

# “Potential” and the Gender Promotion Gap

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Talk based on joint research with Alan Benson and Danielle Li

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# Who should firms promote?

## Evaluate talent using demonstrated performance

- ▶ Based on (relatively) objective metrics like number of performance targets met
- ▶ But management may require a different skill set
- ▶ “Peter Principle”: promote people out of a role they are good at, and put them in a role they are bad at

## A common solution: Directly assess a worker’s “potential”

- ▶ Recognizes that workers can change and grow
- ▶ Recognizes that the managerial role relies on a different skill set
- ▶ But potential is fundamentally imagined and subjective

# Subjective forecasts of potential may disproportionately hurt women

## Role congruity theory

- ▶ Mismatch between female stereotypes and successful leadership stereotypes
- ▶ Women are less likely to be perceived as results-oriented, assertive, ambitious, competitive, dominant

## Subjective forecasts subject to favoritism/politicking

- ▶ Women may have less inclination, access, or returns to self promotion and networking

# Our research

We study evaluations and promotions in a large North American retail chain

- ▶ Focus on 30K full-time salaried “management-track” workers

Our firm evaluates workers using a **Nine Box** grid

1. Performance (1, 2, 3): **backward** looking performance that year
2. Potential (1, 2, 3): **forward** looking projections of future contributions to the firm, in either current or new role

**Nine Box (and similar) grids are widely used in HR**

- ▶ Across industries: Accenture, CitiGroup, Bristol Myers Squibb, General Mills
- ▶ Used to allocate promotions, bonuses, training opportunities

# Preview of results

## 1. Women receive lower potential ratings despite having higher performance

- ▶ Gap in potential ratings accounts for up to half of the gap in promotions

## 2. Potential ratings appear biased

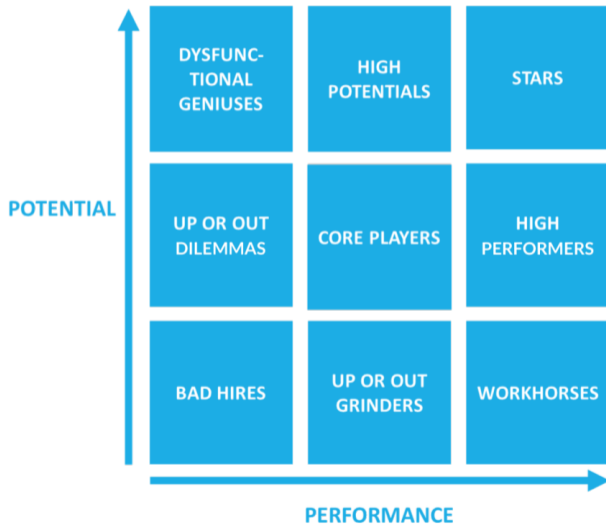
- ▶ Women have higher “realized potential” (future performance) than men with the same initial performance and potential ratings
- ▶ Men have higher exit rates and firms appear to reward “risk of loss”
- ▶ Firms fail to update assessments of women’s potential

## 3. Trade-off between information and equity

- ▶ Throwing away potential ratings decreases efficiency
- ▶ Solutions focused on de-biasing ratings appear more promising

# Nine Box

9 BOX GRID



# Data provider

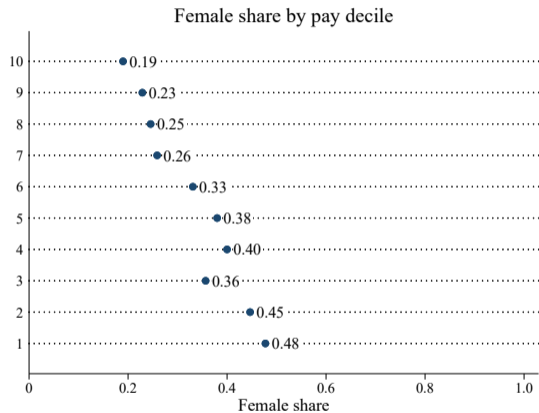
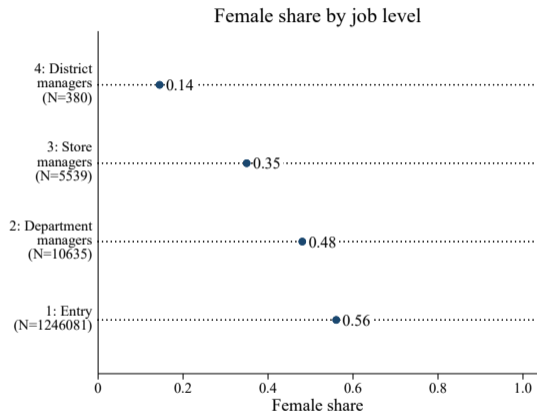
## Large US retail firm

- ▶ Employed over one million workers, mostly entry-level (e.g. cashiers)
- ▶ We focus on 30K core salaried “management-track” workers employed in corporate headquarters or across 4K retail locations

## HR data for each person $\times$ month (2011-2015)

- ▶ Managers assign ratings to their direct reports
- ▶ No quotas, ratings are kept secret

