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# Paternalistic Discrimination

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## ABSTRACT

### Paternalistic Discrimination\*

We combine two field experiments in Bangladesh with a structural labor model to introduce paternalistic discrimination, the differential treatment of two groups to protect one group from harmful or unpleasant situations. We observe real hiring and application decisions for a night-shift job that provides safe worker transport home at the end of the shift. In the first experiment, we vary employers' perceptions of job costs to women by experimentally varying information about the transport while holding taste-based and statistical discrimination constant. We find that employers discriminate paternalistically: Not informing employers about the transport decreases demand for female labor by 22%, and has a larger effect on hiring than informing employers that workers receive a surprise cash payment large enough to purchase safe transport themselves. In the second experiment, not informing applicants about the transport reduces the female labor supply by 15%. In structural simulations that combine the results of both experiments, eliminating paternalistic discrimination reduces the simulated gender employment gap by 24% and increases female wages by 21%.

**JEL Classification:**

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discrimination, paternalism, gender inequality, transport

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# 1 Introduction

Economists traditionally distinguish between two forms of labor market discrimination: *taste-based discrimination*, a simple preference for hiring one group over the other (Becker, 1957), and *statistical discrimination*, a belief that one group is more productive than the other (Phelps, 1972; Arrow, 1973). However, the standard labor market model does not incorporate other-regarding employers, i.e., employers who care about their workers' wellbeing. Other-regarding employers may attempt to protect workers from physical injury, reputational damage, or long hours away from their families. This protective behavior could be the source of a third form of discrimination: Employers protect one group differently than another, potentially depriving the protected group of opportunities to build important skills and experiences.

In this paper, we introduce *paternalistic discrimination*: the differential treatment of two groups to protect one group, even against its will, from harmful or unpleasant situations. In the labor market, paternalistic discrimination may lead employers to hire women over men for female-stereotyped jobs, to avoid promoting recent mothers to reduce workloads, or to fire single workers over workers with families.<sup>1</sup> Given a global norm to protect women (Glick et al., 2000), this discrimination might be particularly prevalent against women. Governments around the world restrict women's employment in jobs perceived as dangerous: 52 countries restrict women's work in hazardous jobs and 23 in night jobs (World Bank, 2023a).<sup>2</sup>

We combine a simple model, two field experiments, and structural estimates to measure paternalistic discrimination against women. First, we augment a standard labor market model with other-regarding employers, i.e., employers who value their workers' welfare. Second, we test the model's predictions using two labor market experiments in which we observe real hiring and application decisions for a night-shift job in Bangladesh. Finally, we estimate the model parameters and combine the results of both experiments to benchmark the importance of paternalistic discrimination and evaluate the effectiveness of potential labor market interventions.

The key innovation of our model is that employers internalize their workers' welfare and thus reduce demand for workers they perceive to have lower welfare. Building on traditional models of discrimination, our model incorporates distaste for interacting with a particular gender (taste-based discrimination), beliefs about the profitability of hiring from a particular gender (statistical discrimination), and beliefs about the welfare of a particular gender (other-regarding

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<sup>1</sup>Outside of the labor market, parents may be more protective of their daughters than their sons (Endendijk et al., 2016) or educate them differently about sex (Kuhle et al., 2015). In addition, women may receive different advice from teachers or advisors about educational tracks, careers, or investments (Bajtelmit and Bernasek, 1996; Gallen and Wasserman, 2021; Carlana, 2019).

<sup>2</sup>For example, women are barred from working during the night in some jobs in Nigeria and from working in mining and underground construction in Thailand (World Bank, 2023b; The Labour Protection Act B.E. 2541, 2014). Similar laws limit women's options in China, Argentina, the Republic of Korea, Cameroon, Saudi Arabia and other countries (US Department of State, 2022b,c; World Bank, 2023b). In South Asia, such laws are prevalent: Women in India face different restrictions than men when working at night, performing hazardous or difficult tasks (such as lifting heavy objects), and selling alcohol (Anand and Kaur, 2022). In addition, all but 17 countries ban women from fighting in combat (Fitriani et al., 2016).

discrimination). We distinguish between two possible types of other-regarding discrimination, committed by either deferential or paternalistic employers. Deferential employers use *applicants' beliefs and preferences*, such as risk preferences, to evaluate worker welfare, while paternalistic employers use *their own beliefs and preferences for workers* to evaluate worker welfare. Our model yields five predictions, which we evaluate using two field experiments and structural estimation.

We experimentally vary the perceived safety of a night-shift job to test the first theoretical prediction: Holding worker selection and productivity fixed, labor demand decreases in perceived job costs for workers. We recruit 495 *employers*, individuals with recent hiring experience, in Dhaka, Bangladesh. These employers make 4,950 hiring decisions (10 per employer) between one male and one female applicant for a job created by the research team: a one-time workshop and office job on the night shift. We randomly implement one hiring choice per employer and pay the employer based on the performance of their worker. We randomize whether we inform employers that workers receive free, safe transport home at the end of the shift. We find that employers who are not informed about the transport hire 22% fewer women.

The key feature of our design is that we hold taste-based and statistical discrimination constant across transport treatments. To hold constant the perceived selection of applicants willing to work, and thus taste-based selection, we inform employers that all applicants have applied for the job without knowing about the transport. In addition, we show every applicant-pair to several employers, allowing us to test whether information about the transport affects the hiring choices for the same woman compared to the same man. To hold constant the perceived productivity of applicants, and thus statistical discrimination, we inform employers that workers will only learn about the transport after completing the shift, i.e., that the transport cannot affect their show-up probability or on-the-job performance. In addition, to ensure that differences in hiring are not explained by concerns about the employers' reputation, all hiring choices are private and anonymous. We limit our sample to employers who correctly respond to all comprehension checks, demonstrating their understanding that information about transport does not influence selection or productivity. We also verify using survey questions that employers do not base their hiring choices on taste, statistical, or reputation concerns differentially across treatment arms.

We experimentally vary payments to workers and employers to test the second theoretical prediction: Deferential employers respond differently from paternalistic employers to providing workers with subsidies and transport. Deferential employers demand workers weakly more when workers receive cash subsidies sufficiently large to purchase safe transport, rather than when workers receive the transport itself. Paternalistic employers, on the other hand, may demand workers less with subsidies than with transport if they believe that workers *should* purchase the transport but, when given the choice, would not. We cross-randomize employers into one of four subsidy treatments: (i) female workers receive a surprise subsidy of 1,000 Bangladesh Taka (BDT, or USD 10)—an amount much larger than the typical transport cost in



our setting (Uber in Dhaka costs less than BDT 500 from our shift site and is easily available and considered safe), (ii) male workers receive a surprise subsidy of BDT 1,000, (iii) employers receive a subsidy for hiring female workers of BDT 1,000, or (iv) neither employers nor workers receive a subsidy. We find that employers hire women significantly less with the female worker subsidy than with the transport—even though rational workers prefer the subsidy over transport. This suggests that employers paternalistically prevent workers from making their own choices. Finally, consistent with the third theoretical prediction, employers hire women significantly more with the employer than either of the worker subsidies.

We test whether employers who score highly in a survey module on other-regarding preferences towards women react more to the transport treatment to test the fourth theoretical prediction: The demand response to changes in perceived worker welfare increases in employers' other-regarding preferences (deferential or paternalistic). We find that *more* other-regarding employers react almost four times as much to the transport than *less* other-regarding employers. This difference suggests that our findings indeed reflect other-regarding discrimination rather than, for example, experimenter demand effects, i.e, employers trying to satisfy the experimenters' preferences.<sup>3</sup>

Employers' response to information about the transport and female worker subsidies appears to be driven by employers disagreeing with both applicants' *beliefs* about job costs and applicants' *preferences*. Employers report that women underestimate the costs of working at night more than men—even though, in reality, employers *overestimate* night shift risks to women. Consistent with employers' beliefs, we find the strongest treatment effects against inexperienced women. We also find that employers who believe *women should be* rather risk-averse but not employers who believe *women are* rather risk-averse reduce hiring significantly more without transport. We also find that female employers, unlike male employers, do not report that women underestimate the costs of working at night more than men. Female employers also do not react to information about the transport.<sup>4</sup> Overall, these heterogeneous treatment effects offer additional evidence that (male) employers are paternalistic rather than deferential.

To evaluate the market's equilibrium behavior, we complement the demand-side experiment with a supply-side experiment, in which we randomly vary information about the transport to applicants. We find that randomly withholding information on the transport from potential applicants reduces the supply of female labor by 15%, significantly less than the demand reduction from employers. In particular, the reservation wages of the 770 *applicants*, both male and female, recruited from the same population but distinct from those of the hiring experiment, increase by BDT 200 (USD 2), which is much less than employers' valuation of female worker transport of BDT 1,400 (USD 14, calculated from employers' hiring responses to the transport and female worker subsidies).

<sup>3</sup>In addition, while experimenter demand effects should decrease when making the study purpose less salient, we find stronger treatment effects in a small “low-salience” control test.

<sup>4</sup>However, we consider these results as suggestive given our small sample of female employers.

We estimate the model parameters and combine the results of the demand- and supply-side experiments to study the fifth theoretical prediction: Equilibrium wages decrease in perceived job costs if the labor demand decreases more than the labor supply. We construct the labor demand function by estimating preference parameters in a binary choice model using the hiring choices in the hiring experiment. We construct the labor supply function by aggregating the reservation wages in the application experiment. We combine the two functions to construct equilibria for both genders with and without transport in the market for our night-shift job. We find that without transport, equilibrium labor quantities decrease by 15% for women and 7% for men, while wages decrease by 19% for women and 12% for men. We present results from two sets of counterfactuals. First, eliminating paternalistic discrimination reduces the gender employment gap by 24% and increases female wages by 21%. Paternalistic discrimination appears to be as important as statistical discrimination and more important than taste-based discrimination in our experimental setting. Second, the cost-effectiveness of transport and subsidy interventions depend on the accuracy of beliefs about job costs for workers: Transport increases total welfare more if employers have more accurate beliefs while female subsidies increase total welfare more if applicants have more accurate beliefs.

The extent of paternalism revealed in our experiment suggests opportunities for increasing female employment and wages in settings with strong gender norms. While we model other-regarding employers, our model is observationally equivalent to one in which employers *act as if* they internalize workers' welfare. For example, employers may follow a protective social norm (Jayachandran, 2021; Bursztyn et al., 2023) or signal their identity as a protective person (Akerlof and Kranton, 2000).<sup>5</sup> However, policies that reduce paternalistic discrimination also eliminate non-other-regarding reasons to discriminate, such as norms or hidden taste-based discrimination. While previous research has shown that addressing work-related danger and unsafe transportation can increase the *supply* of female labor (Park et al., 2021; Field and Vyborny, 2022; Abu-Qarn and Lichtman-Sadot, 2022; Becerra and Guerra, 2023), our findings suggest that these policies can also increase the *demand* for female labor. This implies that there are compounding benefits from policies that reduce women's perceived job costs (e.g., crime reduction programs and workplace safety regulation) or increase their perceived benefits (e.g., wage laws and subsidies).

We contribute to three separate strands of literature. First, we contribute to the literature on discrimination by defining a novel form of discrimination. A large body of literature measures taste-based and statistical discrimination on a variety of characteristics (see, among others, Bertrand and Mullainathan, 2004; Gneezy et al., 2012; Baert, 2018; Bohren et al., 2019; Kessler et al., 2019; Chan, 2022; Macchi, 2022). Paternalistic discrimination differs from taste-based

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<sup>5</sup>One experimental result suggests that employer behavior is not driven strictly by adherence to norms: employers increase female hiring when women receive a surprise subsidy. This behavior appears more consistent with our model of other-regarding preferences.

discrimination, as it varies with workers’ perceived welfare.<sup>6</sup> It also differs from statistical discrimination in two key ways. First, it is driven by other-regarding rather than self-regarding motives—indeed, employers are willing to forego profits to indulge their paternalism. Second, unlike statistical discrimination, it does not require any uncertainty, as paternalistic employers may overrule applicants’ preferences even if job costs are known with certainty. We consider paternalistic discrimination to be most closely related to the psychology literature on benevolent sexism (Glick and Fiske, 1997)—idealized, seemingly positive but stereotypical views of women (e.g., that women should be cherished and protected, Glick et al., 2000; Fraser, 2015; Shnabel et al., 2016; Glick and Raberg, 2018; Offit, 2021). This paper draws on the benevolent sexism literature to formalize the first economic model of paternalistic discrimination.<sup>7</sup>

Second, we contribute to the literature on paternalism and other-regarding preferences by highlighting the role of other-regarding preferences in hiring. Paternalism—limiting the options available to others for their own benefit—drives support for many policies, including banning “repugnant” transactions (e.g., Leider and Roth, 2010; Roth, 2018; Elías et al., 2023), regulating addictive products (e.g., Allcott et al., 2019a,b; DeCicca et al., 2022; Allcott et al., 2022), and protecting boundedly rational or time-inconsistent consumers (e.g., Allcott and Taubinsky, 2015; Allcott et al., 2021). Researchers have also explored the drivers of and responses to paternalism (Uhl, 2011; Ambuehl et al., 2021; Bartling et al., 2023). Most relevant to our setting, other-regarding preferences also drive behavior in the workplace, including wage setting (Akerlof, 1982), workers’ effort (Bandiera et al., 2005), resource allocation (Hjort, 2014), and layoff decisions (Guenzel et al., 2023). To our knowledge, our paper is the first to consider how other-regarding preferences differentially affect men and women in the workplace.

Third, we contribute to the growing literature on barriers to female labor force participation, particularly in low-income countries. Among other factors, this literature considers social norms (e.g., Fernández, 2013; Bertrand et al., 2015; Bernhardt et al., 2019; Bursztyn et al., 2020; Field et al., 2021; McKelway, 2023; see Jayachandran, 2021 for an overview) and safety (Chaudhary et al., 2021; Field and Vyborny, 2022; Siddique, 2022) as barriers to female labor supply. Part of this literature specifically examines how physical mobility restricts women’s labor supply (e.g., Kondylis et al., 2020; Aguilar et al., 2021; Christensen and Osman, 2023;

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<sup>6</sup>Our experimental evidence cannot be explained by a distaste parameter that is constant across jobs, so we reject the simplest formulation of the traditional model. As a result, we describe paternalistic discrimination as a novel form of discrimination. The alternative interpretation—that paternalistic discrimination is a component of taste-based discrimination that varies with job characteristics—is equally valid. Paternalistic discrimination could also both result from and induce systemic discrimination (Bohren et al., 2022). Paternalistic discrimination may result from differences in non-gender characteristics that correlate with gender. For example, employers might paternalistically discriminate against workers with higher perceived job costs, with women having higher job costs, on average. Paternalistic discrimination may induce systemic discrimination by depriving women of opportunities to build important skills and experiences, limiting their human capital accumulation and making them less promotable later on.

<sup>7</sup>U.S. law treats benevolent discrimination as any other kind of discrimination (U.S. EEOC, 2007, 2022). A separate but related concept in the law literature is *benign discrimination*, which generally refers to discriminatory policies designed to benefit minority or marginalized groups (see, for example, Patty 1989 and Evans 1974).



Cheema et al., 2022). Efforts to study discrimination in South Asia have focused primarily on India, examining differential treatment based on caste (Banerjee et al., 2009; Ito, Takahiro, 2009; Siddique, 2011), religion (Thorat and Attewell, 2007), and gender (Choudhury, 2015; Chowdhury et al., 2018; Islam et al., 2021). In South Asia, norms toward protecting women are strong and traditional values encourage women to avoid the public sphere (Oishi, 2005; White, 2017). This paper is the first to study how paternalistic employers restrict women’s employment, particularly in South Asia.

The rest of the paper proceeds as follows. Section 2 describes the labor model with other-regarding employers and section 3 describes the empirical setting. Sections 4 and 5 present the demand-side experiment with employers and the supply-side experiment with applicants. Section 6 combines the results from the two experiments in the equilibrium model and evaluates a series of counterfactuals. Section 7 concludes.

## 2 A Labor Market Model with Other-Regarding Employers

In this section, we augment a standard labor market model with other-regarding employers, i.e., employers internalizing their workers’ perceived on-the-job welfare, and outline the resulting comparative static predictions. First, we describe two markets with other-regarding employers, one for male workers and one for female workers, and define paternalistic discrimination. Second, we evaluate how increases in workers’ perceived job costs affect labor supply and demand and how the demand effects vary with employers’ other-regarding preferences. Finally, we investigate how increases in workers’ perceived job costs affect equilibrium wages.

### 2.1 Setup

**Market Structure** We study two markets, one for each gender  $g \in \{m, f\}$ .<sup>8</sup> A unit mass of price-taking employers, indexed by  $k$ , demand labor in the two markets. A unit mass of male ( $g = m$ ) and a unit mass of female ( $g = f$ ) price-taking workers, indexed by  $i$ , supply labor. We use the superscripts  $A$  and  $E$  to denote preferences and beliefs of workers (i.e., applicants) and employers, respectively. The mass of gender  $g$  workers supplying labor is given by  $L_g^S$ , and the mass of gender  $g$  workers demanded by employers is given by  $L_g^D$ . Wages for gender  $g$  labor and the quantity of hired gender  $g$  labor are determined in equilibrium.  $w_m^*$  and  $w_f^*$  are the equilibrium wages that equate the labor supply and labor demand for both genders simultaneously.  $L_m^*$  and  $L_f^*$  are the equilibrium quantities of both genders at these wages.

**Workers’ Problem** Workers supply their labor if their expected utility from working is weakly positive.<sup>9</sup> Worker  $i$ ’s expected money-metric utility from working for employer  $k$  depends on

<sup>8</sup>The setup generalizes to more groups, each having a separate market.

<sup>9</sup>We study extensive margin decisions to highlight worker selection into different jobs. However, the setup generalizes to intensive margin decisions, for example, by considering every worker supplied as a time unit.

the wage  $w_g$ , the expected costs  $c_{igk}$ , and the disutility associated with the cost of working  $u_i^A(\cdot)$ , where  $u_i^A$  is continuously differentiable and monotonically increasing in  $c_{igk}$ , with  $u_i^A(0) = 0$ .<sup>10</sup> The cost of worker  $i$  of gender  $g$  working for employer  $k$  is given by  $c_{igk} = c_g + c_i + c_{kg}$ , the sum of (i) a gender-specific constant cost  $c_g$ , known to the worker and the employer, (ii) the worker-specific cost  $c_i$ , known only to the worker, and (iii) the employer-gender-specific cost  $c_{kg}$ , known only to the employer. The employer- and worker-specific costs  $c_{kg}$  and  $c_i$  follow distributions  $h_g^K$  and  $h^I$  with CDFs  $H_g^K$  and  $H^I$  and means  $\bar{c}_g^K$  and  $\bar{c}_g^I$ . Workers rely on their cost assessments and do not attempt to learn about the employer-gender-specific costs from employers' hiring decisions.<sup>11</sup> We normalize the opportunity costs to be zero and assume that applications are costless such that applicant  $i$  of gender  $g$  supplies labor if and only if:

$$\mathcal{W}_i^A = \mathbb{E}_i[w_g - u_i^A(c_{igk})] \geq 0. \quad (1)$$

**Employers' Problem** Employers decide how much male and female labor to demand to maximize their expected utility. Employer  $k$ 's expected utility is linear and additively separable in (i)  $d_{kg}$ , the non-pecuniary benefits of hiring gender  $g$  labor (i.e., taste), (ii)  $Y^E(L_{kf}, L_{km}) - L_{kf}w_f - L_{km}w_m$ , the expected profits of hiring  $L_{kf}$  female and  $L_{km}$  male workers at wages  $w_f$  and  $w_m$ , and (iii) fraction  $\alpha_{kg} \in (0, 1)$  of the expected on-the-job welfare of the worker, as perceived by employer  $k$ ,  $\mathcal{W}_{kg}$  (henceforth “welfare”).<sup>12</sup> The expected production function  $Y^E$  is non-negative, concave (see appendix section A.1) and, akin to our empirical setting, not a function of costs, wages, or the selected pool of applicants.<sup>13</sup> Employers understand selection, realizing that the pool of applicants consists only of workers who believe the job will yield positive utility, i.e., for whom  $\mathcal{W}_{kg}^A \geq 0$ .

