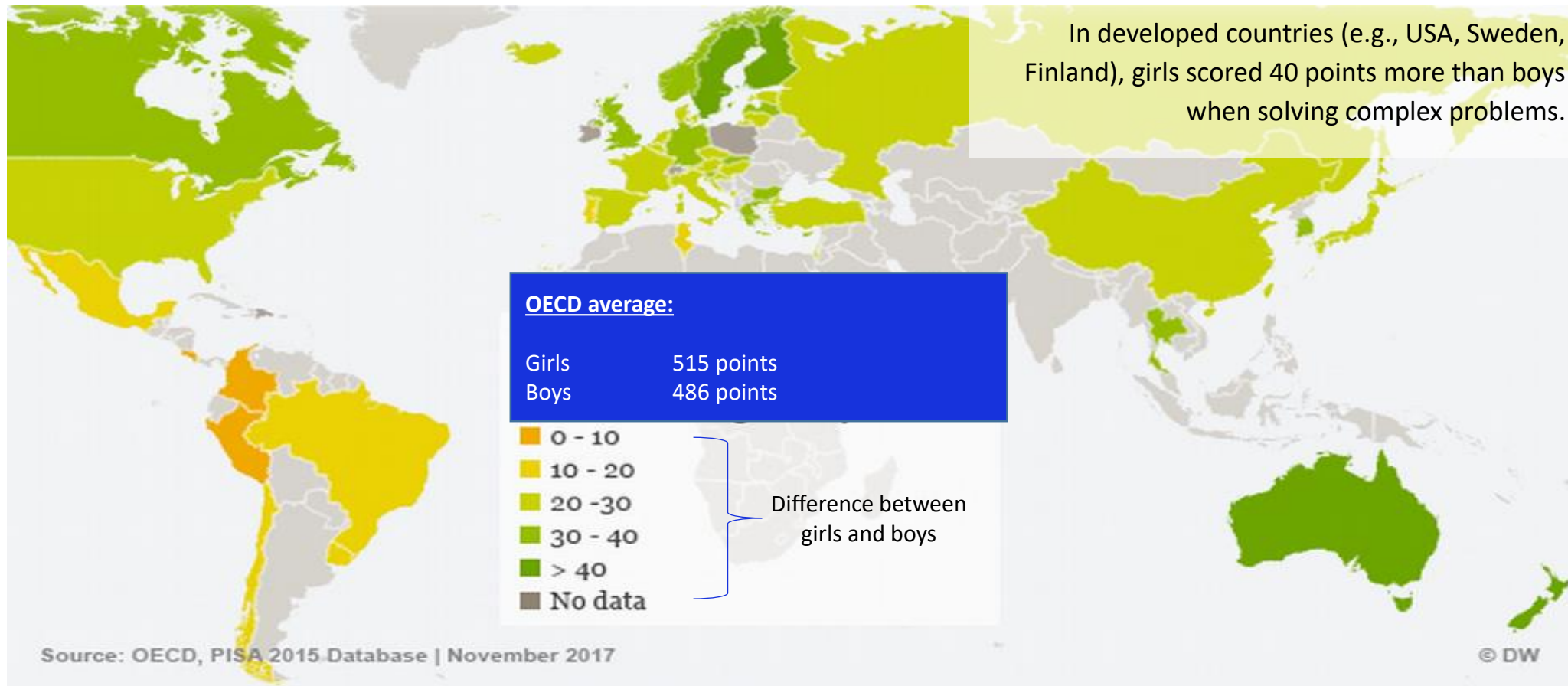
Javelin throw: World records

Women	Men
72.28 m	98.48 m

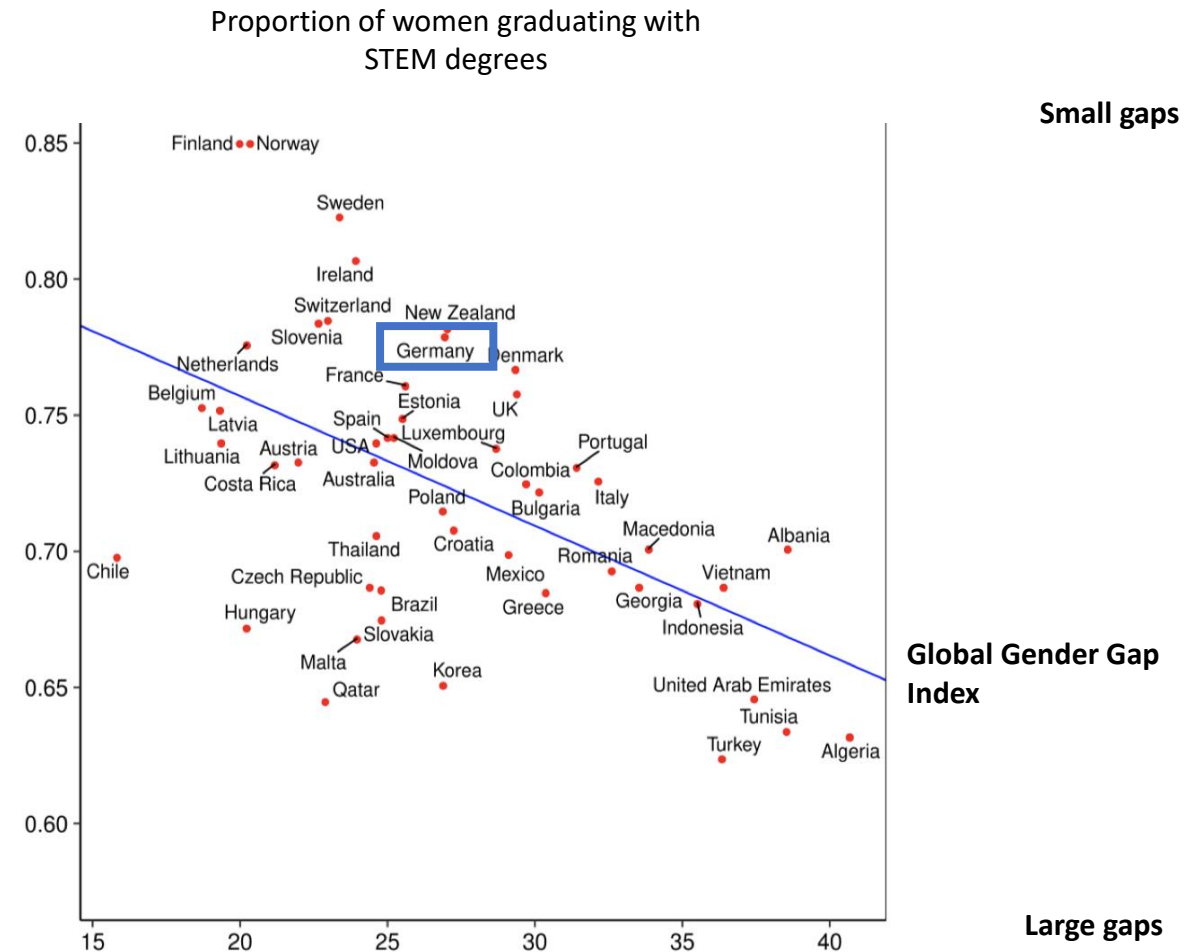
Sample (Hyde, 2005): 46 meta-analyses. Random sample (Zell et al., 2015): 106 meta-analyses.

Source: Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, 60(6), 581–592. Zell, E., Krizan, Z., & Teeter, S. R. (2015). Evaluating gender similarities and differences using metasynthesis. *American Psychologist*, 70(1), 10–20. https://cdn.pixabay.com/photo/2015/02/25/22/38/athletics-649650_1280.jpg, https://cdn.pixabay.com/photo/2020/02/20/19/45/javelin-4865653_1280.jpg

Girls perform better than boys at solving complex problems in teams



Fewer women graduate with degrees in STEM* subjects in more gender-equal countries



*STEM = Science, technology, engineering, and mathematics

Random sample: 472,242 girls and boys.

Source: Stoet, G., & Geary, D. C. (2018). The gender-equality paradox in science, technology, engineering, and mathematics education. *Psychological Science*, 29(4), 581–593.

What happens in more gender-equal countries?

Women and men choose the subject(s) in which they perform best



Latin: A
Physics: B

→ chooses Latin



Latin: C
Physics: B

→ chooses physics

Takeaways

Women and men have **more in common** than differences.

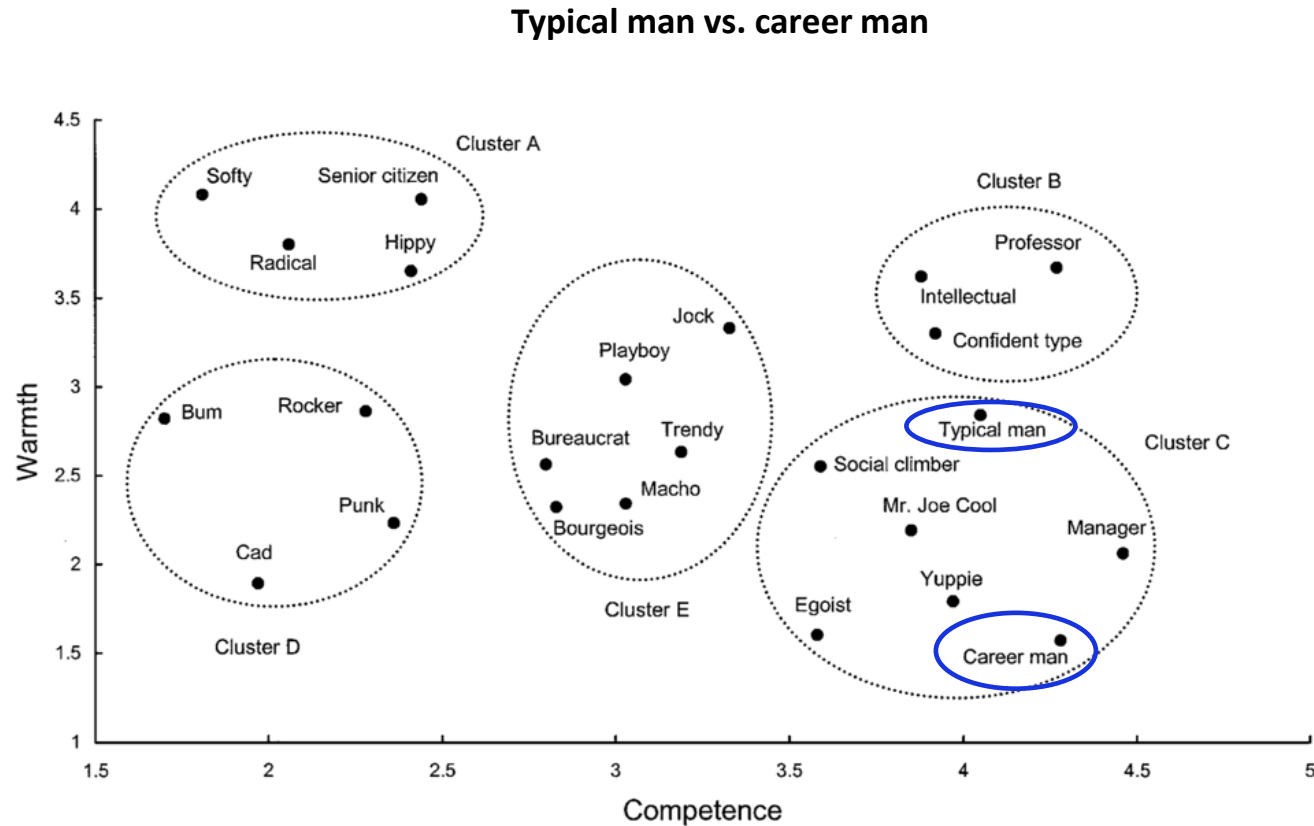
In countries with a high **proportion of female STEM graduates**, **gender equality is lower**.



What are the stereotypes of women and men?

And how do they differ in leadership positions?

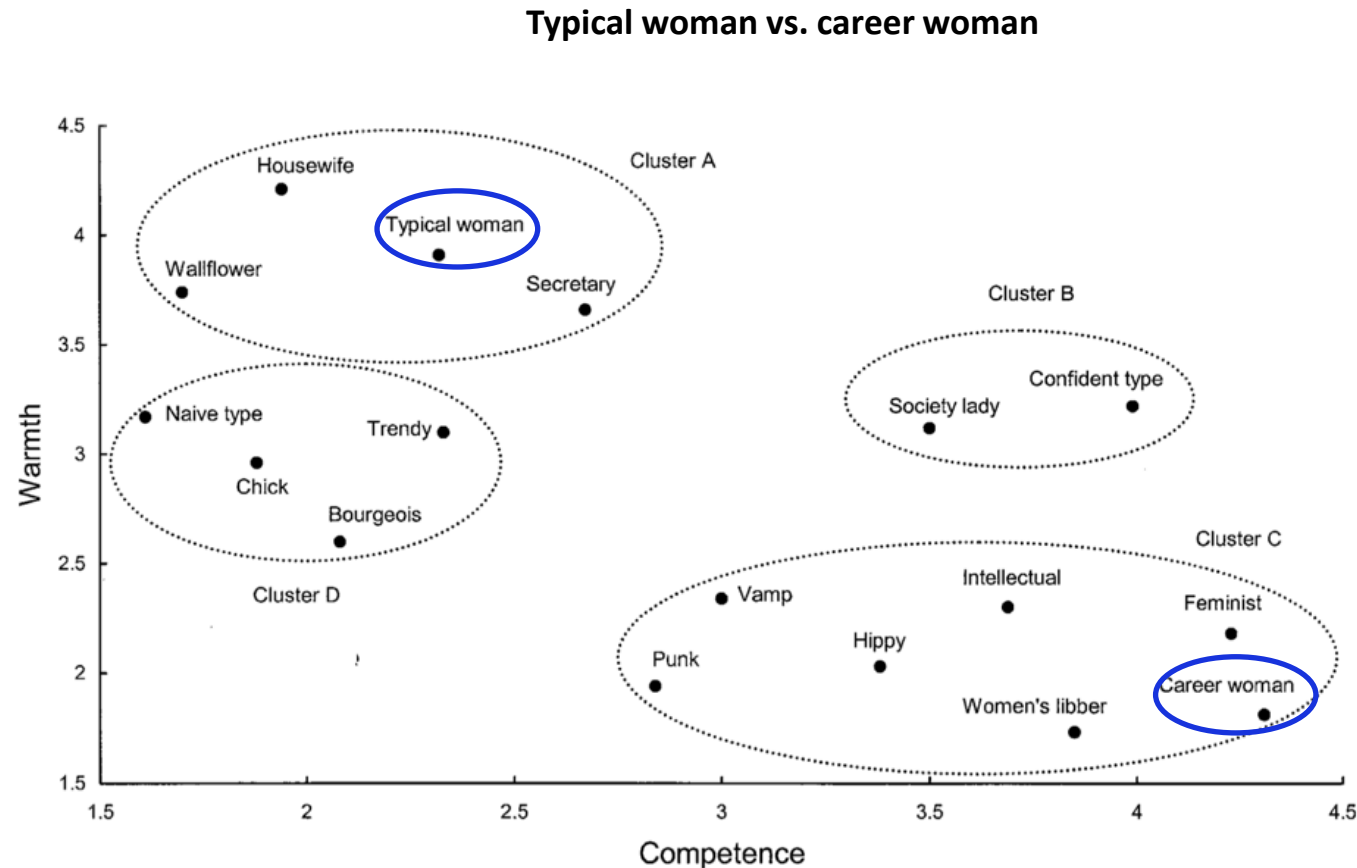
The typical man falls within the cluster of a career man – both are perceived as competent



Random sample: 134 women and 82 men

Source: Eckes, T. (2002). Paternalistic and envious gender stereotypes: Testing predictions from the stereotype content model. *Sex Roles*, 47(3-4), 99–114.

Women are perceived as either competent or warm

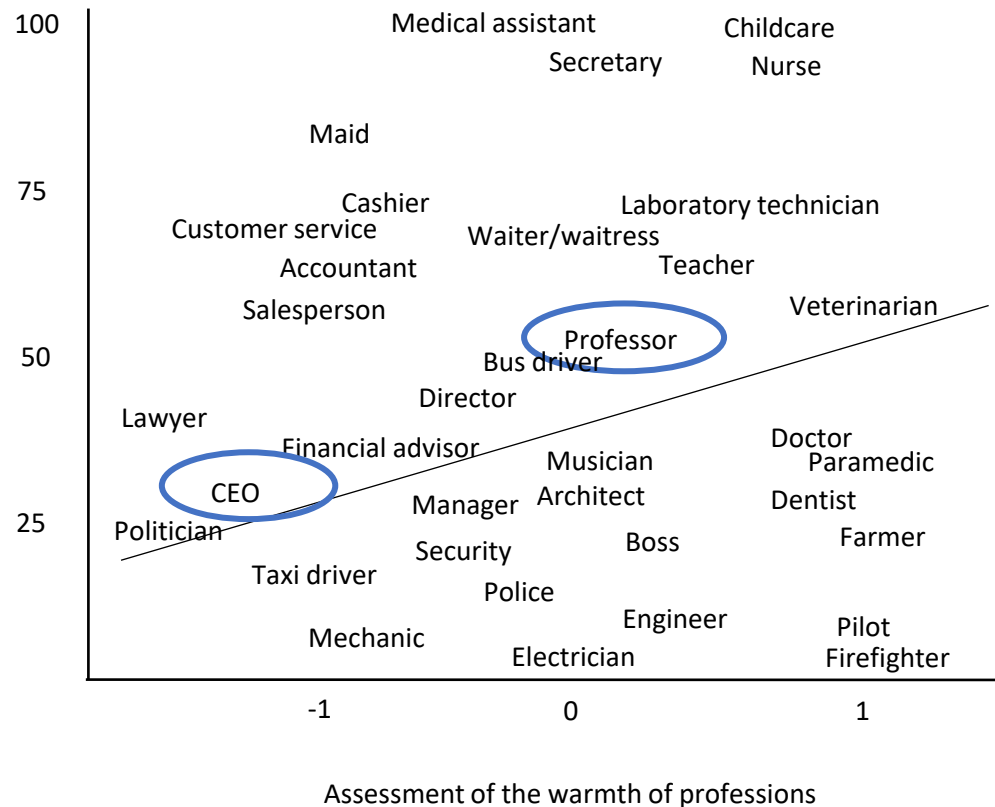


Random sample: 134 women and 82 men

Source: Eckes, T. (2002). Paternalistic and envious gender stereotypes: Testing predictions from the stereotype content model. *Sex Roles*, 47(3-4), 99-114.

Women are more represented in occupations characterized by high warmth and low competence

Proportion of female employees
in occupations (in %)



Random sample: 1,046 respondents (thereof 607 women)

Source: He, J. C., Kang, S. K., Tse, K., & Toh, S. M. (2019). Stereotypes at work: Occupational stereotypes predict race and gender segregation in the workforce. *Journal of Vocational Behavior*, 115, 103318.

Stereotypical descriptions of men and women

Male = “agentic”

- Ambitious
- Analytical
- Assertive
- Challenging
- Competitive
- Decisive
- Direct
- Dominant
- Powerful
- Hierarchical
- Independent
- Individual
- Original
- Leader
- Logical
- Objective
- Confident
- Superior

Female = “communal”

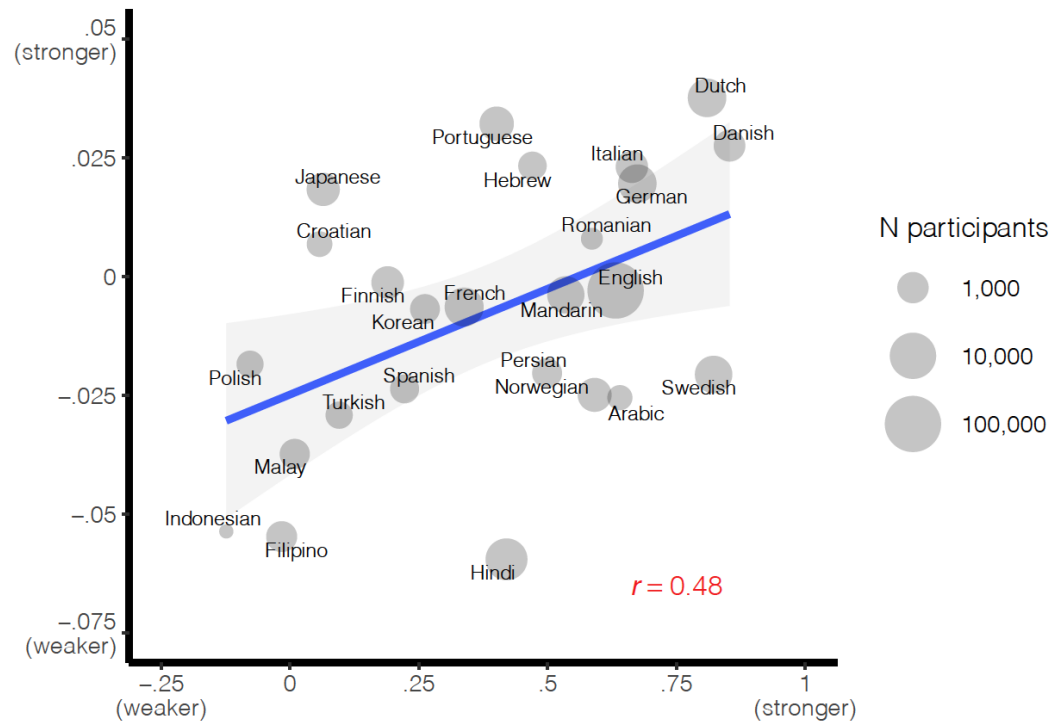
- Happy
- Considerate
- Cooperative
- Emotional
- Empathic
- Friendly
- Helpful
- Honest
- Interpersonal
- Popular
- Loyal
- Modest
- Passionate
- Reliable
- Together
- Trustworthy
- Understanding
- Warm

Men and successful leaders are described in very similar terms.