# Women's representation shrinks as we move up the career ladder



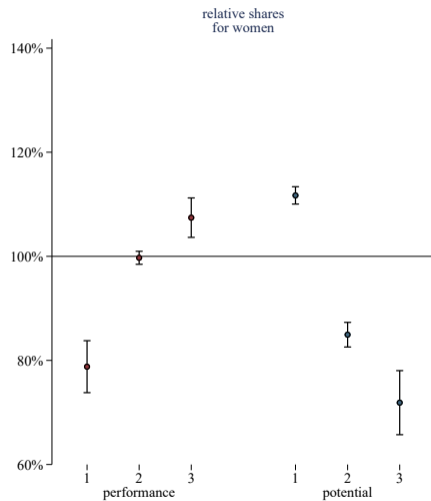
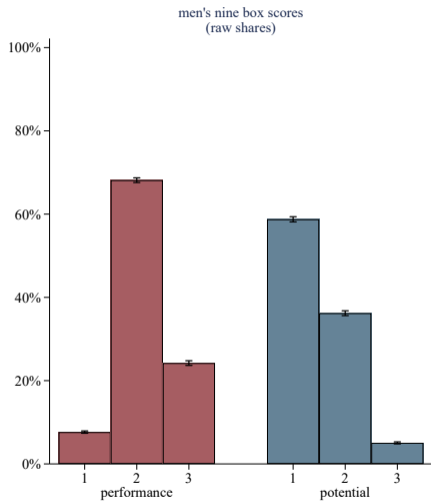
► Women make up 56% of entry level workers, but only 14% of district managers



## Women are less likely to be promoted

- ▶ Women are 15% less likely to be promoted than men in a given year, despite getting higher performance
- ▶ Raw pay gap: Women earn 12.5% less than men within our firm
- ▶ 70% of this raw pay gap can be explained by differences in job levels
- ▶ Assignment of workers to job runs matters for pay equity

# Women receive higher performance and lower potential ratings



## Potential ratings account for much of the gender promotion gap

- ▶ **Red:** The raw gender promotion gap falls in half once we control for potential ratings
- ▶ **Green:** A 1 point increase in potential ratings matters more for promotion than a 1 point increase in performance ratings.

Promoted	(1)	(2)	(3)	(4)
Female	-1.837*** (0.266)	-0.963*** (0.256)	-1.079*** (0.279)	-0.726*** (0.279)
Potential rating				
2=Med		10.52*** (0.292)		6.838*** (0.299)
3=High		19.50*** (0.864)		13.57*** (0.650)
Performance rating				
2=Med	6.498*** (0.325)	6.856*** (0.329)	5.417*** (0.535)	5.921*** (0.536)
3=High	11.35*** (0.424)	10.09*** (0.417)	10.99*** (0.586)	10.38*** (0.588)
Fiscal year FEs	Yes	Yes	Yes	Yes
Demographics			Yes	Yes
Location FEs			Yes	Yes
Observations	900209	900209	900209	900209

# Maybe women have lower potential?

**Practitioner literature:** “Potential” is defined as employee’s ability to contribute to the firm in the future

- ▶ Improved performance and greater responsibilities in her original job role
- ▶ Leadership in a new managerial role

**We examine women’s “realized potential”**

1. Are women’s lower current potential ratings justified by lower future performance?
2. ... or by higher exit rates or leaves of absence?

# Women have higher realized potential

- ▶ **Green:** Potential ratings predict performance in the future
- ▶ **Red:** Women earn higher future performance ratings relative to men with the same potential rating
- ▶ True for workers staying in the same role and workers promoted to new role

Next performance rating	Full sample		Promoted sample	
	(1)	(2)	(3)	(4)
Female	.0328*** (.0046)	.0197*** (.0048)	.0285* (.0154)	.0279* (.0154)
Potential rating				
2=med	.0913*** (.0048)	.1021*** (.0052)	.0678*** (.0162)	.0665* (.0163)
3=high	.1677*** (.0116)	.1974*** (.0118)	.1266*** (.0278)	.1275*** (.0282)
Performance rating				
2=med	.3637*** (.0111)	.2613*** (.0116)	.2697*** (.0522)	.2609*** (.0513)
3=high	.7671*** (.0121)	.5801*** (.0126)	.5139*** (.0534)	.4975*** (.0524)
Year FEs	Yes	Yes	Yes	Yes
Demographic controls		Yes		Yes
Location FEs		Yes		
Observations	586338	586338	5222	5222

# Leaving the firm and risk of loss

Managers may give women lower potential ratings because they believe that women are more likely to exit the firm, e.g., childcare

Are such beliefs are justified by the data?

- ▶ Women are less likely to leave, especially when they are “passed over” for promotions despite high performance
- ▶ If anything, firms appear to reward threat of attrition: workers rated as having higher “risk of loss” receive higher potential ratings, promotions, and wages
- ▶ Women are relatively more likely to take temporary leave, but the levels are too low to explain the gap in potential ratings and promotions

# Does the identity of the manager matter?

## Two common prescriptions

### 1. Assign women to female managers

- ▶ May act as mentors and advocates for female subordinates
- ▶ But could backfire due to “queen bee syndrome”

### 2. Assign women to “star” managers

- ▶ Better at assessing subordinates’ true performance and potential

We find “offsetting effects” so women are not obviously better off working under female or star managers

# Conclusion

Subjective assessments of potential contribute to gender gaps in promotion and pay

## A difficult problem to resolve

- ▶ Firms fail to update potential ratings after seeing strong realized female performance
- ▶ Dropping potential ratings completely would lead to a Peter Principle problem
- ▶ Problem still exists under female managers and highly-rated managers

## Can we de-bias potential ratings?

- ▶ Un-doing “unconscious bias” (e.g. role incongruity)
- ▶ Un-doing “strategic biases” (how much should firms reward risk of loss?)
- ▶ Screening algorithms with less bias