We differentiate between two possible types of other-regarding employers:

**Definition 1.** Deferential employers internalize their perception of workers' perception of welfare,  $\mathcal{W}_{kg}^{E:A} = \mathbb{E}_k[\mathbb{E}_i[w_g - u_i^{E:A}(c_{igk})] | \mathbb{E}_i[u_i^{E:A}(c_{igk})] \leq w_g]$ . Paternalistic employers internalize their own perception of workers' welfare,  $\mathcal{W}_{kg}^E = \mathbb{E}_k[w_g - u_{ki}^E(c_{ikg}) | \mathbb{E}_i[u_i^{E:A}(c_{igk})] \leq w_g]$ .

We denote the employer's second-order belief about  $u_i^A$  by  $u_i^{E:A}$  and the employer's risk preferences for workers by  $u_{ki}^E$ .  $u_i^{E:A}$  and  $u_{ki}^E$  follow the same functional form assumptions as  $u_i^A$ .

<sup>10</sup>Utility is linear in wages but not costs to match our experimental setting, in which agents are more likely to be risk-neutral for the relatively low wages (one day of salary) than the costs (e.g., sexual assault, [Rabin 2013](#)).

<sup>11</sup>We assume away that sophisticated workers apply for costly jobs, anticipating that paternalistic employers will protect them from mistakes. This assumption is consistent with empirical evidence: Anticipating discrimination to make inferences about job costs requires extensive contingent reasoning, which a large literature suggests is rare; see [Niederle and Vespa \(2023\)](#) for an overview. Since workers do not anticipate paternalistic discrimination, employers do not worry about workers' preferences for being “paternalized.”

<sup>12</sup>Our model is also flexible enough to allow the other-regarding utility to vary with ability, for example, by considering high- and low-skilled workers as separate groups with different welfare weights  $\alpha_{kg}$ .

<sup>13</sup>We relax this assumption in the structural model.

Other-regarding employer  $k$  thus maximizes the following objective function  $v_{kg}^E$ :

$$\max_{L_{kf}, L_{km}} \underbrace{\sum_{g \in \{f, m\}} L_{kg} d_{kg}}_{\text{Taste utility}} + \underbrace{Y^E(L_{kf}, L_{km}) - \sum_{g \in \{f, m\}} L_{kg} w_g}_{\text{Profit}} + \underbrace{\sum_{g \in \{f, m\}} L_{kg} \alpha_{kg} \mathcal{W}_{kg}}_{\text{Other-regarding utility}}, \quad (2)$$

with  $\mathcal{W}_{kg} \in \{\mathcal{W}_{kg}^{E:A}, \mathcal{W}_{kg}^E\}$ .<sup>14</sup>

## 2.2 Defining Discriminatory Preferences

We define discriminatory preferences leading to preferential treatment of men over women at a given set of wages ( $w_f, w_m$ ) and hiring levels ( $L_{kf}, L_{km}$ ) as follows:

1. *Taste-based discrimination*:  $d_{km} > d_{kf}$ . The employer receives more (or less negative) non-pecuniary returns from hiring male over female workers.
2. *Statistical discrimination*:  $\frac{\partial Y^E}{\partial L_{km}} > \frac{\partial Y^E}{\partial L_{kf}}$ . The employer expects to receive higher revenues from the marginal male than the marginal female worker.
3. *Other-regarding discrimination*:  $\alpha_{km} \mathcal{W}_{km} > \alpha_{kf} \mathcal{W}_{kf}$ . The employer expects to receive higher other-regarding utility from the marginal male than the marginal female worker. This is deferential if employers use their perception of workers' perception of worker welfare and paternalistic if employers use their own perception of worker welfare.

Other-regarding discrimination arises because an employer places a higher weight on men's welfare than women's or because an employer expects men's welfare to be higher than women's. Three different mechanisms could explain why employers expect men's welfare to be higher even in the same role with the same wages: employers may (i) believe men have lower costs than women ( $\mathbb{E}_k[c_{imk}] < \mathbb{E}_k[c_{ifk}]$ ) (either using the employers' first- or second-order beliefs), (ii) have different risk preferences for men and women ( $u_{km}^E \neq u_{kf}^E$ ), and/or (iii) engage in selection neglect, i.e., they do not condition on ( $\mathcal{W}_{kg}^{E:A}$ ) and thus overestimate workers' job costs.

We consider other-regarding discrimination to be distinct from taste-based discrimination because, unlike taste-based discrimination, it varies predictably with perceptions of job costs  $c_{igk}$ . We consider other-regarding discrimination to be distinct from statistical discrimination because, unlike statistical discrimination, it can arise even without uncertainty, i.e., when  $\mathcal{W}_g = \mathcal{W}_{kg}^{E:A} = \mathcal{W}_{kg}^E$ .<sup>15</sup>

<sup>14</sup> Assuming the outside option has zero value, equation 2 is the same if the employer internalizes the welfare of *only* hired or of hired *and* non-hired workers.

<sup>15</sup> Note that other-regarding discrimination can only lead to restricting the employment opportunities of workers willing to work as employers cannot force workers to apply who do not want to apply. In addition, other-regarding discrimination can persist even in repeated markets. Other-regarding employers may never correct biased beliefs (e.g., if they never observe women working the night shift). Moreover, even with perfect information, employers may maintain different preferences over the risks workers face than the workers themselves.

## 2.3 Comparative Statics in Gender-Specific Costs and Wages

In this section, we investigate how labor supply and labor demand by other-regarding employers react to changes in gender-specific costs and wages and how equilibrium wages react to changes in gender-specific costs.

### 2.3.1 Labor Supply

Workers' perceived welfare is increasing in wages and decreasing in costs. Therefore, workers are less willing to supply their labor if they pay higher gender-specific costs, and more willing to supply their labor if they earn higher gender-specific wages.

### 2.3.2 Labor Demand

Next, we describe how the labor demand of other-regarding employers reacts to changes in gender-specific costs and wages.

**Other-Regarding Employers and Costs** First, we assess how the demand response to changes in gender-specific costs differs between other-regarding and non-other-regarding employers. An increase in  $c_g$  has two effects on employers' other-regarding utility: (i) a *direct effect*: the job cost increases, thereby reducing employers' perception of worker utility, and (ii) a *selection effect*: workers with smaller worker-specific cost self-select into the job, thereby increasing employers' perception of worker utility (see appendix A.2). An increase in gender-specific costs unambiguously reduces perceived welfare when holding selection fixed. In this case, if and only if labor demand decreases in response to lower perceived welfare, then employers place a positive weight on the worker welfare, i.e., they are other-regarding.

**Prediction 1** (Other-Regarding Employers). *Holding selection and productivity constant, employers are other-regarding if and only if their labor demand is decreasing in gender-specific costs.*

**Deferential and Paternalistic Employers and Costs** Second, we assess how the demand response to changes in gender-specific costs differs between deferential and paternalistic employers. If employers are deferential (i.e., if they internalize their perception of the workers' perception of worker welfare,  $\mathcal{W}_{kg}^{E:A}$ ), then their other-regarding utility is weakly lower when workers receive an amenity rather than a subsidy that allows them to afford the amenity (appendix A.3). Workers are weakly better off receiving the subsidy, as they can use their own valuation of the amenity to decide whether to purchase it. Therefore, if employers demand less gender  $g$  labor with the subsidy, they must be paternalistic. In other words, they must use their own beliefs or preferences to evaluate their other-regarding utility.

**Prediction 2** (Deferential and Paternalistic Employers). *Holding selection and productivity constant, the labor demand of deferential employers is increasing weakly more in subsidies to workers than in equally (or lower) priced worker amenities. If labor demand increases less in subsidies than in equally priced amenities, then employers are paternalistic.*

**Other-Regarding Employers and Wages** We assess how the demand response to changes in gender-specific wages differs between other-regarding and non-other regarding employers. An increase in  $w_g$  reduces employers' profit and has two effects on employers' other-regarding utility: (i) a *direct effect*: the wage increases, increasing the employer's perception of worker utility, (ii) a *selection effect*: workers with higher worker-specific cost self-select into the job, decreasing the employer's perception of worker utility (appendix A.4). Thus, holding selection and productivity fixed, the demand for gender  $g$  labor decreases in gender-specific wages.

**Prediction 3** (Wages). *Holding selection and productivity constant, the labor demand of other-regarding employers is decreasing in gender-specific wages.*

**Heterogeneity in  $\alpha_{kg}$**  The demand response to gender-specific costs and wages changes in  $\alpha_{kg}$ . Employers who weigh workers' welfare highly experience a high loss in other-regarding utility from higher gender-specific costs. By contrast, their profit loss from higher wages is offset by a larger other-regarding utility gain. Therefore, relatively more other-regarding employers are relatively less willing to hire gender  $g$  labor if gender-specific costs are high but relatively more willing to hire gender  $g$  labor if gender-specific wages are high (appendix A.5).

**Prediction 4** (Heterogeneity). *Holding selection and productivity constant, larger other-regarding preferences  $\alpha_{kg}$  result in a larger demand response to changes in gender-specific costs and a smaller demand response to changes in gender-specific wages.*

### 2.3.3 Equilibrium Wages

The effect of increases in gender-specific costs on equilibrium wages depends on the magnitude of the cost elasticity of supply relative to that of demand. Gender-specific costs decrease both labor demand and supply, reducing the equilibrium labor quantity of that gender. However, gender-specific costs might increase or decrease equilibrium wages depending on the ratio of the supply and demand elasticities with respect to gender-specific costs (see derivations in appendix A.6). If the ratio is sufficiently small, equilibrium wages decrease because the downward pressure on wages from the decrease in labor demand dominates the upward pressure on wages from the decrease in labor supply.

**Prediction 5** (Equilibrium Wages). *Equilibrium wages are decreasing in gender-specific costs if and only if  $|\epsilon_{c_f}^D| > m \times |\epsilon_{c_f}^S|$ , where  $\epsilon_{c_f}^D$  and  $\epsilon_{c_f}^S$  are the demand and supply elasticities with respect to gender-specific costs and  $z \geq 1$  is a function of the substitutability of male and*



*female labor and the demand and supply elasticities with respect to gender-specific wages of the other gender. If the production function is additively separable in  $L_{kf}$  and  $L_{km}$ ,  $z = 1$ .*

The equilibrium labor quantity and wages of the other gender do not respond to increases in gender-specific costs if male and female workers are additively separable in the production function, increase if they are substitutes, and decrease if they are complements (appendix A.7). We also derive closed-form solutions for a constant elasticity of substitution production function and a Cobb–Douglas production function in appendix A.8.

The remainder of the paper tests theoretical predictions 1 to 5 in three steps. First, we experimentally vary employers’ beliefs about job costs for female workers to study the effect of paternalism on the demand for female labor. Second, we experimentally vary applicants’ beliefs about job costs for female workers to study the effect of these costs on female labor supply. Finally, we estimate the theoretical model by combining the results of both experiments to predict the equilibrium wage effects of changing job costs for female workers.

### 3 Setting

We empirically test theoretical predictions 1 to 5 in two experiments in Dhaka, Bangladesh, in which we sequentially measure the labor demand and supply responses to exogenously varying the perceived job costs to workers. Around 40% of Bangladesh’s population lives in urban areas, and about one sixth lives in Dhaka. Dhaka also accounts for one fifth of Bangladesh’s GDP and nearly one half of its formal employment (World Bank DataBank, 2023).

Women in Bangladesh struggle to access the labor market, particularly male-dominated occupations (BDHS, 2016; BBS, 2021). About 40% of working-age women in Bangladesh are employed, compared to about 80% of working-age men (World Bank DataBank, 2023). Women work predominantly in agriculture and industrial production, particularly in the garment sector, where they comprise 80% of the workforce, while men work predominantly in services (Farole et al., 2017; Quayyum, 2019). Women also earn less than men, especially in urban areas (USD 171 versus USD 133 per month, BBS (2018)).<sup>16</sup>

Restrictive gender norms and labor laws also contribute to Bangladesh’s large gender employment and wage gaps. Male guardianship of females is a common feature of traditional relationships in Bangladesh, with women living under the guardianship of their fathers in childhood, their husbands and fathers-in-law in marriage, and their sons in widowhood (White, 2017). The idea of *purdah*—meaning literally veil or curtain, but figuratively used to describe women’s seclusion from the public sphere—is rooted in Islamic teachings and limits women’s

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<sup>16</sup>A recent report by the International Labor Organization finds that the factor-weighted mean hourly wage for women is higher than that of men in Bangladesh—a sole outlier among countries studied in the report (International Labour Organization, 2018). However, this finding does not appear to be robust to alternative model specifications (Rahman and Al-Hasan, 2022).

access to the labor market (Lata et al., 2021).<sup>17</sup> The Bangladesh constitution establishes Islam as the state religion (US Department of State, 2022a), and the vast majority (91%) of the population identifies as Muslim (BBS, 2022).

These protective attitudes toward gender carry over into economic behavior and policies. In the 2018 Bangladesh World Value Survey, 76% of respondents agreed that “men should have more right to a job than women,” and 67% that “men make better business executives than women.” Results were broadly similar among men and women and in urban and rural areas (World Values Survey, 2018). Bangladesh law does not prohibit discrimination on the basis of gender, nor does it mandate equal pay for women and men (World Bank DataBank, 2023). Women in Bangladesh are also legally restricted from operating or cleaning certain types of machinery, carrying heavy items, or working underwater or underground (Bangladesh Labour Act, 2006). While the Bangladesh Labor Act of 2006 lifted a prohibition on women working at night, employers are still required to obtain women’s consent to work shifts between 8:00 P.M. and 6:00 A.M.; written consent is not required of men.

Safe transport represents a special concern for women in Dhaka. Women report high rates of physical harassment, such as groping, driver misconduct, and discomfort from overcrowding and crush loading (Rahman, 2010; Aachol Foundation, 2022; Humayun and Islam, 2023). These problems have led providers to establish women-only bus service routes in recent years, though these services offer limited routes and hours (Naher, 2022).

## 4 The Hiring Experiment: Job Costs and Labor Demand

To measure the labor demand response to variations in gender-specific costs and wages according to predictions 1 to 4 of the model, we conduct a “hiring experiment” with 495 *employers*, individuals with hiring experience in the previous three years, in Dhaka, Bangladesh. Enumerators recruit employers equally from three industries, selected based on recruitment feasibility, different perceived costs to female workers, and high levels of urban employment: manufacturing, retail/wholesale and services, and education (additional information on these industries is provided in appendix B.2).<sup>18</sup> Enumerators recruit employers in person between April 2023 and August 2023 by asking businesses whether any individual with hiring responsibility is interested in participating in the experiment on the spot or later. The employers in our experiment are mostly men (94%), Which is roughly consistent with Bangladesh’s gender

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<sup>17</sup>Verse 4:34 of the Qur’an: “Men are the protectors and maintainers of women, because Allah has given the one more (strength) than the other, and because they support them from their means.”

<sup>18</sup>We excluded agriculture, a primary employment sector, due to low recruitment feasibility in Dhaka. We asked 80 employers the following question for eight randomly selected applicants about a hypothetical job in their industry: “How dangerous or unpleasant or socially unacceptable do you think this job is for [applicant name], including their commute from and to their home, with 0 indicating a very safe job, equivalent to working from home, and 10 indicating that the job is very dangerous or very unpleasant or very socially unacceptable.” The average response for female applicants was 2.5 in manufacturing, 1.0 in retail and services, and 0.3 in education.

distributions among managers.<sup>19</sup> They are, on average, 32 years old (see table 1 for overall summary statistics and appendix table C.1 for summary statistics by industry). 59% are married, and 45% have at least one child. Furthermore, 42% have at least a Bachelor’s degree. On average, their businesses have nine male and six female employees, and they have made 27 hiring decisions in the previous three years.

Table 1: Employer Characteristics (N=495)

	Mean	S.D.
Female (%)	6.3	24.3
Age (Years)	31.5	7.8
Married (%)	58.5	49.3
Children (%)	45.2	49.8
Bachelor’s (%)	42.2	49.4
# Male Employees	8.9	24.3
# Female Employees	6.1	41.5
# Hiring Decisions Last 3 Years	27.2	235.4

*Notes:* The table shows the means and standard deviations of characteristics of the employers recruited for the hiring experiment. *Children* is an indicator that is 1 if the employer has at least 1 child.

“Employers” make hiring decisions for a job created by the research team: a one-shift, three-hour Excel workshop followed by a stock market analysis task between 7:00 P.M. and midnight (see appendix C.2 for a photograph of the shift), with a free and safe transportation service bringing workers home in private six-seater cars after the shift. One supervisor accompanied each car.<sup>20,21</sup> The applicant pool consists of 580 male and 400 female applicants aged 18 to 60, recruited at booths on 11 university campuses between February and April 2023 (see appendix C.1 for a photograph of the recruitment process).<sup>22</sup> Applicants take two 12-minute back-to-back Excel screening tests incentivized with BDT 2 (USD 0.02) per correct answer

<sup>19</sup>The vast majority (89%) of managers in Bangladesh are male, according to official statistics (BBS, 2018).

<sup>20</sup>The cars were mixed-gender. However, this information was not communicated to employers.

<sup>21</sup>Training opportunities at night are common in Bangladesh. In addition, night-shift work is becoming increasingly common as many outsourcing firms work European or US hours (Mamun et al., 2019).

<sup>22</sup>We initially targeted 585 men and 405 women to construct 45 hiring pools of nine female and 13 male applicants each (we oversampled men to make hiring choices more realistic); however, five hiring pairs were excluded from the sample as the female applicant was miscoded as male. Results are unchanged when including these five pairs. We conducted recruitment on university campuses anticipating a high concentration of job seekers and that paternalistic discrimination may be particularly consequential for job seekers early in their careers. We do not restrict participation to university students.

for a total of up to BDT 40 (USD 0.4).<sup>23</sup> On average, male applicants in our experiment are 25 years old and female applicants are 24 years old (table 2). Around one fifth of applicants are married (19% of male and 23% of female applicants), and 12% have children. Female applicants are slightly less experienced than male applicants (89% have up to three years of experience versus 80% of male applicants) but have similar education (36% have a Bachelor's degree versus 39% of male applicants) and Excel screening scores (25%, on average, versus 23% among male applicants). Because we measure within-applicant treatment effects, we do not require balance in observables across gender.