Women and successful leaders are described in very different terms.

Gender stereotypes are reflected in 25 languages

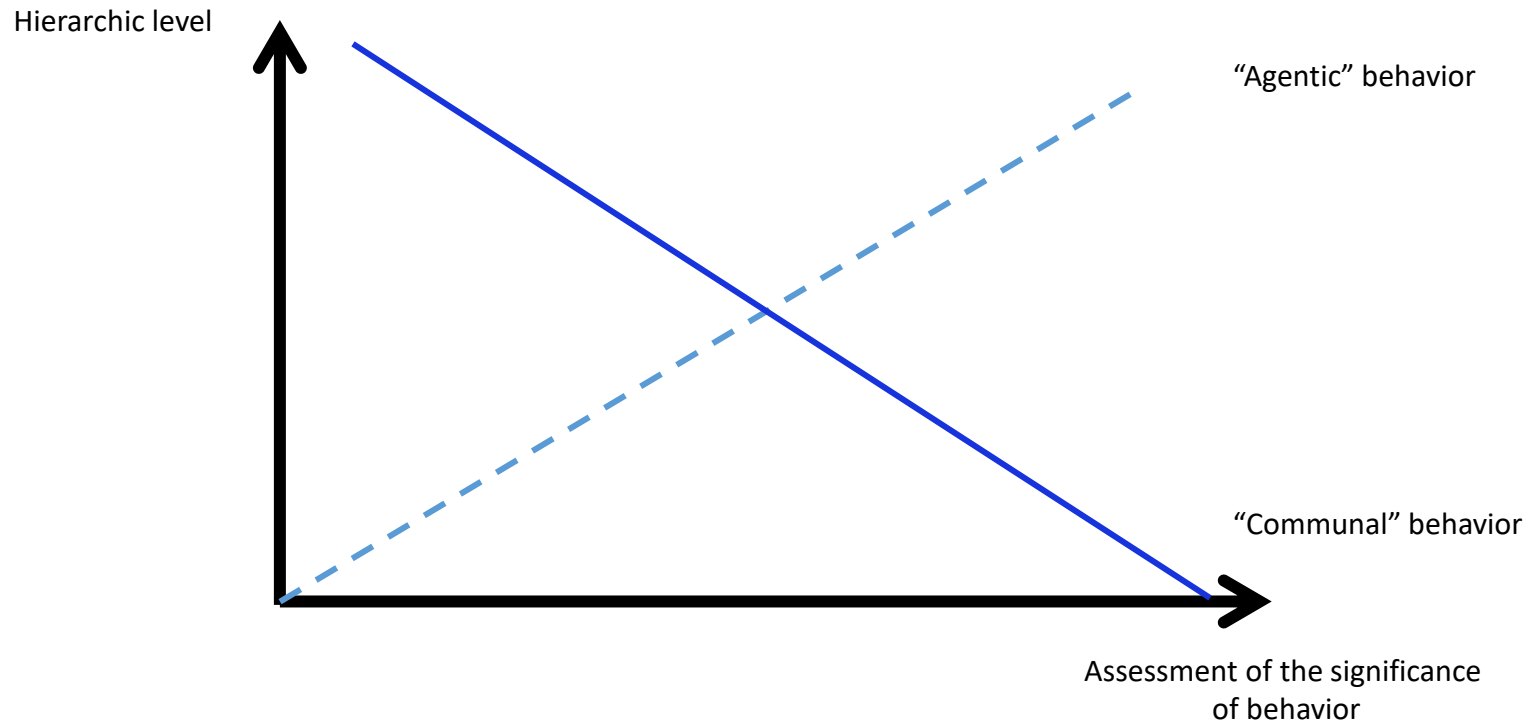
Implicit male-career
association



Unconscious gender associations are predicted by gender associations in languages.

This is also related to the extent to which **languages mark gender in occupation terms** (e.g., “waiter”/“waitress”).

The higher up on the career ladder, the more important “agentic” behavior becomes



Source: Frame, M. C., Roberto, K. J., Schwab, A. E., & Harris, C. T. (2010). What is important on the job? Differences across gender, perspective, and job level. *Journal of Applied Social Psychology*, 40(1), 36–56; Formanowicz, M., Bedynska, S., Cisiak, A., Braun, F., & Sczesny, S. (2013). Side effects of gender-fair language: How feminine job titles influence the evaluation of female applicants. *European Journal of Social Psychology*, 43(1), 62–71; Do, M. H., & Minbashian, A. (2014). A meta-analytic examination of the effects of the agentic and affiliative aspects of extraversion on leadership outcomes. *The Leadership Quarterly*, 25(5), 1040–1053.

When you think of the following terms, does a feminine, masculine, or neutral characteristic spontaneously come to mind?

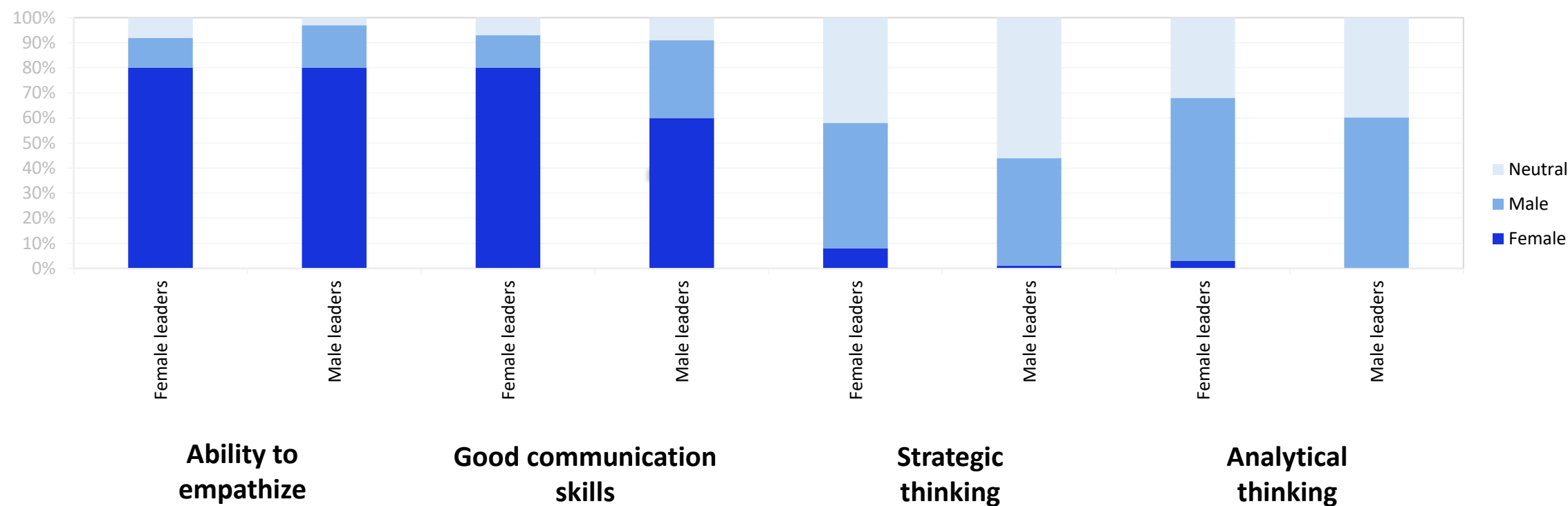
**Ability to
empathize**

**Good communication
skills**

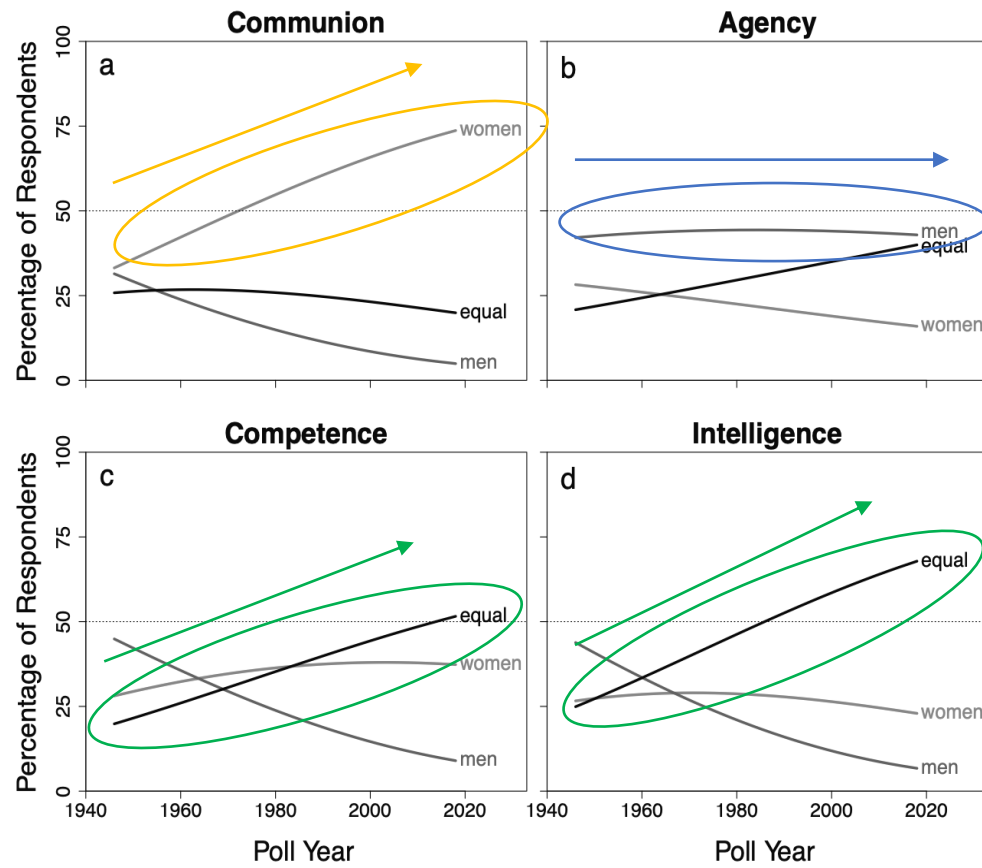
**Strategic
thinking**

**Analytical
thinking**

The difference between the attribution of the characteristics to female and male leaders is small



Gender stereotypes have changed over the last 70 years

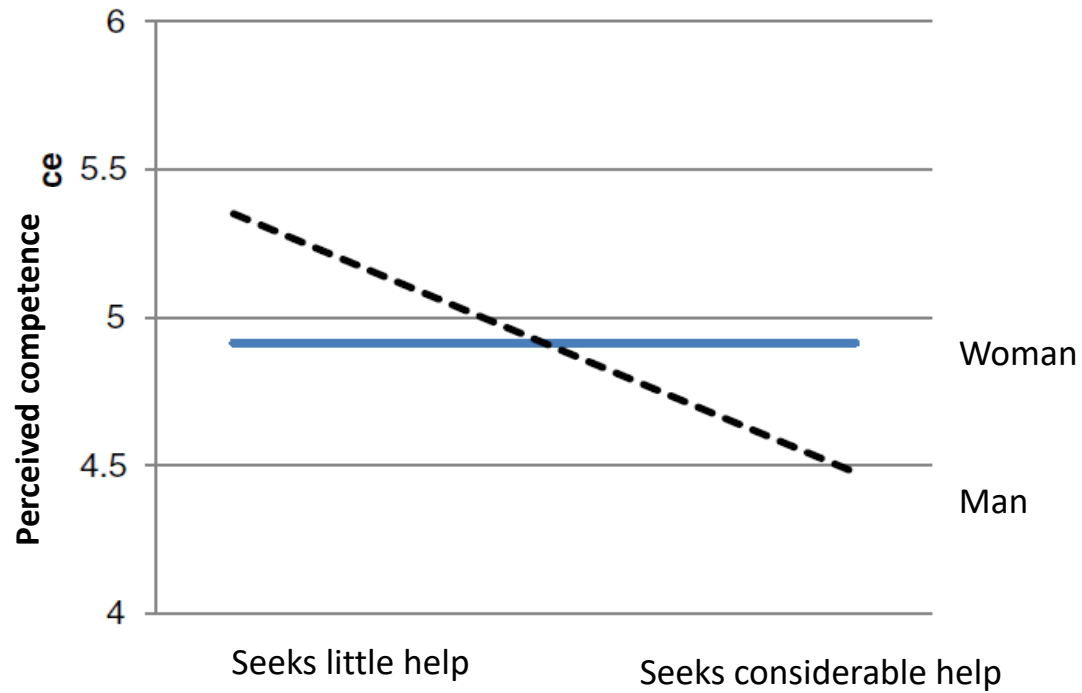


Women are increasingly associated with a sense of community (communion).

The association of agency with men **has not changed**.

Belief in competence and intelligence equality has increased over time.

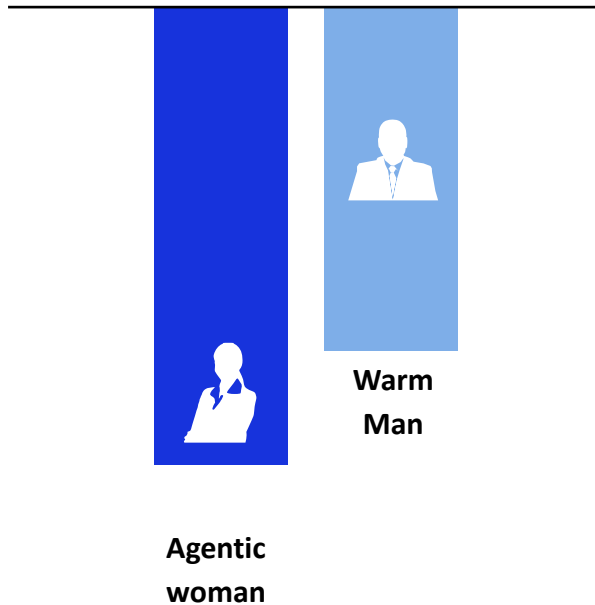
If male leaders ask for help, they are seen as less competent



For **female** leaders, asking for help does **not** have a **negative** effect.

The performance of stereotype-incongruent individuals is rated lower, for both women and men

Perceived performance of a woman described as neutral



The **performance of men** who are perceived as **warm** (emotional = **stereotype-incongruent**) is rated lower than the performance of women who are described neutrally.

The **performance of women** who are perceived as **agentic** (competent = **stereotype-incongruent**) is rated lower than the performance of women who are described neutrally.

The backlash effect is more pronounced for “competent women” than for “warm men.”

Perceived incongruence between gender and a leadership position leads to two biases



Women are perceived less favorably than men as **potential candidates** for leadership positions.



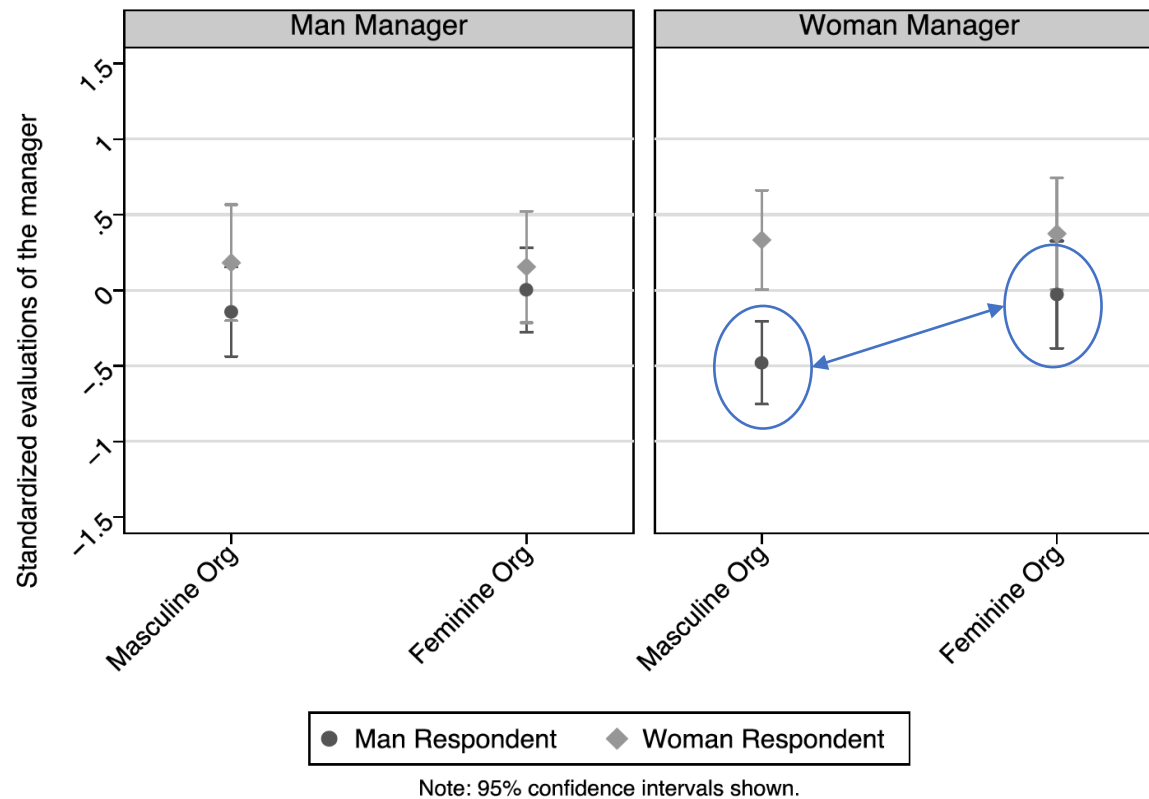
Behavior that meets the **expectations of a leadership position** is viewed less favorably when it is enacted by a woman.

Prohibitive effect:

Women are not supposed to be agentic.

However, agentic behavior is attributed to leaders.

Gender stereotypes are still problematic, especially in male-dominated organizations



Female managers are evaluated **more negatively** in **male-dominated companies** than in female-dominated companies.

Takeaways

Women are perceived as either **competent or warm**.

Gender stereotypes are changing: **Communion** is **attributed to women** more frequently today than it was 70 years ago.

Perceived **incongruence** between gender and a leadership position has **negative consequences**.



Research overview

01 Baseline position

Facts, figures, and data over time
and in an international comparison

02 Causes

Explanations and causes for the proportion
of women in leadership positions from a scientific
perspective

03 Impact

Effects of unconscious bias/stereotypes toward women
in leadership positions

The effects of more women in leadership positions

04 Interventions

What are companies doing to increase the
proportion of women in leadership positions?

(In)effectiveness of diversity interventions

05 New interventions

Impact on the individual

Impact on society

Impact on the company

06 The gold standard

Testing the effectiveness of interventions



What effects do unconscious bias/stereotypes have on women throughout the career ladder?

Stereotypes influence all steps of the career ladder



Written applications

- Selective use of **aptitude tests** for men and women ^a
- Men are seen as **less motivated** to undertake “typically **female**” tasks ^b



Negotiations

- **Competence signals**: Signal that underrepresented groups need help to succeed ^c
- **Modest men** are less liked ^d



Performance evaluations

- The **success** of mixed teams is **attributed to the man** ^e
- Managers tend to give **good evaluations** to avoid trouble or to keep all options open ^f

a) Barbulescu, R. & Bidwell, M. (2013). Do women choose different jobs from men? Mechanisms of application segregation in the market for managerial workers. *Organization Science*, 24(3), 737–756.

b) Allen, J., & Smith, J. L. (2011). The influence of sexuality stereotypes on men’s experience of gender-role incongruence. *Psychology of Men & Masculinity*, 12(1), 77–96.

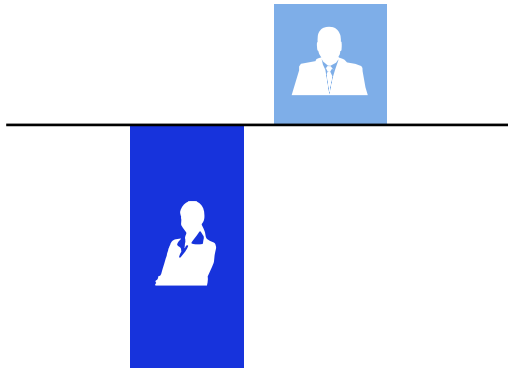
c) Dover, T. L., Kaiser, C. R., & Major, B. (2020). Mixed signals: The unintended effects of diversity initiatives. *Social Issues and Policy Review*, 14(1), 152–181.

d) Moss-Racusin, C. A., Phelan, J. E., & Rudman, L. A. (2010). When men break the gender rules: status incongruity and backlash against modest men. *Psychology of Men & Masculinity*, 11(2), 140–151.

