Female Peer Effects on Career Outcomes: Evidence from MBA Students

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Motivation

Despite decades of progress, women are still vastly underrepresented in executive leadership positions.

In 2017, women held only 19.9% of corporate board seats and comprised only 5.8% of CEO positions in Fortune 500 companies in the U.S.

Underrepresentation of women in top executive position is important

- Executives affect firms' performance: talent misallocation influences productivity and growth (Hsieh et al. 2019; Bertrand and Schoar 2003; Bloom and Reenen, 2007; Bloom et al. 2013; Rasul and Roger, 2018; Rasul et al. 2018)
- Leaders' identity affects policies and culture (Chattopadhyay and Duflo 2004; Beaman et al. 2009)
- Leaders can represent role models (Beaman et al. 2012; Bhalotra et al. 2018)

"The Leaky Pipeline": Increasing gender gap on the path to top management

Figure: Female Representation in the Corporate Pipeline
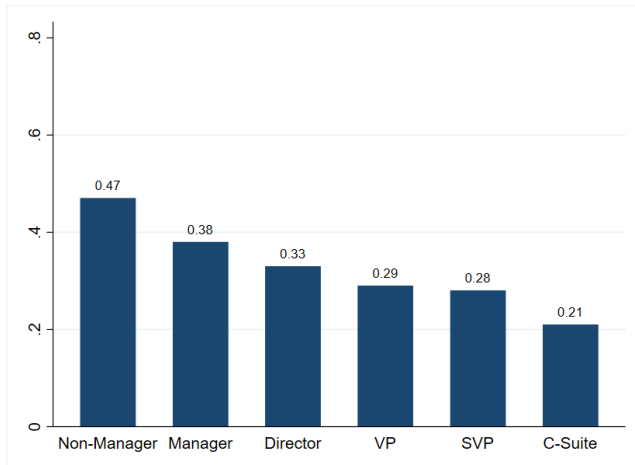
Source: LeanIn.Org and McKinsey & Company, 2020

Role of Female MBA Peers and the Gender Gap in the Leadership Pipeline

- One possible explanation for the persistent gender gap is gender differences in networks (Yang, Chawla, and Uzzi 2019)

- Important source of gender-specific career information, professional and personal support.

- No empirical evidence on the effect of female peers on the likelihood of advancing into senior management positions.

Question: Can having a larger network of female peers influence women's likelihood of entering senior leadership positions?

Sample: MBA students from a top U.S. business school for cohorts 2000-2015

Identification Strategy: Exogenous variation in exposure to female peers from random assignment to sections

Data: Detailed CV data with work history for over 10 years post-MBA

▶ Job titles to identify positions along the management pipeline

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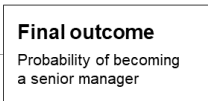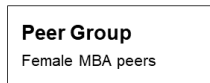**Sample:** MBA students from a top U.S. business school for cohorts 2000-2015

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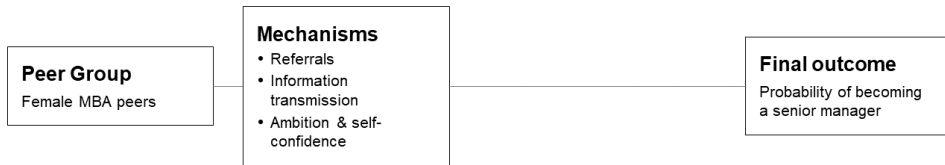- Job titles to identify positions along the management pipeline

Theory of Change

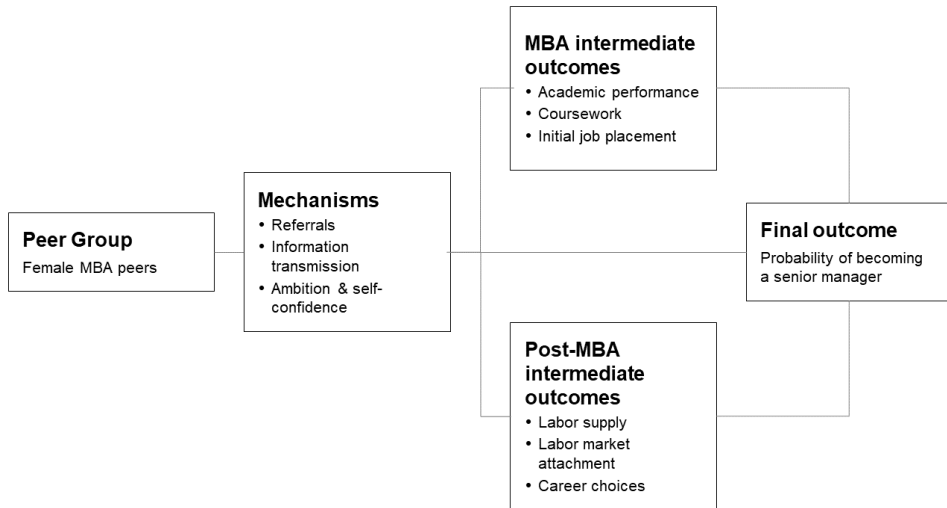- How do female MBA peers affect female representation along the pipeline?

