Gender, Mobility and Labor Market Outcomes

Pre-Analysis Plan

Part 2

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Fieldwork location:	Lahore, Pakistan
Fieldwork dates:	
Experimental treatment:	2017-2020 (anticipated)
Date of Pre-Analysis Plan:	**November 19, 2019**

1 Updates to design post pilot

Since we registered our first Pre-Analysis Plan at the pilot stage of our experiment, we have made the following changes to the experimental design based on pilot results and increases in available resources:

- Due to logistical issues with SMS tracking, we remove "respond to SMS" as an outcome variable.
- We have added a third treatment arm for jobseekers, WMT. In Enumeration Blocks assigned to this arm, only women jobseekers are offered mixed-gender transport to work.
- We have incorporated randomization of employer areas
- We have initiated randomization in the proportion of job ads treated for treatment jobseekers.

Other aspects of the design remain as described in the initial PAP.

2 Full design incorporating changes

- We randomized firms by enumeration block into treatment and control.

  - For the first phase of the firm randomization (September 2018 - September 2019), firms were assigned to treatment and control arms as described for jobseekers (WT, MT, WMT, C)
  - For the second phase of firm randomization (October 2019 ongoing), all treatment firms (WT, MT, WMT) are treated as part of a single treatment arm.

- We randomized residential Enumeration Blocks into the following treatment arms:
  - WT - Women in these enumeration blocks are offered women's-only transport to and from work;
  - MT - Men and women in these enumeration blocks are offered mixed-gender transport to and from work
  - WMT - Women in these enumeration blocks are offered mixed-gender transport to and from work
  - A control group with no transport offered;
  - FC - "Full control" Enumeration Blocks randomly selected far from the treatment enumeration blocks;
  - CASH: Enumeration Blocks randomly selected far from treatment enumeration blocks, in which a subset of jobseekers is randomized into a cash stipend for transport.

- Jobseekers in WT, MT, and WMT Enumeration Blocks were randomized individually into receiving all job ads with treatment offers, or only a subset.

- Jobseekers in the treatment arms were randomized individually into different price levels for the transport.

3 Outcomes and estimation

We intend to test for impact on the following outcome variables, collected as administrative data through our "Job Talash" platform (all variables are binary):

- Decides to apply for job when asked during initial screening call;
- Attends the interview (conditional on interview offer);
- Accepts the job (conditional on job offer);
- Takes up the transport service.

We will estimate the following IV linear probability model on the outcomes of all job opportunities sent out to applicants who meet the basic job criteria:

$$Y_{ijt} = \beta_0 + \beta_1 OFFERT\widehat{RANSPORT}_{ijt} + \beta_2 OFF\widehat{ERCASH}_{ijt} + \mu_t + \epsilon_{ijt} \quad (1)$$

Where:

- The unit of observation: **candidate i - job ad j pair** for an individual ad sent to the candidate at time t
- Y_{ij} is a generic outcome for the response of applicant i to job opportunity j;
- $OFFERTRANSPORT_{ij} = 1$ for job matches in which the jobseeker was offered transport, instrumented by the assigned treatment status for the match, $ASSIGNTRANSPORT_{ij}$; this may not always correspond to the original assignment in case of data errors in the process of coding and sending information to jobseekers
- $OFFERCASH_{ij} = 1$ for job matches in which the jobseeker was offered a cash stipend, instrumented by the assigned treatment status for the match, $ASSIGNCASH_{ij}$;
- μ_t are time dummies;
- SE are two-way clustered by jobseeker Enumeration Block and firm Enumeration Block
- We will select control variables for precision based on those that best predict variation in the control group, using a Lasso technique.

We will estimate Equation 1 for male and female jobseekers pooled and test whether the response to the transport offer is different for the two groups.

We will then estimate the following for female jobseekers, breaking down the treatment by women's-only and mixed gender transport:

$$Y_{ij} = \beta_0 + \beta_1 OFFERWOMENTRANS_{ij} + \beta_2 OFFERMIXEDTRANS_{ij} + \beta_3 OFFERCASH_{ij} + \epsilon_{ij} \quad (2)$$

We intend to test for differences in responses by variations in:

- Proportion of the job ads that a jobseeker receives that are treated (using non-experimental and experimental variation)
- Cross-randomized subsidy level for the transport

4 Heterogeneity

We intend to test for heterogeneous effects on the following dimensions:

- Baseline job search activity and employment

- Perceptions of safety in the neighborhood
- Marital status
- Education level
- Distance from the jobseeker's home to the job
- Job salary
- Baseline perceptions of women's safety in public spaces
- Baseline measure of whether the respondent knows any women who work