Table 2: Applicant Characteristics in the Hiring Experiment by Gender

	Male (N=580)		Female (N=400)	
	Mean	S.D.	Mean	S.D.
Age (Years)	24.8	6.3	23.6	6.0
Married (%)	19.3	39.5	22.8	42.0
Children (%)	12.1	32.6	11.8	32.2
Bachelor's (%)	39.1	48.8	35.7	48.0
$\leq 3$ Years Work Experience (%)	80.0	40.0	89.0	31.3
Excel Screening Score (%)	22.6	12.5	24.5	13.7

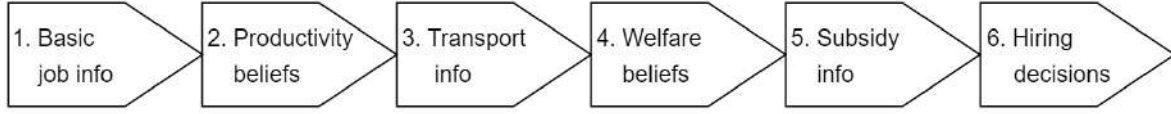
*Notes:* The table shows the means and standard deviations of characteristics of applicants recruited for the hiring experiment. *Children* is an indicator that is 1 if the applicant has at least 1 child.

## 4.1 Hiring Experiment Design

Employers make real hiring decisions and are randomized into different treatment conditions that experimentally vary the perceived job costs for workers, the payoffs received by workers, and the payoffs received by employers. This allows us to test whether employers hire fewer women when the job costs are perceived to be high (prediction 1)—even when workers can afford safe transport themselves (prediction 2). The variation in payoffs to workers and employers allows us to test whether employers react more to profit than to other-regarding concerns (prediction 3). The experiment was carefully designed to avoid potential ethical concerns associated with placing workers in potentially dangerous situations; see appendix B.1. The experiment takes an average of 64 minutes and is conducted in six stages (figure 1).

<sup>23</sup>The tests were designed based on a scoping survey with 20 office employers about desired Excel skills.

Figure 1: Stages of the Hiring Experiment



*Notes:* The figure shows the six stages of the hiring experiment, described in detail below. 1) We provide employers with detailed information about the job. 2) We elicit employers' beliefs about the on-the-job productivity of a subset of applicants. 3) We provide employers with the transport information. 4) We elicit employers' beliefs about the on-the-job welfare of a subset of applicants. 5) We provide employers with the subsidy (employer and worker payoff) information. 6) We elicit employers' hiring decisions.

1. **Basic job information:** In the first stage, we provide employers with basic information about the job. Employers receive the following information about the hiring process: (i) Applicants have applied for a one-day Excel workshop and job from 7:00 P.M. to midnight and completed an Excel screening test. (ii) Recruited workers will be compensated with BDT 1,500 (USD 15) and receive an Excel workshop completion certificate. (iii) We hire one worker based on each employer's decisions. (iv) Employers receive a base compensation of BDT 500 (USD 5) for their time as well as BDT 5 (USD 0.05) per task completed on the job (out of 100 possible tasks) by their recruited worker.
2. **Productivity beliefs elicitation:** In the second stage, we elicit employers' incentivized beliefs about the on-the-job productivity of four randomly selected applicants (two male-female pairs). Employers predict the number of tasks that each applicant will complete if hired based on their first names, gender, marital status, education, years of experience, and Excel screening test scores (see appendix figure C.3 for the experimental interface).<sup>24</sup> Employers are informed that two of these applicants are randomly selected for hire and that they will receive a bonus payment for correctly predicting the productivity of these applicants. Employers guess (i) the probability that each applicant shows up to the shift (incentivized using the binarized scoring rule, see Hossain and Okui 2013), and (ii) the number of completed tasks conditional on attendance (incentivized with BDT 10, USD 0.1, for guesses within five percentage points from the truth). To reduce the risk of strategic misreporting, we elicit employers' productivity beliefs before randomizing them to a treatment group. We also verify that the predictions of the main sample of 495 *Hiring* employers do not differ from those of 80 separately recruited *Prediction-Only* employers who make no hiring choices and therefore have no incentive to adjust their predictions to their hiring choices.

<sup>24</sup>Because of a translation mistake into Bangla, employers were shown "3 years of work experience" instead of "> 3 years of work experience" when an applicant had >3 years of work experience.



3. **Transport information randomization:** In the third stage, we randomize employers into one of two transport treatments that experimentally vary their perception of workers' job costs while holding constant the perceived worker selection and productivity:

- (a) *Transport* (50%): Employers are informed about the transport with supervisors.
- (b) *No Transport* (50%): Employers are not informed about any transport.

The randomization allows us to test theoretical prediction 1: Demand for female labor is lower without safe transport. To hold constant the perceived selection of applicants willing to work across treatments, we inform employers that all applicants have applied for the job without knowing about the transport. To hold constant the perceived productivity of applicants across treatments, we inform employers in the *Transport* treatment that workers will only learn about the transport after completing the shift, i.e., that the transport cannot affect their probability of attendance or their on-the-job performance. To ensure that differences in hiring are not driven by differences in reputation concerns, i.e., employers being concerned about being made responsible if something happens to a female worker without transport, we ensure employers that all hiring choices are private and anonymous.<sup>25</sup> To hold constant beliefs about applicants' beliefs across treatments, i.e., to ensure that employers in the *No Transport* treatment know that applicants do not expect transport, we inform employers in both treatments "Aside from the job description before, no other benefits (such as flexible hours, work-from-home, [transport], or future employment) are offered to any applicant." ("transport" is only included in the *No Transport* treatment). We verify comprehension of the experimental set-up with five comprehension questions administered after the treatment assignments (see appendix section B.6.1). We also find that employers perceive workers to be very likely to take the offered transport (i.e., high compliance) and no evidence for information spillovers (i.e., no contamination).<sup>26</sup>

4. **Cost beliefs elicitation:** In the fourth stage, we elicit employers' beliefs about the job costs (including the commute) in terms of danger, unpleasantness, and social acceptability on a scale from 0 to 10. We elicit employers' beliefs for the same four applicants for whom they make productivity predictions (see appendix figure C.4 for the experimental interface). To reduce anchoring, we do not inform employers of applicants' reported

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<sup>25</sup>We also find that only four employers choose reputation concerns as one of their drivers for their hiring choices.

<sup>26</sup>Only one *Transport* employer believes that applicants will not take the transport. To prevent information spillovers (i.e., employers in the *No Transport* condition learning about the transport from previous workers), we started the shifts only after roughly half (57%) of the hiring experiment was completed (results are robust to restricting the sample to all employers surveyed before this shift). Only six employers in the *No Transport* treatment believe that applicants will get home by provided transport (three of these are excluded from the analysis due to incorrectly answering understanding questions used for screening comprehension). The vast majority of *No Transport* employers (98%) believe applicants will use public transport or a ride share (Uber, CNG, Rikshaw).

costs, nor do we attach any experimental incentives to the elicitation in order to reduce strategic reporting.<sup>27</sup> We find no significant differences between *Hiring* and *Prediction-Only* employers, suggesting that our results are not driven by strategic misreporting to justify hiring decisions.

5. **Subsidy randomization:** In the fifth stage, we cross-randomize employers into one of five subsidy treatments that experimentally vary the payments received by workers and employers while holding constant worker selection and productivity:

- (a) *No Subsidy* (40%): Male and female workers receive BDT 1,500 (USD 15) for completing the shift. Employers receive BDT 500 (USD 5) for hiring any worker.
- (b) *Male Worker Subsidy* (20%): Male workers receive BDT 2,500 (USD 25), and female workers BDT 1,500 (USD 15) for completing the shift. Employers receive BDT 500 (USD 5) for hiring any worker.
- (c) *Female Worker Subsidy* (20%): Male workers receive BDT 1,500 (USD 15), and female workers BDT 2,500 (USD 25) for completing the shift. Employers receive BDT 500 (USD 5) for hiring any worker.
- (d) *Employer Subsidy for Hiring Women* (19%): Male and female workers receive BDT 1,500 (USD 15) for completing the shift. Employers receive BDT 500 (USD 5) if their hired worker is a man, and BDT 1,500 (USD 15) if it is a woman.
- (e) *Employer Subsidy for Hiring Men* (1%): Male and female workers receive BDT 1,500 (USD 15) for completing the shift. Employers receive BDT 1,500 (USD 15) if their hired worker is a man, and BDT 500 (USD 5) if it is a woman.

The randomization allows us to test theoretical predictions 2 and 3: Demand for female labor is higher with safe transport than with subsidies paid to female workers, and labor demand increases more in subsidies paid to employers than to workers. Qualitative interviews suggest that it is common knowledge that workers can afford an Uber (costing  $\leq$  BDT 500 or USD 5) or professional car service (costing  $\leq$  BDT 800 or USD 8) using the subsidy of BDT 1,500 (USD 15). We decided against an alternative design in which we inform employers that workers can use the subsidy to purchase transport from us to avoid deception (as we provide transport to all workers; see appendix B.1 for a discussion of ethical considerations).

We take the following steps in order to hold both perceived worker selection and productivity constant across subsidy treatments. First, employers draw a piece of paper to determine their treatment assignment. This procedure signals to employers that all subsidy outcomes are due to chance. Second, the *Employer Subsidy for Hiring Men* is included to

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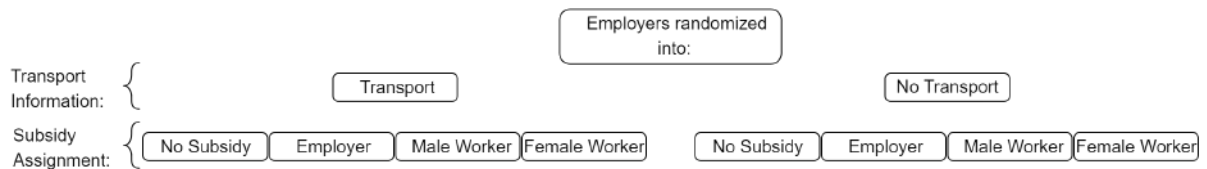
<sup>27</sup>For example, if we promised to convey the response as advice to the applicant, employers with a strong distaste for hiring women might misleadingly report a high cost.

prevent asymmetrical subsidies that could signal that women and men are differentially qualified (enumerators describe all treatments but not the relative frequencies (in parentheses) to the employers). Third, in order to hold perceived selection and productivity constant, employers are informed that workers will be surprised by the subsidies at the end of the shift.

6. **Hiring:** In the sixth stage, employers make twelve hiring decisions, each between two randomly selected applicants. For each applicant, employers are shown the same characteristics as employers in the prediction questions (see appendix figure C.5 for the experimental interface and appendix figure C.6 for the experimental interface when we reduce the salience of gender, discussed below). Each employer makes decisions for two male–male pairs and ten mixed-gender pairs in random order. We did not include two female–female pairs because we wanted to keep the female-to-male ratio similar to that observed in labor markets in Bangladesh. Two mixed-gender pairs were already included in the productivity and cost beliefs elicitation stages. One of these two pairs comes from the application experiment (described in section 5) to incentivize productivity beliefs (see stage 2). The remaining 11 pairs are shown to 11 employers each, implementing a different pair per employer so that we implement one hiring choice per pair (see appendix B.5 for a description of the matching process). Employers are informed that one of their decisions will be implemented and that their identity will not be revealed to any workers.

We make several design choices to reduce experimenter demand effects across treatments as much as possible (treatments are summarized in figure 2). First, all treatments are assigned across employers to make it harder for participants to infer the study purpose. Second, all interviews are conducted privately and anonymously. Third, participants are informed about all subsidy treatments regardless of their assignments, holding constant demand effects for hiring women across subsidy treatments.

Figure 2: Experiment Treatment Arms: Varying Information about Worker Transport and Worker and Employer Pay



*Notes:* Employers were cross-randomized into two transport and four subsidy treatments, described in detail above. First, we randomize employers into one of two transport treatments. Employers in the *Transport* treatment were informed that the job provided all workers free and

## 4.2 Hiring Analysis: Empirical Specification

We next test whether the design and randomization were successful in keeping constant other forms of discrimination across treatment arms and we present our estimating equation.

We identify *within-applicant* differences in hiring across treatments, allowing us to rule out a myriad of endogeneity concerns (though balance is not required, we provide applicant characteristics by treatment in appendix table C.3). The transport treatment was stratified by applicant and by employer industry.<sup>28</sup> We restrict the sample to employers who answer all understanding questions correctly (94%, see appendix B.6.1 for the understanding questions) and who are not assigned to the *Employer Subsidy for Hiring Men*, a treatment we only include for perceptions of fairness and symmetry (see section 4.1). Employer characteristics and productivity beliefs are balanced across treatment arms (appendix tables C.2 and C.3) and predictions do not differ between *Hiring* and *Prediction-Only* employers (appendix table C.4). In addition, employers are more likely to report basing their hiring decisions on safety but not taste or statistical concerns without transport (employers in the *Female Subsidy* expected women to generate slightly lower revenues: BDT 29, USD 0.3,  $p=0.04$ ).

We estimate the following equation among all female applicants shown to at least two employers:<sup>29</sup>

$$H_{ki} = \alpha + \beta_1 NT_k + \beta_2 MS_k + \beta_3 FS_k + \beta_4 ES_k + \beta_5 (NT_k \times MS_k) + \beta_6 (NT_k \times FS_k) + \beta_7 (NT_k \times ES_k) + \mu_i + \mu_j + \epsilon_{ki} \quad (3)$$

where  $H_{ki}$  is an indicator that is 1 if employer  $k$  hires female applicant  $i$ .  $NT_k$ ,  $MS_k$ ,  $FS_k$ , and  $ES_k$  are indicators that are 1 if employer  $k$  is assigned to the *No Transport*, the *Male Subsidy*, the *Female Subsidy* or the *Employer Subsidy* treatment, respectively.  $\mu_i$  and  $\mu_j$  are strata fixed effects, i.e., female applicant and employer industry fixed effects.<sup>30</sup> We estimate Huber–White robust standard errors clustered at the employer level (the level of randomization).

As each pair was shown to 11 different employers, this specification allows us to test whether employers from the same industry hire the same woman compared to the same man differentially across treatment arms. Specifically, we test:

- Prediction 1: Demand for female labor is lower without safe transport than with:  $\beta_1 < 0$ .
- Prediction 2: Demand for female labor is higher with safe transport than with subsidies paid to female workers:  $\beta_1 + \beta_3 + \beta_6 < 0$ .

<sup>28</sup>As the subsidy treatments were drawn on-the-spot, they were not stratified.

<sup>29</sup>We exclude seven female applicants from the application experiment (used to incentivize beliefs, see section 4.1, stages 2 and 4) shown to only one employer. By design, all applicants in the hiring experiment were shown to multiple employers.

<sup>30</sup>We also control for a vector of male applicant characteristics (Excel screening score, education, work experience, and marriage status) in the 12th prediction pair, in which applicants were not always compared to the same man.

- Prediction 3: Labor demand is increasing more in subsidies paid to employers than workers:  $\beta_2 < \beta_4, \beta_3 < \beta_4$ .

The first prediction implies that employers are other-regarding. Without taste, profit, or reputation concerns, employers do not have *self*-regarding motives to hire fewer women without transport. The second prediction implies that employers are paternalistic. A deferential employer's utility from hiring women relative to men is strictly greater in the *No Transport+Female Subsidy* treatment than the *Transport+No Subsidy* treatment. Independent of women's and men's valuation of transport, women are strictly better off (they receive a subsidy larger than the cost of transport) while men are strictly worse off (they do not receive transport). Employers may only hire fewer women with the subsidy than the transport if they expect to earn less other-regarding utility because they (i) perceive the subsidy's value to be lower than that of the transport, and (ii) believe women may not purchase the transport because they undervalue it. The third prediction implies that labor demand is locally downward sloping in wages.

Finally, we assess heterogeneity in hiring by employer characteristics; elicited from employers *after* making their hiring choices:

- Prediction 4: Employers with larger concerns for women's welfare respond more to safe transport and subsidies paid to female workers.

We test whether the response to the transport and female worker subsidies is larger among:

1. Employers who reported above-median agreement with paternalistic laws in India that restrict women from working at night (on a 0–10 scale with a median response of 8).
2. Employers who reported above-median agreement with the statement that women should not work at night, even if they want to (on a 0–10 scale with a median response of 6).
3. Employers who transferred above-median amounts to the female worker in a three-way dictator game between themselves and two workers from the application experiment (to ensure that employers did not simply try to compensate workers for not hiring them; BDT 0–100 with a median transfer of BDT 30 or USD 0.3 to male and female workers).<sup>31</sup>
4. Employers who reported maximum agreement with the statement that women should be protected from harmful jobs, even against their will (on a 0–10 scale with a median response of 10).

We also test whether the response to the transport and subsidies is larger among employers with an above-median Kling Mean effects index of the four measures (Kling et al. (2007)).<sup>32</sup>

<sup>31</sup>Dictator game transfers are not a direct measure of  $\alpha_{kg}$ . In our model, employers should keep the entire amount whenever  $\alpha_{kg} < 1$ . Instead, we consider the dictator game transfers as a proxy of underlying individual-level other-regarding preferences.

<sup>32</sup>We find similar results when using a correlation-adjusted index Anderson (2008)).



These heterogeneity analyses also serve a second purpose: If treatment effects are larger among employers with more other-regarding attitudes towards women, then the observed behavior likely reflects true underlying other-regarding preferences rather than, for example, experimenter demand effects. Furthermore, if experimenter demand effects drive answers to these questions and observed behavior, employers likely perceive protecting women to be the norm, which is consistent with our interpretation of the findings.

### 4.3 Results: Job Costs and Labor Demand

This subsection presents the results of our experimental tests of predictions 1 to 4. We first test whether information about the transport changed employers' beliefs about job costs, and then test whether exogenously changing perceived job costs or payments received by the workers or employers changes hiring decisions.

Not informing employers about the transport increases their perceived job costs (including commute, section 4.1, stage 4) by 1.6 points ( $p < 0.01$ ) from a baseline of 0.9 for male applicants and by 3.1 points ( $p < 0.01$ ) from a baseline of 3.2 for female applicants (appendix table C.3).

Consistent with prediction 1, not informing employers about the transport reduces the share of hired female applicants by 22% ( $-10\text{ppts}$ ,  $p < 0.01$ ) from a baseline of 45% (figure 3, bars 1 and 2).<sup>33</sup> The reduction in demand for female labor seems to be driven by changes on the intensive rather than the extensive margin: Employers in the *No Transport* hire about one fewer woman, on average, ( $p < 0.01$ , appendix table C.6).

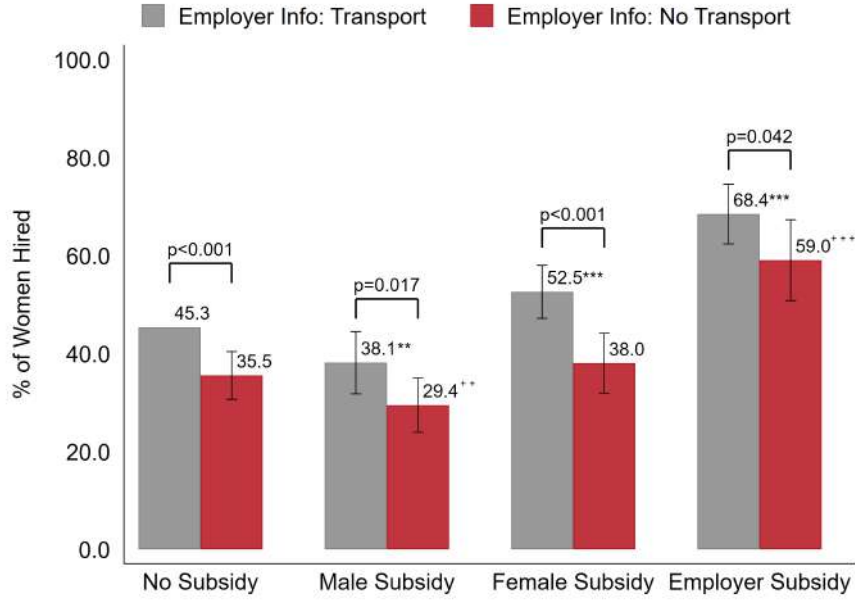
As employers only make hiring choices about applicants willing to take the job, these results imply that employers restrict women's employment opportunities when employers consider the opportunities unsafe. Moreover, we find that this employer behavior varies with both employer and applicant characteristics: Employers respond more strongly to the transport information when they are male (even though the difference is insignificant given the small number of female employers), have more hiring experience (appendix figure C.9), or when the female applicant has less experience than the male applicant (appendix figure C.10).<sup>34</sup>

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<sup>33</sup>The high female hiring rate is consistent with responses to an open-ended question suggesting that employers believed the study's goal was to test their ability to hire the most qualified workers. Accordingly, the enumerators reported that the employers attempted to reduce their biases against women as much as possible.