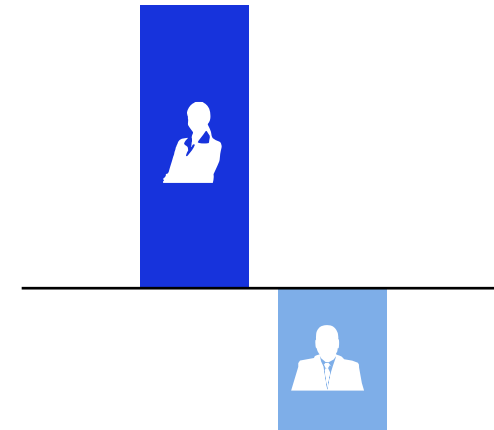
e) Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology*, 89(3), 416–427.

f) Snyder, K. (2014). The abrasiveness trap: High-achieving men and women are described differently in reviews. *Fortune Magazine*, August 26.

Independent women are more successful



Dominant* women are perceived as **socially unpleasant**



Self-reliant** women are perceived **positively**

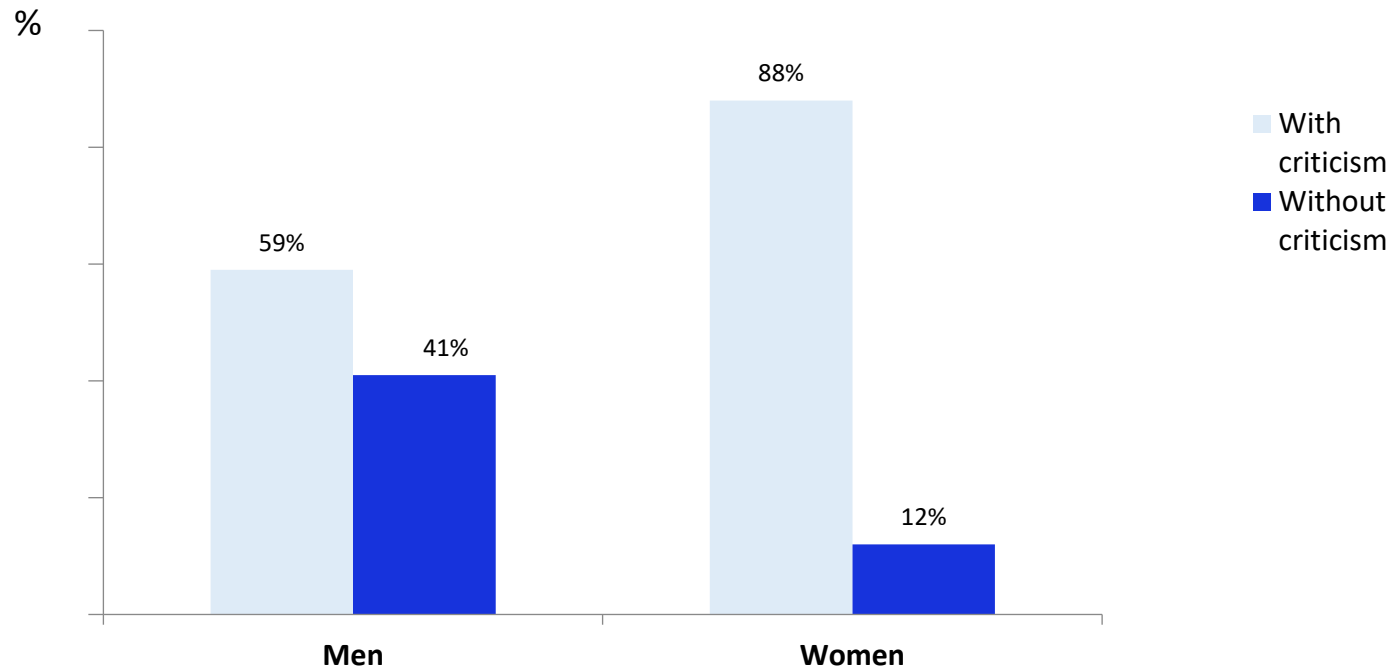
*Dominance was measured with questions such as “I think I would enjoy having authority over other people.”

**Self-reliance was measured with questions such as “I rely on myself most of the time; I rarely rely on others.”

Source: Schaumberg, R., L. & Flynn, F. J. (2017). Self-reliance: A gender perspective on its relationship to communality and leadership evaluation. *Academy of Management Journal*, 60 (5), 1859–1881. <https://doi.org/10.5465/amj.2015.0018>, https://cdn.pixabay.com/photo/2015/04/02/06/45/achievement-703442_1280.jpg

Performance evaluations for women are more likely to contain critical feedback

Number of evaluations with critical statements



59% of the evaluations concerning men contain critical feedback.

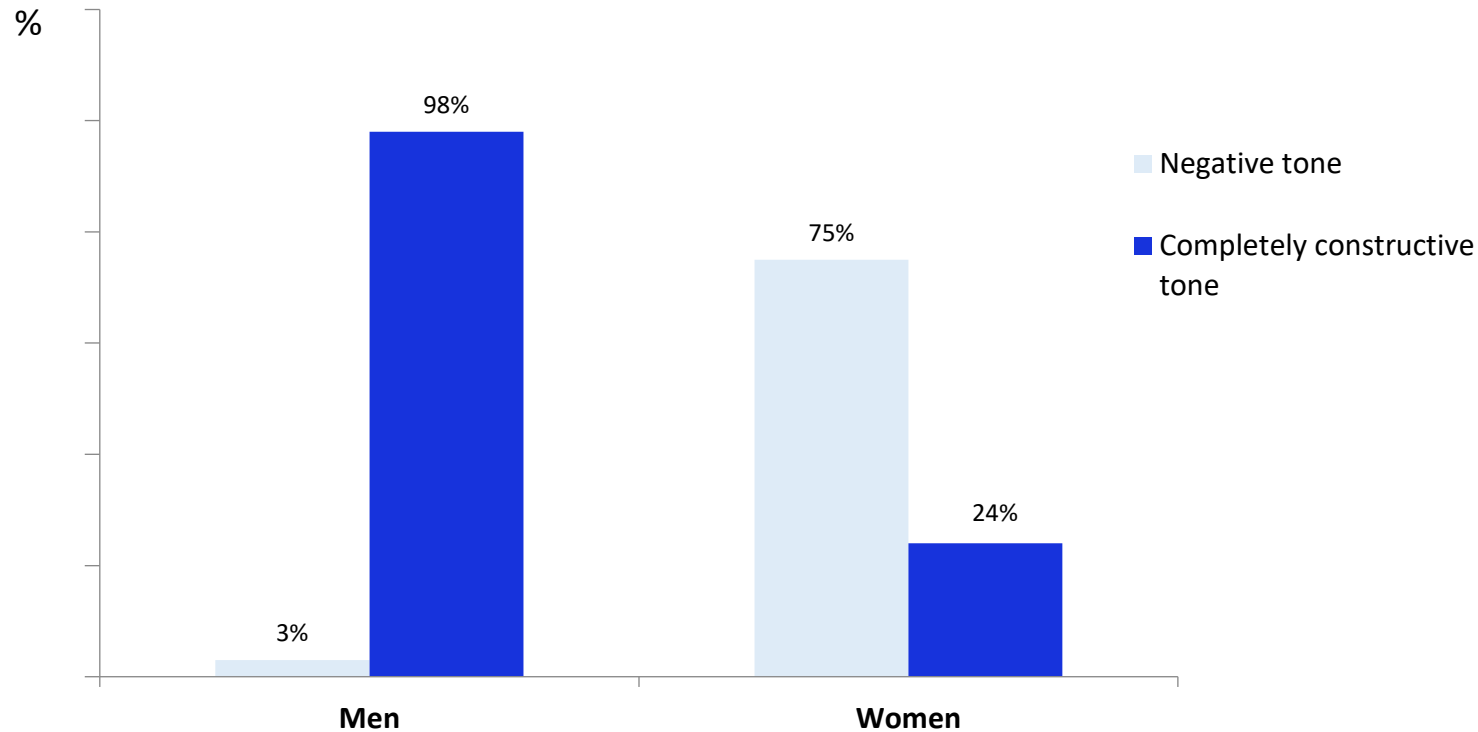
88% of the evaluations concerning women contain critical feedback.

Random sample: 248 evaluations of 180 respondents (105 male and 75 female employees) from 28 different companies

Source: Snyder, K. (2014). The abrasiveness trap: High-achieving men and women are described differently in reviews. *Fortune Magazine*, 26, 08–14.

Men get critical/constructive feedback; women do, too – and they are told to keep quiet

Number of critical evaluations
in a negative tone



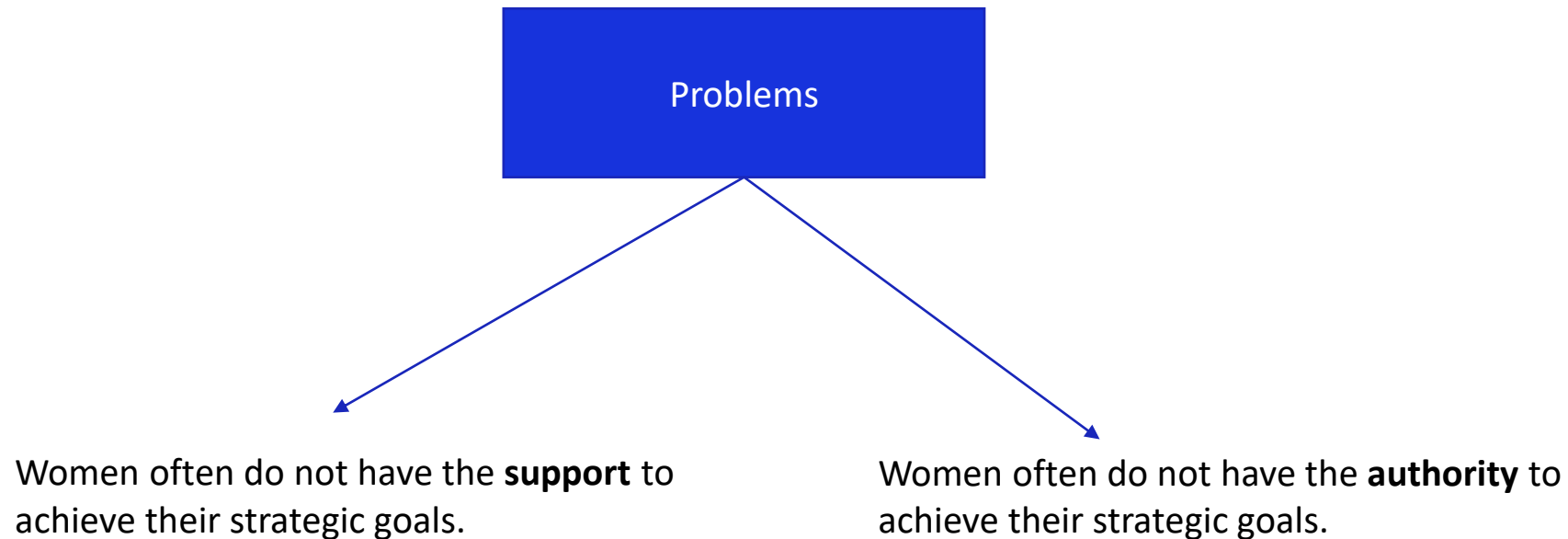
3% of critical feedback to men was in a negative tone.

75% of critical feedback to women was in a negative tone.

Random sample: 248 evaluations of 180 respondents (105 male & 75 female employees) from 28 different companies

Source: Snyder, K. (2014). The abrasiveness trap: High-achieving men and women are described differently in reviews. *Fortune Magazine*, 26, 08–14.

Women are more likely than men to be promoted to high-risk leadership positions

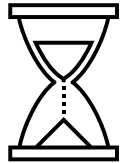


As a result, female leaders often have a shorter tenure than their male peers

Random sample: comparing the career trajectory of all women who have ever served as CEOs of a Fortune 500 company with a comparable sample of male CEOs

Source: Glass, C., & Cook, A. (2016). Leading at the top: Understanding women's challenges above the glass ceiling. *The Leadership Quarterly*, 27(1), 51–63.

Occupational minorities are more likely to be promoted to CEO of underperforming companies than white men

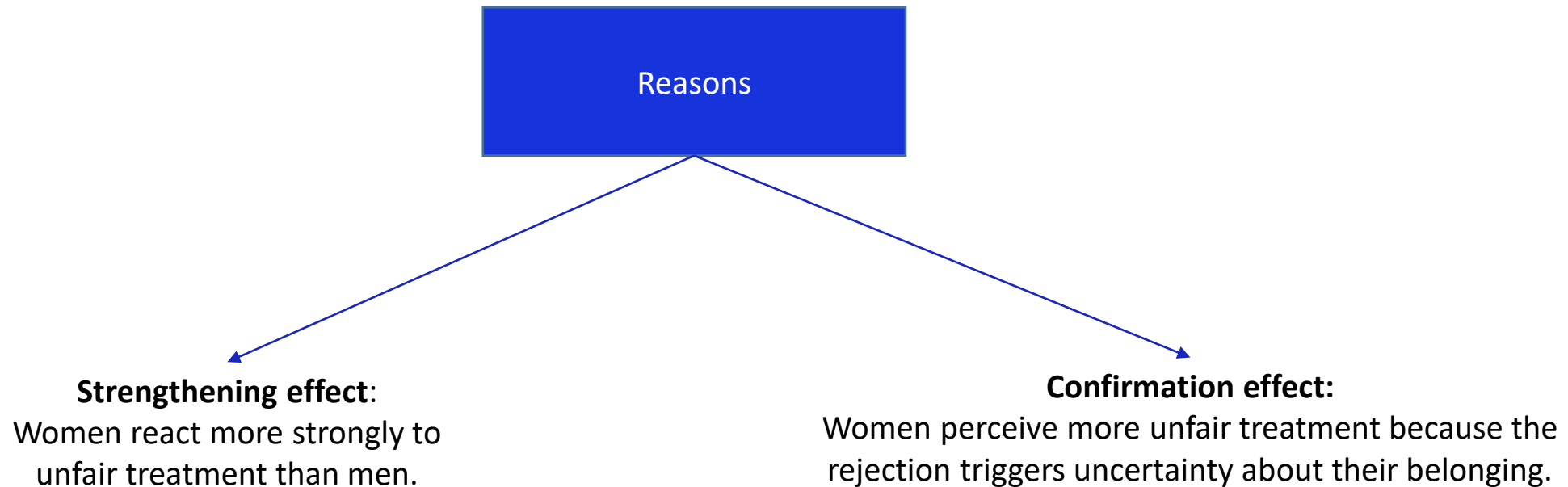


No significant differences in length of CEO tenure between occupational minorities (white women and women and men of color) and white men.

Savior effect: When corporate performance declines during the tenure of occupational minority CEOs, these leaders are replaced by white males.



Women are less likely to consider a potential job with an employer if the employer has rejected them in the past



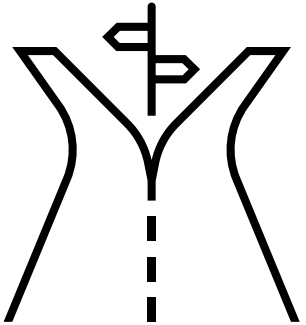
Cumulative disadvantage: More women than men refuse to be considered after rejection.

More children and years of education lower the probability of a woman being a CEO; more employees increase the probability



Need to support women in achieving work-life balance, especially in dealing with family and caregiving responsibilities.

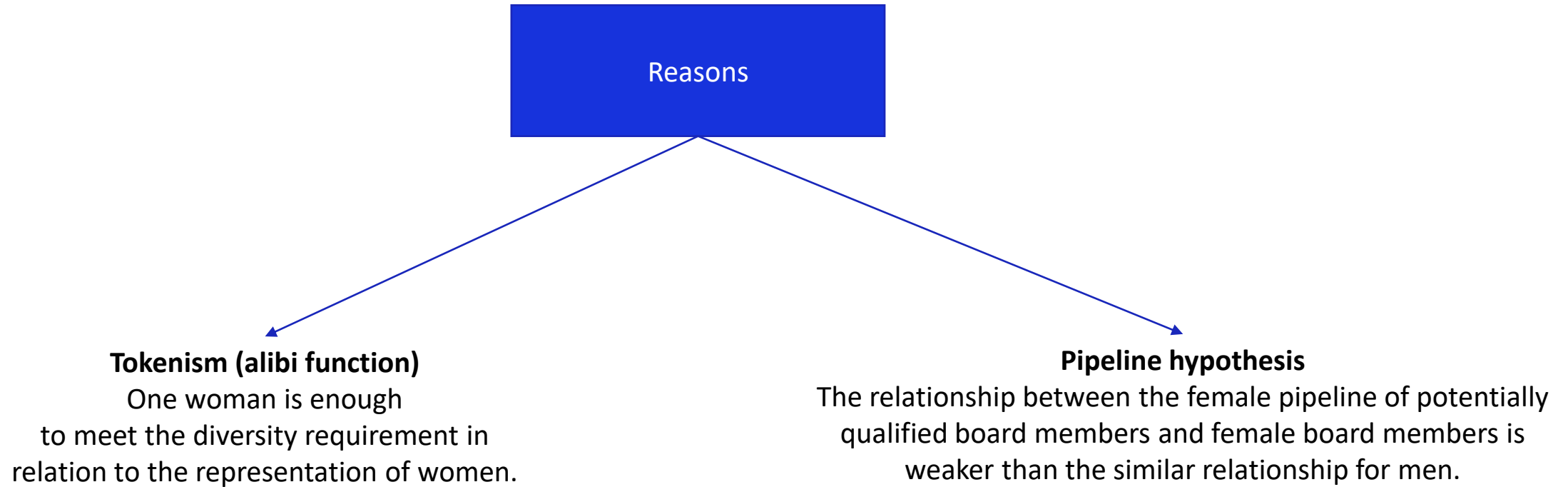
Women get to top positions faster not just because they are better but because they moved through previous positions faster and skipped steps in the job ladder



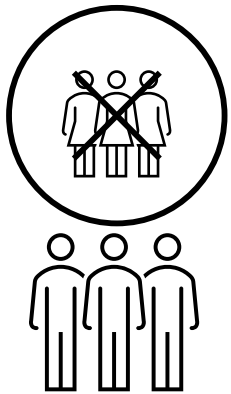
Faster advancement slows down once there is more than one woman in top positions.

➡ Supporting advancement is a business decision that can be driven by public appearances.

The proportion of female board members is less likely to grow if there are already women on the board



Women can be socialized in the (in)formal norms of the organization and gain career advantages from them through greater access to networks and mentors

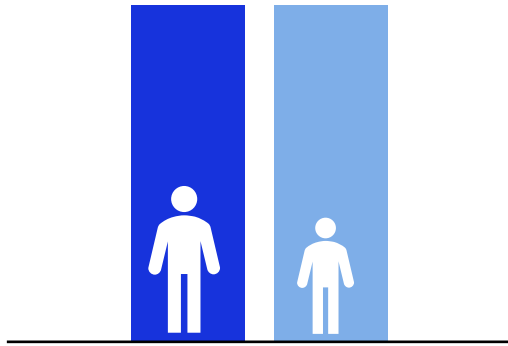


Men as the dominant group want to **maintain their dominance** by excluding women from the informal interactions of mentoring and networking.

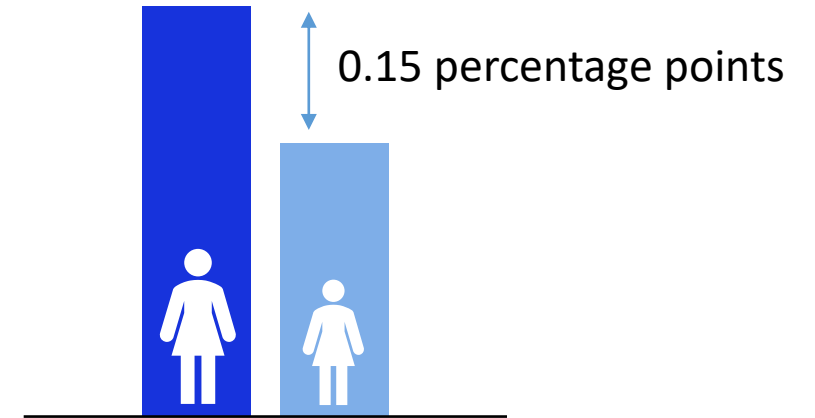
→ Additional barriers for women in a “man’s world”

Female managers do not get global jobs because they lack mentors, role models, sponsorship, or access to appropriate networks – things that are available to their male peers.

