Gender, Mobility and Labor Market Outcomes

Pilot study

Pre-Analysis Plan

Erica Field and Kate Vyborny

Fieldwork location:	Lahore, Pakistan
Fieldwork dates:	
Baseline survey:	October 2016 - September 2017 (anticipated)
Pilot experimental treatment:	August 21, 2017 onwards
Date of Pre-Analysis Plan:	**August 31, 2017**

1 Introduction

We are currently running the pilot stage of a randomized of transport to work in Lahore, Pakistan. In the plot stage, we have randomized the offer of treatment to a subset of residential enumeration blocks.

The field team has started collecting data on job application responses for these individuals on August 21. At the time of registration of this document we have collected this information for the first few applications in a large scale pilot of the intervention (for the first ten days and first four job vacancies in the pilot).

This pre-analysis plan sets out the outcome variables we intend to examine in the pilot only. We intend to register a separate Pre-Analysis Plan to cover the full-scale study at a later date.

2 Baseline data

The process of baseline surveying and initial enrollment into the study started in October 2016 and is expected

to be complete in September 2017:

1. We survey approximately 50,000 households in a clustered random sample of households in Lahore, Pakistan.
2. In each household, a respondent reports a roster of adult household members and basic information on their age, education, and current work status.
3. For each member (whether currently working or not), the enumerator asks whether he/she was interested in signing up for Job Talash, a job search service, and if so notes contact information for him/her.
4. The enumerator also leaves a flyer with a unique code and a contact number for Job Talash.

The second stage of data collection was CV creation, which started in December 2016 and is ongoing:

5. The Job Talash call center then calls the individuals marked as interested in the household to sign them up.
6. On each call, the Job Talash team verifies the individual's interest in the service, then signs him / her up as a "subscriber" by gathering more detailed background information about the applicant's education including institutions, specializations, and grades, and full details of work experience and responsibilities.
7. The Job Talash team then prepares a CV for each subscriber with the information gathered on the call. The CV is sent to the subscriber to confirm accuracy and any final changes are made.
8. Once the subscriber is enrolled, Job Talash includes him/her into a pool of potential candidates. For each new job identified by Job Talash, the team uses a simple filter of required educational level and years of experience to identify matching candidates.

The third stage, job matching, started in June 2017 and is ongoing:

9. Job Talash sends the SMS announcements of these job opportunities. Individuals can respond with the code in the SMS to confirm interest in the job.

10. The Job Talash team then places a follow-up call to all individuals to whom the job has been sent, to confirm they have received the SMS, check their interest, confirm they understand the location of the job and confirm they plan to attend an interview if invited.

11. The Job Talash team sends a packet of CVs of interested applicants to the employer, who may choose to call them for interviews.

12. After several days, the JT team then calls the employer to gather follow-up data on the applicants selected and called for interviews.

3 Randomization

For the pilot intervention, we randomized the enumeration blocks in the initial area covered in the process discussed above 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; or
- C - A control group with no transport offered.

In addition, individuals in the two treatment arms were randomized into two price levels for the transport:

- 2000 PKR (20 USD) per month
- 3500 PKR (35 USD) per month

At the pilot stage, this transport offer only applies to jobs in an initial pilot area of employers.

Job Talash subscribers are informed about the availability of the transport, its characteristics (women's-only or mixed-gender) and its price along with the job ad SMS and follow-up call for job ads from these employers only. Ads from other employers sent to the treatment subscribers do not mention transport. Ads for the control group do not mention transport. The Job Talash agents clarify the characteristics of the transport as needed with applicants during the screening call.

Employers are not informed about the transport offered to candidates. Since Job Talash sends applications to the firms, the earliest they could be aware of the transport is if the candidate mentions it during a call for interview.

4 Outcome variables

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

- Responds to the SMS to indicate interest in applying;
- 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 linear probability model on the outcomes of all job opportunities sent out to applicants who meet the basic job criteria (step 8 in section 2):

$$Y_{ibj} = \beta_0 + \beta_1 MT_b HIGH_i + \beta_2 MT_b LOW_i + \beta_3 WT_b HIGH_i + \beta_4 WT_b LOW_i + \gamma X_i + \epsilon_{ibj} \quad (1)$$

where:

- Y_{ibj} is a generic outcome for the response of applicant i who lives in enumeration block b to job opportunity j;
- MT and WT are dummies for whether the enumeration block b was assigned to mixed-gender or women's-only transport, respectively;
- $HIGH$ and LOW are dummies for whether individual i was assigned to the higher or lower price for the treatment;
- X is a vector of individual characteristics including age, education, years of experience, a dummy for married, a dummy for children below the starting age off primary school, and a dummy for whether the salary of the job opportunity is greater than or equal to the applicant's reported reservation wage.

We will use a two-way cluster to cluster standard errors by the applicant and the job opportunity.

We will report report p-values for tests of the following null hypotheses:

1. $\beta_1 = 0$, the effect of high cost mixed transport equals zero;
2. $\beta_2 = 0$, the effect of low cost mixed transport equals zero;

3. $\beta_3 = 0$, the effect of high cost women's transport equals zero;

4. $\beta_4 = 0$, the effect of low cost women's transport equals zero;

5. $\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$, the overall effect of an offer of transport equals zero;

6. $\beta_1 = \beta_2$ and $\beta_3 = \beta_4$, the overall effect of price equals zero;

7. $\beta_1 = \beta_3$ and $\beta_2 = \beta_4$, women's-only transport has the same effect as mixed-gender transport.

In addition, we will define high-salary jobs as those where the anticipated salary is more than five times the high transport price (i.e. 17,500 PKR per month). We will fully interact Equation 1 with an indicator variable for high-salary jobs and report the same set of results.

For males, who are not offered women's-only transport, we will impose $\beta_3 = \beta_4 = 0$ and estimate:

$$Y_{ibj} = \beta_0 + \beta_1 MT_b HIGH_i + \beta_2 MT_b LOW_i + \gamma X_i + \epsilon_{ij} \tag{2}$$

We will report the relevant sub-set of post-estimation tests (1, 2 and the analogous tests to 5, 6).

In addition, we will report cross-equation tests of the following null hypotheses, denoting the samples as M and F respectively:

8. $\beta_{1,M} = \beta_{1,F}$ and $\beta_{2,M} = \beta_{2,F}$: Men and women have the same marginal response to transport.