<sup>34</sup>The employer heterogeneity may be driven by employers with more hiring experience believing that women have significantly higher costs than employers with less hiring experience ( $p < 0.01$ ) and female employers believing that women are more risk-seeking than male employers ( $p = 0.02$ ).

Figure 3: Hiring by Transport Information and Subsidy Assignment



*Notes:* The graph shows results from equation 3, i.e., the share of women hired by whether the employer knows about the transport or was offered no subsidy, a male or female worker subsidy, or an employer subsidy for hiring women. Each bar is the sum of the control mean and the relevant regression coefficients. We show 95% confidence intervals based on the estimated standard errors of the linear combinations of the regression coefficients. Asterisks are from  $p$ -values from Wald tests comparing hiring rates between *No Subsidy* and each of the subsidies with transport,  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$  (on the gray *Transport* bars, only), and pluses from comparing *No Subsidy* and each of the subsidies without transport,  $p < 0.10^+$ ,  $p < 0.05^{++}$ ,  $p < 0.01^{+++}$  (on the red *No Transport* bars, only).  $P$ -values between bars compare hiring rates with and without transport within subsidies.<sup>35</sup>

Consistent with prediction 2, employers behave paternalistically rather than deferentially: They hire women more under the *Transport+No Subsidy* condition than under the *No Transport+Female Subsidy* condition (45% versus 38%, bars 1 and 6,  $p=0.02$ ), i.e., when they know that women receive an additional BDT 1,000 (USD 10). In other words, employers do not hire women without transport—even when women can afford safe transport themselves. This is consistent with the finding that 93% of these employers agree that women should be protected even against their will (choosing 6–10 on the Likert scale, see section 4.2). By contrast, the male subsidy increases male hiring with and without transport (+13%,  $p=0.03$ , and +9%,  $p=0.04$ ). In addition, consistent with prediction 3, the employer subsidy increases hiring more than the worker subsidies with and without transport (+51%,  $p<0.01$ , and +66%,  $p<0.01$ ).

Using the change in hiring in response to applicant characteristics and the subsidy treatments, we estimate employers' valuation of the transport in terms of worker qualifications and payments to female workers or employers themselves. The coefficients on the Excel screening score, the *Female Subsidy*, and the *Employer Subsidy* imply that employers value the safe transport as much as a 7ppts (0.5SD) increase in Excel score, BDT 1,371 (USD 13) to the worker,

<sup>35</sup>The  $p$ -values comparing the effect of the female with the male subsidy, with and without transport, are  $p = 0.99$  and  $p = 0.49$ , respectively (not shown). The  $p$ -values comparing the effect of the female with the employer subsidy, with and without transport, are  $p < 0.01$  and  $p < 0.01$ , respectively (not shown).

or BDT 427 (USD 4) to the employer (appendix table C.5, columns (1) and (2)).

Finally, consistent with prediction 4, employers with stronger other-regarding preferences respond more strongly to the *No Transport* treatment (figure 4) and directionally more to the *Female Subsidy* for three out of four measures (appendix figure C.8). Overall, we do not find substantial heterogeneity for two measures, for which we also observe little heterogeneity in the underlying responses, making meaningful employer classification difficult: Consistent with the 50–50 norm (Andreoni and Bernheim, 2009), 71% of employers gave the same dictator game transfers to men and women (85% within BDT 10), and 59% fully agreed (10 out of 10) that women should be protected against their will (only 4% disagreed, 0–4 out of 10).<sup>36</sup>

Results are robust to a series of different regression specifications (appendix table C.5). They are robust to (i) removing applicant fixed effects or (ii) all covariates, and (iii) selecting covariates using Belloni et al. (2014)’s post-double selection Lasso method. They are also robust to including (vi) employers who answer understanding questions incorrectly, (v) only employers who report that women in the *Transport* treatment will get home using provided transport and women in the *No Transport* will not, and (vi) only employers surveyed before the first night shift (for whom spillovers are impossible). They are also robust to (vii) excluding the applicants from the application experiment. Finally, results are robust to (viii) clustering standard errors at both the employer and applicant level (Cameron et al., 2011) and (ix) using a Logit specification.

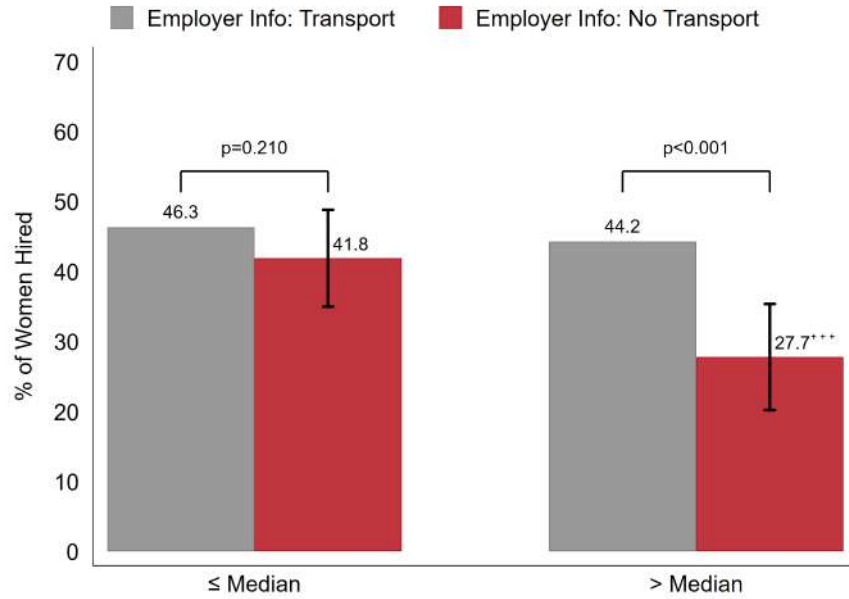
We also find that employers respond more to the transport information in a robustness check in a small sample of 41 employers, in which we reduced the salience of gender by presenting the subsidies as random payments to Candidate 1 or Candidate 2 (see appendix figure C.6 for the experimental interface).<sup>37</sup> This result is consistent with enumerator reports that employers made a conscious effort to reduce their biases against women as much as possible in the main study when the experiment’s relationship to gender was more salient. Thus, reducing the salience of gender in the experiment *increases* paternalistic discrimination. By contrast, if the results were driven by experimenter demand effects, reducing the salience of gender in the experiment should *reduce* paternalistic discrimination.

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<sup>36</sup>A body of literature questions the value of the dictator game for measuring altruism, suggesting that giving may be an artefact of the experimental environment with little external validity (Cherry et al., 2002; Bardsley, 2008; Di Tella et al., 2015; Winking and Mizer, 2013).

<sup>37</sup>The higher female hiring rate with transport is explained by women’s Excel screening score being 1.8 points higher than men’s in this subsample.

Figure 4: Hiring by Transport Information and Other-Regarding (Deferential or Paternalistic) Preferences



*Notes:* We show results from regression 3 run separately among different subsets of employers (see section 4.2). Asterisks are from  $p$ -values from Wald tests comparing hiring rates of employers with  $\leq$  median and above median other-regarding index with transport,  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$  (on the gray *Transport* bars, only), and pluses from comparing *No Subsidy* and without transport,  $p < 0.10^+$ ,  $p < 0.05^{++}$ ,  $p < 0.01^{+++}$  (on the red *No Transport* bars, only)

## 4.4 Mechanisms

We assess the relative importance of three potential drivers of paternalistic discrimination (see section 2.2): employers' beliefs about job costs, employers' attitudes toward risk, and selection neglect (that is, failure to condition on applicants' selection into the applicant pool).

1. **Costs:** As we discussed in section 4.3, employers believe that job costs (on a 0–10 scale, see section 4.1, stage 4) are significantly higher without transport than with transport, and more so for women than men.

Employers also believe women underestimate job costs more than men, both on the extensive and intensive margin. We elicited first- and second-order beliefs about job costs from 80 *Beliefs-Elicitation* employers, who guessed productivity and costs for eight applicants from the application experiment (second-order beliefs were incentivized with BDT 5, or USD 0.05, per correct answer).<sup>38</sup> Employers believe that both men and women underestimate the costs ( $p < 0.01$ ). In addition, controlling for other characteristics, employers believe that 56% of women and 31% of men underestimate the costs ( $p < 0.01$ ) and that the average conditional mistake (the difference between first- and second-order

<sup>38</sup>These employers are different from the 80 *Prediction-Only* employers who made predictions about applicants from the hiring experiment.

beliefs) is 1.8 for women versus 1.4 for men ( $p < 0.01$ ).<sup>39</sup> We also find that employers react more to the transport (though not significantly so) if they believe the female applicant will underestimate the costs (i.e., for whom their first-order cost beliefs, see section 4.1, stage 4, are larger than their incentivized second-order beliefs about the average reported costs of women willing to do the job in the application experiment, see appendix figure C.11). Female employers do not believe that women make larger conditional mistakes than men, which is consistent with the absence of a transport treatment effect for them.

However, employers *overestimate* the frequency of negative events ever experienced on the night shift ( $p < 0.01$  for all comparisons), and more so for women than men. We incentivized employers to guess the results of a small survey with 20 male and 20 female night-shift workers (BDT 5, or USD 0.05, per correct answer). Employers believe that (i) 3.3 men and 4.1 women were in a car accident ( $p < 0.01$ ), with the true numbers being 5 and 2, (ii) 4.3 men and 6.3 women were robbed ( $p < 0.01$ ), with the true numbers being 2 and 4, and (iii) 3.2 men and 8.8 women were attacked or assaulted ( $p < 0.01$ ), with the true numbers being 1 and 3.

2. **Risk Preferences:** Employers who believe *women should be* relatively risk-averse (above-median in our sample of employers) but not employers who believe *women are* relatively risk-averse reduce hiring significantly more without transport (see appendix figure C.11). We measure both employers' risk preferences for women and perceptions about women's risk preferences by adapting a question from the Global Preference Survey (Falk et al., 2018, 2023): "In your opinion, on a scale of 0–10, how willing to take risks should women be [are women]?"<sup>40</sup>

These results suggest that risk preferences may drive paternalistic discrimination, and offer additional evidence that employers are paternalistic rather than deferential.<sup>41</sup>

3. **Selection Neglect:** We find no evidence that selection neglect drives paternalistic discrimination in the experiment. We test for selection neglect by eliciting employers' perceptions of differences in reported job costs between applicants willing and unwilling to take the job at BDT 1,500 (USD 15) in the application experiment (see section 4.1, stage 4). If selection neglect drives discrimination (e.g., by causing employers to evaluate the selected pool of willing applicants as if they were a random draw from the general population), we would expect employers who underestimate the cost differences to respond more strongly to treatment (see, for example, Exley and Nielsen (2022)). However, we

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<sup>39</sup>Note that we do not observe true costs on the Likert scale.

<sup>40</sup>We opted not to elicit incentivized risk preferences because gambling is illegal in Bangladesh.

<sup>41</sup>We do not believe that low reported risk-preferences for women simply proxy low perceived costs for women or paternalistic attitudes. We observe a very low correlation between risk-preferences and perceived costs ( $r = -0.02$ ) and low correlations between risk-preferences and agreement with paternalism laws in India ( $r = -0.12$ ), the statement that women should be protected even against their will ( $r = -0.08$ ), and the statement that women should not work at night ( $r = -0.18$ ).



find that employers overestimate the reported cost differences between willing and unwilling applicants (2.3 for women and 1 for men,  $p < 0.01$ , compared to the true values of 0.8 and 0.5) and that hiring behavior does not vary with the perceived difference (see appendix figure C.11).

Overall, our experimental results in the hiring experiment suggest that employers engage in substantial paternalistic discrimination, which is primarily driven by employers beliefs that 1) job costs are high and women underestimate them, and 2) women should be more risk-averse. In the next section, we investigate how applicants respond to changing the job costs to female workers in the application experiment.

## 5 The Application Experiment: Job Costs and Labor Supply

To measure the labor supply response to variations in gender-specific costs, we conduct an “application experiment” with *applicants* for the Excel workshop and job on the night shift. We recruit 391 men and 379 women aged 18 to 60 through in-person recruitment drives on 11 university campuses in March and April 2023 in Dhaka, Bangladesh.

The pool of applicants is similar to that in the hiring experiment (table 3, see table 2 for applicants in the hiring experiment). The male applicants in our experiment are, on average, 26 years old, and the female applicants are, on average, 23 years old. Around one quarter of applicants are married (26% of men and 24% of women), and less than one fifth have children (18% of men and 14% of women). Female applicants are less experienced than male applicants (89% have up to three years of experience versus 72% of male applicants) but have similar education (9% have a Bachelor’s degree versus 14% of male applicants) and Excel screening scores (the average score is 26% versus 25% among male applicants).

### 5.1 Application Experiment Design

Applicants make real application decisions and are randomized into different treatment conditions that experimentally vary the perceived job costs for workers. The experiment takes an average of 63 minutes and is conducted in four stages described below.

1. **Applicant screening:** In the first stage, applicants take two 12-minute back-to-back Excel screening tests incentivized with BDT 2 (USD 0.02) per correct answer for a total compensation of up to BDT 40 (USD 0.4). After completing the tests, applicants are informed that the workshop and job will be from 7:00PM to midnight, that all hired workers will receive an Excel certificate of completion, and a fraction of workers will be promoted and receive a promotion benefit of BDT 500 and a promotion certificate.
2. **Transport information randomization:** In the second stage, we randomize applicants

Table 3: Applicant Characteristics in the Application Experiment by Gender

	Male (N=391)		Female (N=379)	
	Mean	S.D.	Mean	S.D.
Age (Years)	25.9	7.8	22.9	6.4
Married (%)	26.3	44.1	23.5	42.4
Children (%)	18.4	38.8	13.5	34.2
Bachelor's (%)	14.3	35.1	8.7	28.2
$\leq 3$ Years Work Experience (%)	72.1	44.9	88.9	31.4
Excel Screening Score (%)	24.8	11.5	26.3	12.1

*Notes:* The table shows the means and standard deviations of characteristics of applicants in the analysis sample of the application experiment. *Children* is an indicator that is 1 if the employer has at least 1 child.

into one of two transport treatments that experimentally vary the perceived job costs:<sup>42</sup>

- (a) *Transport*: Applicants are informed about the safe transport home.
- (b) *No transport*: Applicants are not informed about the safe transport home.

3. **Cost beliefs elicitation:** In the third stage, we elicit applicants' unincentivized beliefs about job costs (see section 4.1).
4. **Reservation wage elicitation:** In the fourth stage, we elicit applicants' reservation wages using the Becker–DeGroot–Marschak mechanism (Becker et al. (1964), see figure C.7 for the experimental interface). Applicants then randomly draw a wage between BDT 100 (USD 1) and BDT 5,000 (USD 50) from the following distribution (applicants are informed about the wages in the distribution but not the probability of drawing each wage).<sup>43</sup>

<sup>42</sup>In addition, we experimentally vary the perceived non-wage benefits through two treatments: (i) *High Promotion*: Applicants are informed that 90% of workers hired for the job are promoted. (ii) *Low Promotion*: Applicants are informed that 10% of workers hired for the job are promoted. In the *Low (High) Promotion* arm, promotions are conducted automatically, selecting the 10% (90%) highest-scoring workers. Applicants determine their promotion treatment assignments by drawing a piece of paper, signaling to them that all promotion assignments are due to chance.

<sup>43</sup>We noticed a correlation between the random lottery wage and applicant characteristics mid-survey. In particular, women, educated applicants, and married applicants without children drew higher random wages on average. We were concerned that enumerators might be redrawing the wages to draw higher wages for applicants with higher opportunity costs. We discussed our concerns with the survey firm and started closely supervising the surveys. Enumerators never redrew a wage while we were watching, and we do not observe any correlation between the stated reservation wage and the randomly drawn reservation wage.

Table 4: Random Wage Distribution in the Application Experiment

BDT	100	250	500	1,000	2,000	3,000	4,000	5,000
%	40%	40%	15%	1%	1%	1%	1%	1%

Applicants are hired if the random wage is at least as high as their reported reservation wage. In total, 231 men and 183 women are hired as part of the application experiment.

## 5.2 Application Analysis: Empirical Specification

We next test whether the design successfully varied perceived job costs and present the estimating equation that allows us to estimate applicants' valuation of safe transport. We restrict the sample to applicants who answer all understanding questions correctly (91% of male and female applicants, see appendix B.6.2 for the understanding questions). Both male and female applicant characteristics are balanced across treatment arms (appendix table C.7).

We estimate the following equation separately among male and female applicants:

$$\bar{w}_i = \alpha + \beta_1 NT_i + \beta_2' X_i + \epsilon_i \quad (4)$$

where  $\bar{w}_i$  is the stated reservation wage of applicant  $i$ , and  $NT_i$  is an indicator that is 1 if applicant  $i$  is assigned to the *No Transport* treatment.  $X_i$  is a vector of applicant controls (as randomization was across applicants), including the applicant's age, Excel screening score, education, years of experience, and marital status.<sup>44</sup>  $\epsilon_i$  are Huber–White robust standard errors.

## 5.3 Results: Job Costs and Labor Supply

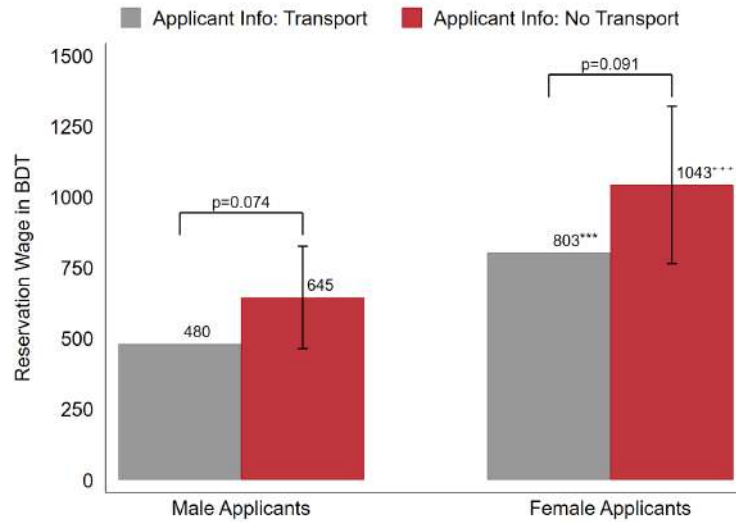
We first test whether information about the transport changed applicants' beliefs about job costs and then whether exogenously changing perceived job costs changes application decisions. Not informing applicants about the transport increases their perceived job costs by 0.4 points ( $p > 0.1$ ) from a baseline of 2.3 among male applicants and by 0.8 points ( $p = 0.03$ ) from a baseline of 5.9 among female applicants (on a scale from 0–10, appendix table C.7).