Taller women are 0.15 percentage points more likely to be in a leadership position

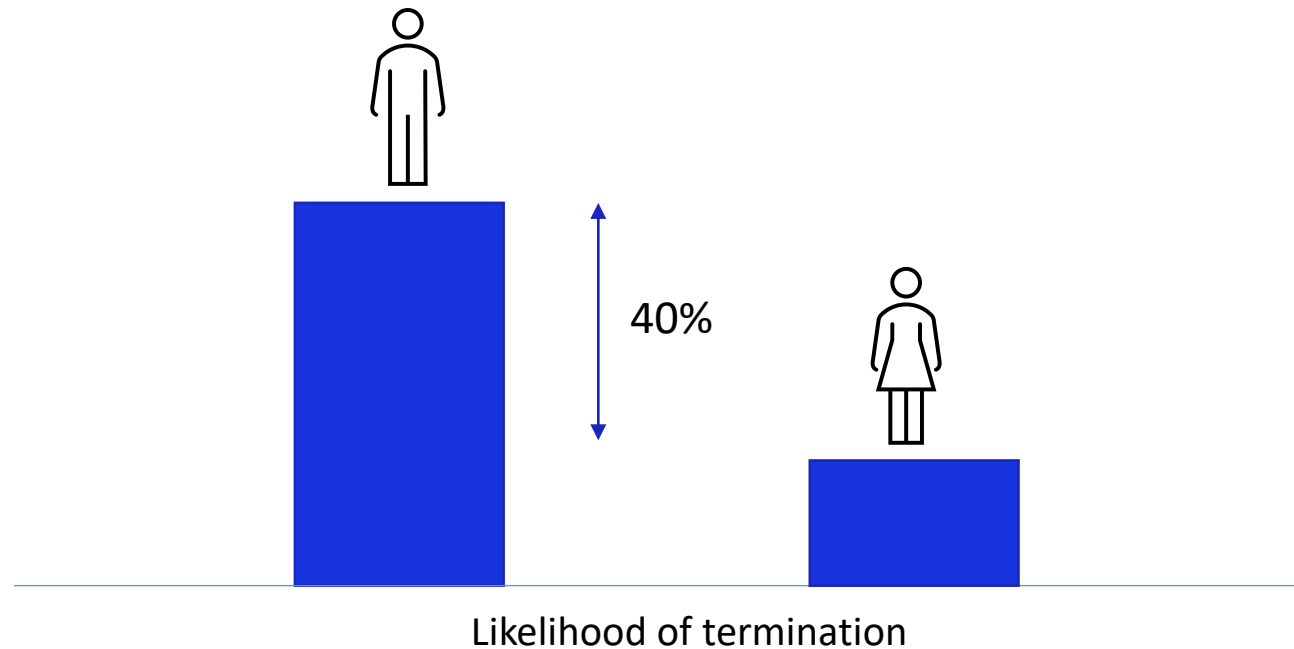


A **taller man** does not have an advantage in obtaining a leadership position if he has the same education and is in the same position as a shorter man.



A **taller woman** has an advantage in obtaining a leadership position if she has the same education and is in the same position as a shorter woman.

Female CEOs are 40% less likely than male CEOs to be terminated following their appointment



Lower turnover rate of female CEOs is related to companies' desire to avoid the negative publicity that would accompany their termination.

The difference between those who make it to the top of their companies and those who don't is political skill

STAGE I: POLITICAL NAIVETÉ

- ❖ Value of directness
- ❖ Developing an awareness of the corporate culture

STAGE III: REFINING A STYLE

- ❖ Importance of delegation and team building
- ❖ Overcoming obstacles through perseverance
- ❖ Being both tough and direct
- ❖ Using personal opportunities to exert influence

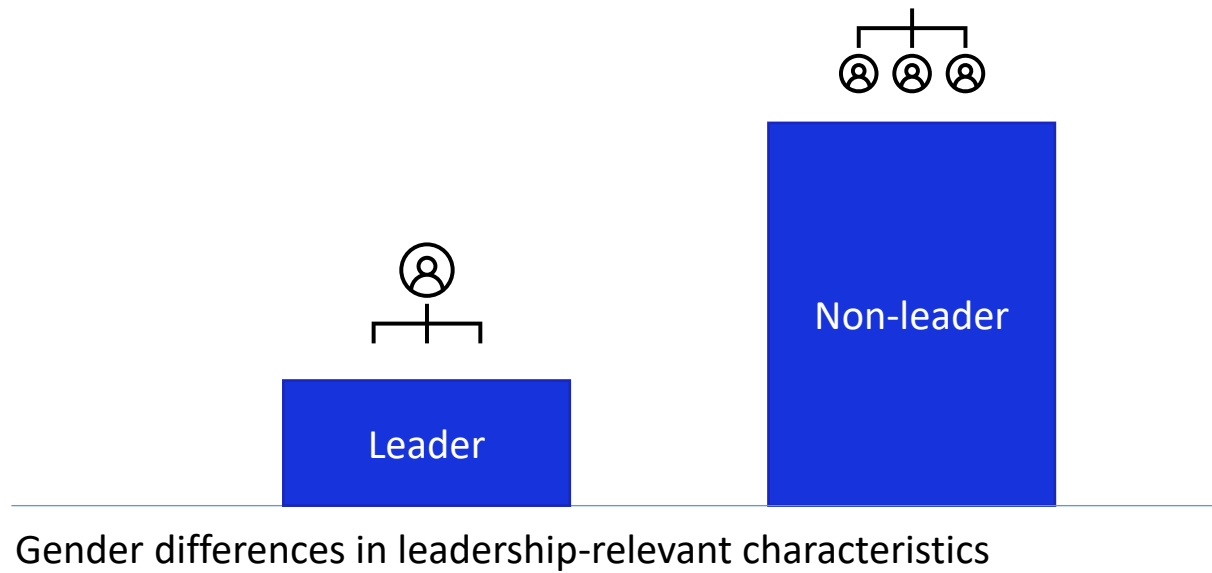
STAGE II: BUILDING CREDIBILITY

- ❖ Standing up to accepted stereotypes
- ❖ Working within the system
- ❖ Taking business risks
- ❖ Building alliances and networks

STAGE IV: SHOULDERING RESPONSIBILITY

- ❖ Being the only woman at the top
- ❖ Mentoring others
- ❖ Managing life balance

Women and men have similar leadership characteristics, such as assertiveness, strategic thinking, and decisiveness



Gender differences in traits relevant to leadership emergence (i.e., conscientiousness, emotional stability, extraversion) were smaller among executives than non-executives.

Random sample: 577 European executives (434 male and 143 female) and 52,139 non-executives (34,496 male and 17,643 female)

Source: Wille, B., Wiernik, B. M., Vergauwe, J., Vrijdags, A., & Trbovic, N. (2018). Personality characteristics of male and female executives: Distinct pathways to success?. *Journal of Vocational Behavior*, 106, 220–235.

Takeaways

Performance evaluations for women are more likely to contain **critical feedback**.

Women reach **top positions faster** and are **less likely** to be **dismissed**.

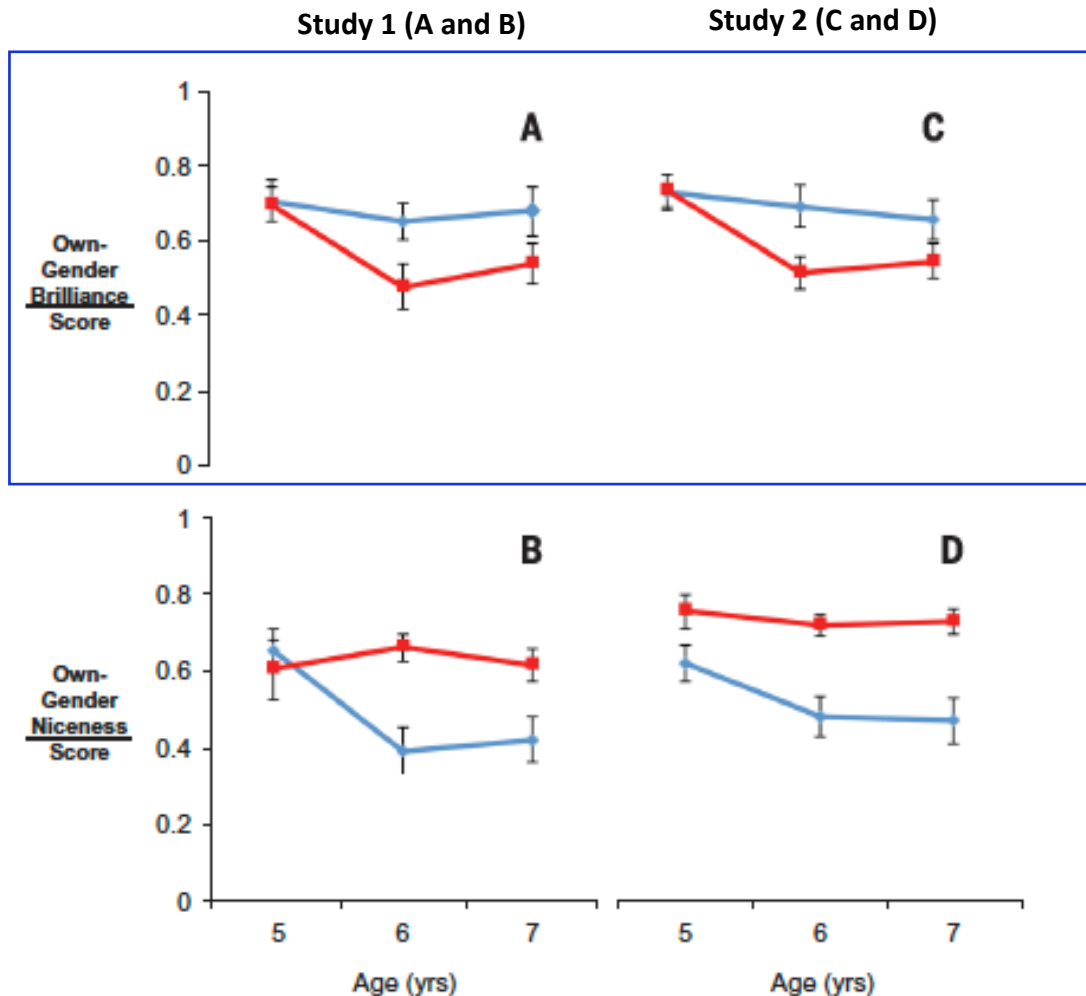
Political skill is crucial on the way to the top.

Women and men have **greater similarities in leadership-relevant characteristics** than differences (= gender similarities hypothesis).



What effects do unconscious bias/stereotypes have on diversity throughout the career ladder?

Girls are less likely than boys to believe that members of their gender are “really, really smart”



Stereotype values of boys (blue) and girls (red), by age group (5- versus 6- versus 7-year-olds).

Gendered notions of brilliance (and niceness) are acquired early and directly affect children's interests.

Random sample: study 1: 96 children; study 2: 144 children

Source: Bian, L., Leslie, S. J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, 355(6323), 389–391.

Women are underrepresented in fields where innate talent is considered the main requirement for success

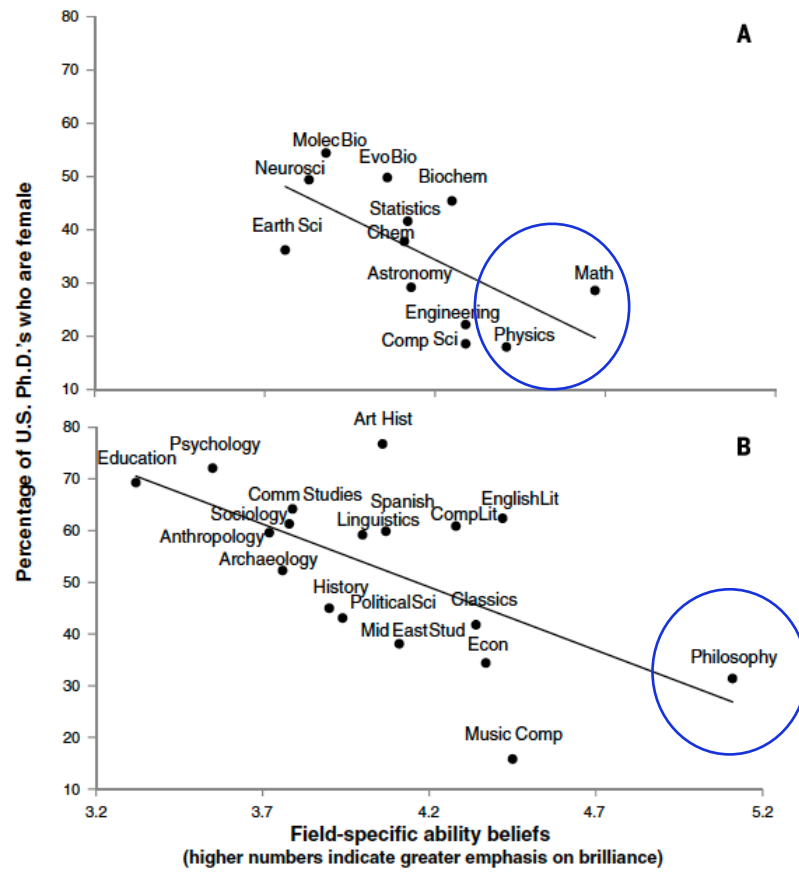


Fig. 1. Field-specific ability beliefs and the percentage of female 2011 U.S. Ph.D.'s in (A) STEM and (B) Social Science and Humanities.

Women are subject to the stereotype that they are **perceived as not being talented**.

Male-dominated fields

Random sample: survey of 1,820 faculty, postdocs, and doctoral candidates from 30 disciplines (12 STEM, 18 social sciences/humanities) at geographically diverse, top-ranked public and private universities in the USA

Source: Leslie, S. J., Cimpian, A., Meyer, M., & Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262–265.

African Americans – just like women – are perceived as less talented

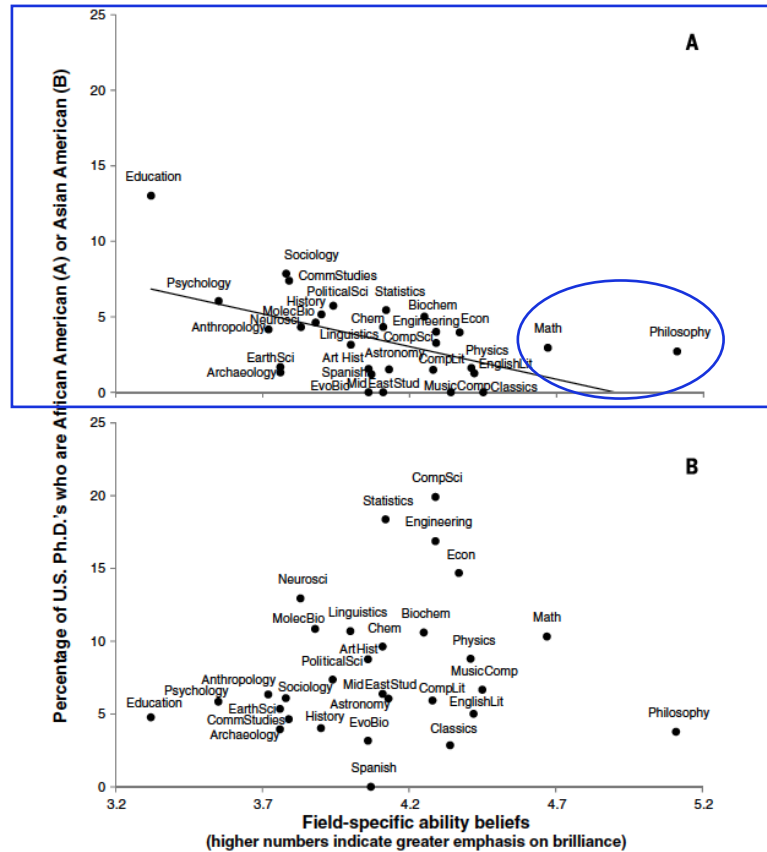


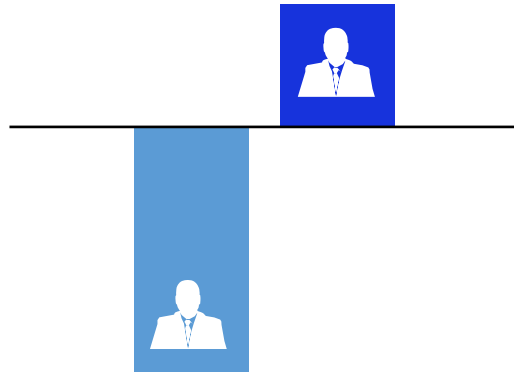
Fig. 2. Field-specific ability beliefs and the percentage of 2011 U.S. Ph.D.'s who are (A) African American and (B) Asian American.

African Americans are subject to the same stereotype as women that they are **perceived as not talented** and are underrepresented like women in the same fields.

Asian Americans are **not** associated with the same stereotype.

Men who express a gender-non-congruent trait are experienced as socially unpleasant

Agreeable* men are perceived to be **more socially unpleasant** than dominant** men



Dominant women, a gender-non-congruent trait, were **not perceived more negatively** than agreeable women.

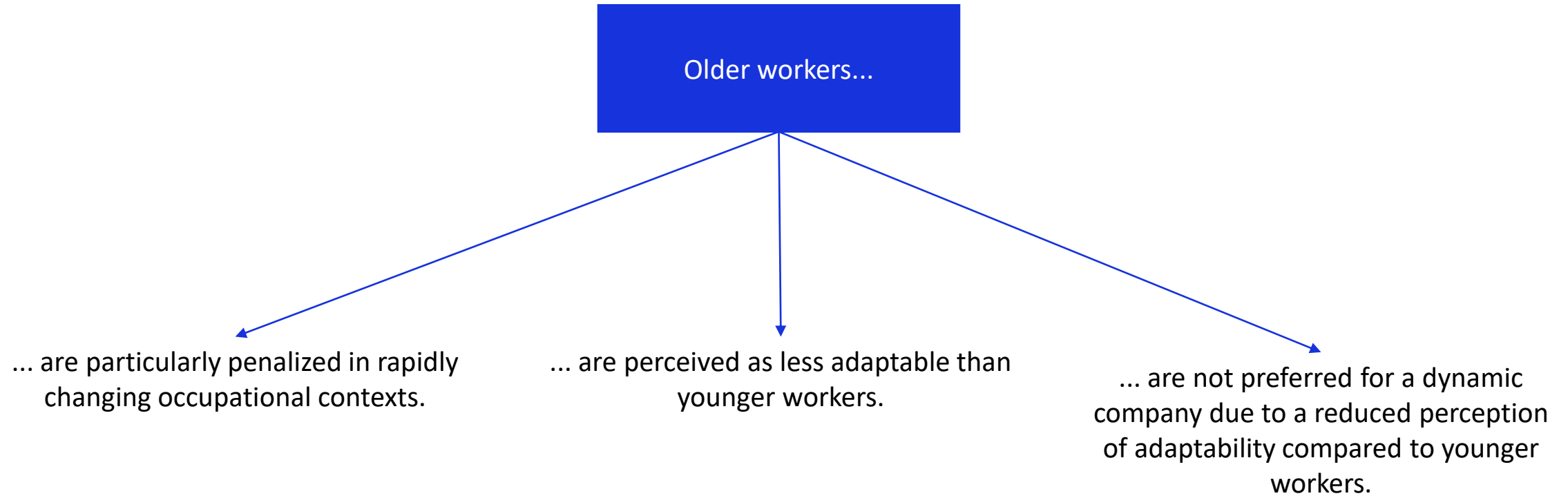
*Agreeableness was measured with questions such as “Some people say they have never seen me angry.”

**Dominance was measured with questions such as “When I am in a group of people, I am often the one who speaks on behalf of the group.”

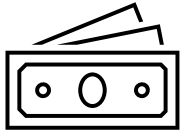
Random sample: 375 employees

Source: Biron, M., De Reuver, R., & Toker, S. (2016). All employees are equal, but some are more equal than others: dominance, agreeableness, and status inconsistency among men and women. *European Journal of Work and Organizational Psychology*, 25(3), 430–446.

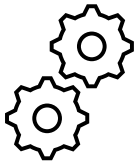
Older workers are penalized in hiring decisions because of their perceived adaptability



Minority supervisors are given less challenging assignments and are more vulnerable to layoffs than white supervisors



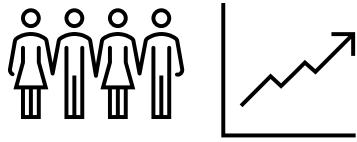
Racial pay inequality among supervisors is as great as it is among non-supervisors.



“Bottom-up ascription”:

Non-supervisory minority employees with a minority supervisor **earn less** despite being **more committed to the company**.

