Workplace Attributes and Women’s Labor Supply Decisions
Evidence from a Randomized Experiment

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Gender Gap in Education and Labor Supply in Pakistan

▶ GPI in secondary education is 0.81 as of 2017
▶ GPI in tertiary education is 0.87 as of 2017
▶ ratio of female to male LFP is 29% as of 2018
▶ FLFP is 24% as of 2017

ILOStat
Costs for women working

- Stigma for women working outside the home (Field et al 2015, World Bank 2012)
  - 75% of women in urban Punjab say that other household members make their labor supply decisions for them.
  - 25% of those not working say it is because their husband or father has not given permission.
Costs for women working

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▶ Costs from specific workplace attributes
  ▶ Cultural norm of social segregation of women and men
  ▶ 20% of job postings won’t accept applications from women
Beliefs about salary impact labor supply decisions (Jensen, 2010; Stinebrickner and Stinebrickner, 2013; Wiswall and Zafar, 2013; Zafar, 2013; Delavande and Zafar, 2018)
Low Information Environment

- Beliefs about salary impact labor supply decisions (Jensen, 2010; Stinebrickner and Stinebrickner, 2013; Wiswall and Zafar, 2013; Zafar, 2013; Delavande and Zafar, 2018)


Women who want to work don't have enough information to sort into firms that are a good fit.
Beliefs about salary impact labor supply decisions (Jensen, 2010; Stinebrickner and Stinebrickner, 2013; Wiswall and Zafar, 2013; Zafar, 2013; Delavande and Zafar, 2018)


Women who want to work don’t have enough information to sort into firms that are a good fit
Research Questions

1. How does information about gender-related workplace attributes impact women’s job application decisions?
2. Does family involvement in job search impact job application decisions?
3. How do women update their beliefs about workplace attributes in different occupations?
4. How do these beliefs impact occupational choice?
Context

- Job Asaan
- Job Matching: education, experience, interest in occupation, and gender
- Data on firms, jobseekers, and job search
64 Job Postings

- Median salary: 18000 PKR/month
- 74% of firms have majority male employees
- 77% of jobs have a male supervisor
- 17 occupations
Job Seekers

- All women
- 4081 jobseekers, 988 actively searching for jobs
- 22 years old on average
- 58% are currently enrolled in high school or college
- 90% are at least in their final year of college
- About 1 year of work experience, on average
- 7% are married
- About 50% are most interested in becoming a teacher
Cross-Randomized Experiments

Information Experiment
- Randomize jobseekers’ access to information for each job posting about
  - gender composition of the firm
  - gender of the supervisor
Cross-Randomized Experiments

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Priming Experiment
- Prime jobseeker to think about family job search involvement before job application decisions
Cross-Randomized Experiments

Information Experiment
▶ Randomize jobseekers’ access to information for each job posting about
  ▶ gender composition of the firm
  ▶ gender of the supervisor

Priming Experiment
▶ Prime jobseeker to think about family job search involvement before job application decisions

▶ Control group job application rate: 5%
▶ Control group job application rate among active jobseekers: 7%
Information Experiment: Sample SMS

Control SMS

3:18 PM

JOB AD for Fatima Jinnah Management Trainee, First Consultancy
Salary: 15000 Gulberg, Lahore
Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
Apply by calling the Job Asaan helpline
Call XXXX-XXXXXX

3:18 PM
Information Experiment: Sample SMS

Control SMS

JOB AD for Fatima Jinnah Management Trainee, First Consultancy
Salary: 15000
Gulberg, Lahore
Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
Apply by calling the Job Asaan helpline
Call XXXX-XXXXXX

Gender Composition SMS

JOB AD for Fatima Jinnah Management Trainee, First Consultancy
Salary: 15000
Gulberg, Lahore
MOSTLY MALE employees
Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
Apply by calling the Job Asaan helpline
Call XXXX-XXXXXX
Information Experiment: Sample SMS

**Gender Supervisor SMS**

3:18 PM

JOB AD for Fatima Jinnah
Management Trainee, First
Consultancy
Salary: 15000
Gulberg, Lahore

**MALE Supervisor**

Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
Apply by calling the Job Asaan helpline
Call XXXX-XXXXXX

3:18 PM
Information Experiment: Sample SMS

Gender Supervisor SMS

3:18 PM

JOB AD for Fatima Jinnah Management Trainee, First Consultancy
Salary: 15000
Gulberg, Lahore

MALE Supervisor
Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
Apply by calling the Job Asaan helpline
Call XXXX-XXXXXX

3:18 PM

Gender Composition and Gender of Supervisor SMS

3:18 PM

JOB AD for Fatima Jinnah Management Trainee, First Consultancy
Salary: 15000
Gulberg, Lahore

MOSTLY MALE employees
MALE Supervisor
Company accepting female applicants.
FLEXIBLE work hours.
Apply by: 2nd April '19
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Call XXXX-XXXXXX

3:18 PM
Empirical Strategy - Any Information

\[ Y_{ijk} = \alpha_0 + \alpha_1 T_i A_j + \alpha_2 T_i + \alpha_3 A_j + \Gamma W_{ijk} + \epsilon_{ijk} \quad (1) \]

\( \alpha_1 > 0 \): Receiving information about workplace attribute increases job application rate

\( W_{ijk} \): natural log salary, flexible working hours, FE for occupation, FE for location of the job, received call to apply for jobs, number of matches in that round, education, experience
# Results - Information about Gender of Supervisor