Peer Group		Final outcome
Female MBA peers		Probability of becoming a senior manager

Theory of Change

- How do female MBA peers affect female representation along the pipeline?

Peer Group
Female MBA peers

Mechanisms
- Referrals
- Information transmission
- Ambition & self-confidence

Final outcome
Probability of becoming a senior manager

Theory of Change

▶ How do female MBA peers affect female representation along the pipeline?

Preview of results

- 1 SD increase in proportion of female MBA peers increases likelihood of holding senior management positions for women by 5%

- 15.7% reduction in gender gap in senior managerial positions

- MBA intermediate outcomes:
  - Shift in coursework towards management classes
  - Increase in starting position as senior manager

- Next Steps:
  - Post-MBA intermediate outcomes
  - Mechanisms

# Data

Professional Networking Social Media Platform Data:

- 2-YR Full-Time MBA graduates from the classes of 2000-2015

- Matched approximately 85% (86% male, 83% female)

- Self-reported education and employment history

School Administrative data: GPA, coursework, and first post-MBA job information

Survey Data (January 2021): Family background, labor supply, labor market attachment, referrals, information transmission, compensation
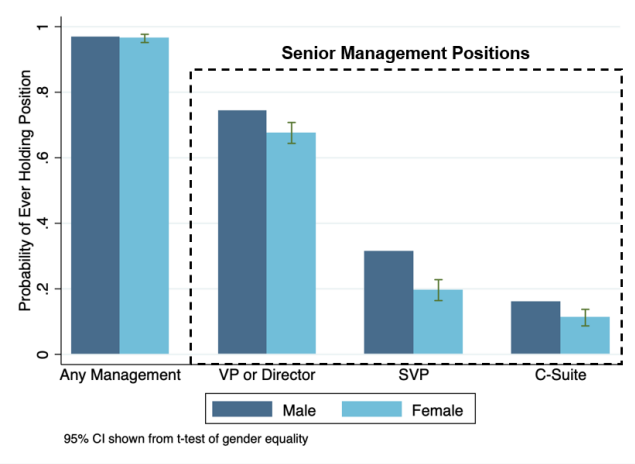
Management Positions

Based on keywords in job titles listed on CVs `Job Titles`
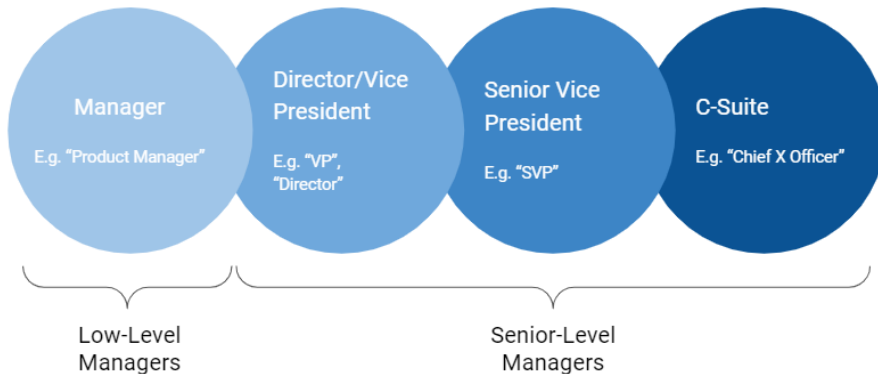
Notes: Definitions from LeanIn.Org and McKinsey & Company, 2020

Fact 1: No gender difference in the entry rate into the management pipeline, but gender gap emerges in the entry rate into senior management

Figure: Probability of Ever Entering Management Positions at 10 Years Post MBA by Gender

95% CI shown from t-test of gender equality

Fact 2: Gender Difference in Senior Leadership Positions Emerges Immediately Post MBA and Persists Over Time