Cognitive diversity in top management teams correlates with company performance

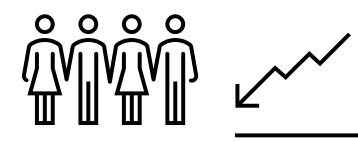


Successful top management teams:

High interpretative ambiguity* among team members

High company performance (market share, profit)

Reduction in interpretative ambiguity



Unsuccessful top management teams:

Low interpretative ambiguity* among team members

Low company performance (market share, profit)

Increase in interpretative ambiguity

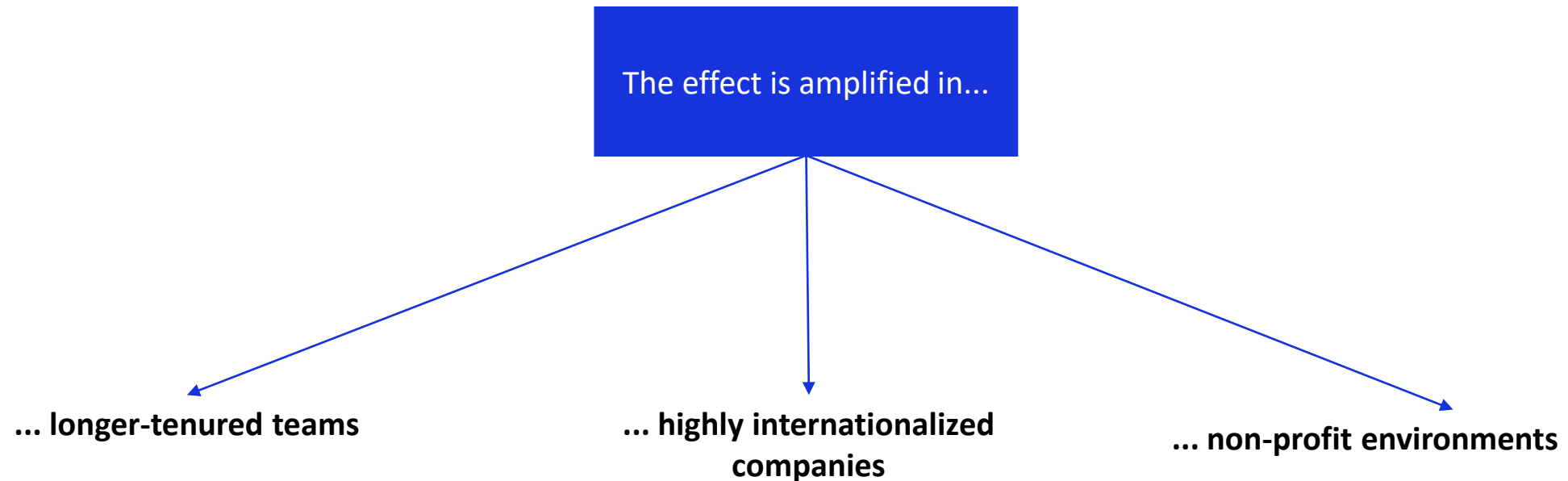
Interpretative ambiguity* turns out to be the most significant cognitive diversity variable in distinguishing between successful and unsuccessful top management teams

*Interpretive ambiguity: lack of clarity within the team about the degree to which members share responsibilities for the success or failure of the organization

Random sample: 35 simulated companies with 159 managers

Source: Kilduff, M., Angelmar, R., & Mehra, A. (2000). Top management-team diversity and firm performance: Examining the role of cognitions. *Organization Science*, 11(1), 21–34.

Nationality diversity in the top management team (TMT) correlates positively with company performance

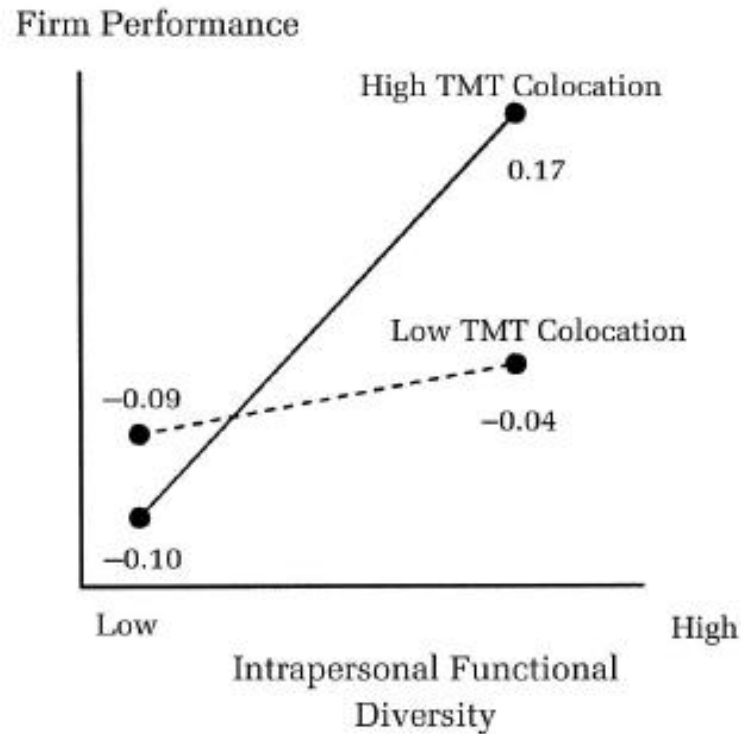


The consequences of top management team diversity depend on the company and industry conditions under which strategic decisions are made.

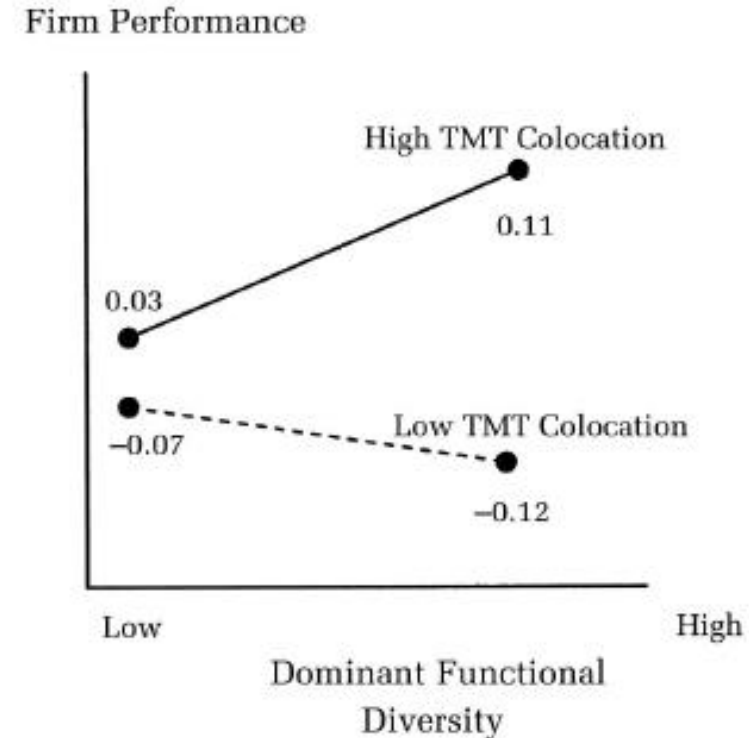
Random sample: secondary data from 146 Swiss companies, study period from 2001 to 2008

Source: Nielsen, B. B., & Nielsen, S. (2013). Top management team nationality diversity and firm performance: A multilevel study. *Strategic Management Journal*, 34(3), 373–382.

The greater the collocation of the top management team (TMT), the more positive the link between functional background diversity and company performance is



Intrapersonal functional background diversity:
Team members have already performed several functional activities and thus embody functional diversity.

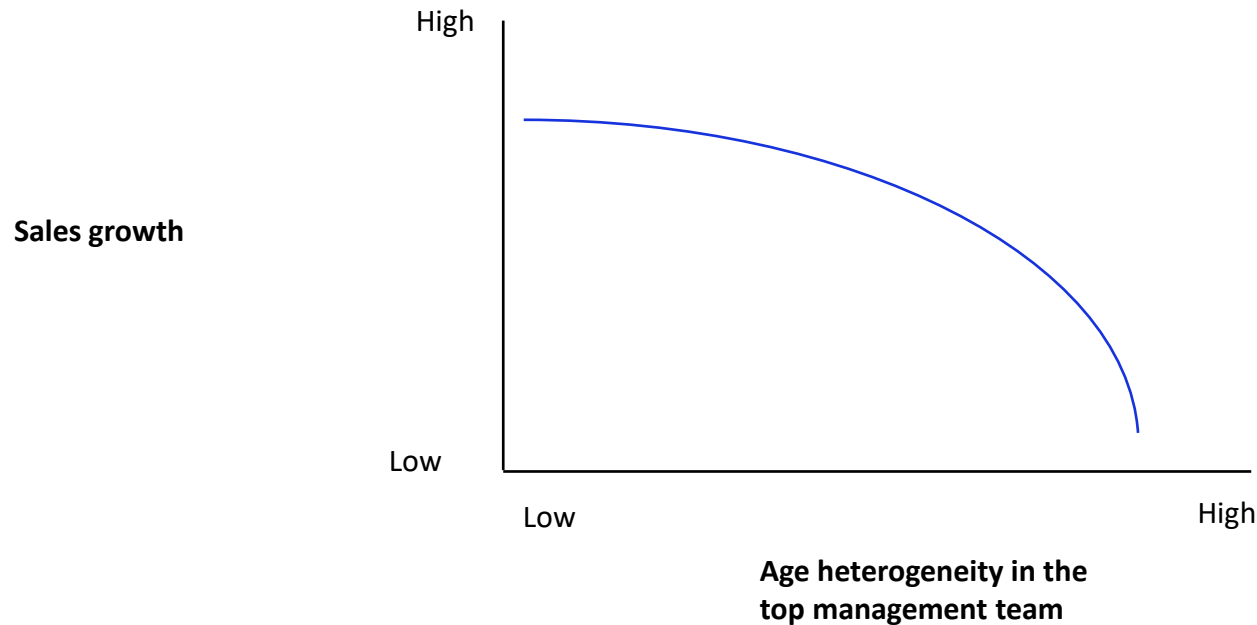


Dominant functional background diversity:
Team members differed in the role they have worked in for most of their career.

Random sample: 207 US companies from 11 industries.

Source: Cannella Jr., A. A., Park, J. H., & Lee, H. U. (2008). Top management team functional background diversity and firm performance: Examining the roles of team member collocation and environmental uncertainty. *Academy of Management Journal*, 51(4), 768–784.

Curvilinear relationship between age heterogeneity in teams and sales growth in companies



**Low and medium age heterogeneity in top management teams is positively correlated with sales growth;
high age heterogeneity is negatively associated with sales growth.**

Takeaways

Gender-specific notions of brilliance and niceness are acquired already in early **childhood**.

Women and African Americans are **perceived** as **less talented** and therefore underrepresented in fields where innate talent is considered the main requirement for success.

Minority supervisors and non-supervisors **earn less**.

Cognitive, national, and (low and medium) age **diversity in the top management team** is **positively** associated with **company performance**.



How does external and self-assessment differ between men and women?

In external assessments, women score better in leadership effectiveness; in self-assessments, men score better



Men and women do **not** differ
in perceived leadership
effectiveness **on the whole**.



If only **external assessments** are
considered, women's leadership
effectiveness is rated significantly
higher than that of men.



If only **self-assessments** are
considered, men rate their
leadership as significantly more
effective than women.

Is there a correlation between more women executives and company performance?

Female executive board members have positive effects on company value and negative effects on share value

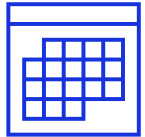
Positive effects of the proportion of women on the executive or supervisory board on...

- ... the **financial performance** (financial key performance indicators) of the company, especially in countries with extensive shareholder protection (e.g., USA; Post & Byron, 2015).
- ... **company value**, especially in countries with high gender equity (e.g., Norway; Pletzer et al., 2015).
- ... **social and ethical aspects** (working conditions, sustainability) of corporate behavior (Kirsch, 2018)
- **Gender diversity** below board level (Kirsch, 2018)

Mixed effects of the proportion of women on the executive or supervisory board on...

- ... the **financial performance** (financial key performance indicators) of the company due to a lack of correlation/causality (Kirsch, 2018).
- ... **organizational company performance** (Hoobler et al., 2018).
- HOWEVER: Female executive board members have a **negative impact on share value** and **no impact on profit** (Dobbin & Jung, 2011) → Institutional investor bias.

Women who break the glass ceiling often find themselves in precarious leadership positions (glass cliff)



The glass cliff effect is **sector-specific** (management, politics, education, sports, non-profits).



Small glass cliff effect in **leadership aptitude assessments**.



Women are more likely to be selected for **leadership positions** in **crises** than men.



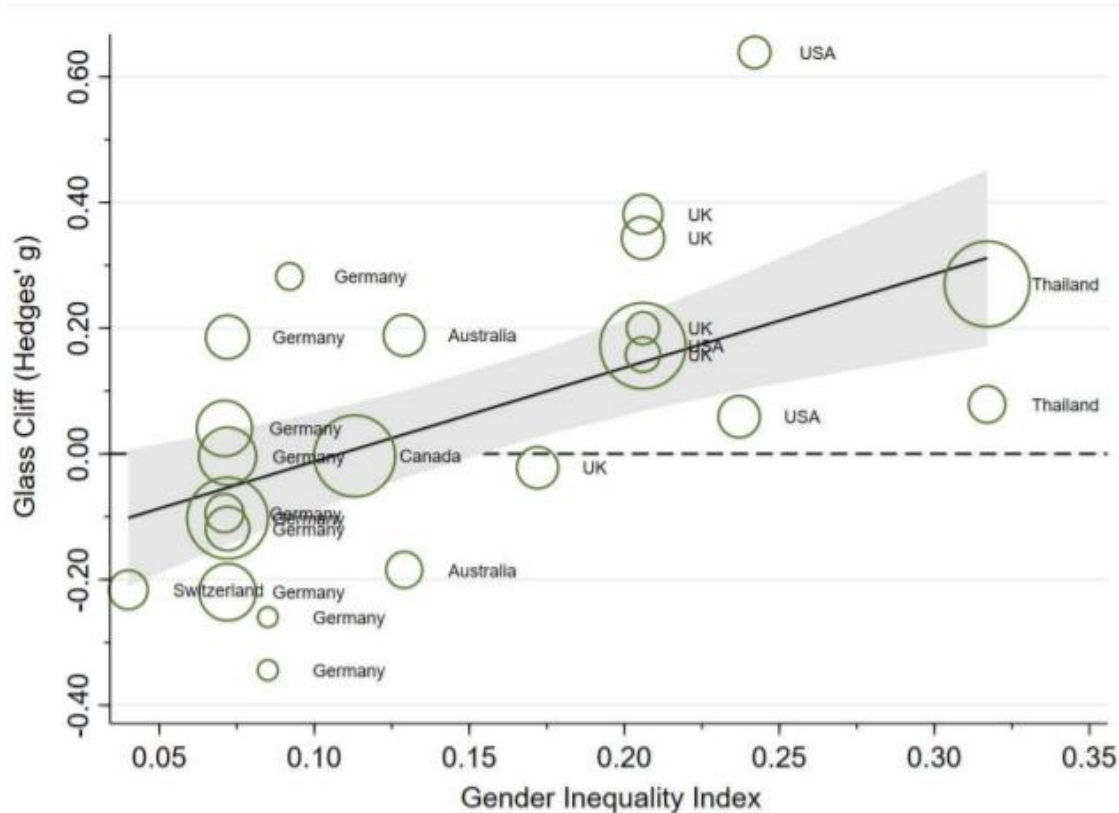
The glass cliff effect also affects **other minorities** based on race and ethnicity.

Definition of glass cliff: women in leadership positions that are more risky or precarious compared to their male counterparts

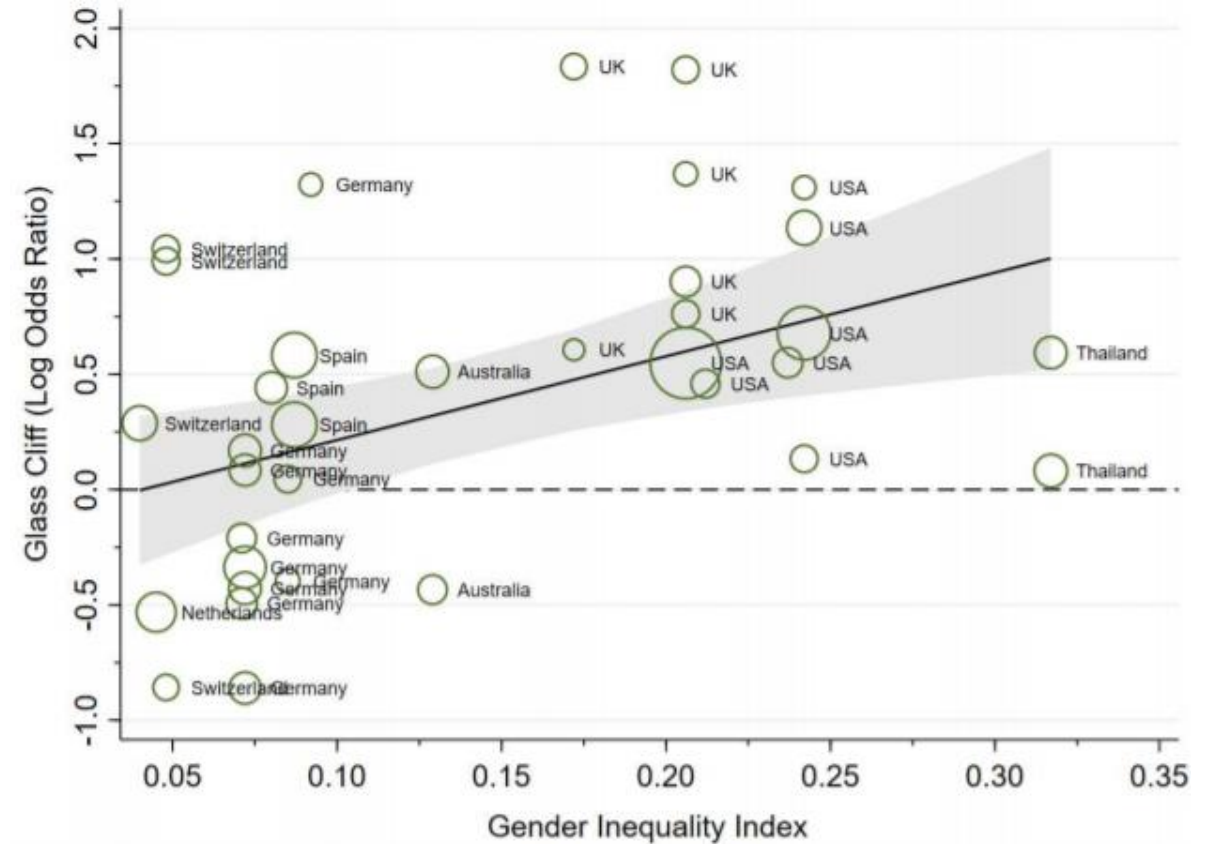
Random sample: 3 meta-analyses

Source: Morgenroth, T., Kirby, T. A., Ryan, M. K., & Sudkämper, A. (2020). The who, when, and why of the glass cliff phenomenon: A meta-analysis of appointments to precarious leadership positions. *Psychological Bulletin*, 146(9), 797.

The glass cliff effect is stronger in countries with higher gender inequality



Glass cliff effect on **leadership aptitude assessments** and the country index for gender inequality



Glass cliff effect in the **selection of leaders** and country index for gender inequality

Takeaways

Academic studies show **mixed results** on the impact of more women in leadership positions on company performance.

Women who **break the glass ceiling** often find themselves in **precarious leadership positions**.

This effect is stronger in **countries with high gender inequality**.



What effects do quotas have?

The quota has brought about change in Norway, not in Germany



Norway, 2008: 40% quota in group executive boards introduced

Companies have nurtured talented top female leaders locally rather than “importing” them from other countries.



Germany, 2016: gender quota of 30% women on German supervisory boards

Despite the signal effect, there has been no direct improvement in entry-level salaries and promotion prospects.

Quotas can have a positive impact on the proportion of women and a negative impact on company performance



Mandatory gender quotas are able to bring about **change** and increase the proportion of women
→ Encourage women to take on leadership positions as board chairs and CEOs
(Wang & Kelan, 2013; Yang et al., 2019)



External pressure leads to an increase in the number of **female board members**
HOWEVER: Mostly by adding board seats, not by replacing incumbent male board members
(Knippen, Wei & Qi, 2019)



The gender quota in Norway **negatively** affects corporate performance and entrepreneurial risk
(Yang et al., 2019)

Partly random selection of leaders can be an effective alternative to controversial quotas



Pure merit selection



Partly random selection procedures
(aleatory focal = lottery used after targeted preselection)

Compared to pure merit selection, women were significantly more likely to participate in a competitive selection with a random component and were thus more likely to attain a leadership position.

Takeaways

Despite the **signal effect** of a quota, there has been **no direct improvement** in **entry-level salaries and promotion prospects** in Germany.

Partly random selection of leaders can mitigate the disadvantages of both competitive selection and pure lotteries.



What other effects do women in boardrooms have?

Research shows that role models are effective

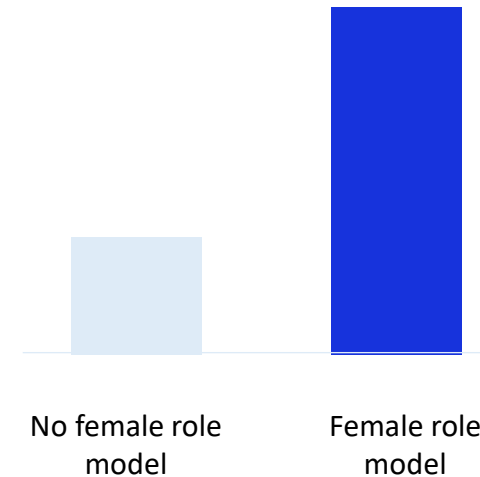
Role model function

Study participants who are shown a female role model...



