

# Pre-Analysis Plan: Effects of Public Recognition of New Norms

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## 1 Introduction

This document describes our pre-analysis plan to estimate the effect of industry public recognition of new norms on firms' hiring outcomes. In this experiment, we randomly assign the viewing of a video in which industry leaders promotes female hiring in Pakistan's garment manufacturing industry.

## 2 Intervention

This experiment randomly assigns viewing of a video in which industry members promote female hiring. This approximately 8-minute long video is aimed to symbolize the public recognition of the new norm to hire women by industry members, and has been produced by the authors, and includes leaders from two prominent trade associations, one human resources manager of a well-known large-scale firm (over 3,000 employees), one factory manager of a small company (about 400 employees), and an owner of micro company (about 15 employees). All discussants are male.

The main message of this video is the promotion of female hiring in the industry. Each discussant in the video discusses their views on female hiring and female workers in the industry. The trade association leaders link female hiring to the industry's growth, especially via increased export volume. Meanwhile, the three businessmen provide their respective experiences with hiring women, which include both the benefits and challenges of introducing female workers, and explain why their companies hire women.

## 3 Sampling

We randomly sample 600 firms from the membership lists of two trade associations: the Pakistan Hosiery Manufacturers and Exporters Association (PHMA) and the Pakistan Ready-made Garment

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Manufacturers and Exporters Association (PRGMEA). Of the 600 firms, we randomly assign 300 firms to the video treatment group, and the other half to the control group with no video showing.

The video treatment is administered during a survey interview that takes place at each company's premise sometime between January - April, 2023. At each company's premise, we interview its top manager who has control over the firm's hiring policy and is not necessarily its owner. During this interview, if the company is assigned to the treatment group, its top manager watches the video on a tablet provided by our enumerator. Therefore, respondents, while they share membership to either of the above trade associations, do not know who receive the video treatment.

## 4 Outcomes of Interest

The primary outcome of interest is companies' female hiring after the treatment. In order to collect the data on this outcome, we conduct a phone survey approximately six months after the initial survey interview.

More specifically, we construct two variables that capture the primary outcome:

1. **Hired female workers:** An indicator variable equals 1 if a firm has hired at least one female worker since the initial interview
2. **Number of female workers hired:** A continuous variable represents the number of female workers hired since the initial interview.

We also expect that the video can influence top managers' perception of female hiring and female workers. Thus, we additionally investigate the video effect on the following dimensions:

1. **Wife's work status:** Whether a top manager's wife has obtained out-of-home employment since the initial interview
2. **View on competency across gender:** General view on the work performance across gender
3. **View on out-of-home employment for women:** General view on female labor force participation
4. **View on hiring women in the industry:** General view on female hiring by common positions in the industry

## 5 Estimation and Testing

To estimate the effect of the public recognition treatment, we use the data from the baseline survey and experiment described in Chapter one and from the follow-up survey described in the previous section. The initial survey data contain basic firm and top manager characteristics as well as actual and expected economic and non-economic costs associated with hiring women. The bean sorting

game experiment provides the individual level willingness to pay for norm compliance. The follow-up survey provides data on the outcomes of our interest, beliefs about the existing norms around female hiring, and actual hiring of women.

Using these data, we estimate the following equation with OLS where  $y_i$  is the outcome for the company for which the top manager  $i$  works;  $T_i$  is the dummy variable with 1 if  $i$  has received the video treatment;  $X'_i$  is a vector of firm characteristics such as the years in operation, size in terms of revenue and the number of employees, whether it exports, access to finance, and types of production;  $Z'_i$  is a vector of top manager characteristics including sex, age, education level, experience in the business if his wife has out-of-the-home employment if he is the firm owner, willingness to pay for norm compliance and so forth; and  $\epsilon_i$  is the error term.

$$y_i = \beta_1 T_i + X'_i \beta_2 + Z'_i \beta_3 + \epsilon_i \quad (1)$$

The coefficient of interest is  $\beta_1$ . The estimate of this coefficient reflects the causal effect of the public acknowledgment of female hiring as the randomization of the video treatment ensures exogeneity of the treatment variation. The expected direction of the public acknowledgment effect depends on top managers' priors regarding how the existing norms around hiring women are perceived in the industry. If top managers are unsure about how hiring women is perceived by other members of the industry and particularly think that hiring women is viewed negatively by others, the public acknowledgment should increase their interest in and shift their preference toward hiring women, as well as actual hiring of women. In the baseline survey, we collect data on their prior beliefs and will check for heterogeneity across the priors distribution.

## 6 Robustness Checks

We will estimate a version of equation 5 without the firm and top manager characteristics,  $X'_i$  and  $Z'_i$ .

## 7 Heterogeneity Analysis

WE will estimate heterogeneous treatment effects across variables collected at the initial interview (at the time of treatment assignment) by including the interaction between the treatment assignment,  $T_i$  and one of the following variables, and the variable itself:

1. Firm size
2. Firm's exporter status
3. Firm's export destination
4. Firm's experience in hiring women

5. Types of goods produced
6. Top managers' baseline views on female hiring and cultural norms
7. Daughters' education level
8. Wife's employment status