

Worker Beliefs and the Job Application Decision: A Lab-in-the-Field Experiment on Gender and Sorting

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Motivation

**"whether taken together or separately, (sorting by) occupation and industry now constitute the largest measured factors accounting for the gender wage gap"
(Blau & Kahn, 2017)**

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What is the underlying mechanism?

- Preferences?
- Discrimination based on First-Order Beliefs?
 - FOB: beliefs about the differences between men and women
- **Workers’ Second-Order Beliefs?**
 - SOB: beliefs about other people’s first-order beliefs

Second-Order Beliefs as a Mechanism

Belief:



Second-Order Beliefs as a Mechanism

Belief:



Second-Order Beliefs as a Mechanism

Belief:



Male-Dominated



Female-Dominated



Second-Order Beliefs as a Mechanism

Belief (w.r.t. STEM capability):



Second-Order Beliefs as a Mechanism

Belief (w.r.t. STEM capability):



STEM



Non-Stem



Second-Order Beliefs as a Mechanism

Belief (w.r.t. STEM capability):



STEM



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Second-Order Beliefs as a Mechanism

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STEM



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Second-Order Beliefs as a Mechanism

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STEM



Non-Stem



Research Question

How do workers' second-order beliefs affect their decision to apply for a job?

- Natural field experiment
 - recruit candidates for a **real** job
 - vary gender of hiring manager
 - vary product sector (gender connotations)
- Online lab experiment
 - elicit first- and second-order beliefs
 - procedure from Dustan, Koutout, & Leo (2019)

Literature Review

Gender Wage Gap

- Flexibility: Goldin (2014), Wiswall & Zafar (2017)
- Bargaining Initiative: Leibbrandt & List (2014)
- HH Production Constraints: Cortes & Pan (2019)
- Child-bearing: Kleven, Landais, & Sogaard (2018)
- Discrimination (review): Neumark (2018)

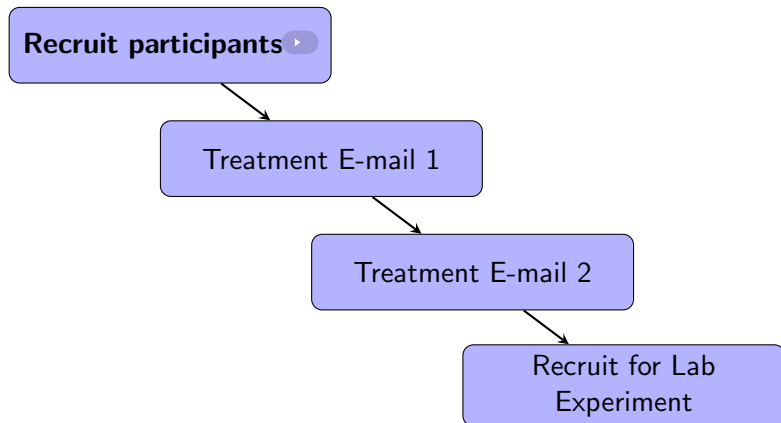
Sorting

- Lower-paying Positions: Fernandez & Campero (2017)
- Job Stereotypes: Fernandez & Friedrich (2011)
- Competitive Compensation: Flory, Leibbrandt, & List (2015)
- Lower-paying Firms: Card, Cardoso, & Kline (2015)

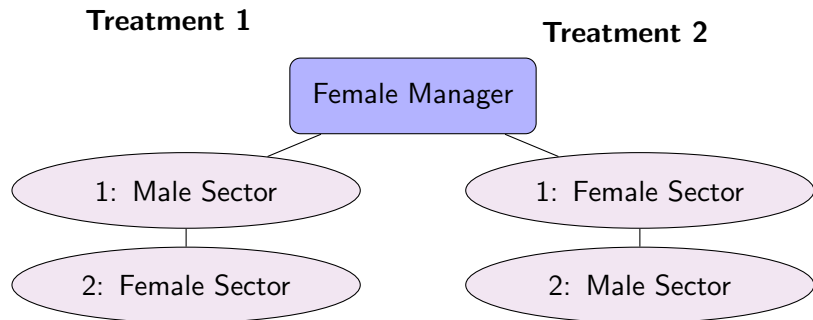
Outside Business to Business Sales Representative

- Company: regional wholesale distributor of disposable goods
 - Office Products
 - Janitorial Products
- Typically 6-figure income (commission-based)
- Generous benefits
- Flexible work hours/place of work
- 7 locations in the Southeast