Figure: Probability of Ever Becoming Senior Manager
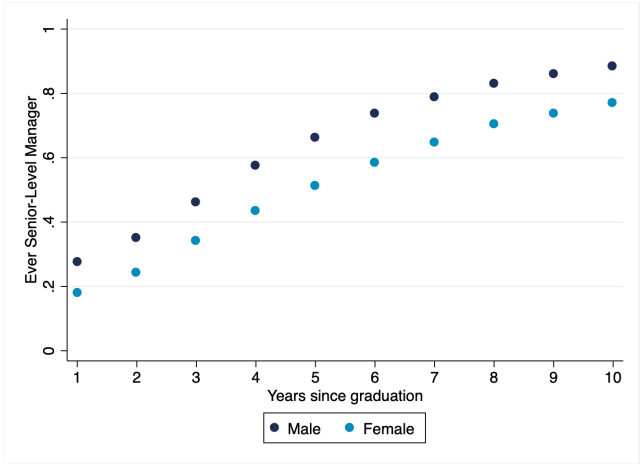
Fact 3: Women are less likely to transition into senior-level management positions from low-level managers

Figure: 5-Year Transition Probabilities for Low-Level Managers
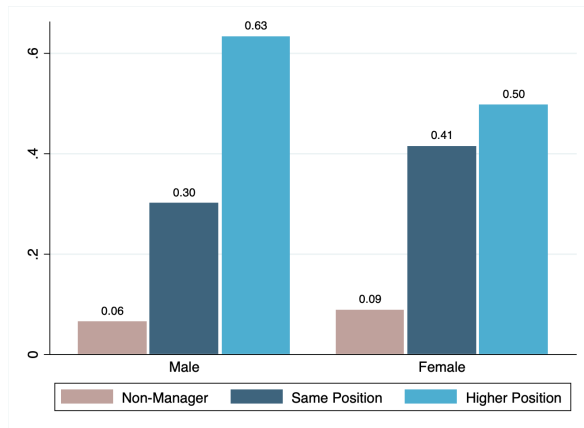
▶ Women are 20% (p-value=0.0000) less likely to move up and 50% (p-value=0.0001) more likely to move down

Empirical Strategy

Identification Strategy: Exploit random variation in female share across sections

- Randomly assigned groups of around 60-70 students (11 sections per class)
- Students in the same sections take core classes together

Linear-in-Means

$$y_{ikct} = \alpha_0 + \alpha_1 \overline{FemaleShare}_{-i,kct} \times Male_i +$$
$$+ \alpha_2 \overline{FemaleShare}_{-i,kct} \times Female_i + \alpha_3 Female_i + ClassFE + \epsilon_{ikct} \tag{1}$$

- $\overline{FemaleShare}_{-i,kct}$ is the share of section female peers of i (Female Share)
- Clustered at the section level

Descriptive Evidence on the Relationship Between Female Peers and Senior Management Roles

Figure: Probability of Ever Senior-Level Manager

Male Coeff = 0.0287; Male SE = 0.0630
Female Coeff = 0.3620; Female SE = 0.1072
Class FE Included
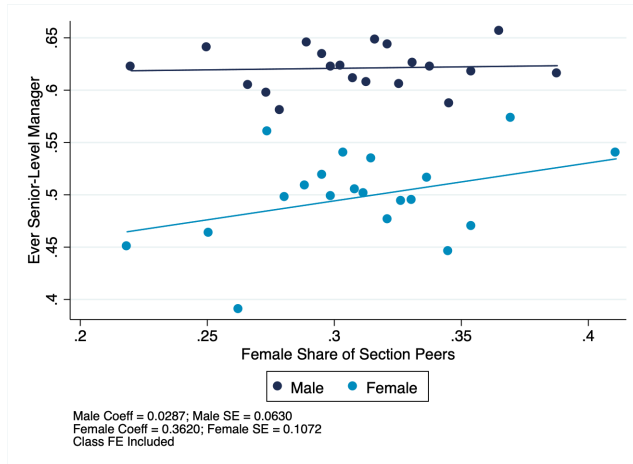
Results: Ever Becoming a Senior Manager

Figure: Effect of Female Peers on Ever Holding Any Senior-Level Management Positions