Quality of speeches

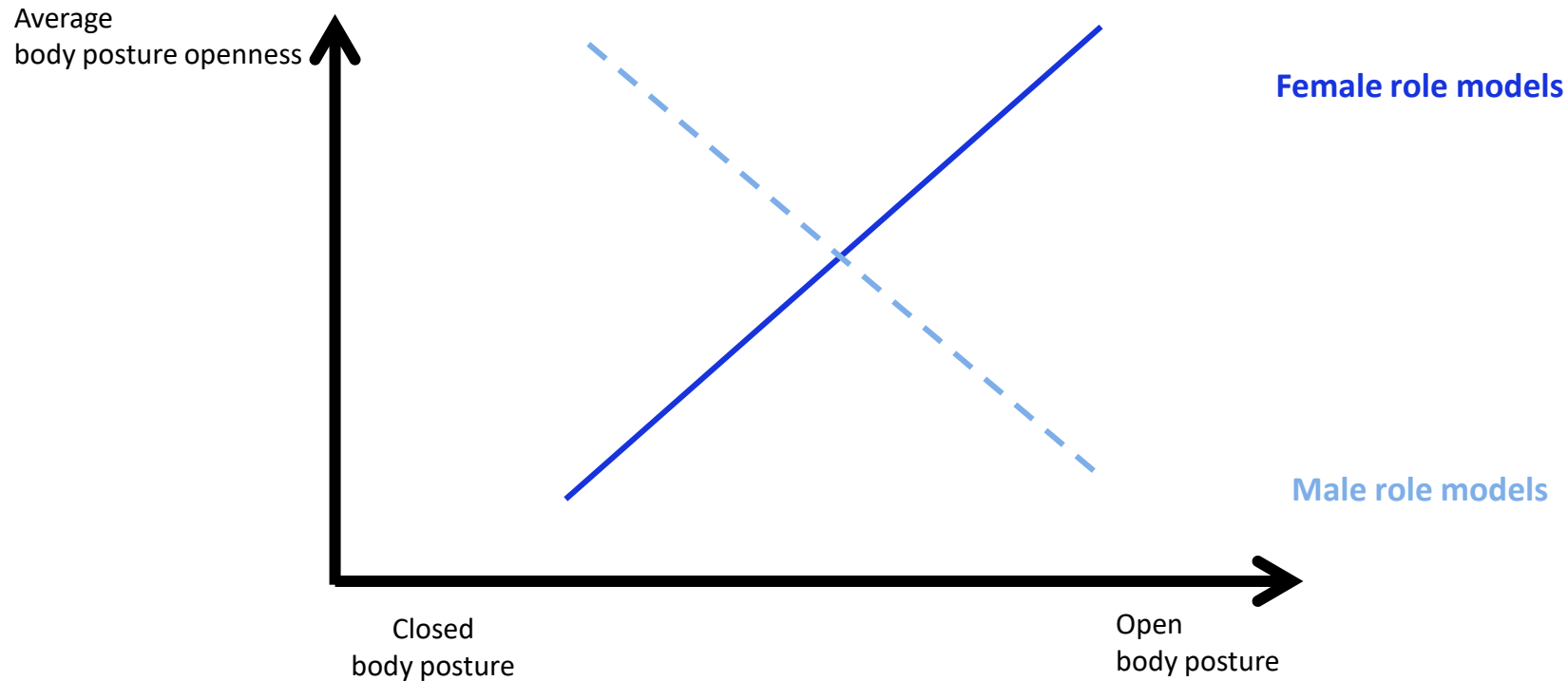
... give better speeches afterwards.



Random sample: 86 participants

Source: Latu, I. M., Mast, M. S., Bombari, D., Lammers, J., & Hoyt, C. L. (2019). Empowering mimicry: female leader role models empower women in leadership tasks through body posture mimicry. *Sex Roles*, 80(1-2), 11–24.

Female role models inspire and motivate female leaders through non-verbal signals



Random sample: 86 participants

Source: Latu, I. M., Mast, M. S., Bombari, D., Lammers, J., & Hoyt, C. L. (2019). Empowering mimicry: Female leader role models empower women in leadership tasks through body posture mimicry. *Sex Roles*, 80(1-2), 11–24.

In companies whose top management is perceived as diverse...

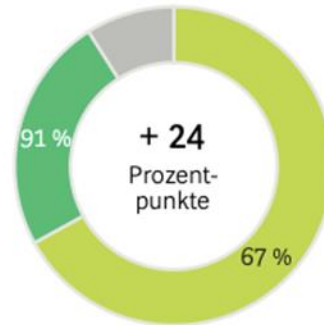
... wollen 83 Prozent der ambitionierten Frauen im eigenen Unternehmen aufsteigen



... sind 82 Prozent der Unternehmen gesamthhaft für Diversität engagiert



... fühlen sich 91 Prozent der Mitarbeiter ermutigt, sich authentisch zu geben

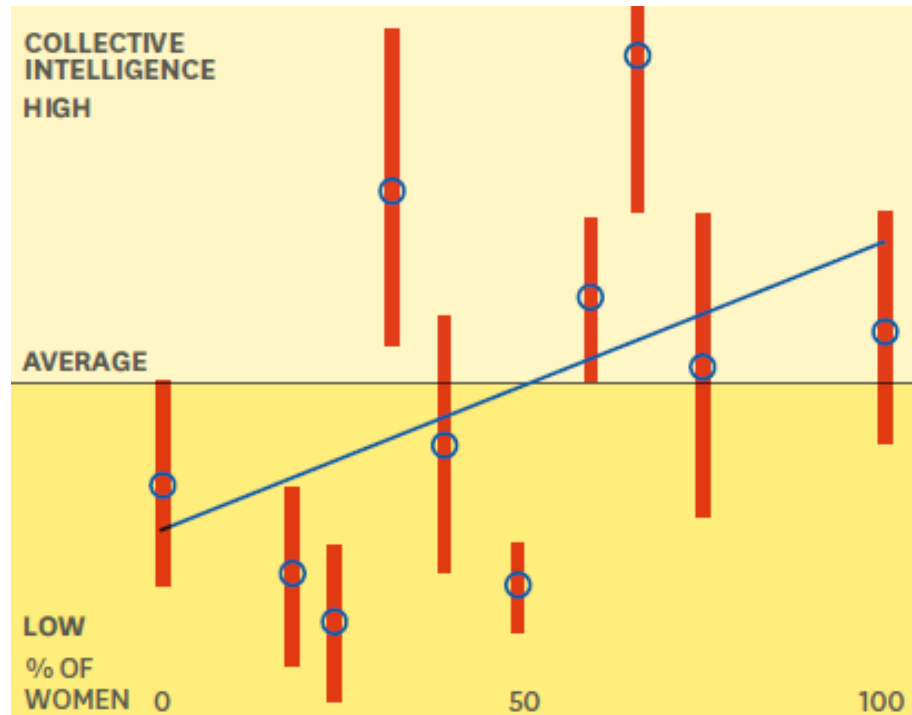


... geben 93 Prozent der Mitarbeiter an, dass ihre Stimme gehört wird



■ Topmanagement divers ■ Topmanagement nicht divers

People with high social sensitivity are especially important, regardless of their gender



Teams with more **women** tend to be **above average**;

Teams with more **men** tend to be **below average**.

Collective intelligence is defined as the ability of a group to perform a variety of tasks.

The **red bars** indicate the range of scores in the group of teams at each level; the **blue circles** indicate the average.

Random sample: The chart represents the **collective intelligence** scores of 192 teams.

Source: Woolley, A., & Malone, T. (2011). What makes a team smarter? More women. *Harvard Business Review*, 89(6), 32–33.

Takeaways

Female role models **inspire** and **motivate** female leaders.

What really matters are people who have **high social sensitivity**, regardless of their gender.



Is there a critical mass of women in leadership positions?

Critical mass – Women hire women

The likelihood of a woman being appointed CEO **increases with the proportion of female directors on the board** – *but only among firms where one of the female directors is appointed CEO* (Gupta & Raman, 2014)

Women are more likely to be appointed to the board when **a woman has just left the position** (Tinsley et al., 2017)

There is a positive correlation between the number of **female CEOs** and the **implementation of gender policies** (Furlotti et al., 2019)



A critical mass crystallizes when the proportion of women reaches 30% (Schmitt, 2015)

Takeaways

Female board members are **more likely to be appointed CEO** when a woman **has just left the position**.

There is a **positive correlation** between the number of **female CEOs** and the implementation of **gender policies**.

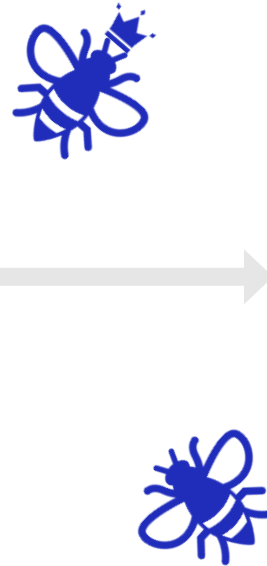


**How do women behave toward
other women at work?**

“Queen bees” prevent the advancement of other female leaders

Origin

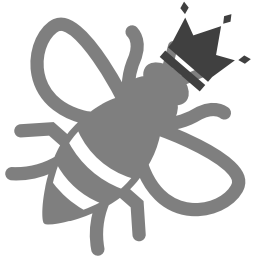
- Describes the behavior of queen bees in nature
- Is a consequence of gender discrimination
- Is a reaction to discrimination and the threat to the women’s social identity



Manifestations

- Leads women to present themselves in a masculine way
- Emphasizes their own differences from other women
- Prevents the advancement of other women
- Leads to distancing between women

Recent studies see the queen bee phenomenon as a myth



- When a woman reaches a leadership position, **the number of** female top managers **increases** compared to the number of men in the same category
- Female leaders behave **benevolently** toward subordinate women
- More appropriately characterized as a “**regal leader**” than a “queen bee”

Takeaways

Where the **queen bee phenomenon** occurs, women tend to present **themselves** in a **more masculine** way and to **marginalize other women** due to discrimination.

Recent studies see the queen bee phenomenon as a **myth**.



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of women in leadership positions from a scientific
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Effects of unconscious bias/stereotypes toward women
in leadership positions

The effects of more women in leadership positions

04 Interventions

What are companies doing to increase the
proportion of women in leadership positions?

(In)effectiveness of diversity interventions

05 New interventions

Impact on the individual

Impact on society

Impact on the company

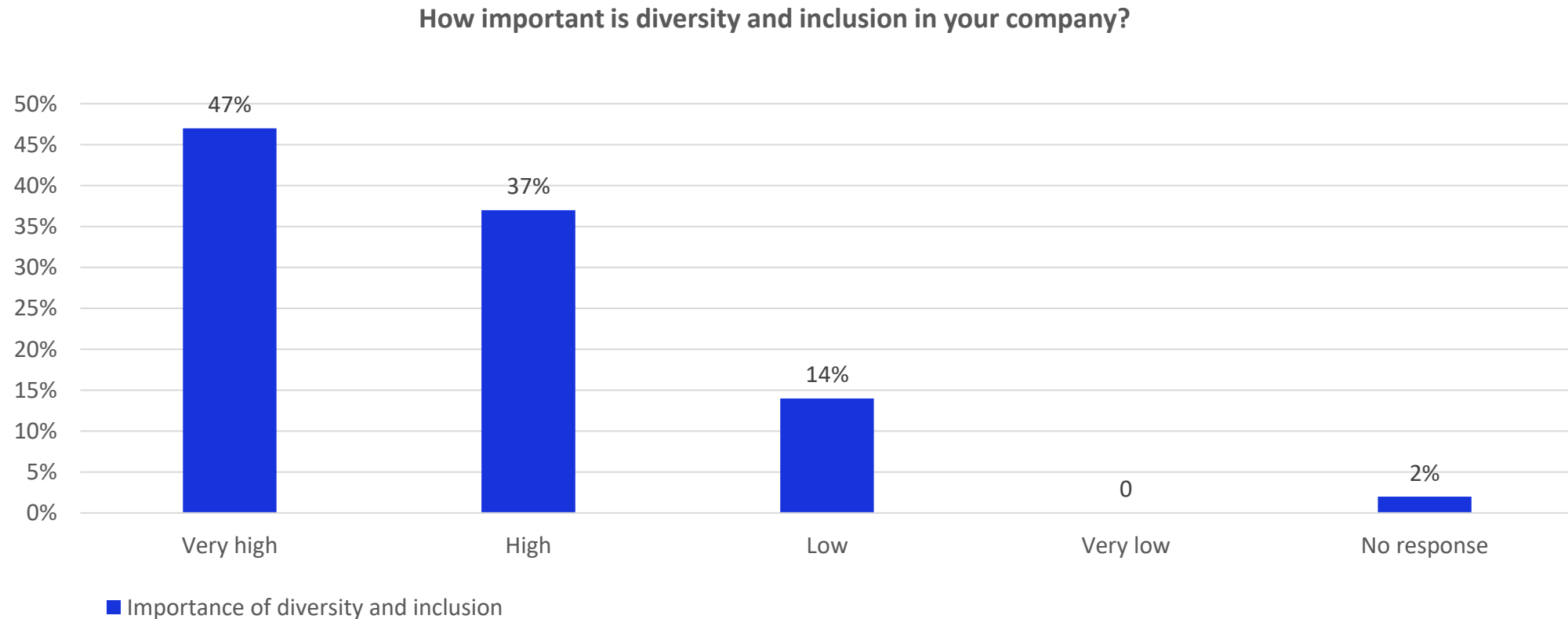
06 The gold standard

Testing the effectiveness of interventions



What interventions are companies using to increase the proportion of women in leadership positions?

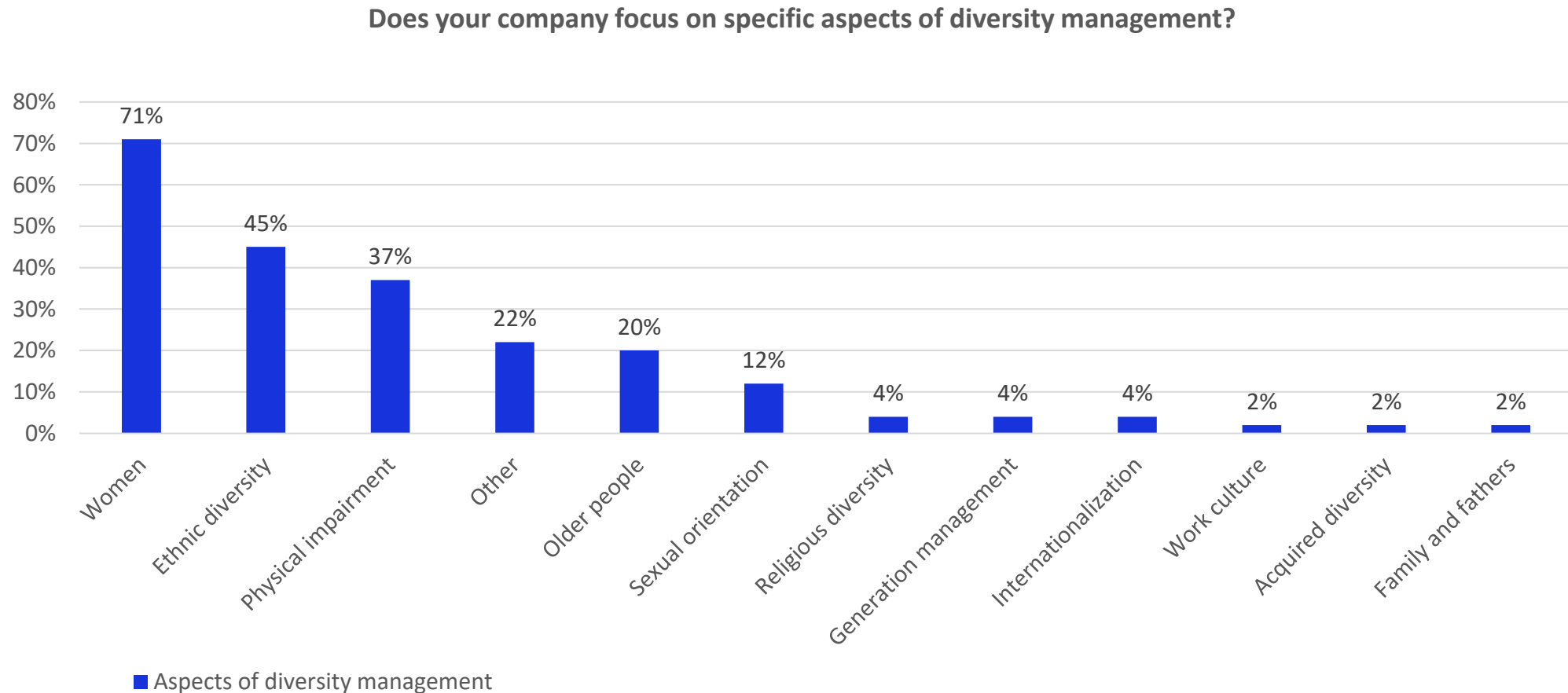
84% of the leaders surveyed describe diversity and inclusion as important in their company



Random sample: 51 leaders from major international companies

Source: AmCham Germany & Frankfurt Business Media (2016). Produktiver und begehrt bei Talenten.

71% of companies are dedicated to promoting the advancement of women within their diversity management

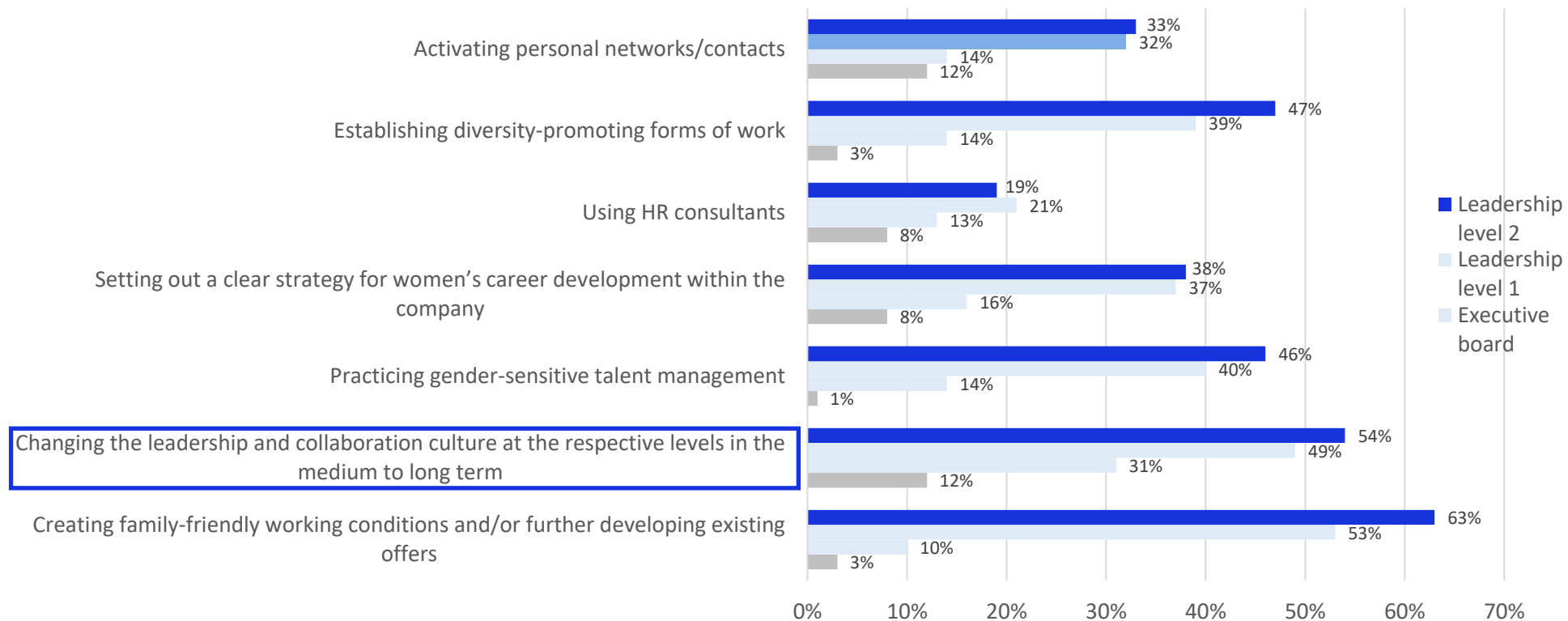


Random sample: 51 leaders from major international companies

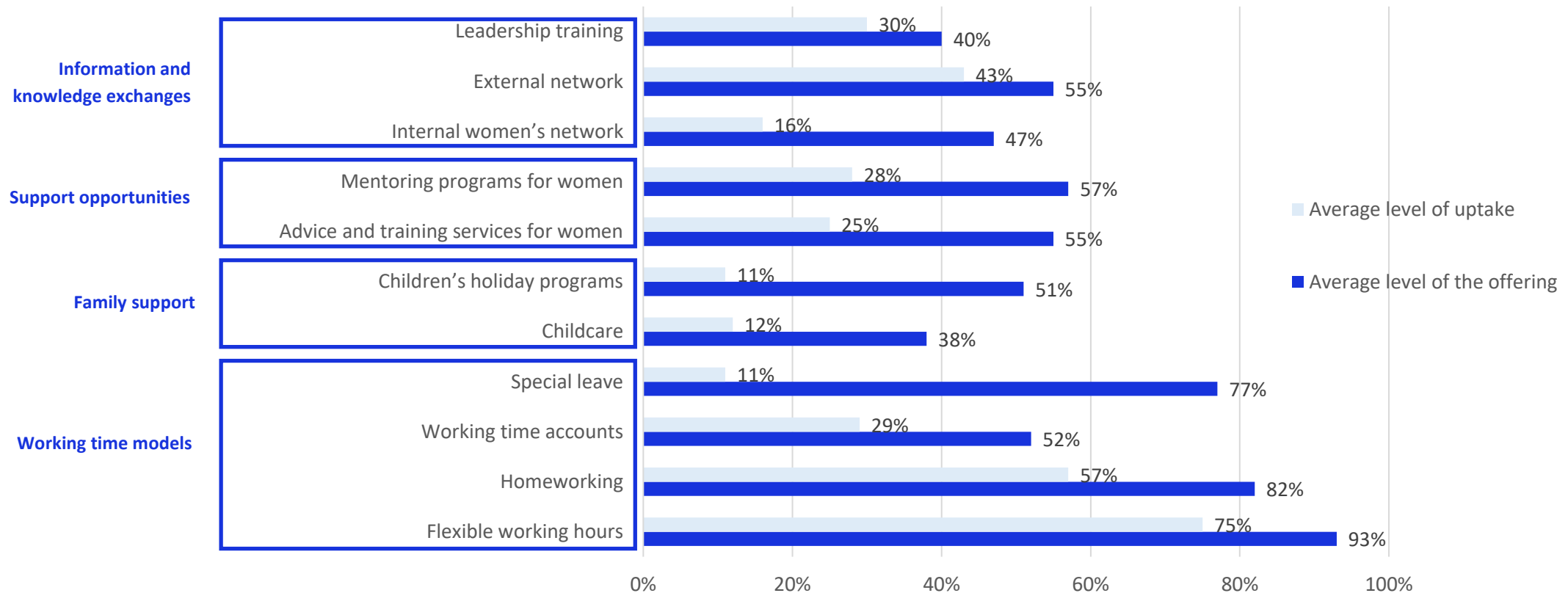
Source: AmCham Germany & Frankfurt Business Media (2016). Produktiver und begehrt bei Talenten.