Not informing applicants about the transport increases the reservation wage of male applicants by 34% (BDT 165, USD 2,  $p = 0.07$ ) from a baseline of BDT 480 (USD 5) and that of female applicants by 30% (BDT 240, USD 2,  $p = 0.09$ ) from a baseline of BDT 803 (USD 8, figure 5). Women's significantly higher reservation wage with transport ( $p < 0.01$ ) is consistent with women's higher perceived costs even with transport. Interestingly, the valuation of the transport by both male and female applicants is similar to the expected transport price in Dhaka, suggesting that the applicants considered safe transport as a means of reducing their

<sup>44</sup>We also control for indicators for whether the applicant was assigned to the *High Promotion* rate and its interaction with the *No Transport* treatment (see footnote 42).

transport costs. By contrast, employers value the transport significantly more for female workers, at BDT 1,371 (USD 13,  $p < 0.01$ , section 4.3).<sup>45</sup> Starting from a baseline wage of BDT 1,500 (USD 15), the wage paid in the experiment, male labor supply decreases by 5% (4ppts,  $p > 0.01$ ) without transport and female labor supply by 15% (13ppts,  $p = 0.06$ , appendix table C.8).

Figure 5: Application Rates by Applicant Gender and Transport Assignments



Notes: The graph shows results from equation 4 within gender (winsorized at the 95th percentile). Each bar is the sum of the control mean and the relevant regression coefficients. We show 95% confidence intervals based on the estimated standard errors of the regression coefficients. Asterisks are from  $p$ -values from Wald tests comparing reservation rates across genders with transport,  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$  (on the gray *Transport* bars, only), and pluses from reservation wages across genders without transport,  $p < 0.10^+$ ,  $p < 0.05^{++}$ ,  $p < 0.01^{+++}$  (on the red *No Transport* bars, only).  $P$ -values between bars compare reservation wages with and without transport within genders.

Results are robust to a series of different regression specifications (appendix table C.8). They are robust to (i) truncating and (ii) not winsorizing reservation wages, (iii) including or (iv) excluding outliers, (v) removing covariates or (vi) selecting them using Belloni et al. (2014)'s post-double selection Lasso method, and (vii) including applicants who answer understanding questions incorrectly.

## 6 Structural Estimation: Job Costs and Market Equilibrium

To test equilibrium prediction 5 of the model and quantify the effect of paternalistic discrimination on equilibrium wages in the market for our night-shift job, we combine the results from the labor demand and supply experiments described in the previous two sections in an

<sup>45</sup>This is not driven by the different selection of applicants in the two experiments: (i) women with any reservation wage in the application experiment versus (ii) women with a reservation wage of  $\leq$  BDT 1,500 in the hiring experiment, where women knew ex-ante they would be paid BDT 1,500. In fact, we find that women with a reservation wage of  $\leq$  BDT 1,500 in the application experiment react even less to the transport treatment than women with a reservation wage of  $>$  BDT 1,500 (appendix table C.8).

equilibrium model. The model allows us to identify the equilibrium effects of changing perceived costs for workers when allowing worker selection and productivity to vary with costs. First, we construct the labor demand function using employers' decisions in the hiring experiment. Second, we construct the labor supply function using applicants' reservation wages in the application experiment. Third, we combine the demand and supply functions to construct equilibria for both genders in simplified markets without employer exits and entries. Finally, we benchmark the importance of paternalistic discrimination against other sources of the gender employment and wage gaps and assess the cost-effectiveness of safe transport and subsidy interventions in our experimental setting.

## 6.1 Labor Demand

We simulate the labor demand function in three steps. First, we estimate employers' preferences, i.e., how employers trade off taste, profit, and other-regarding concerns in hiring decisions. Second, we estimate how employers' productivity and welfare beliefs respond to changes in wages and transport (as beliefs were held constant in the experiment). Third, we use the estimated preferences and predicted beliefs to simulate labor demand. We first describe the parameterization of the demand function and then the three individual steps to simulate it: estimating preferences, predicting beliefs, and simulating the labor demand curve.

### 6.1.1 Parametrization

We model the preferences of paternalistic employers from equation 2. We allow employers to be from different industries and profit and welfare beliefs to vary with wages and transport. We simulate separate labor markets for each industry and gender such that each market is a gender-industry combination. Employers and workers do not move between industries. The markets for male and female labor clear simultaneously by industry. We normalize  $d_m$  to zero and drop the gender subscript such that  $d$  is the employer's taste for working with women relative to men.

Employer  $k$ 's expected utility from hiring applicant  $i$  of gender  $g$  in industry  $j$  at wage  $w_{jg}$  and without transport  $NT \in \{0, 1\}$  is given by the following equation:

$$\begin{aligned} u_{ki} &= v_{ki} + \varepsilon_{ki} \\ &= \underbrace{d_j}_{\text{Taste utility}} + \underbrace{\beta_j \Pi_{ki}(w_{jg}, NT_{jg})}_{\text{Profit utility}} + \underbrace{\alpha_{jg} \mathcal{W}_{ki}^E(w_{jg}, NT_{jg})}_{\text{Other-regarding utility}} + \varepsilon_{ki}, \end{aligned} \quad (5)$$

where  $v_{ki}$  is the utility that varies according to the applicant's gender, expected profit, and other-regarding utility, and  $\varepsilon_{ki} \sim EV1$  is an unobserved demand shock. The employer's *preferences* are given by taste parameter  $d_j$ , preference for profits  $\beta_j$ , and other-regarding utility weights  $\alpha_{jg}$ . The employer's *beliefs* about the worker's profit and welfare are given by  $\Pi_{ki}(w_{jg}, NT_{jg})$

and  $\mathcal{W}_{ki}^E(w_{jg}, NT_{jg})$ .

### 6.1.2 Estimating Employer Preferences

We estimate employer preferences using a binary choice model that exploits exogenous variation in the expected profits and welfare created by the transport and subsidy treatments. We first explain our estimation approach and then the data variation used to identify each parameter.

**Estimation Approach** The probability that employer  $k$  from industry  $j$  chooses to hire applicant  $i$  over applicant  $i'$  is determined by the relative utility of hiring each applicant:

$$P_{kii'} = \Pr(u_{ki} > u_{ki'}) = \frac{\exp(v_{ki})}{\exp(v_{ki}) + \exp(v_{ki'})}, \quad (6)$$

where  $v_{ki}$  is the utility of employer  $k$  from hiring applicant  $i$  in equation 5. We estimate  $(d_j, \beta_j, \alpha_{jm}, \alpha_{jf})$  within each industry  $j$  using maximum likelihood (see appendix B.7.2). We present results in money-metric utility (to the employer) by dividing the estimated preference parameters by  $\beta_j$ . We calculate standard errors using the delta method.

**Identifying Variation** We identify the parameters in equation 5 by estimating how hiring responds to the applicant's gender and the employers' expected profits,  $\Pi_{ki}$ , and welfare,  $\mathcal{W}_{ki}^E$ . We measure hiring in response to  $\Pi_{ki}$  and  $\mathcal{W}_{ki}^E$  as opposed to the random employer and worker subsidies to increase the support and because paternalistic employers may not react to the worker subsidies as shown in section 4.3. We calculate employers' profit and welfare expectations using the predictions from the *Hiring* employers for the four applicants for whom employers made both predictions and hiring choices (section 4.1, steps 2 and 4).

First, we calculate  $\Pi_{ki}$  as the difference between the expected revenue generated by the worker and the wage paid to the worker. The expected revenue is the sum of the employers' base pay of BDT 500 (USD 5) and a piece rate of BDT 5 (USD 0.05) multiplied with the predicted number of tasks completed (the incentivized expected attendance rate multiplied by the incentivized expected conditional number of tasks completed; see section 4.1, step 2). The wage paid by the employer is randomly assigned based on the subsidy treatment: Employers in the *No Subsidy*, *Male Subsidy* and *Female Subsidy* treatments pay a wage of BDT 0 for both male and female workers; employers in the *Employer Subsidy* treatment pay a wage of BDT 0 for male workers and of BDT -1,000 for female workers.

Second, we calculate  $\mathcal{W}_{ki}^E$  as the difference between the wage offered to the worker and the job costs,  $u_{ki}^E(c_{ki}^E)$ . The wage paid to the worker is randomly assigned based on the subsidy treatment: Workers in the *No Subsidy* and *Employer Subsidy* treatments receive BDT 1,500 (USD 15), while male and female workers in the *Male Subsidy* and *Female Subsidy* treatments receive BDT 2,500 (USD 25). The expected job costs are the predicted job costs on a scale of 0–10 (see section 4.1, step 4) converted to money-metric using conversion rates calculated from



employers' hiring responses to increases in costs and worker wages (described in appendix section B.7.1).<sup>46</sup>

Our identifying assumptions are that equation 5 correctly specifies employers' utility function, that employers consider outside options as a component of job costs (opportunity costs), and that employers do not misreport productivity and cost beliefs to hide taste-based discrimination. In this case,  $d_j$  measures employers' unbiased preference for hiring women relative to men, and  $\alpha_m$  and  $\alpha_f$  measure employers' unbiased welfare weights for men and women. Neither predicted productivity nor costs differ between *Hiring* and *Prediction-Only* employers (see section 4.1, step 2, and appendix table C.4), alleviating concerns that employers may try to hide taste-based behind statistical or paternalistic concerns by understating productivity or overstating costs. We also show robustness when controlling for applicant characteristics or employer industry fixed effects, as well as by using a control function approach to adjust for misreporting of productivity and cost beliefs (described in appendix section B.7.3) and by estimating  $\beta_j$  and  $\alpha_{jg}$  in equations 5 and 6 using only the random variation created by the employer and worker subsidies.

**Results** Our estimates of other-regarding preferences ( $\alpha_{jg}$ ) imply that employers internalize 9% of every BDT paid to male workers and 14% of every BDT paid to female workers (table 5). Employers in manufacturing place a significantly larger weight on women than men ( $p=0.03$ ). Overall, our estimated welfare weights are slightly lower than those estimated by Chen and Li (2009) in dictator games (0.32–0.47). We also observe substantial negative taste for hiring women relative to men ( $d_j$ ). Holding productivity and welfare constant, employers are willing to forego BDT 151 (USD 1.5) to hire a man rather than a woman.

Table 5: Employer Preferences: Parameter Estimates

	Pooled	Manufacturing	Services	Education
$d$	-0.151** (0.075)	-0.092 (0.111)	-0.205 (0.211)	-0.140 (0.107)
$\alpha_m$	0.085* (0.051)	-0.032 (0.071)	0.186 (0.156)	0.162** (0.074)
$\alpha_f$	0.140*** (0.038)	0.125** (0.051)	0.194* (0.102)	0.156** (0.062)
$p\text{-val}(\alpha_m = \alpha_f)$	0.213	0.034	0.948	0.915
Observations	1,826	610	592	624

*Notes:* Notes: The table presents parameter estimates from equation 5 estimated among all mixed-gender hiring pairs. All estimates in money metric.  $d$  in '000 BDT. Standard errors are calculated using the delta method. We present p-values from testing whether  $\alpha_m$  is statistically different from  $\alpha_f$ .

<sup>46</sup>We also elicited costs in monetary terms directly with higher monetary values representing higher costs. However, we do not the directly elicited costs, as the enumerators reported that respondents associated more money with better jobs and thus reported lower monetary values for costly jobs.

Results are robust to (i) controlling for employer fixed effects and (ii) applicant characteristics, using (iii) probit, (iv) a control function approach (described in appendix B.7.3), (v) estimating equations 5 and 6 using the random employer and worker subsidies only, and (vi) estimating heterogeneous preferences using mixed logit (appendix figure C.12). The results using only the random subsidies are noisier given the support only consists of two values.

### 6.1.3 Predicting Employer Beliefs as a Function of Wage and Transport

To endogenize selection and productivity, which were held constant in the experiment, we estimate the functions  $\Pi_{jg}(w_{jg}, NT_{jg})$  and  $\mathcal{W}_{jg}^E(w_{jg}, NT_{jg})$ , which indicate how beliefs of industry  $j$  employers about profits and welfare for gender  $g$  workers form in equilibrium when selection and productivity vary with wages and transport. We estimate average beliefs per industry (and thus drop subscript  $k$ ). We again first explain our estimation approach and then the identifying variation.

**Estimation Approach** We estimate how employers’ welfare and profit beliefs vary with employer and applicant characteristics as well as wages and information about the transport using a random forest model in the sample of *Beliefs-Elicitation* employers who did not make hiring decisions (see section 4.4). We then predict beliefs out-of-sample in the sample of *Hiring* employers (see appendix section B.7.4 for additional detail). That is, we answer the question “What would the *Hiring* employers have thought about the applicant if we had allowed wages and information about the transport to affect selection and productivity?” We then calculate the average expected productivity and costs in an industry at every wage with and without transport.

**Identifying Variation** Each *Beliefs-Elicitation* employer made eight predictions about applicants from the application experiment. The *Beliefs-Elicitation* employers were provided with the information given to *Hiring* employers for making predictions (applicant gender, Excel screening score, education, work experience, and marital status). In addition, these employers were also informed about each applicant’s wage and transport condition and that the wage and transport could influence selection and productivity in the application experiment.

### 6.1.4 Constructing the Labor Demand Curve

Finally, we use the estimated preferences and predicted beliefs from the previous two subsections to simulate labor demand separately in each industry with and without transport. We construct a labor demand curve that approximates our theoretical framework (equation 2). We assume that each market consists of 495 employers, 495 male applicants, and 495 female applicants, as in the experimental set-up. Each employer chooses whether to demand (i) a male worker in the market for male labor and (ii) a female worker in the market for female labor.

In each market, the employer’s outside option to hiring is not hiring and receiving zero taste, profit, or other-regarding utility. We thus assume that employers’ preferences  $(d_j, \beta_j, \alpha_{jg})$  and beliefs  $(\Pi_{jg}, \mathcal{W}_{jg}^E)$  are stable across hiring environments, i.e., when employers choose between one male and one female applicant or between one male or one female applicant and the outside option of not hiring. We discuss the simulation of the demand curve in appendix B.8.

We present results using two different estimates of  $\Pi_{jg}$  resulting from different piece rates. In the experiment, employers received a piece rate of BDT 5 (USD 0.05) per task in addition to a base profit of BDT 500 (USD 5, the experimental compensation for employers) at a wage of BDT 1,500 (USD 15). Our preferred estimate of  $\Pi_{jg}$  eliminates the BDT 500 base profit (which was necessary for ethical reasons) and calibrates a piece rate that matches the expected average profits with the expected average profits in the experiment:  $\hat{\Pi}_{jg} = (5 + \frac{2,000}{\text{average productivity}}) \times \text{tasks} - w_{jg}$  (employers expect a base profit of BDT 500 at a wage of BDT 1,500; the associated piece rate is BDT 62 or USD 0.6). We also show results using the effective payment scheme used in the experiment:  $\hat{\Pi}_{jg} = 2,000 + 5\widehat{Tasks}_{jg} - w_{jg}$  (employers expect a base profit of BDT 500 at a wage of BDT 1,500).

## 6.2 Labor Supply

We estimate the labor supply non-parametrically using the reservation wages elicited in the application experiment. We calculate the fraction of gender  $g$  labor willing to work at every wage  $w_{jg}$  and with and without transport  $NT_{jg} \in \{0, 1\}$ , i.e., the fraction of workers for which  $\mathcal{W}_i^A \geq 0$  according to equation 1 using the empirical CDF:

$$\widehat{L}_g^S(w_{jg}, NT_{jg}) = \frac{\sum_i \mathbf{1}(\bar{w}_i(NT_{jg}) \leq w_{jg})}{\sum_i \mathbf{1}} \quad (7)$$

## 6.3 Counterfactuals

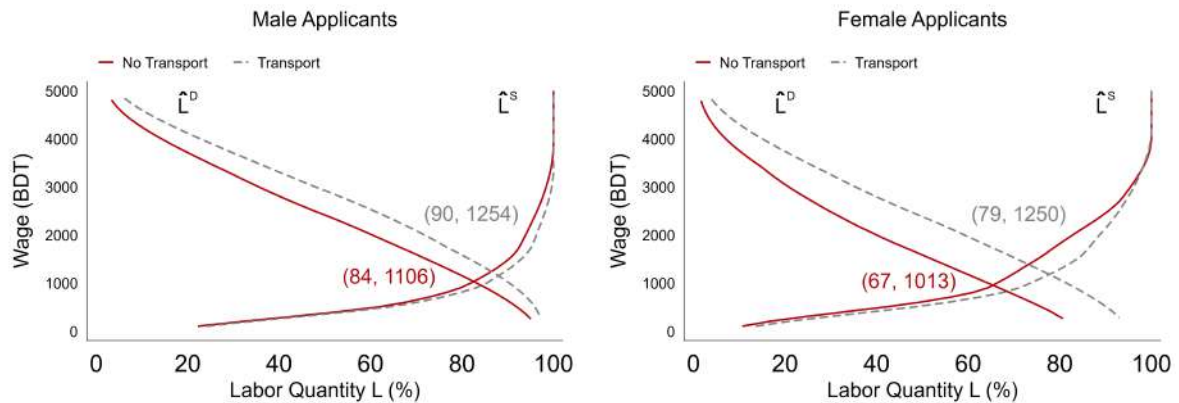
We use our estimates of employers’ preferences and beliefs to conduct three sets of counterfactual analyses. First, we estimate the equilibria with and without transport. Second, we evaluate the importance of paternalistic discrimination relative to other drivers of the gender gaps in employment and wages in the experimental setting, such as supply-side differences and other forms of discrimination. Third, we estimate the cost-effectiveness of counterfactual policies—namely, safe transport paid by the policymaker and employment subsidies. To estimate worker welfare, we use beliefs of both employers and applicants about job costs. We also estimate employer profits using the observed productivity of workers hired at different wages with and without transport in the application experiment.<sup>47</sup>

<sup>47</sup>See [Bernheim and Taubinsky \(2018\)](#) for a discussion of various approaches to behavioral welfare economics.

### 6.3.1 Equilibrium

Not offering transport to applicants reduces female employment by 15% and female wages by 19% (figure 6; we also present results by industry and using the piece rate used in the experiment in appendix figures C.13 and C.14).<sup>48</sup> In addition, not offering transport reduces male employment by 7% and male wages by 12%. The decrease in demand for male labor is explained by two facts: (i) male and female labor is additively separable in the production function, i.e., employers do not hire between one male and one female worker, and (ii) employers believe male workers' expected productivity is lower without transport (they believe male workers are less likely to attend the shift). The equilibrium wage equalizes supply and demand, and the equilibrium labor quantity is the labor quantity at this wage. To calculate the equilibria, we use employers' beliefs about welfare and profits instead of true welfare and profits because (i) true welfare is not observed, and (ii) paternalistic employers may not update their beliefs if they rarely hire women. Consistent with prediction 5, equilibrium female wages (but not male wages) decrease even when holding constant selection and productivity across treatments (appendix figure C.15).

Figure 6: Equilibria in the Male and Female Labor Markets



Notes: The graph shows the share of male and female workers demanded from equation 31 and the share of male and female workers supplied from equation 7 at each wage on a grid from 0 to 5,000 with and without transport. We use predicted productivity and cost beliefs from the *Beliefs-Elicitation* employers (see section 6.1.3) and calculate profits using a piece rate of BDT 62 (USD 0.6). Numbers in parentheses in the graph give  $(L_g^*, w_g^*)$ . Numbers in gray on the right-top are the equilibrium with transport and numbers in red on the left-bottom are the equilibrium without transport.