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Applied to job</th>
<th>(2) Applied to job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat Info X Info Exists Gender Sup</td>
<td>0.0457**</td>
<td>0.0647*</td>
</tr>
<tr>
<td></td>
<td>(0.0220)</td>
<td>(0.0369)</td>
</tr>
<tr>
<td>Treat Info Gender Sup</td>
<td>-0.0465**</td>
<td>-0.0660*</td>
</tr>
<tr>
<td></td>
<td>(0.0220)</td>
<td>(0.0371)</td>
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<tr>
<td>Info Exists Gender Sup</td>
<td>-0.0300</td>
<td>0.00617</td>
</tr>
<tr>
<td></td>
<td>(0.0471)</td>
<td>(0.0674)</td>
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</tbody>
</table>

Observations: 20,650 8,110  
Job Covars: Yes Yes  
Strata FE: Yes Yes  
Sample: All Active
### Results - Information about Gender Composition

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Applied to job</th>
<th>(2) Applied to job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat Info X Info Exists Gender Comp</td>
<td>0.00652</td>
<td>0.0143</td>
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<tr>
<td></td>
<td>(0.00718)</td>
<td>(0.0131)</td>
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<tr>
<td>Treat Info Gender Comp</td>
<td>-0.00322</td>
<td>-0.0142</td>
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<tr>
<td></td>
<td>(0.00685)</td>
<td>(0.0131)</td>
</tr>
<tr>
<td>Info Exists Gender Comp</td>
<td>0.0268*</td>
<td>0.0302</td>
</tr>
<tr>
<td></td>
<td>(0.0163)</td>
<td>(0.0251)</td>
</tr>
<tr>
<td>Observations</td>
<td>20,650</td>
<td>8,110</td>
</tr>
<tr>
<td>Job Covars</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Strata FE</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sample</td>
<td>All</td>
<td>Active</td>
</tr>
</tbody>
</table>
Empirical Strategy - Information

\[ Y_{ijk} = \beta_0 + \beta_1 F_j T_i + \beta_2 M_j T_i \]
\[ + \beta_3 F_j + \beta_4 M_i + \beta_5 T_i + \Gamma W_{ijk} + \epsilon_{ijk} \]

(2)

\( \beta_1 - \beta_2 > 0 \): Receiving information that job is female- vs male-dominant increases the application rate, versus not receiving that information.
Results - Information about Female vs Male Supervisor
Results - Information about Female vs Male Gender Composition
Empirical Strategy - Priming

\[ Y_{ijk} = \gamma_0 + \gamma_1 P_i + \Gamma W_{ijk} + \epsilon_{ijk} \]  (3)

\( \gamma_1 < 0 \): Priming about family job search involvement decreases the job application rate

Primed Question Text
## Results - Prime

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Applied to job</th>
<th>(2) Applied to job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat: Prime</td>
<td>-0.0119** (0.00571)</td>
<td>-0.0184* (0.0103)</td>
</tr>
<tr>
<td>Observations</td>
<td>12,503</td>
<td>5,877</td>
</tr>
<tr>
<td>Job Covars</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Strata FE</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sample</td>
<td>All</td>
<td>Active</td>
</tr>
</tbody>
</table>
Panel A: All Jobseekers

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>employed_preround1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>info_female_supervisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>info_women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat: Prime</td>
<td>0.193***</td>
<td>-0.000496</td>
<td>0.000410</td>
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<tr>
<td>(0.0540)</td>
<td>(0.0105)</td>
<td>(0.0122)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>2,260</td>
<td>12,503</td>
<td>12,503</td>
</tr>
</tbody>
</table>
### Panel B: Active Jobseekers

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>employed_preround1</td>
<td>info_female_supervisor</td>
<td>info_women</td>
</tr>
<tr>
<td>Treat: Prime</td>
<td>0.379***</td>
<td>0.0196</td>
<td>0.0379**</td>
</tr>
<tr>
<td></td>
<td>(0.120)</td>
<td>(0.0158)</td>
<td>(0.0185)</td>
</tr>
<tr>
<td>Observations</td>
<td>1,263</td>
<td>5,877</td>
<td>5,877</td>
</tr>
</tbody>
</table>
Conclusions

- Providing information about gender of the supervisor nearly doubles the job application rate.
- Women are more likely to apply to a job when they learn that it has a female supervisor than a male supervisor.
- No significant impact of information about gender composition on job application rate.
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- Providing information about gender of the supervisor nearly doubles the job application rate.
- Women are more likely to apply to a job when they learn that it has a female supervisor than a male supervisor.
- No significant impact of information about gender composition on job application rate.
- Family job search involvement decreases women’s job application rates by 24-36%.
- Women who are already working are more likely to apply for a job when primed about family job search advice than their counterparts.
Policy Implications

- Information about gender of the supervisor allows women to sort and increases the job application rate
- Promoting women to supervisory roles could have a multiplier effect and increase women’s employment
- There is a threshold cost to working outside the home that women must first overcome with their family
Thank You!

This project gratefully acknowledges support from the following sources: National Science Foundation Doctoral Dissertation Research Improvement Grant, Duke University Center for International and Global Studies, Duke University Graduate School
We are also interested in understanding how women make decisions about their jobs. Have you discussed your job search with your family in the last week?

[Responses: Yes, No, I do not wish to answer]