Changing the leadership and collaboration culture is particularly relevant for executive boards

Which instruments do you plan to use to increase the proportion of women at various levels?



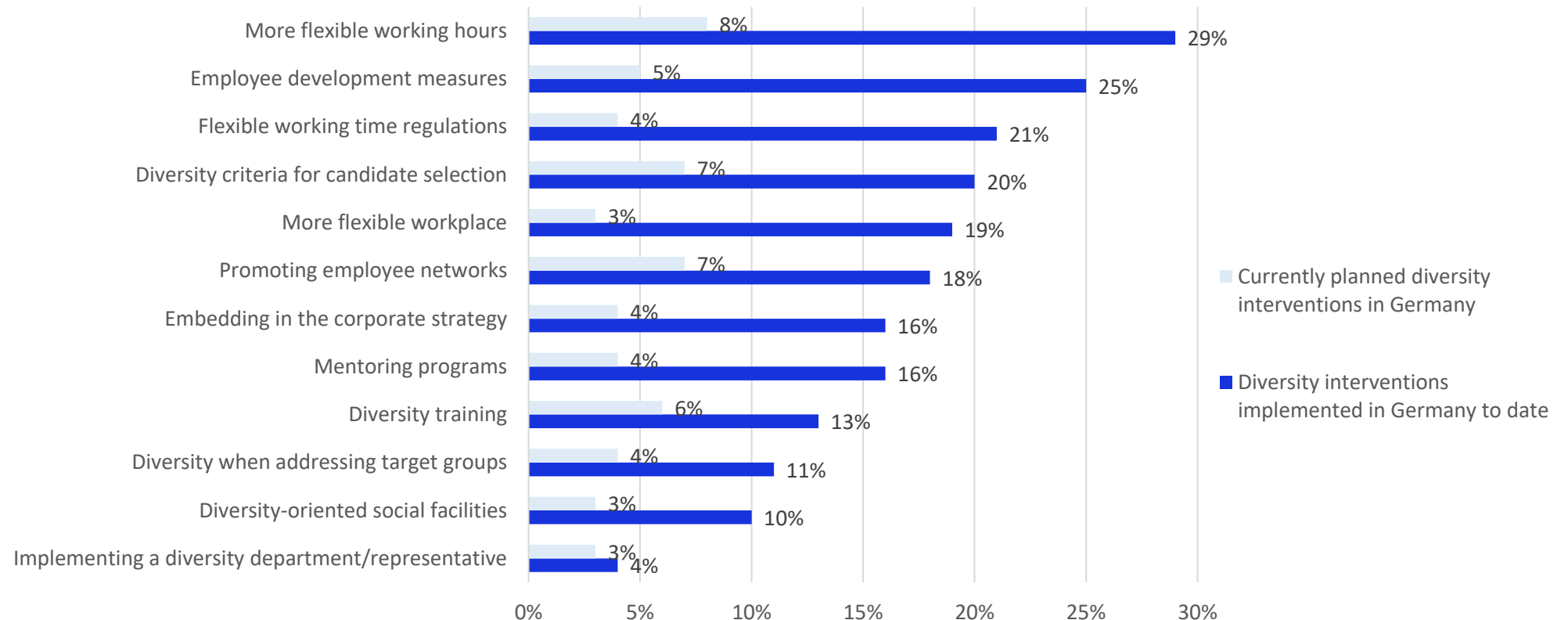
More diversity interventions are offered than are taken up



Random sample: 1393 respondents (72% women, 28% men)

Source: Merklein, A. (2017). Konzeption der empirischen Untersuchung. In *Diversity Management in Deutschland* (pp. 101–152). Springer Gabler, Wiesbaden.

3 of the 5 most frequent interventions implemented by German companies are aimed at making work more flexible



Random sample: 250 German managers

Source: Charta der Vielfalt (2016): Diversity in Germany: Study marking ten years of the Diversity Charter.

Takeaways

Diversity and inclusion are important to most leaders.

Most companies focus their **diversity interventions on women**.

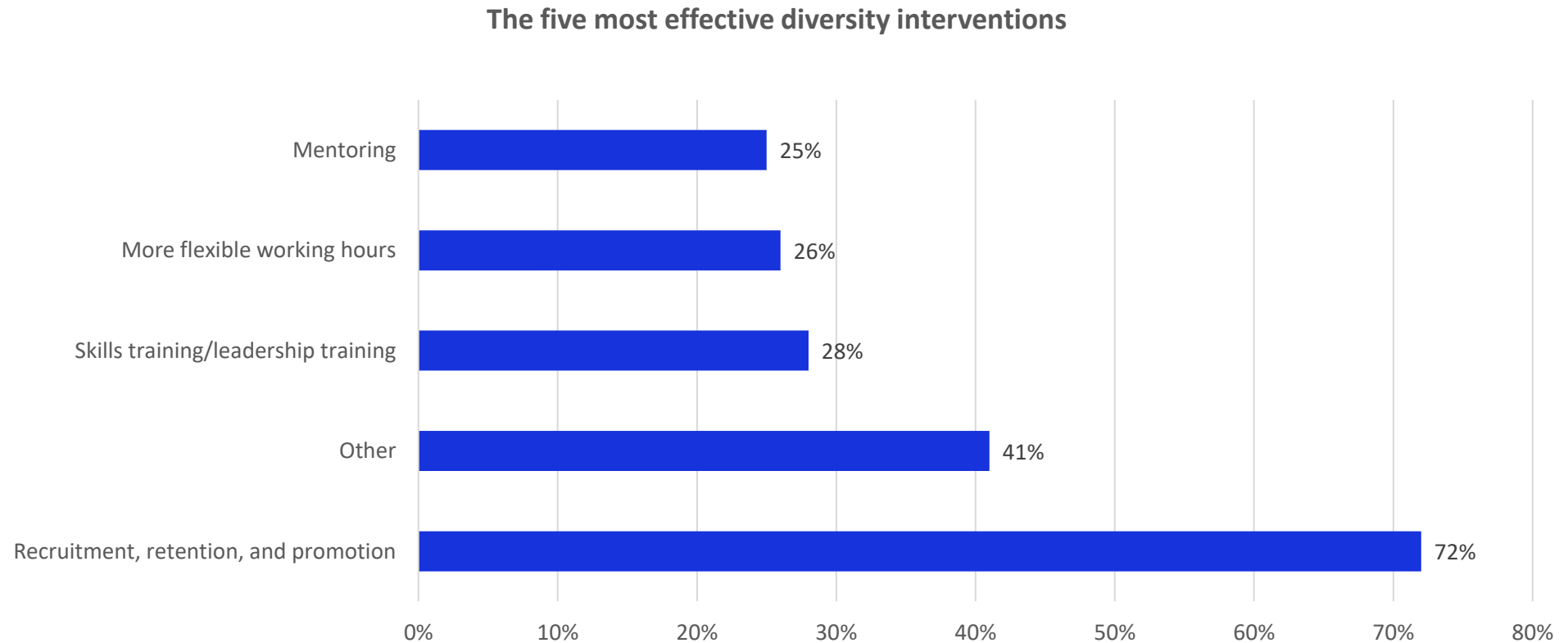
Making work more flexible is the most widely implemented diversity intervention in Germany.

More diversity interventions are offered than are taken up.



How do companies and leaders rate the impact of the interventions implemented to increase the proportion of women in leadership positions?

72% of international companies rate recruitment, retention, and promotion as the most effective diversity intervention



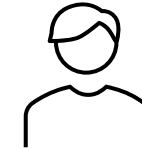
Random sample: 12,940 international companies

Source: International Labour Organization (2019). A global survey of enterprises.

Ambitious female employees rate Group-wide diversity strategies as effective; male decision-makers focus on participation in external events and rankings





Women's perspective





Men's perspective

Top 5 measures rated as being effective provided they are implemented

 Ambitious women		Male decision-makers 
1	Group-wide diversity strategy	5
2	Financial incentivization of the leadership	17
3	Childcare	14
4	Anti-discriminatory measures	7
5	Standing up for change	12

Top 5 measures that the company currently lacks

1	Standing up for change	30
2	Part-time models	15
3	Diverse role models in the leadership	11
4	Anti-discriminatory measures	1
5	Parental leave	22

 Ambitious women		Male decision-makers 
28	Participation in external events and rankings	1
18	Anonymous ombudspersons/protocol	2
6	Part-time models	3
25	Blind employee selection	4
1	Group-wide diversity strategy	5

4	Anti-discriminatory measures	1
15	Training (e.g. bias)	2
7	Blind employee selection	3
13	Leadership coaching	4
6	Balanced group of candidates in job interviews	5

Takeaways

International companies rate **recruitment, retention, and promotion** as the most effective diversity intervention.

Women in particular **feel the need for fundamental diversity strategies** and rate them as **effective if** they are implemented **company-wide**.



Which diversity interventions are effective?

Voluntary diversity training has a more positive impact than a mandatory training, but...

Interventions	Explanation/definition	Individual attitudes toward women	Individual behavior toward women	Impact on the organization	Impact on the proportion of women	Impact on other (ethnic) minorities	Unintended effects on the individual	Unintended effects on the organization
Voluntary diversity training	Educating employees on bias/discrimination toward the targeted individuals; putting strategies to combat discrimination in place	+	-	+			0	+
Mandatory diversity training		-	-	-	-	-	-	-
Performance-based decision-making	Ensuring that decision-making is based on qualifications and skills, not on demographics	0	-	+			-	-
Tokenism (a woman as a symbol)	Superficial, symbolic effort to represent minorities in organizations → Alibi function			+			-	-
Diversity statements	Statement on diversity as a philosophy/approach to diversity in an environment			+		-	-	-

+: positive/enhancing (side) effect; 0: ambivalent effect; -: negative/reducing (side) effect

... Targeted recruitment as well as setting and monitoring diversity goals are more effective

Interventions	Explanation/definition	Individual attitudes toward women	Individual behavior toward women	Impact on the organization	Impact on the proportion of women	Impact on other minorities	Unintended effects on the individual	Unintended effects on the organization
Targeted recruitment	Focusing on recruiting people specialized in required and special skills	+		+		+		+
Network groups	Platforms for exchanges on diversity, equality, and inclusion			0		0		
Mentoring programs	The mentee's personal and professional development is supported by the mentor	0/+		0		0	-	
Diversity plans (responsibility)	Setting out diversity goals and monitoring progress			+		+	+	+
Complaints systems	System through which individuals can report instances of discrimination and other incidents that impede progress toward diversity goals	-		0			-	-
Preferential treatment	Preferential treatment or hiring of certain individuals or groups	-					-	-
Game interventions	Validated diversity intervention with videos	+	-	+			-	+

+: positive/enhancing (side) effect; 0: ambivalent effect; -: negative/reducing (side) effect

Effective diversity interventions throughout the career ladder



Targeted recruitment



Voluntary diversity training



Diversity plans and goals

Applying gender-sensitive and non-discriminatory processes in recruitment



Written applications

- Gender-sensitive & non-discriminatory job advertisements (Gaucher et al., 2011)
- Making women linguistically visible (e.g., female/male word pairs) (Horvath et al., 2016)
- Reviewing existing recruitment processes for intercultural bias (Menegatti & Rubini, 2017)



Negotiations



Performance evaluations

Applying gender-sensitive and non-discriminatory processes in recruitment



Written applications



Negotiations



Performance evaluations

- Reducing the pay gap by introducing accountability and transparency procedures (Castilla, 2015)
- Taking gender differences into account in negotiations (Kugler et al., 2018)

Applying gender-sensitive and non-discriminatory processes in recruitment



Written applications



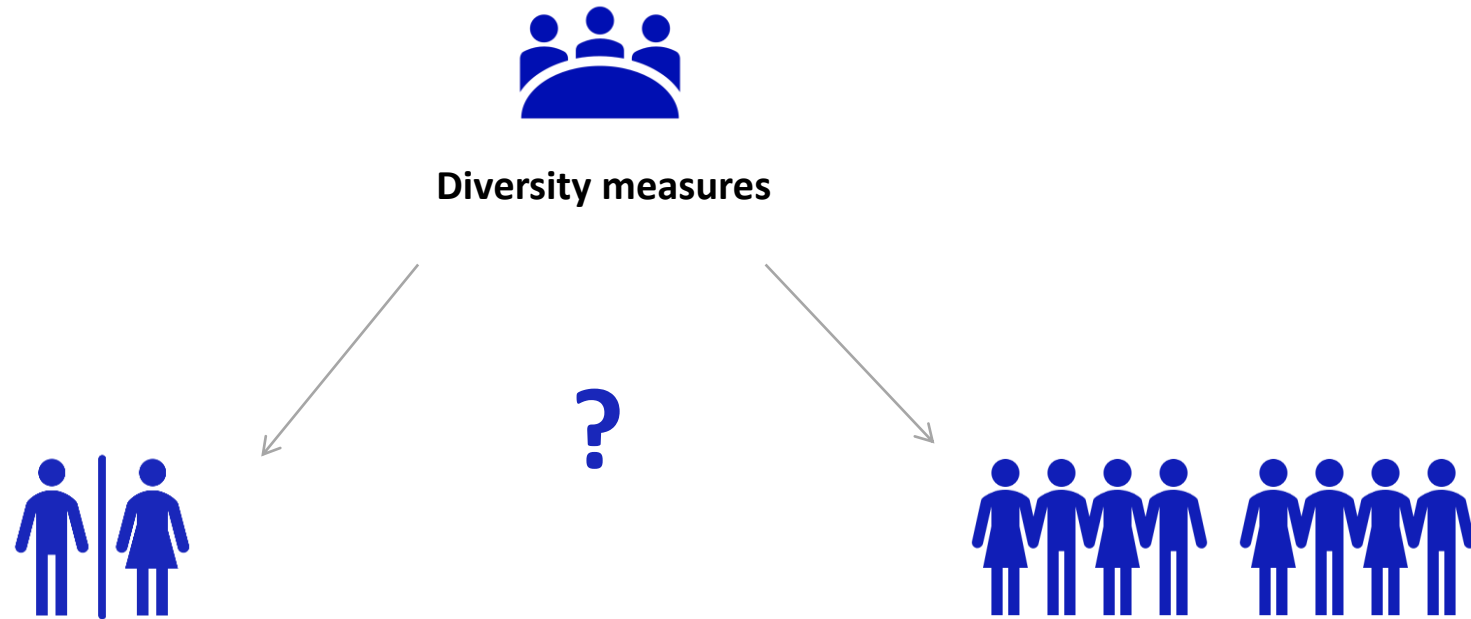
Negotiations



Performance evaluations

- Measuring bias in performance evaluations and time to promotion (Anderson et al., 2015; Bohnet, 2017)
- Managers as problem owners of gender inequality → Responsible for change and action (Lansu et al., 2020)

Limited research on the impact of diversity interventions on individuals and groups



Takeaways

Voluntary diversity training is **more effective** than mandatory diversity training.

Setting out diversity plans (corporate responsibility) is the most effective way to increase diversity.

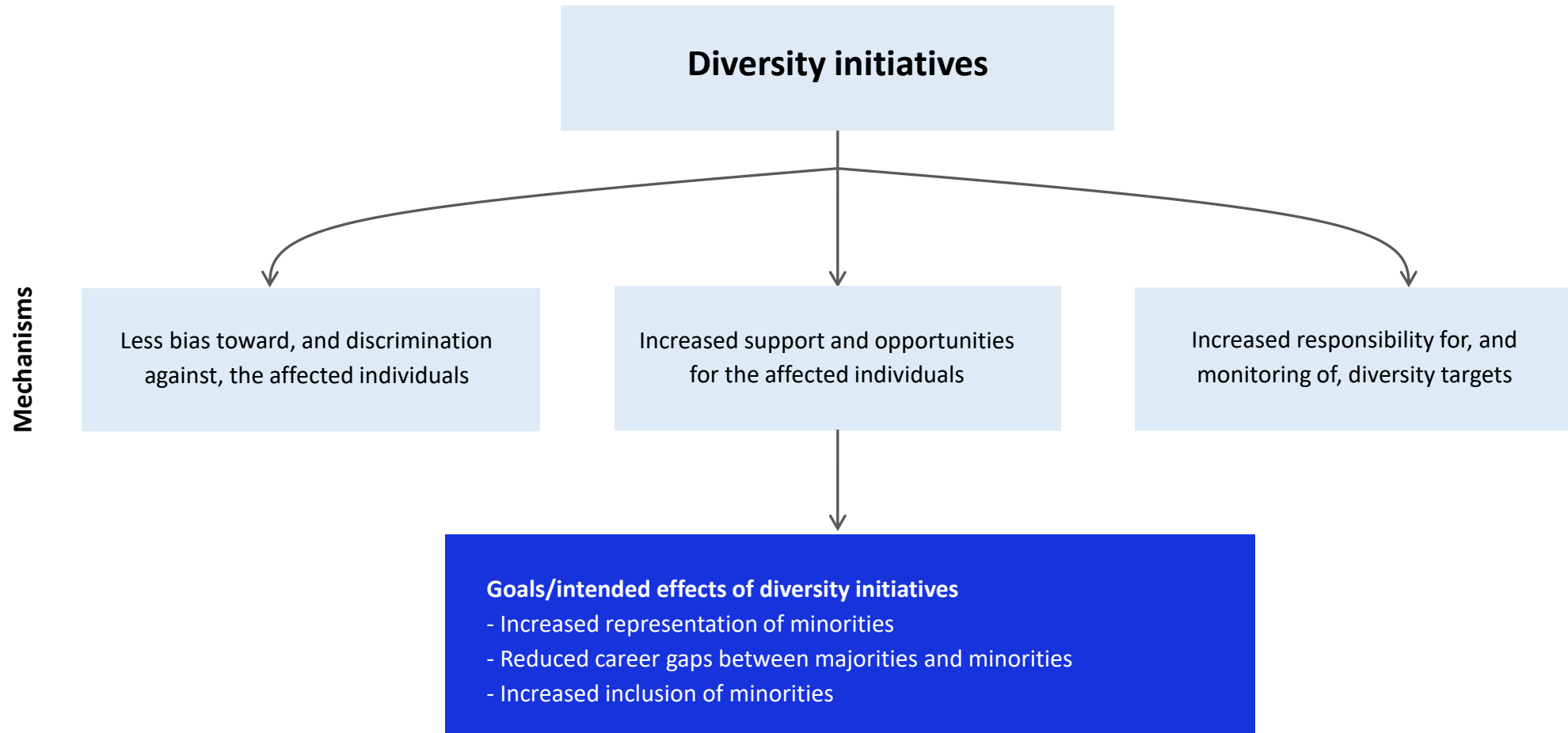
Diversity interventions must be implemented at **all levels of the career ladder**.