### 6.3.2 How Much of the Gender Gap is Due to Paternalistic Discrimination?

We then benchmark the importance of paternalistic discrimination in explaining the gender employment and wage gaps without transport observed in the experiment. We consider a se-

<sup>48</sup>We do not model firms' entry and exit in a competitive equilibrium. Whether paternalistic firms will exit the market over time depends on a multitude of factors: Whether there's heterogeneity in preferences, i.e., whether some employers hire women, whether men and women are substitutes, and whether employers or workers have accurate beliefs.

ries of counterfactuals that one-by-one eliminate the following different gender disparities in equations 31 and 7:

1. Paternalistic discrimination: We equalize (i) welfare weights ( $\alpha_{jf} = \alpha_{jm}$ ), (ii) expected welfare ( $\mathcal{W}_{jf}^E = \mathcal{W}_{jm}^E$ ), or (iii) both simultaneously ( $\alpha_{jf}\mathcal{W}_{jf}^E = \alpha_{jm}\mathcal{W}_{jm}^E$ ).
2. Taste-based discrimination: We equalize non-pecuniary returns ( $d_j = 0$ ).
3. Statistical discrimination: We equalize the expected profit at every wage ( $\Pi_{jf}^E = \Pi_{jm}^E$ ).
4. Differences in labor supply: We equalize labor supply at every wage  $L_f^S = L_m^S$ . We rank both male and female applicants by their reservation wages and equate each female applicant's reservation wage with that of her male counterpart. We then recompute female applicants' perceived welfare using these updated wages. We also update demand estimates to account for the changes in selection and its effects on employers' productivity and welfare beliefs (see also section 6.1.3).

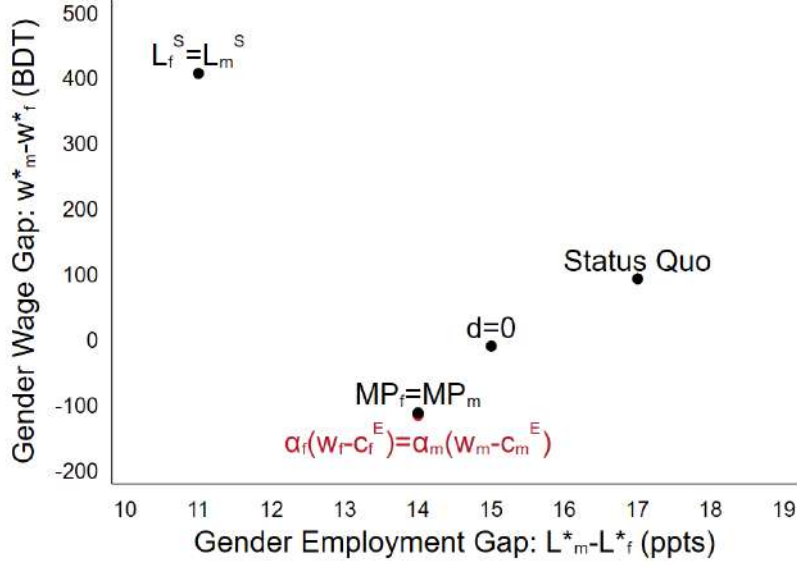
We present the results using our preferred profit measure (see section 6.1.4).

**Results** Paternalistic discrimination driven by differences in beliefs about welfare—rather than different welfare weights—appears to be as important as statistical discrimination and more important than taste-based discrimination in our experimental setting (figure 7). Eliminating paternalistic discrimination reduces the gender employment gap by 24% (3 ppts) and the gender wage gap by BDT 209 (USD 2), reversing the gender wage gap as male labor supply is higher than female labor supply. In addition, it increases worker welfare by 19% using workers' perceptions of their own welfare and by 4% using employers' perceptions of worker welfare (appendix table C.11). That is, paradoxically, employers agree that female workers would be better off without paternalistic discrimination. This result is due to the fact that female workers would be hired at a higher wage (i.e., employers ask for a smaller wage discount from women). The effect of eliminating paternalistic discrimination seems almost entirely driven by differences in perceived welfare, as opposed to differences in the welfare weights placed on men and women.

By contrast, eliminating taste-based and statistical discrimination reduces the gender employment gap by 12% (2 ppts) and 24% (3 ppts) and the gender wage gap by BDT 103 (USD 1) and BDT 205 (USD 2), respectively, while eliminating differences in labor supply reduces the gender employment gap by 35% (6 ppts) but increases the gender wage gap (as the increase in female labor supply puts downward pressure on female wages). Note that paternalistic discrimination may be particularly prevalent in our experiment since the night shift is highly salient. By contrast, differences in labor supply, as well as taste-based and statistical discrimination, might be relatively small as women who would never work do not participate in the experiment, and employers do not meet applicants in person and receive a highly informative signal of applicant quality (the Excel screening score).

We also find that if employers made differential hiring choices ( $\mathcal{W}_g^E = \mathcal{W}_g^{E:A}$ ) or used workers' perception of welfare ( $\mathcal{W}_g^E = \mathcal{W}_g^A$ ), total experienced worker welfare would increase by 1–8% and 6–42% using employers' or applicants' perception of worker welfare.

Figure 7: Benchmarking Paternalistic Discrimination



*Notes:* The graph shows the gender employment gap ( $L_m^* - L_f^*$ ) and the gender wage gap ( $w_m^* - w_f^*$ ) of the status quo (the equilibrium in figure 6) as well as in four different counterfactuals that eliminate one-by-one (section 6.3.2): 1) paternalistic discrimination ( $\alpha_f \mathcal{W}_f^E = \alpha_m \mathcal{W}_m^E$ ), 2) taste-based discrimination ( $d = 0$ ), 3) statistical discrimination ( $\Pi_f^E = \Pi_m^E$ ), and 4) differences in labor supply ( $L_f^S = L_m^S$ ).

### 6.3.3 Counterfactual Policy Interventions

Finally, we consider the welfare effects and cost effectiveness of two counterfactual policies in our setting: safe transport for female workers and an employer subsidy for hiring women. We calculate the total profits of the 495 employers and the total worker welfare of the 990 workers (495 male and 495 female) in the market.

**Safe Transport for Female Workers** Based on the equilibria derived in section 6.3.2, we estimate the welfare effects and financial cost of providing safe transport to female workers. Hence, we consider the equilibrium with transport in the market for female labor and the equilibrium without transport in the market for male labor. The policymaker's expenditures are BDT 800 (USD 8) for each woman hired, the cost of safe transport in our experiment.

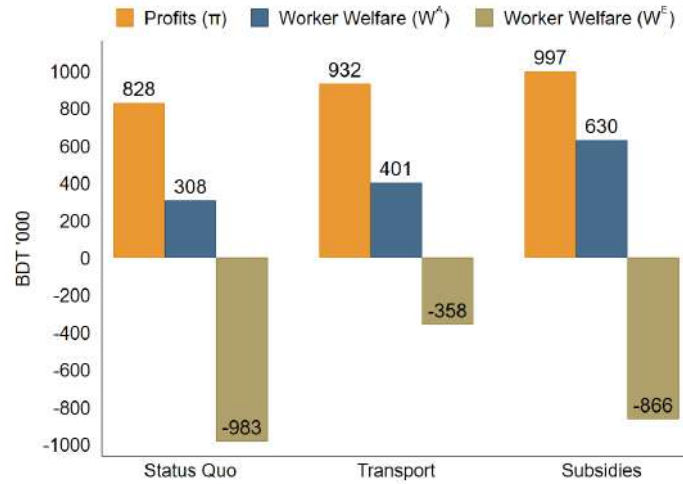
**Female Subsidy** We estimate the welfare effects of providing employers a subsidy  $s$  for hiring women. The labor supply at each wage  $w^E$  is given by all workers willing to work at the wage  $w^A = w^E + s$ . The labor demand at each wage  $w^E$  is given by employers' demand for workers willing to work at wage  $w^A$  when paying wage  $w^E$ . The equilibrium wage equalizes supply and demand and the equilibrium quantity is the labor quantity at the equilibrium



wage. We evaluate the subsidy that equalizes the policymaker's expenditures of the transport and subsidy interventions, amounting to BDT 900 (USD 9) per woman hired.<sup>49</sup>

**Results** As compared to the hiring subsidies, the transport for female workers is more effective at reducing the gender employment gap (-71% versus -59%) but less effective at reducing the gender wage gap (-BDT 237, USD 2, versus -BDT 627, USD 6, appendix table C.13). The transport also results in smaller profit increases (BDT 104k, USD 1,040, versus BDT 169k, USD 1,690) and welfare increases using applicants' perception of welfare (BDT 93k, USD 930, versus BDT 322k, USD 3,220) but larger welfare increases using employers' perception of welfare (BDT 625k, USD 6,250, versus BDT 117k, USD 1,170, figure 8). The increases in profits and worker welfare from the transport outweigh the implementation costs under employers' perception but not applicants' perception of welfare while the increases in profits and worker welfare from the subsidies outweigh the implementation costs under applicants but not employers' perception of welfare.<sup>50</sup>

Figure 8: Welfare Effects of Transport and Subsidy Interventions



*Notes:* The graph shows total profits and total worker welfare (male + female worker welfare) using applicants' perceptions of worker welfare ( $W^A$ ) and employers' perceptions of worker welfare ( $W^E$ ) in three different equilibria: the status quo, a counterfactual equilibrium in which female workers receive free transport and a counterfactual equilibrium in which female workers receive a subsidy of BDT 900 (USD 9). Results in BDT '000.

Whether safe transport or subsidies increase overall welfare more crucially depends on the relative accuracy of employers' and applicants' beliefs. Assuming that true experienced worker welfare is a convex combination of employers' and applicants' perception of worker welfare,  $\mathcal{W}_g = \lambda \mathcal{W}_g^E + (1 - \lambda) \mathcal{W}_g^A$ , and summing the total worker welfare of male and

<sup>49</sup>This is higher per woman as fewer women get hired in the subsidies counterfactual.

<sup>50</sup>Forcing employers to provide the transport themselves increases both the gender employment and wage gaps and reduces profits (appendix table C.13). It increases worker welfare only using employers' perception of welfare.

female workers, employer profits, and costs to the implementers, the transport intervention increases welfare more for  $\lambda \geq 0.36$ . Thus, while subsidies have larger benefits than transport in terms of reducing the gender wage gaps and increasing employer profits, the relative effects on worker welfare—and thus total welfare—depend on whether employers or applicants have more accurate beliefs about worker welfare. For example, when applicants underestimate the job costs because the employer-gender specific costs  $c_{kg}$  are high, transport interventions are more welfare-enhancing. But when employers overestimate the job costs because the worker-specific job costs  $c_i$  are low, subsidies are more welfare-enhancing.

## 7 Conclusion

This paper considers paternalism as a source of labor market discrimination. Combining a labor market model with data from two parallel field experiments, we document a high degree of paternalistic discrimination. An equilibrium model predicts that eliminating paternalistic discrimination reduces the gender employment gap by 24% and the gender wage gap by BDT 209 (USD 2) in our experimental setting.

We believe that the magnitude of paternalism in our setting is likely similar to other settings in which safety is a salient factor. However, in more natural settings, employers directly interact with workers, which may increase paternalism if employers feel a greater responsibility for their workers or decrease paternalism if employers update their beliefs about job costs to workers. In addition, paternalism is likely a larger factor in hiring in settings where the information gap between employers and applicants is large. We discuss the external relevance of our findings in appendix B.9.

Studying paternalistic discrimination offers valuable insights for policymakers aiming to affect labor market outcomes. For one, decreasing workers’ job costs, both in the workplace or during the commute, or increasing workers’ benefits may induce increases in both the supply of and demand for labor. Meanwhile, programs targeting supply-side changes—such as increasing women’s qualifications in the workforce—may not translate into additional hiring if they fail to address demand-side constraints. Fundamentally, paternalistic discrimination is driven by the perception that one group faces larger costs from employment than another. If minority status in the workforce or in society itself generates costs to minorities, paternalistic discrimination may lead to a “minority trap” (Shan, 2022). That is, a disadvantaged group may not be hired because of the very costs related to being disadvantaged, reinforcing the disadvantaged status.<sup>51</sup>

Future research could explore how paternalism affects women’s career trajectories or preferences over the long term, thus contributing to systemic discrimination (Bohren et al., 2022). Our data suggest that those who suffer the most from paternalistic discrimination are women with little experience. Obstacles to early-career employment may keep these applicants off the

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<sup>51</sup>For example, employers may not hire minority workers if they believe that they will suffer ostracism.

career ladder, slowing human capital accumulation and eliminating some future opportunities. While we focus on hiring decisions, other-regarding preferences may also lead to differential treatment in task assignment, promotion, or layoff decisions. Moreover, paternalistic discrimination might occur not only in the labor market but also inside the household (towards daughters) or in school (towards female students), thus differentially shaping the preferences of girls and boys during their most formative stages. Understanding these issues can enhance our understanding of gender differences in and outside the labor market and our analysis of available policies.

## References

- Aachol Foundation (2022, June). Harassment in Public Transport in Dhaka City; Its Impact on Mental Health of Adolescent and Young Women. Technical report.
- Abu-Qarn, A. S. and S. Lichtman-Sadot (2022, April). Connecting Disadvantaged Communities to Work and Higher Education Opportunities: Evidence from Public Transportation Penetration to Arab Towns in Israel. Working Paper 12824, IZA.
- Aguilar, A., E. Gutiérrez, and P. S. Villagrán (2021). Benefits and unintended consequences of gender segregation in public transportation: Evidence from Mexico City’s subway system. *Economic Development and Cultural Change* 69(4), 1379–1410.
- Akerlof, G. A. (1982). Labor contracts as partial gift exchange. *The Quarterly Journal of Economics* 97(4), 543–569.
- Akerlof, G. A. and R. E. Kranton (2000). Economics and identity. *The Quarterly Journal of Economics* 115(3), 715–753.
- Allcott, H., M. Gentzkow, and L. Song (2022, July). Digital Addiction. *American Economic Review* 112(7), 2424–63.
- Allcott, H., J. Kim, D. Taubinsky, and J. Zinman (2021, 09). Are High-Interest Loans Predatory? Theory and Evidence from Payday Lending. *The Review of Economic Studies* 89(3), 1041–1084.
- Allcott, H., B. B. Lockwood, and D. Taubinsky (2019a). Regressive Sin Taxes, with an Application to the Optimal Soda Tax. *Quarterly Journal of Economics* 134(3).
- Allcott, H., B. B. Lockwood, and D. Taubinsky (2019b, Summer). Should We Tax Sugar-Sweetened Beverages? An Overview of Theory and Evidence. *Journal of Economic Perspectives* 33(3), 202–227.

- Allcott, H. and D. Taubinsky (2015). Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market. *American Economic Review* 105(8), 2501–38.
- Ambuehl, S., B. D. Bernheim, and A. Ockenfels (2021, March). What Motivates Paternalism? An Experimental Study. *American Economic Review* 111(3), 787–830.
- Ambuehl, S., A. Ockenfels, and C. Stewart (2022, 11). Who Opt In? Composition Effects and Disappointment from Participation Payments. *The Review of Economics and Statistics*, 1–45.
- Anand, B. and S. Kaur (2022, March). State of Discrimination Report: Sub-national comparison of legal barriers to women’s right to choose work in India.
- Anderson, M. L. (2008). Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. *Journal of the American Statistical Association* 103(484), 1481–1495.
- Andreoni, J. and B. D. Bernheim (2009, September). Social image and the 50-50 norm: A theoretical and experimental analysis of audience effects. *Econometrica* 77(5), 1607–1636.
- Arrow, K. J. (1973). The Theory of Discrimination. In O. Ashenfelter and A. Rees (Eds.), *Discrimination in Labor Markets*. Princeton University Press.
- Baert, S. (2018). *Hiring Discrimination: An Overview of (Almost) All Correspondence Experiments Since 2005*, pp. 63–77. Cham: Springer International Publishing.
- Bajtelsmit, V. L. and A. Bernasek (1996). Why Do Women Invest Differently than Men? *Financial Counseling and Planning* 7. Available at SSRN: <https://ssrn.com/abstract=2238> or <http://dx.doi.org/10.2139/ssrn.2238>.
- Bandiera, O., I. Barankay, and I. Rasul (2005, 08). Social Preferences and the Response to Incentives: Evidence from Personnel Data. *The Quarterly Journal of Economics* 120(3), 917–962.
- Banerjee, A., M. Bertrand, S. Datta, and S. Mullainathan (2009). Labor market discrimination in Delhi: Evidence from a field experiment. *Journal of Comparative Economics* 37(1), 14–27. Symposium: Labor Regulation In Developing Countries.
- Bangladesh Labour Act (2006). Bangladesh Labour Act, 2006 (XLII of 2006). <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/76402/110637/F-1265526237/BGD76402%20Eng.pdf>.
- Bardsley, N. (2008). Dictator game giving: altruism or artefact? *Experimental Economics* 11, 122–133.

- Bartling, B., A. W. Cappelen, H. Hermes, and B. Tungodden (2023, May). Free to Fail? Paternalistic Preferences in the United States. Available at SSRN: <https://ssrn.com/abstract=4454985>.
- BBS (2018, January). Report on Labour Force Survey (LFS) 2016–17. <https://mccibd.org/wp-content/uploads/2021/09/Labour-Force-Survey-2016-17.pdf>.
- BBS (2021). Bangladesh Statistics 2020. [https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/a1d32f13\\_8553\\_44f1\\_92e6\\_8ff80a4ff82e/2021-05-14-06-22-47723b0e1476ed905d1c121f8f07d935.pdf](https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/a1d32f13_8553_44f1_92e6_8ff80a4ff82e/2021-05-14-06-22-47723b0e1476ed905d1c121f8f07d935.pdf).
- BBS (2022). Population and Housing Census 2022 Preliminary Report. [https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/b343a8b4\\_956b\\_45ca\\_872f\\_4cf9b2f109-27-09-50-a3672cdf61961a45347ab8660a3109b6.pdf](https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/b343a8b4_956b_45ca_872f_4cf9b2f109-27-09-50-a3672cdf61961a45347ab8660a3109b6.pdf).
- BDHS (2016). Bangladesh Demographic and Health Survey 2014.
- Becerra, O. and J.-A. Guerra (2023). Personal safety first: Do workers value safer jobs? *Journal of Economic Behavior & Organization* 212, 996–1016.
- Becker, G. M., M. H. DeGroot, and J. Marschak (1964). Measuring utility by a single-response sequential method. *Behavioral Science* 9(3), 226–232.
- Becker, G. S. (1957). *The Economics of Discrimination*. University of Chicago Press.
- Belloni, A., V. Chernozhukov, and C. Hansen (2014). Inference on treatment effects after selection among high-dimensional controls. *The Review of Economic Studies* 81(2), 608–650.
- Bernhardt, A., E. Field, R. Pande, and N. Rigol (2019). Household matters: Revisiting the returns to capital among female microentrepreneurs. *American Economic Review: Insights* 1(2), 141–60.
- Bernheim, B. D. and D. Taubinsky (2018). Chapter 5 — behavioral public economics. In B. D. Bernheim, S. DellaVigna, and D. Laibson (Eds.), *Handbook of Behavioral Economics — Foundations and Applications 1*, Volume 1 of *Handbook of Behavioral Economics: Applications and Foundations 1*, pp. 381–516. North-Holland.
- Bertrand, M., E. Kamenica, and J. Pan (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics* 130(2), 571–614.
- Bertrand, M. and S. Mullainathan (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review* 94(4), 991–1013.