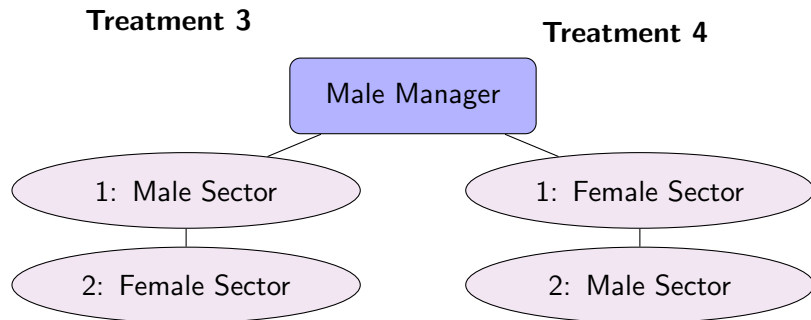
Field Experiment



Experiment Design: Treatments



Experiment Design: Treatments



Experiment Design: Product Sectors

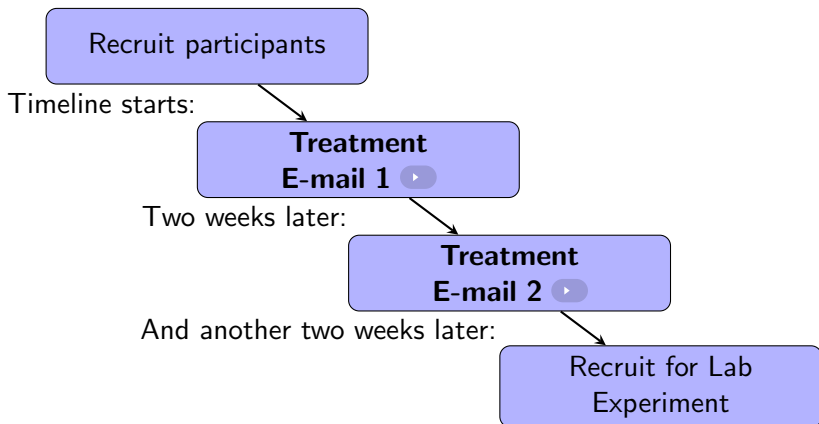
Janitorial Products (M)

Operations
Facility Mgr.
Maintenance

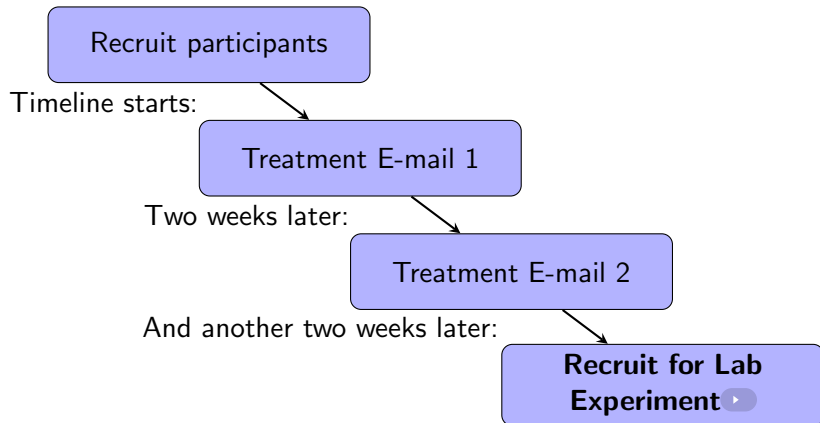
Office Products (F)

Admin. Asst.
Office Mgr.
Receptionist

Field Experiment



Field Experiment



Lab Experiment Recruitment

Participants in the field experiment are invited to participate in an online survey of job seekers conducted by Vanderbilt University.

- \$5 participation fee
- \$5 belief elicitation
- \$500 Amazon gift card
- 10-15 minutes
- NO association with job advertisements

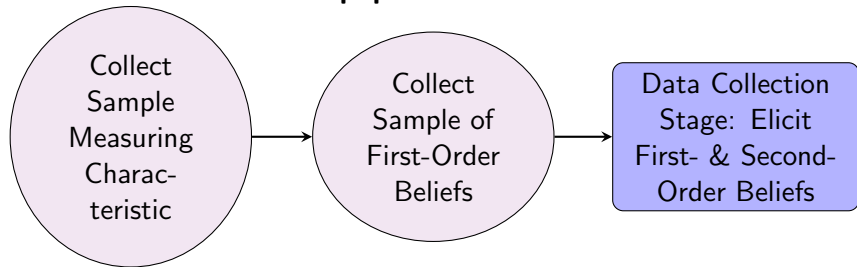
Belief Elicitation

Binarized Scoring Rule (Hossain & Okui, 2013)

- Decision affects the *probability* of winning
- Robust to risk aversion/loving
- Robust to some non-expected utility maximizers
- Critical assumption: stochastic monotonicity
- Loss function determines the statistic