Which diversity interventions are effective?

Intended and unintended effects.

Intended effects of diversity interventions



Diversity interventions can have negative unintended effects on the company



Stereotyping

Reinforcement of perceived differences and confirmation of stereotypes through focus on “stereotype awareness”



Resource allocation

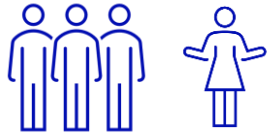
Ensuring unbiased evaluation procedures requires additional time, energy, and cognitive resources



Diffusion of responsibility

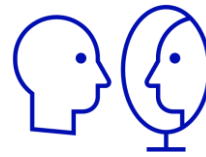
Reduction in perceived personal responsibility and vigilance against bias

Diversity interventions can have negative unintended effects on the company



Subtyping

Perception of women in traditionally male professions as competent exceptions to the rule or as recipients of undeserved advantages



Social identity threat

Women's self-perception that they actually neither fit nor belong in a male environment (e.g., STEM)



Stereotype threat concerns

Women's fear that their behavior is viewed through the lens of negative stereotypes and that they confirm them

Diversity interventions can lead to reduced representation of the target and non-target engagement

	Intended outcome is affected	Unintended outcome is affected
Undesirable direction of the effect	Backfire → Reduced progress toward the target (e.g., lower representation of the target group)	Negative spillover → Negative impact on unintended outcomes (e.g., reduced engagement of the majority)
Desired direction of the effect	False progress → Measure improves the measurement used but does not lead to true change (e.g., increased representation of the target group by changing the classification of employees)	Positive spillover → Positive impact on unintended outcomes (e.g., increased engagement of the majority)

The effectiveness of diversity management is hampered by unintended signals

Signal	Explanation	Possible unintended consequences
Fairness signals	Underrepresented groups are treated fairly	<ul style="list-style-type: none"> • Anti-minority discrimination is underestimated • Overlooking/dismissing/delegitimizing discrimination complaints • Excluding minority discrimination complainants
	Overrepresented groups are treated unfairly	<ul style="list-style-type: none"> • Anti-majority discrimination is overestimated • Advocating unfair hiring practices • Compensation for perceived bias against majorities
Inclusion signals	Underrepresented groups are included	<ul style="list-style-type: none"> • False promises, unrealistic expectations (if signal and culture do not correspond)
	Overrepresented groups are excluded	<ul style="list-style-type: none"> • Psychological & physiological threat • Backlash against rules, colleagues, or minority job applicants
Competence signals	Underrepresented groups are less competent	<ul style="list-style-type: none"> • The competence of minority colleagues is underestimated • The individual's own competence is underestimated
	Positive outcomes for minorities are undeserved	<ul style="list-style-type: none"> • Stereotypes are activated • Attributed uncertainty about positive treatment and career opportunities

The effectiveness of diversity training depends on the already existing attitudes of the target group

Previous attitude	Change in attitude after diversity training	Change in behavior after diversity training
Low supportive attitude toward women	✓	✗
Highly supportive attitude toward women	Supportive attitude already present	✓

Takeaways

Diversity interventions have both **intended and unintended** effects.

Unintended effects can have both **positive and negative** impacts on the effectiveness of diversity interventions.

The **effectiveness** of diversity management is **hampered by unintended signals**.



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Impact on society

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Which new interventions can have an impact on the individual?

Away from individual norms, toward changing social norms



Diversity interventions should start with **society** to bring about a change in social norms.

Takeaways

For diversity interventions to be effective, there needs to be a **shift away from changing individual norms** to changing **social norms**.



**How do the media influence society
and social norms?**

Media reporting on women is different

Forbes

Oct 26, 2020, 08:00am EDT | 1.519 views

Feminism In The Workplace Supports Everyone

How becoming a mother made 11 CEOs, founders, and leaders better at their jobs

EQUALITY MATTERS | HOW WE WORK

Why do we still distrust women leaders?

Inc.

NEWSLETTERS

MARKETING

The Hidden Advantage of Women in Leadership How Closing the Gender Gap can Increase GDP

BY SHAMA HYDER, FOUNDER AND CEO, ZEN MEDIA @SHAMA

How executive mothers cope

Women still face barriers to progress at work

Social norms and stereotypes are heavily influenced by the media



Media

High TV consumption reinforces stereotypical thinking in kindergarten children



Soaps

Access to telenovelas on Brazilian cable TV reduces the birth rate, increases female employment, and raises the age of marriage



Fairy tales

Passive fairy-tale roles (Sleeping Beauty, Rapunzel) reduce women's desire for personal power

→ **Debiasing training: Making people aware of stereotypes can lead to stereotypical thinking**

Women behind the camera improve the image of women in front of the camera

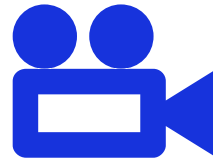
Director



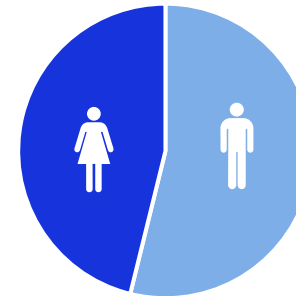
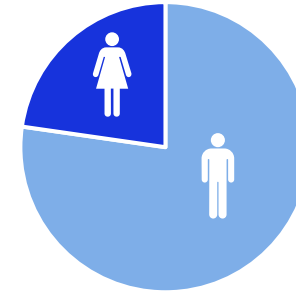
Male team



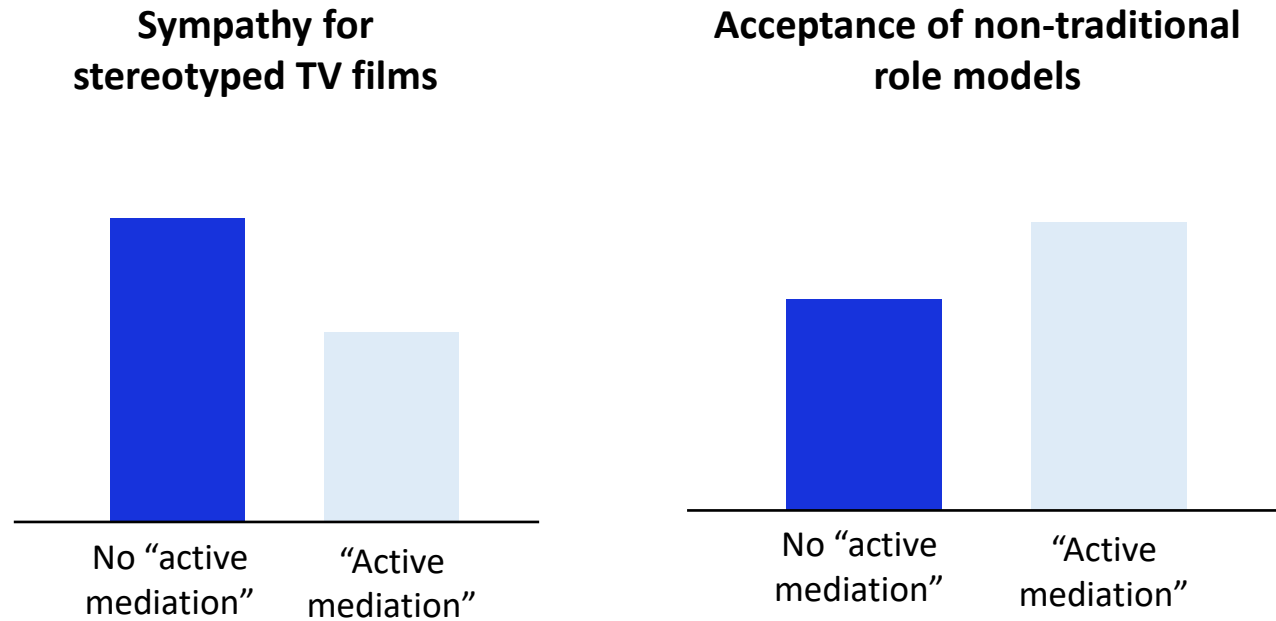
Mixed team



Gender ratio of film characters in front of the camera



The influence of stereotyped media can be reduced from as early as childhood through “active mediation”*



*“Active mediation”: actively challenging stereotyped TV images and encouraging critical thinking.

Random sample: experiment with 83 kindergarten children

Source: Nathanson, A. I., Wilson, B. J., McGee, J., & Sebastian, M. (2002). Counteracting the effects of female stereotypes on television via active mediation. *Journal of Communication*, 52(4), 922–937.

Takeaways

Social norms and stereotypes are heavily **influenced** by the media.

Women behind the camera **improve the image of women** in front of the camera.

Active mediation reduces the influence of stereotyped media.



What new interventions can have an impact at the company level?

Diversity effectiveness pyramid – structure is the decisive success factor for changing social norms



Structure in processes, procedures, and decisions can change social norms and promote diversity



Processes

Establishing gender-neutral and fair hiring processes and promotion decisions



Procedures

Embedding diversity in corporate strategy in the form of rules, laws, and codes of conduct



Decisions

Creating competence- and performance-based decisions and procedures by establishing a diversity competence center

Voluntary training changes social norms if it is supported by the top management and scientifically monitored



Voluntariness

Training programs based on voluntariness and intrinsic motivation



Support

Training programs that are supported and promoted by the top management



Evaluation

Training programs whose effectiveness is scientifically monitored and evaluated

Diversity can be achieved if the top management is aware of the company's actual figures



Regularity

Introducing targets and regular measurement by means of goals achievable in the short and long term



Transparency

Disclosing and measuring targets, figures, and performance criteria



Monitoring

Monitoring change, accountability, and compliance with targets

Support for diversity goals from the top management sends an important signal to the company



Role model

Role model function of leaders
(especially male leaders) in
recruiting and mentoring women



Culture

Changing norms by establishing and
exemplifying an inclusive culture



Engagement

Fostering engagement and
commitment to reach a critical
mass

Diversity can be promoted through neutrality and equal opportunities



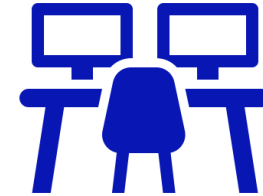
Artifacts

Using gender-neutral designs, logos, art, sculptures, rituals, symbols, and images



Role models

Balanced presentation of female and male role models in companies, e.g., through portraits on walls



Environment

Creating gender-neutral work environments and workplaces

Takeaways

Structurally embedding gender equality is the decisive **success factor** in changing social norms.

The effectiveness of interventions can be assessed only through **regular and transparent measurement**.

Successful diversity management can succeed only with the **support of the top management**.



What works?



Conducting **field experiments** to evaluate and assess the effectiveness of interventions and implementation.

Research overview

01 Baseline position

Facts, figures, and data over time
and in an international comparison

02 Causes

Explanations and causes for the proportion
of women in leadership positions from a scientific
perspective

03 Impact

Effects of unconscious bias/stereotypes toward women
in leadership positions

The effects of more women in leadership positions

04 Interventions

What are companies doing to increase the
proportion of women in leadership positions?

(In)effectiveness of diversity interventions

05 New interventions

Impact on the individual

Impact on society

Impact on the company

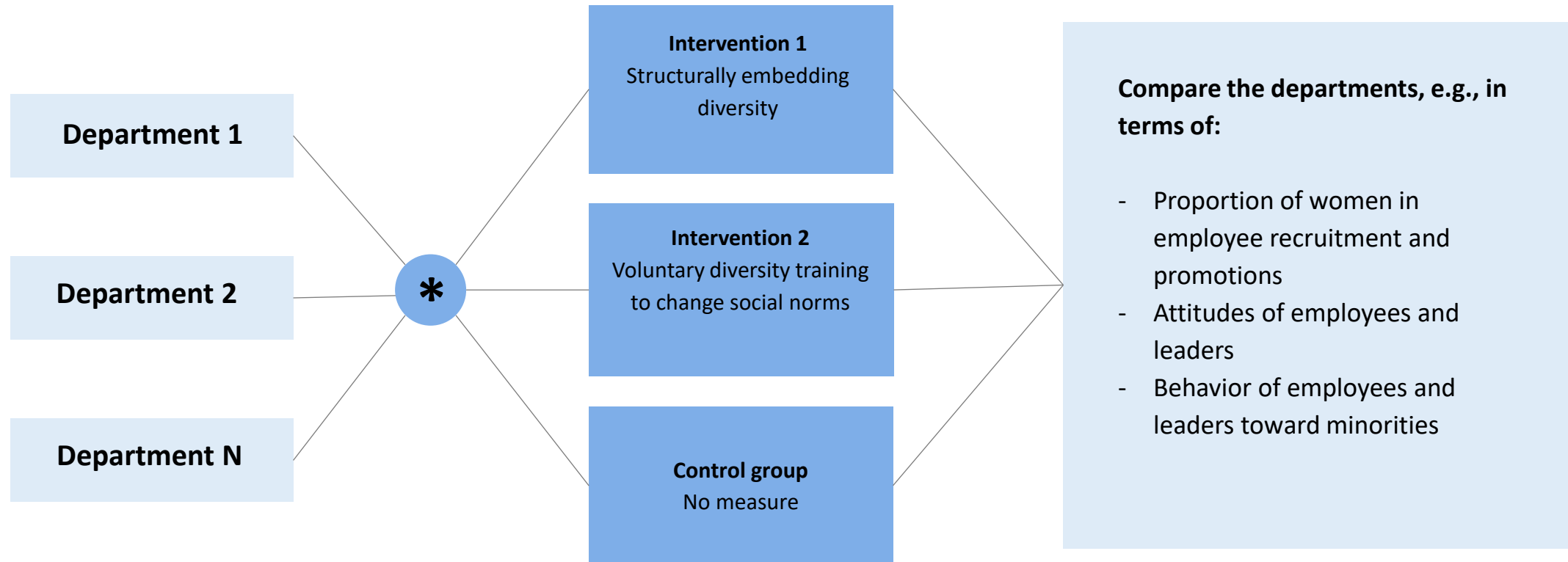
06 The golden standard

Testing the effectiveness of interventions



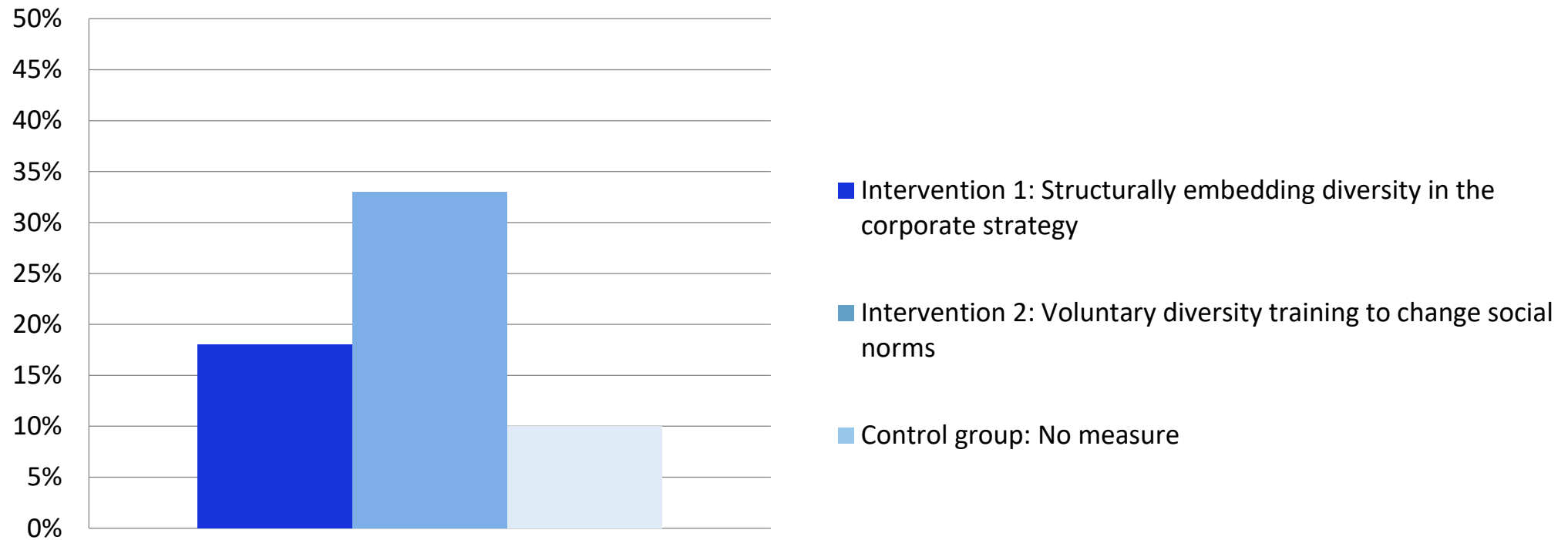
How can companies measure the effectiveness of the interventions implemented?

Field experiments are the scientific gold standard for assessing the effectiveness of interventions



Voluntary diversity training to change social norms could be an effective intervention (fictional result)

Proportion of women in leadership positions in the company



Interested in starting a conversation?

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GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung



DLR Projektträger



NATIONALER PAKT
FÜR FRAUEN
IN MINT-BERUFEN

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Appendix

Articles on the effectiveness of diversity interventions

Measures

Academic articles

Voluntary diversity training

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Bezrukova, K., Spell, C. S., Perry, J. L., & Jehn, K. A. (2016). A meta-analytical integration of over 40 years of research on diversity training evaluation. *Psychological Bulletin*, 142(11), 1227;
- Kalinoski, Z. T., Steele-Johnson, D., Peyton, E. J., Leas, K. A., Steinke, J., & Bowling, N. A. (2013). A meta-analytic evaluation of diversity training outcomes. *Journal of Organizational Behavior*, 34(8), 1076–1104.

Mandatory diversity training

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Bezrukova, K., Spell, C. S., Perry, J. L., & Jehn, K. A. (2016). A meta-analytical integration of over 40 years of research on diversity training evaluation. *Psychological Bulletin*, 142(11), 1227;
- Kalinoski, Z. T., Steele-Johnson, D., Peyton, E. J., Leas, K. A., Steinke, J., & Bowling, N. A. (2013). A meta-analytic evaluation of diversity training outcomes. *Journal of Organizational Behavior*, 34(8), 1076–1104;
- Roberson, L., Kulik, C. T., & Pepper, M. B. (2009). Individual and environmental factors influencing the use of transfer strategies after diversity training. *Group & Organization Management*, 34(1), 67–89.

Performance-based decision-making

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Tokenism (alibi function)

- King, E. B., Hebl, M. R., George, J. M., & Matusik, S. F. (2010). Understanding tokenism: Antecedents and consequences of a psychological climate of gender inequity. *Journal of Management*, 36, 482–510.

Diversity statements

- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Targeted recruitment

- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Network groups

- Kalev, A., Dobbin, F., & Kelly, E. (2006). Best practices or best guesses? Assessing the efficacy of corporate affirmative action and diversity policies. *American Sociological Review*, 71(4), 589–617;
- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Articles on the effectiveness of diversity interventions

Measures

Academic articles

Mentoring programs

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Kalev, A., Dobbin, F., & Kelly, E. (2006). Best practices or best guesses? Assessing the efficacy of corporate affirmative action and diversity policies. *American Sociological Review*, 71(4), 589–617;
- Guillaume, Y. R., Dawson, J. F., Woods, S. A., Sacramento, C. A., & West, M. A. (2013). Getting diversity at work to work: What we know and what we still don't know. *Journal of Occupational and Organizational Psychology*, 86(2), 123–141;
- Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology*, 84, 529–550.

Diversity plans (responsibility)

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Wentling, R. M., & Palma-Rivas, N. (2000). Current status of diversity initiatives in selected multinational corporations. *Human Resource Development Quarterly*, 11(1), 35-60;
- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Complaints systems

- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail and what works better. *Harvard Business Review*, 94(7-8), 52–60;
- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Preferential treatment

- Leslie, L. M. (2019). Diversity initiative effectiveness: A typological theory of unintended consequences. *Academy of Management Review*, 44(3), 538–563.

Game interventions

- Cundiff, J. L., Zawadzki, M. J., Danube, C. L., & Shields, S. A. (2014). Using experiential learning to increase the recognition of everyday sexism as harmful: The WAGES intervention. *Journal of Social Issues*, 70(4), 703–721;
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- Hennes, E. P., Pietri, E. S., Moss-Racusin, C. A., Mason, K. A., Dovidio, J. F., Brescoll, V. L., H. Bailey, A., & Handelsman, J. (2018). Increasing the perceived malleability of gender bias using a modified video intervention for diversity in STEM (VIDS). *Group Processes and Intergroup Relations*, 21(5), 788–809;
- Moss-Racusin, C. A., Pietri, E. S., Hennes, E. P., Dovidio, J. F., Brescoll, V. L., Roussos, G., & Handelsman, J. (2018). Reducing STEM gender bias with VIDS (video interventions for diversity in STEM). *Journal of Experimental Psychology: Applied*, 24(2), 236–260.