- Bohren, J. A., P. Hull, and A. Imas (2022, March). Systemic discrimination: Theory and measurement. Working Paper.
- Bohren, J. A., A. Imas, and M. Rosenberg (2019, October). The Dynamics of Discrimination: Theory and Evidence. *American Economic Review* 109(10), 3395–3436.
- Breiman, L. (2001). Random Forests. *Machine Learning* 45(1), 5–32.
- Bursztyn, L., A. W. Cappelen, B. Tungodden, A. Voena, and D. H. Yanagizawa-Drott (2023, March). How are gender norms perceived? Working Paper 31049, National Bureau of Economic Research.
- Bursztyn, L., A. L. González, and D. Yanagizawa-Drott (2020). Misperceived social norms: Women working outside the home in Saudi Arabia. *American Economic Review* 110(10), 2997–3029.
- Cameron, A. C., J. B. Gelbach, and D. L. Miller (2011). Robust inference with multiway clustering. *Journal of Business & Economic Statistics* 29(2), 238–249.
- Carlana, M. (2019, 03). Implicit Stereotypes: Evidence from Teachers' Gender Bias\*. *The Quarterly Journal of Economics* 134(3), 1163–1224.
- Chan, A. (2022, October). Discrimination against doctors: A field experiment. Unpublished manuscript.
- Chaudhary, R. et al. (2021). India's emerging gig economy: shaping the future of work for women.
- Cheema, A., A. I. Khwaja, M. F. Naseer, and J. N. Shapiro (2022). Glass walls: Experimental evidence on access constraints faced by women.
- Chen, Y. and S. X. Li (2009). Group identity and social preferences. *American Economic Review* 99(1), 431–457.
- Cherry, T. L., P. Frykblom, and J. F. Shogren (2002, September). Hardnose the dictator. *American Economic Review* 92(4), 1218–1221.
- Choudhury, P. (2015, 07). Explaining Gender Discrimination in the Employment and Earnings of Engineering Graduates in India. *Journal of Educational Planning and Administration* 29, 225–246.
- Chowdhury, A. R., A. C. Areias, S. Imaizumi, S. Nomura, and F. Yamauchi (2018, March). Reflections of Employers' Gender Preferences in Job Ads in India: An Analysis of Online Job Portal Data. <https://ssrn.com/abstract=3150092>.



- Christensen, P. and A. Osman (2023). The demand for mobility: Evidence from an experiment with uber riders. Technical report, National Bureau of Economic Research.
- DeCicca, P., D. Kenkel, and M. F. Lovenheim (2022, September). The economics of tobacco regulation: A comprehensive review. *Journal of Economic Literature* 60(3), 883–970.
- Di Tella, R., R. Perez-Truglia, A. Babino, and M. Sigman (2015, November). Conveniently Upset: Avoiding Altruism by Distorting Beliefs about Others’ Altruism. *American Economic Review* 105(11), 3416–42.
- Elías, J. J., N. Lacetera, and M. Macis (2023, April). Is the Price Right? The Role of Economic Tradeoffs in Explaining Reactions to Price Surges. Working Paper 29963, National Bureau of Economic Research.
- Endendijk, J. J., M. G. Groeneveld, M. J. Bakermans-Kranenburg, and J. Mesman (2016). Gender-differentiated parenting revisited: Meta-analysis reveals very few differences in parental control of boys and girls. *PLOS ONE* 11(7). <https://doi.org/10.1371/journal.pone.0159193>.
- Evans, G. (1974). Benign discrimination and the right to equality. *Federal Law Review* 6(1), 26–83.
- Exley, C. and K. Nielsen (2022). The gender gap in confidence: Expected but not accounted for. *Available at SSRN* 4352381.
- Falk, A., A. Becker, T. Dohmen, B. Enke, D. Huffman, and U. Sunde (2018). Global evidence on economic preferences. *The Quarterly Journal of Economics* 133(4), 1645–1692.
- Falk, A., A. Becker, T. Dohmen, D. Huffman, and U. Sunde (2023). The preference survey module: A validated instrument for measuring risk, time, and social preferences. *Management Science* 69(4), 1935–1950.
- Farole, T., Y. Cho, L. Bossavie, and R. Aterido (2017, October). Bangladesh jobs diagnostic. 2(9).
- Fernández, R. (2013). Cultural change as learning: The evolution of female labor force participation over a century. *American Economic Review* 103(1), 472–500.
- Field, E., R. Pande, N. Rigol, S. Schaner, and C. Troyer Moore (2021, July). On her own account: How strengthening women’s financial control impacts labor supply and gender norms. *American Economic Review* 111(7), 2342–75.
- Field, E. and K. Vyborny (2022). Women’s Mobility and Labor Supply: Experimental Evidence from Pakistan. *Asian Development Bank Economics Working Paper Series* (655).

- Fitriani, R. G. Cooper, and R. Matthews (2016). Women in ground close combat. *The RUSI journal* 161(1), 14–24.
- Fraser, C. (2015). From ladies first to asking for it: Benevolent sexism in the maintenance of rape culture. *California Law Review* 103, 141.
- Gallen, Y. and M. Wasserman (2021). Informed choices: Gender gaps in career advice.
- Glick, P. and S. T. Fiske (1997). Hostile and Benevolent Sexism: Measuring Ambivalent Sexist Attitudes Toward Women. *Psychology of Women Quarterly* 21, 119–135.
- Glick, P., S. T. Fiske, A. Mladinic, J. L. Saiz, D. Abrams, B. Masser, B. Adetoun, J. E. Osagie, A. Akande, A. Alao, A. Brunner, T. M. Willemsen, K. Chipeta, B. Dardenne, A. Dijksterhuis, D. Wigboldus, T. Eckes, I. Six-Materna, F. Expósito, M. Moya, M. Foddy, H.-J. Kim, M. Lameiras, M. J. Sotelo, A. Mucchi-Faina, M. Romani, N. Sakalh, B. Udegbe, M. Yamamoto, M. Ui, M. C. Ferreira, and W. L. López (2000, Nov). Beyond prejudice as simple antipathy: hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology* 79(5), 763–75.
- Glick, P. and L. Raberg (2018). Benevolent sexism and the status of women. In C. B. Travis, J. W. White, A. Rutherford, W. S. Williams, S. L. Cook, and K. F. Wyche (Eds.), *APA Handbook of the Psychology of Women: History, Theory, and Battlegrounds*, Chapter 18, pp. 363–380. American Psychological Association.
- Gneezy, U., J. List, and M. K. Price (2012, February). Toward an understanding of why people discriminate: Evidence from a series of natural field experiments. Working Paper 17855, National Bureau of Economic Research.
- Guenzel, M., C. Hamilton, and U. Malmendier (2023, August). CEO Social Preferences and Layoffs. Technical report.
- Hahn, J. and G. Ridder (2017). Instrumental variable estimation of nonlinear models with nonclassical measurement error using control variables. *Journal of Econometrics* 200(2), 238–250.
- Harrison, G. W. and J. A. List (2004, December). Field experiments. *Journal of Economic Literature* 42(4), 1009–1055.
- Hjort, J. (2014, 10). Ethnic Divisions and Production in Firms. *The Quarterly Journal of Economics* 129(4), 1899–1946.
- Hossain, T. and R. Okui (2013). The binarized scoring rule. *Review of Economic Studies* 80(3), 984–1001.

- Humayun, K. and S. Islam (2023). Sexual harassment in public transport in dhaka city: A socio-legal assessment. *Asian Journal of Sciences and Legal Studies* 5(2), 31–42.
- International Labour Organization (2018). Global Wage Report 2018/19: What lies behind gender pay gaps. [https://www.ilo.org/wcmsp5/groups/public/—dgreports/—dcomm/—publ/documents/publication/wcms\\_650553.pdf](https://www.ilo.org/wcmsp5/groups/public/—dgreports/—dcomm/—publ/documents/publication/wcms_650553.pdf).
- Islam, A., D. Pakrashi, S. Sahoo, L. C. Wang, and Y. Zenou (2021). Gender inequality and caste: Field experimental evidence from India. *Journal of Economic Behavior & Organization* 190, 111–124.
- Ito, Takahiro (2009). Caste discrimination and transaction costs in the labor market: Evidence from rural North India. *Journal of Development Economics* 88(2), 292–300.
- Jayachandran, S. (2021). Social norms as a barrier to women’s employment in developing countries. *IMF Economic Review* 69(3), 576–595.
- Kessler, J. B., C. Low, and C. D. Sullivan (2019, November). Incentivized resume rating: Eliciting employer preferences without deception. *American Economic Review* 109(11), 3713–44.
- Kling, J. R., J. B. Liebman, and L. F. Katz (2007). Experimental analysis of neighborhood effects. *Econometrica* 75(1), 83–119.
- Kondylis, F., A. Legovini, K. Vyborny, A. M. T. Zwager, and L. Cardoso De Andrade (2020). Demand for safe spaces: Avoiding harassment and stigma. *World Bank Policy Research Working Paper* (9269).
- Kuhle, B. X., D. K. Melzer, C. A. Cooper, A. J. Merkle, N. A. Pepe, A. Ribanovic, A. L. Verdesco, and T. L. Wettstein (2015). The “birds and the bees” differ for boys and girls: Sex differences in the nature of sex talks. *Evolutionary Behavioral Sciences* 9(2), 107–115.
- Lata, L. N., P. Walters, and S. Roitman (2021). The politics of gendered space: Social norms and purdah affecting female informal work in dhaka, bangladesh. *Gender, Work & Organization* 28(1), 318–336.
- Leider, S. and A. E. Roth (2010). Kidneys for sale: Who disapproves, and why? *American Journal of Transplantation* 10(5), 1221–1227.
- List, J. A. (2020, July). Non est disputandum de generalizability? a glimpse into the external validity trial. Working Paper 27535, National Bureau of Economic Research.
- Macchi, E. (2022, March). Worth your weight: Experimental evidence on the benefits of obesity in low-income countries. <https://elisamacchi.github.io/publication/job-market-paper/>. Unpublished manuscript.

- Mamun, M. Z., M. Ahmed, and S. M. Jahan (2019). Bangladesh's readiness for the international call center industry. *Journal of Bangladesh Studies* 21(2).
- McFadden, D. (1974). Conditional logit analysis of qualitative choice behavior. In P. Zarembka (Ed.), *Frontiers in Econometrics*, pp. 105–142. New York: Academic press.
- McKelway, M. (2023, August). Information, norms, and female employment: An experiment in india. Working paper available at [https://drive.google.com/file/d/1G\\_ZI0ug2Zzy47YYXiWhXyJ\\_WX1ZkzBZx/view](https://drive.google.com/file/d/1G_ZI0ug2Zzy47YYXiWhXyJ_WX1ZkzBZx/view).
- Naher, K. (2022, October). Female employment is rising rapidly. then why are women-only buses 'unprofitable'? *The Business Standard*.
- Niederle, M. and E. Vespa (2023, February). Cognitive limitations: Failures of contingent thinking. [https://drive.google.com/file/d/104jv\\_CrDqzVbmajXCxrwR2dR-NSaDTre/view](https://drive.google.com/file/d/104jv_CrDqzVbmajXCxrwR2dR-NSaDTre/view). Unpublished manuscript.
- Offit, A. (2021). Benevolent exclusion. *Washington Law Review* 96, 613.
- Oishi, N. (2005). *Women in Motion: Globalization, State Policies, and Labor Migration in Asia*. Stanford University Press.
- Park, J., N. M. C. Pankratz, and A. Behrer (2021, July). Temperature, workplace safety, and labor market inequality. Technical Report 14560, IZA.
- Patty, W. F. (1989). Constitutional law-affirmative action-the supreme court decides on a standard of review for benign discrimination. *Cumberland Law Review* 20, 849.
- Petrin, A. and K. Train (2010). A control function approach to endogeneity in consumer choice models. *Journal of Marketing Research* 47(1), 3–13.
- Phelps, E. S. (1972). The statistical theory of racism and sexism. *The American Economic Review* 62(4), 659–661.
- Quayyum, N. (2019). Women workers in Bangladesh's ready-made garment industry: Building an infrastructure of dissent. *Journal of Labor and Society* 22(4), 835–852.
- Rabin, M. (2013). Risk aversion and expected-utility theory: A calibration theorem. In L. C. MacLean and W. T. Ziemba (Eds.), *Handbook of the fundamentals of financial decision making: Part I*, pp. 241–252. World Scientific.
- Rahman, M. and M. Al-Hasan (2022). The Reverse Gender Wage Gap in Bangladesh: Demystifying the Counterintuitive. *Indian Journal of Labour Economics* 65, 929–950.
- Rahman, M. S.-U. (2010, 12). Bus service for 'women only' in dhaka city: An investigation. *Journal of Bangladesh Institute of Planners* 3, 17–32.

- Rivers, D. and Q. H. Vuong (1988). Limited information estimators and exogeneity tests for simultaneous probit models. *Journal of Econometrics* 39(3), 347–366.
- Roth, A. E. (2018, July). Marketplaces, markets, and market design. *American Economic Review* 108(7), 1609–58.
- Schonlau, M. and R. Y. Zou (2020). The random forest algorithm for statistical learning. *The Stata Journal* 20(1), 3–29.
- Shan, X. (2022, November). The minority trap: Minority status drives women out of male-dominated fields. [https://www.dropbox.com/s/kfrxxm3korp7v5/Shan\\_MinorityTrap\\_Nov.pdf?dl=1](https://www.dropbox.com/s/kfrxxm3korp7v5/Shan_MinorityTrap_Nov.pdf?dl=1). Unpublished manuscript.
- Shnabel, N., Y. Bar-Anan, A. Kende, O. Bareket, and Y. Lazar (2016). Help to perpetuate traditional gender roles: Benevolent sexism increases engagement in dependency-oriented cross-gender helping. *Journal of Personality and Social Psychology* 110(1), 55–75.
- Siddique, Z. (2011). Evidence on caste based discrimination. *Labour Economics* 18, S146–S159. Labour markets in developing countries.
- Siddique, Z. (2022). Media-reported violence and female labor supply. *Economic Development and Cultural Change* 70(4), 1337–1365.
- The Labour Protection Act B.E. 2541 (2014). The Labour Protection Act B.E. 2541.
- Thorat, S. and P. Attewell (2007). The legacy of social exclusion: A correspondence study of job discrimination in India. *Economic and Political Weekly* 42(41), 4141–4145.
- Uhl, M. (2011). Do self-committers mind other-imposed commitment? an experiment on weak paternalism. Unpublished manuscript. Available at <https://jilupub.ub.uni-giessen.de/handle/jlupub/447>.
- US Department of State (2022a). 2022 Report on International Religious Freedom: Bangladesh. <https://bd.usembassy.gov/29722/>.
- US Department of State (2022b). Argentina Human Rights Report. <https://www.state.gov/reports/2022-country-reports-on-human-rights-practices/argentina/>.
- US Department of State (2022c). Korea Human Rights Report. <https://www.state.gov/reports/2022-country-reports-on-human-rights-practices/south-korea/>.
- U.S. EEOC (2007, May). Enforcement guidance: Unlawful disparate treatment of workers with caregiving responsibilities. <https://www.eeoc.gov/laws/guidance/enforcement-guidance-unlawful-disparate-treatment-workers-caregiving-responsibilities#benevolent>.

- U.S. EEOC (2022, July). What you should know about covid-19 and the ada, the rehabilitation act, and other eeo laws. <https://www.eeoc.gov/wysk/what-you-should-know-about-covid-19-and-ada-rehabilitation-act-and-other-eeo-laws>. Technical Assistance Questions and Answers.
- Villas-Boas, J. M. and R. S. Winer (1999). Endogeneity in brand choice models. *Management Science* 45(10), 1324–1338.
- White, S. C. (2017). Patriarchal investments: Marriage, dowry and the political economy of development in bangladesh. *Journal of Contemporary Asia* 47(2), 247–272.
- Winking, J. and N. Mizer (2013). Natural-field dictator game shows no altruistic giving. *Evolution and Human Behavior* 34(4), 288–293.
- Wooldridge, J. M. (2015). Control function methods in applied econometrics. *Journal of Human Resources* 50(2), 420–445.
- World Bank (2023a). Women, Business and the Law 1971–2023 Dataset. Technical report, World Bank. <https://wbl.worldbank.org/content/dam/sites/wbl/documents/2023/WBL-1971-2023-Dataset.xlsx>.
- World Bank (2023b). Women, Business and the Law 2023. Technical report, World Bank.
- World Bank DataBank (2023). World development indicators. Technical report, World Bank. <https://databank.worldbank.org/source/world-development-indicators>.
- World Values Survey (2018). World Values Survey (WVS) 2018. <https://www.worldvaluessurvey.org/WVSONline.jsp>.



## A Theory Appendix

### A.1 Production Function

We make several assumptions about the production function to ensure a unique solution to the employer's problem:

1.  $Y^E(L_{kf}, L_{km})$  is a non-negative, continuously differentiable function with existing second derivatives.
2.  $\lim_{L_{kg} \rightarrow 0^+} \frac{\partial Y^E(L_{kf}, L_{km})}{\partial L_{kg}} \rightarrow \infty$ .
3.  $\frac{\partial^2 Y^E(L_{kf}, L_{km})}{\partial L_{kf}^2} < 0$  and  $\frac{\partial^2 Y^E(L_{kf}, L_{km})}{\partial L_{km}^2} < 0$  for all  $L_{kf}, L_{km}$ .
4.  $\frac{\partial^2 Y^E(L_{kf}, L_{km})}{\partial L_{kf}^2} \frac{\partial^2 Y^E(L_{kf}, L_{km})}{\partial L_{km}^2} > \left( \frac{\partial^2 Y^E(L_{kf}, L_{km})}{\partial L_{km} \partial L_{kf}} \right)^2$  for all  $L_{kf}, L_{km}$ .

Assumption 2 ensures that each employer hires both men and women. Assumptions 3 and 4 ensure that the production function is concave. For example, the Cobb–Douglas production function satisfies these assumptions.

### A.2 Derivation of Prediction 1

We derive prediction 1 in three steps: First, we derive the employers' expected change in worker welfare in response to increases in job costs  $c_g$ . Second, we derive the first-order conditions that describe the employers' problems. Third, we use the employers' expected change in worker welfare as well as the first-order conditions to derive the demand response to changes in job costs  $c_g$ .

First, we derive the change in welfare in response to increases in gender-specific costs  $c_g$ .

$$\frac{\partial \mathcal{W}_{kg}}{\partial c_g} = -\frac{\partial}{\partial c_g} \mathbb{E}_k[u_{ki}(c_g + c_i + c_{kg}) \mid \mathbb{E}_i[u_i^{E:A}(c_g + c_i + c_{kg})] \leq w_g], \quad (8)$$

for  $u_{ki} \in \{u_{ki}^E, u_i^{E:A}\}$ .

Note that the above implies that a change in job costs has two effects: (i) *direct*: job costs increase, thereby reducing the employer's perception of applicant utility, and (ii) *selection*: workers with smaller individual job costs self-select into the job, thereby partially offsetting the increase in perceived job costs. Without selection effect, for example, when employers engage in *selection neglect*, i.e., they do not consider how changing job costs changes the selection of workers,  $\frac{\partial \mathcal{W}_{kg}}{\partial c_g} < 0$ . As we make predictions for the experiment, we

assume that selection is fixed going forward, i.e., that  $\frac{\partial \mathcal{W}_{kg}}{\partial c_g} < 0$  and equal to the direct effect.