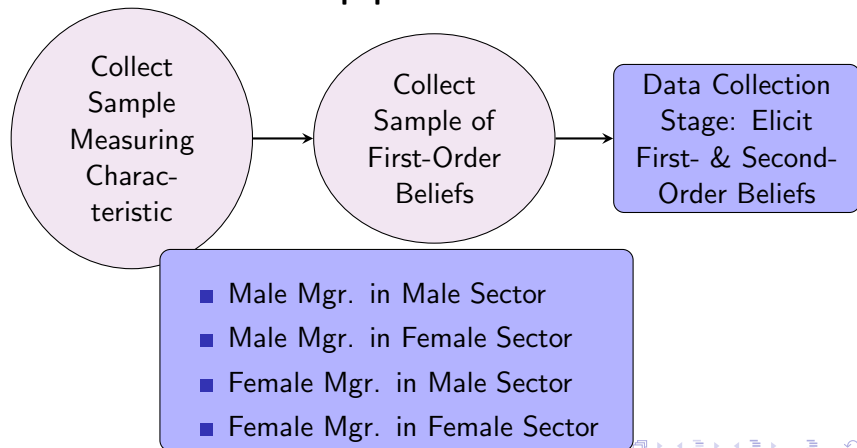
Lab Experiment

Procedure to elicit first- and second-order beliefs about the differences between two populations.



Lab Experiment

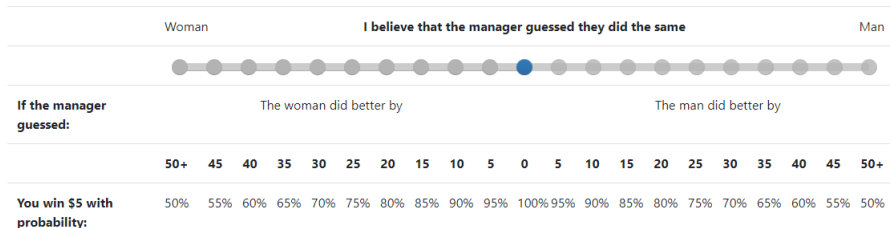
Procedure to elicit first- and second-order beliefs about the differences between two populations.



Slider

Task 2, Male Manager in a Traditionally Female Product Sector

A computer at the end of this survey will randomly select a male manager responsible for hiring and managing sales representatives in a traditionally female product sector. **What did he choose when asked “Who do you believe did better on the sales ability assessment, the randomly selected man or the randomly selected woman, and by how much?”**



Next

Piloting

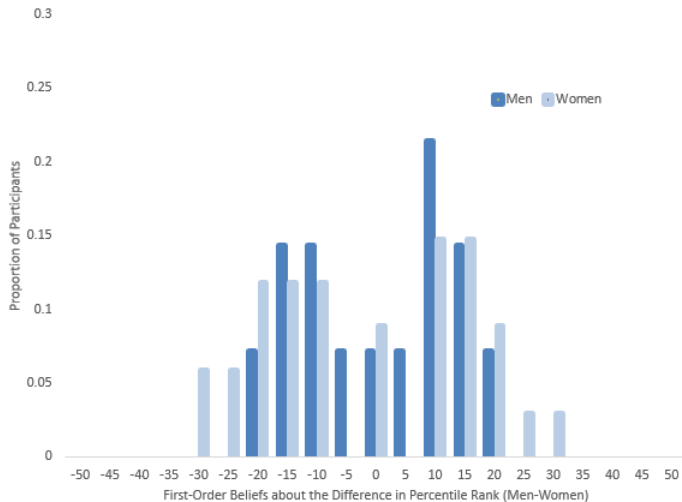
Lab Pilot

- Validating the survey instrument
- TAMU Human Behavior Lab
- 46 participants (not balanced)
- Higher payments \$10/\$10

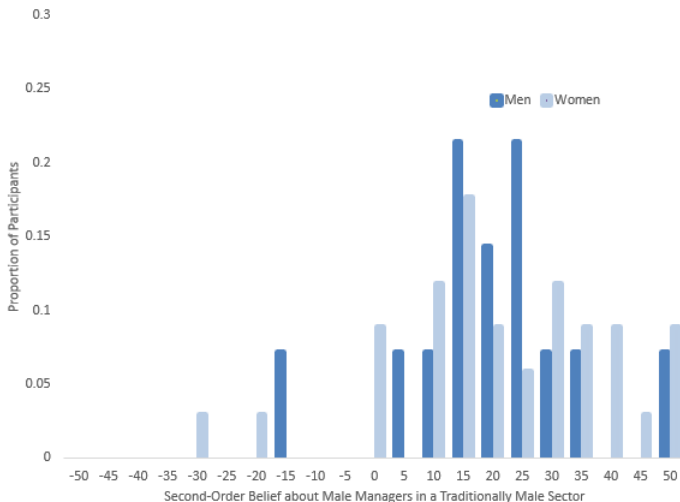
Field Pilot

- 70 participants in field exp. (47 male)
- 37 applications
- 9 participants in lab exp. (7 male)