Observations = 3649
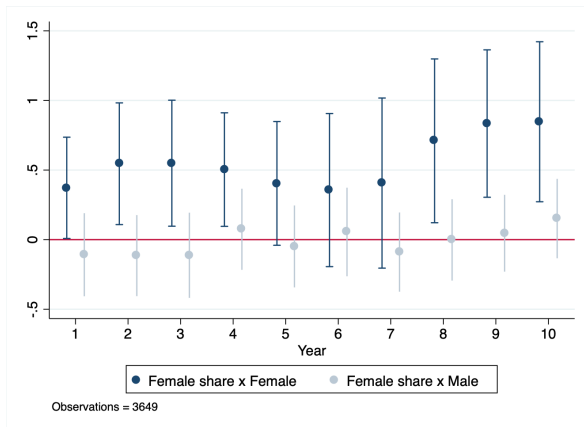
- ▶ 1SD increase in proportion of female MBA peers → ↑ 5% in ever holding a senior-level management position for women
- ▶ ↓ 15.7% in the gender gap in senior management

Results not driven by entry of new women into the management pipeline, but by more female managers becoming senior managers

Results can be driven by:

1. More women entering the managerial pipeline

  ▶ No effects on ever becoming a manager in general

2. More female managers entering senior level positions

  ▶ New initial entry into senior management in year 1

  ▶ Increased promotion rate into senior management for low-level female managers

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MBA Education

▶ Limited evidence of an effect on academic achievement in terms of GPA

▶ *Increase in elective coursework in management*

Initial Job Placement

▶ No effects on compensation

▶ No effects on employer type (size of firm, top 100 MBA employer)

▶ *Increase in becoming a senior manager*

▶ *Reduction in first job in consulting*

Preliminary results suggest ambitions and information transmission as important mechanisms

Intermediate Outcomes: MBA

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Intermediate Outcomes: Post-MBA

- ▶ Labor Supply (e.g. hours worked)
- ▶ Labor Market Attachment (e.g. parental leaves, childcare responsibilities)
- ▶ Career Choices (e.g. job characteristics: flexibility, amenities)

Mechanisms

- ▶ Ambition and Self-Confidence
- ▶ Referrals
- ▶ Information Transmission

Conclusion

- Female MBAs are 30% less likely to ever become a senior manager 10 years since graduation

- We provide the first evidence on the impact of female peers on the career advancement of women in the management pipeline

    - ↓ 15.7% in gender gap in senior managerial positions for ↑ 1 SD in share of female MBA peers

- Gender composition of peers can have important implications in reducing the gender gap in corporate leadership positions
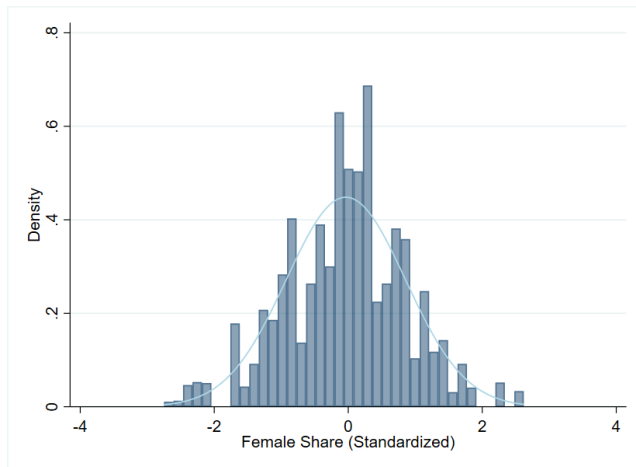
THANK YOU

Female Share Distribution

Stratification on gender, undergrad institution, and ethnicity

Figure: Female Share

Definition of Managers

Identify management positions based on keywords in job titles listed on CVs

Senior-Level Management Roles[1]:

- **C-Suite**: Executives such as CEO, CFO, COO, responsible for company operations and profitability ("Chief X Officer", "President")
  - Avg 8.6 years post grad

- **Senior Vice Presidents**: Senior leaders with significant business unit or functional oversight ("SVP", "General Manager", "Managing Director")
  - Avg 7.8 years post grad

- **Vice President and Director**: Leaders responsible for activities/initiatives within a sub-business unit, or who report directly to SVP ("VP", "Director", "Regional Managers")
  - Avg 5.4 years post grad

Low-Level Management Roles:

- **Managers**: Leaders responsible for teams and discrete functions or operating units ("Manager", "Senior Product Manager")
  - Avg 3.8 years post grad

Back

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[1]Definitions adapted from LeanIn.org and McKinsey & Company, 2020