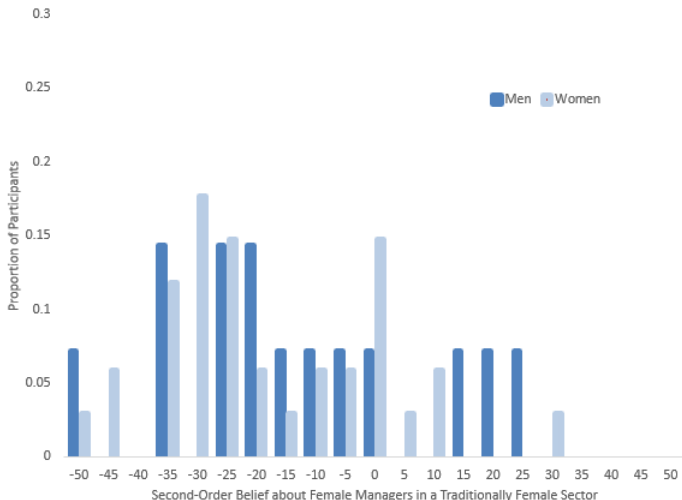
First-Order Beliefs



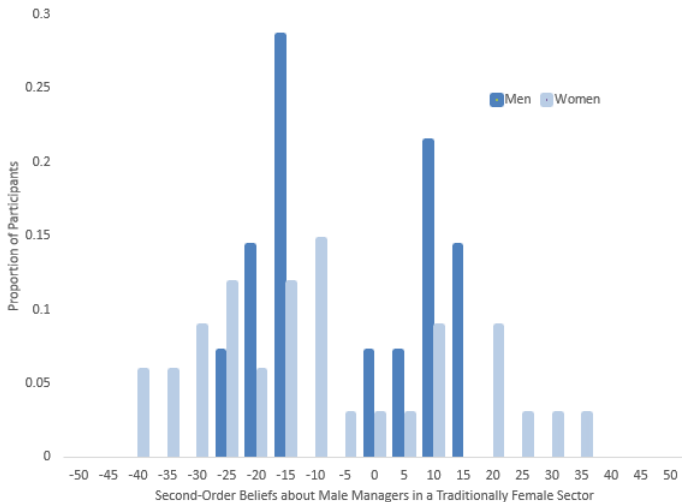
Second-Order Beliefs: Male Manager/Male Sector



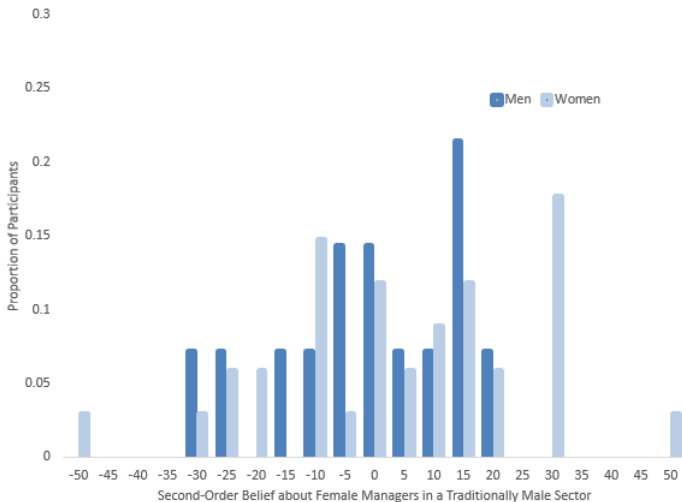
Second-Order Beliefs: Female Manager/Female Sector



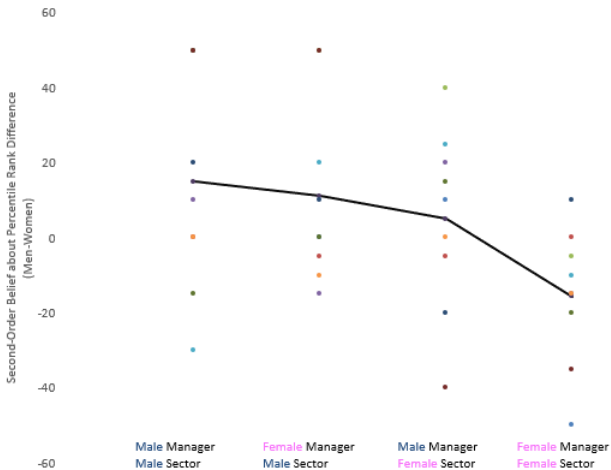
Second-Order Beliefs: Male Manager/Female Sector



Second-Order Beliefs: Female Manager/Male Sector



Second-Order Beliefs: Knoxville Pilot



Application Rates: Knoxville Pilot



Thank You