Second, we pin down the labor demand using the first-order conditions implied by the employer's problem (equation 2).

$$\begin{aligned} FOC_{L_{kf}} \quad d_{kf} + \frac{\partial Y^E(L_{kf}, L_{km})}{\partial L_{kf}} + \alpha_{kf} \mathcal{W}_{kf} - w_f &= 0 \\ FOC_{L_{km}} \quad d_{km} + \frac{\partial Y^E(L_{kf}, L_{km})}{\partial L_{km}} + \alpha_{km} \mathcal{W}_{km} - w_m &= 0. \end{aligned} \quad (9)$$

Given assumptions 1–4 about the shape of the production function, the above system of equations has a unique maximum. Note that the employer hires until the utility contributed by the marginal worker is equal to the wage.

Third, implicit differentiation of the first-order conditions yields the following comparative static:

$$\frac{\partial L_{kf}}{\partial c_f} = - \frac{\alpha_{kf} \overbrace{\frac{\partial \mathcal{W}_{kf}}{\partial c_f}}^{<0} \overbrace{\frac{\partial^2 Y^E}{\partial L_{km}^2}}^{<0}}{\underbrace{\frac{\partial^2 Y^E}{\partial L_{kf}^2} \frac{\partial^2 Y^E}{\partial L_{km}^2} - \left( \frac{\partial^2 Y^E}{\partial L_{km} \partial L_{kf}} \right)^2}_{>0}} \quad (10)$$

This is = 0 if and only if  $\alpha_{kf} = 0$ , > 0 if and only if  $\alpha_{kf} < 0$  and < 0 if and only if  $\alpha_{kf} > 0$ . The results are equivalent when considering  $\frac{\partial L_{km}}{\partial c_m}$ .

### A.3 Derivation of Prediction 2

Assume that a job has an amenity that changes neither selection, nor expected productivity, and that reduces job costs by  $r$  and is priced at  $s$ . The worker can receive the job either with the amenity or with a monetary subsidy  $s$ .

The worker's expected welfare is  $w_g - \mathbb{E}_i[u_i^A(c_{igk} - r)]$  with the amenity and  $w_g + s - \mathbb{E}_i[u_i^A(c_{igk})]$  without the amenity. Assume the worker receives the job without the amenity. The worker will purchase the amenity to receive welfare  $w_g + \mathbb{E}_i[u_i^A(c_{igk} - r)] \geq w_g + s - \mathbb{E}_i[u_i^A(c_{igk})]$  if and only if  $s \leq \mathbb{E}_i[u_i^A(c_{igk}) - u_i^A(c_{igk} - r)]$ . If  $s > \mathbb{E}_i[u_i^A(c_{igk}) - u_i^A(c_{igk} - r)]$ , then the worker will not purchase the amenity and receive welfare  $w_g + s - \mathbb{E}_i[u_i^A(c_{igk})] > w_g - \mathbb{E}_i[u_i^A(c_{igk} - r)]$ . Thus, either way, the worker receives welfare  $\geq w_g - \mathbb{E}_i[u_i^A(c_{igk} - r)]$ .

Therefore, for the deferential employer,  $w_g + s - \mathbb{E}_k[\mathbb{E}_i[u_i^{E:A}(c_{igk})]] \geq w_g - \mathbb{E}_k[\mathbb{E}_i[u_i^{E:A}(c_{igk} - r)]]$  and labor demand for gender  $g$  labor should be weakly larger with subsidy and without amenity than without subsidy and amenity.

If we observe that employers demand gender  $g$  labor less with the subsidy, then em-

employers expect that workers under-estimate the job cost utility loss,  $\mathbb{E}_k[u_{ki}^E(c_{igk})] > \mathbb{E}_k[\mathbb{E}_i[u_i^{E:A}(c_{igk})]]$ , such that  $w_g + s - \mathbb{E}_k[\mathbb{E}_{ki}[u_i^{E:A}(c_{igk})]] \geq w_g - \mathbb{E}_k[\mathbb{E}_i[u_i^{E:A}(c_{igk} - r)]]$  and  $w_g + s - \mathbb{E}_k[u_{ki}^E(c_{igk})] < w_g - \mathbb{E}_k[u_{ki}^E(c_{igk} - r)]$ . Thus, employers other-regarding utility is larger from a worker with amenity than a worker who has the option to purchase the amenity.

#### A.4 Derivation of Prediction 3

We derive prediction 3 in two steps: First, we derive the employers' expected change in worker welfare in response to increases in wages  $w_g$ . Second, we use the employers' expected change in worker welfare as well as the first-order conditions to derive the demand response to changes in wages  $w_g$ .

First, we derive the change in welfare in response to increases in gender-specific wages  $w_g$ .

$$\frac{\partial \mathcal{W}_{kg}}{\partial w_g} = 1 - \frac{\partial}{\partial w_g} \mathbb{E}_k[u_{ki}(c_i + c_{kg} + c_g) | \mathbb{E}_i[u_i^{E:A}(c_i + c_{kg} + c_g)] \leq w_g], \quad (11)$$

for  $u_{ki} \in \{u_{ki}^E, u_i^{E:A}\}$ .

Wage affects the employer's view of worker welfare through two channels. First, a wage increase directly contributes to worker welfare; higher wages are more desirable. Second, a selection effect changes the composition of workers. In particular, when the wage increases, the higher wage attracts workers with higher worker-specific costs, resulting in a decrease in worker welfare. The relative size of the direct and selection effects depend on the levels of cost as well as the utility functions. Welfare is unambiguously increasing when holding selection fixed, or when employers engage in selection neglect.

As we make predictions for the experiment, we assume that selection is fixed going forward, i.e., that  $\frac{\partial \mathcal{W}_{kg}}{\partial w_g} = 1$ .

Second, implicit differentiation of the first-order conditions 9 yields the following comparative static:

$$\frac{\partial L_{kf}}{\partial w_f} = \frac{\overbrace{\frac{\partial^2 Y^E}{\partial L_{km}^2}}^{<0} (1 - \alpha_{kf})}{\underbrace{\frac{\partial^2 Y^E}{\partial L_{kf}^2} \frac{\partial^2 Y^E}{\partial L_{km}^2} - \left( \frac{\partial^2 Y^E}{\partial L_{km} \partial L_{kf}} \right)^2}_{>0}} \quad (12)$$

The above is  $\geq 0$  if and only if  $\alpha_{kf} \geq 1$ , i.e., when employers do not place a higher weight on the welfare of the worker than their own welfare.

## A.5 Derivation of Prediction 4

Note that, if  $\alpha_{kf} > 0$ , then equations 10 and 12 are decreasing in absolute value in  $\alpha_{kf}$ .

## A.6 Derivation of Prediction 5

We derive prediction 5 in three steps. First, we set up the system of equations describing the equilibrium. Second, we show that this system of equations has a unique solution. Third, we show how the equilibrium labor quantity and wages respond to changes in gender-specific costs  $c_g$ .

First, we set up the system of equations describing the equilibrium. As we are interested in the equilibrium comparative statics, we replace the continuum of employers with one representative employer.

Let  $c_i$  follow distribution  $h_g^I$ , which is a continuously differentiable density function with no mass points. The labor supply of gender  $g$  labor is then given by the following equation:

$$L_g = L_g^S \equiv \int_i \mathbb{1}(\mathbb{E}_i[u^A(c_i + c_{kg} + c_g)] \leq w_g) h_g^I(c_i) dc_i \quad (13)$$

The system of equations given by 9 and 13 then describes the equilibrium.

Second, we show that the system of equations describing the equilibrium has a unique solution. It has a unique solution if it has continuous partial derivatives with respect to all endogenous and exogenous variables and the determinant of the Jacobian of the system of equations is non-zero. This Jacobian is given by the matrix on the left of the following equation:

$$\begin{bmatrix} 1 & 0 & -\frac{\partial L_f^S}{\partial w_f} & 0 \\ 0 & 1 & 0 & -\frac{\partial L_m^S}{\partial w_m} \\ \frac{\partial^2 Y^E}{\partial L_f^2} & \frac{\partial^2 Y^E}{\partial L_f \partial L_m} & -(1 - \alpha_f) & 0 \\ \frac{\partial^2 Y^E}{\partial L_m \partial L_f} & \frac{\partial^2 Y^E}{\partial L_m^2} & 0 & -(1 - \alpha_m) \end{bmatrix} \begin{bmatrix} \frac{\partial L_f^*}{\partial c_f} \\ \frac{\partial L_m^*}{\partial c_f} \\ \frac{\partial w_f^*}{\partial c_f} \\ \frac{\partial w_m^*}{\partial c_f} \end{bmatrix} = \begin{bmatrix} \frac{\partial L_f^S}{\partial c_f} \\ 0 \\ -\alpha_f \frac{\partial \mathcal{W}_f}{\partial c_f} \\ 0 \end{bmatrix} \quad (14)$$

The following equation gives the determinant of the Jacobian:

$$\begin{aligned}
|J| &= \underbrace{\frac{\partial L_f^S}{\partial w_f} \frac{\partial L_m^S}{\partial w_m} \left( \frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \left( \frac{\partial^2 Y^E}{\partial L_f \partial L_m} \right)^2 \right)}_{>0} \underbrace{- \frac{\partial L_f^S}{\partial w_f} \frac{\partial^2 Y^E}{\partial L_f^2} (1 - \alpha_m)}_{>0} \\
&\quad - \underbrace{\frac{\partial L_m^S}{\partial w_m} \frac{\partial^2 Y^E}{\partial L_m^2} (1 - \alpha_f)}_{>0} + \underbrace{(1 - \alpha_f)(1 - \alpha_m)}_{>0} \\
&= \left( \frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial L_f^S}{\partial w_f} - (1 - \alpha_f) \right) \left( \frac{\partial^2 Y^E}{\partial L_m^2} \frac{\partial L_m^S}{\partial w_m} - (1 - \alpha_m) \right) \\
&\quad - \left( \frac{\partial^2 Y^E}{\partial L_f \partial L_m} \right)^2 \frac{\partial L_f^S}{\partial w_f} \frac{\partial L_m^S}{\partial w_m} > 0
\end{aligned}$$

As the Jacobian is positive, the system of equation has a unique solution.

Next, we show how the equilibrium labor quantity and wages respond to changes in gender-specific costs  $c_g$ . By Cramer's rule, the aggregate solution can be expressed as

$$\begin{aligned}
\frac{\partial L_f^*}{\partial c_f} &= \frac{|J_1|}{|J|} & \frac{\partial L_m^*}{\partial c_f} &= \frac{|J_2|}{|J|} \\
\frac{\partial w_f^*}{\partial c_f} &= \frac{|J_3|}{|J|} & \frac{\partial w_m^*}{\partial c_f} &= \frac{|J_4|}{|J|}.
\end{aligned}$$

Here  $|J_j|$  is the matrix resulting from replacing the  $j$ th column of the Jacobian matrix with the solution to the system of equations.

Calculating  $\frac{|J_1|}{|J|}$  and re-arranging:

$$\frac{\partial L_f^*}{\partial c_f} = \frac{|J_1|}{|J|} = \frac{\overbrace{\left( -\frac{\partial L_f^S}{\partial c_f} (1 - \alpha_f) - \alpha_f \frac{\partial W_f}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right)}^{>0}}{\underbrace{|J|}_{>0}} \overbrace{\left( -(1 - \alpha_m) + \frac{\partial L_m^S}{\partial w_m} \frac{\partial^2 Y^E}{\partial L_m^2} \right)}^{<0} < 0 \quad (15)$$

Define

$$\delta \equiv \frac{\left( \frac{\partial^2 Y^E}{\partial L_m \partial L_f} \right)^2}{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2}} \in [0, 1] \quad (16)$$

as the measure of the relative curvature across versus within gender.  $\delta$  is increasing in the relatedness of male and female labor. Then, when we substitute  $\frac{\partial L_f^D}{\partial w_f}$ ,  $\frac{\partial L_f^D}{\partial c_f}$ ,  $\frac{\partial L_m^D}{\partial w_m}$  in equation

15:

$$\frac{\partial L_f^*}{\partial c_f} = \frac{\overbrace{\left( \frac{\partial L_f^S}{\partial c_f} \frac{\partial L_f^D}{\partial w_f} - \frac{\partial L_f^D}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right)}^{>0} \overbrace{\left( (1-\delta) \frac{\partial L_m^D}{\partial w_m} - \frac{\partial L_m^S}{\partial w_m} \right)}^{<0}}{|J|} < 0$$

$$\underbrace{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \left( \frac{\partial^2 Y^E}{\partial L_f \partial L_m} \right)^2}_{>0}$$

An increase in costs to female labor reduces the equilibrium quantity of women hired by reducing both female labor supply and demand for female labor. The magnitude of the shift depends on both the responsiveness of demand and supply to costs and wages. Note that the above is true for any  $\alpha_f \in [0, 1]$ , implying that the equilibrium female labor quantity is decreasing in costs to female labor in a model with and without other-regarding preferences.

The results are equivalent when considering  $\frac{\partial L_m^*}{\partial c_m}$ .

Calculating  $\frac{|J_3|}{|J|}$  and re-arranging:

$$\frac{\partial w_f^*}{\partial c_f} = \frac{|J_3|}{|J|} = \underbrace{\frac{1}{|J|}}_{>0} \left[ \overbrace{\left( \frac{\partial L_f^S}{\partial c_f} \left( \frac{\partial^2 Y^E}{\partial L_f^2} (1 - \alpha_m) + \frac{\partial L_m^S}{\partial w_m} \left( \left( \frac{\partial^2 Y^E}{\partial L_f \partial L_m} \right)^2 - \frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} \right) \right) \right)}^{>0} \right.$$

$$\left. \overbrace{\left( -\alpha_f \frac{\partial W_f}{\partial c_f} \left( -(1 - \alpha_m) + \frac{\partial L_m^S}{\partial w_m} \frac{\partial^2 Y^E}{\partial L_m^2} \right) \right)}^{<0} \right] \quad (17)$$

Again, substituting  $\frac{\partial L_f^D}{\partial w_f}$ ,  $\frac{\partial L_f^D}{\partial c_f}$ ,  $\frac{\partial L_m^D}{\partial w_m}$  in equation 17, we find that the equilibrium effect depends on the relative size of the supply versus the demand shift. In particular, the female equilibrium wage *decreases* if and only if:

$$\underbrace{r_{c_f}}_{>0} < 1 - \frac{\overbrace{\delta}^{\in [0,1)}}{\underbrace{1 - r_{w_m}}_{>1}} \leq 1 \quad (18)$$

where  $r_{c_f} \equiv \frac{\epsilon_{c_f}^S}{\epsilon_{c_f}^D}$  and  $r_{w_m} \equiv \frac{\epsilon_{w_m}^S}{\epsilon_{w_m}^D}$  are the ratios of the supply and demand elasticities with respect to female costs and male wages, respectively, and  $\delta \in [0, 1]$  is the measure or relative curvature across versus within gender defined in equation 16.

The female equilibrium wage decreases if the elasticity of demand in response to costs is proportionally larger than the elasticity of supply.

If male and female labor is unrelated, in which case  $\delta = 0$ , then the equilibrium wage decreases whenever the demand elasticity in costs is larger than the supply elasticity in costs.

## A.7 Prediction 6

We next evaluate how the equilibrium wage and quantity of the other gender respond to an increase in gender-specific costs. As gender-specific costs increase, employers substitute toward labor of the other gender if male and female workers are substitutes, as labor of the other gender is able to generate similar revenues at larger other-regarding utility. Note that this implies that the gender employment gap is unambiguously increasing in gender-specific costs if male and female workers are substitutes. We formalize this in the following auxiliary prediction:

**Prediction 6** (Substitutability). *Holding selection and productivity constant, the demand for labor of the opposite gender and wages of labor of the opposite gender are increasing in gender-specific costs to substitute labor and decreasing in gender-specific costs to complement labor.*

**Proof** We derive prediction 6 in three steps. First, we assess under which conditions male and female workers are substitutes, complements, or neither. Second, we derive how labor demand is changing in increases in gender-specific costs of the opposite gender. Third, we derive how equilibrium hiring and wages are changing in increases in gender-specific costs of the opposite gender.

First, to assess under which conditions male and female workers are substitutes, complements, or neither, we calculate the cross-wage elasticity of demand of male labor with respect to female wages. Male and female workers are substitutes if the cross-wage elasticity is positive, i.e., an increase in female wages increases the demand for male workers, complements if the cross-wage elasticity is negative, i.e., an increase in female wages decreases the demand for male workers, and unrelated if the cross-wage elasticity is 0.

$$\epsilon_{w_f, w_m} = \frac{w_f}{L_m^D} \frac{\partial L_m}{\partial w_f} = \underbrace{-\frac{w_f}{L_m}}_{<0} \underbrace{\frac{\frac{\partial^2 Y^E}{\partial L_m \partial L_f} (1 - \alpha_f)}{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \left( \frac{\partial^2 Y^E}{\partial L_m \partial L_f} \right)^2}}_{>0} \quad (19)$$

Thus,  $\epsilon_{w_f, w_m} > 0$  if and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} < 0$ ,  $\epsilon_{w_f, w_m} < 0$  if and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} > 0$  and  $\epsilon_{w_f, w_m} = 0$  if and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} = 0$ . That is, male and female workers are substitutes if



and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} < 0$ , complements if and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} > 0$ , and unrelated if and only if  $\frac{\partial^2 Y^E}{\partial L_m \partial L_f} = 0$ .

Therefore, the demand for male workers is increasing in female wages if male and female workers are substitutes, decreasing if they are complements, and constant if they are unrelated. The change in the demand for male workers is decreasing in  $\alpha_f$ .

Second, we derive how labor demand is changing in increases in gender-specific costs of the opposite gender.

$$\frac{\partial L_m}{\partial c_f} = \frac{\alpha_f \overbrace{\frac{\partial \mathcal{W}_f}{\partial c_f}}^{<0} \overbrace{\frac{\partial^2 Y^E}{\partial L_m \partial L_f}}^{?}}{\underbrace{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \left( \frac{\partial^2 Y^E}{\partial L_m \partial L_f} \right)^2}_{>0}}. \quad (20)$$

Assuming  $\alpha_f \geq 0$ , the above is 0 if  $\alpha_f = 0$  or if  $Y_{L_m, L_f} = 0$ , i.e., male and female workers are unrelated. For  $\alpha_f > 0$ , it is  $< 0$  if  $Y_{L_m, L_f} > 0$ , i.e., male and female workers are complements, and  $> 0$  if  $Y_{L_m, L_f} < 0$ , i.e., male and female workers are substitutes. That is, as the costs to female workers increase, other-regarding employers hire more male workers if male and female workers are substitutes, and less male workers if they are complements. Note that the change in male hiring is increasing in  $\alpha_f$ .

Note from equation 10 that an increase in costs has the smallest effect on demand for female labor when male and female labor are neither substitutes nor complements. Intuitively, if male and female labor are substitutes, employers substitute towards male labor when the perceived costs to female labor increase. On the other hand, if male and female labor are complements, the demand for male labor decreases, thus increasing the wage for male labor and further suppressing the demand for female labor.

Third, we derive how equilibrium hiring and wages are changing in increases in gender-specific costs of the opposite gender. First, we calculate the change in equilibrium male hiring in response to an increase in gender-specific costs to female labor:

$$\frac{\partial L_m^*}{\partial c_f} = \frac{|J_2|}{|J|} = - \frac{\overbrace{\left( -(1 - \alpha_f) \frac{\partial L_f^S}{\partial c_f} - \alpha_f \frac{\partial W_f}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right)}^{>0} \overbrace{\frac{\partial^2 Y^E}{\partial L_f \partial L_m}}^{?} \overbrace{\frac{\partial L_m^S}{\partial w_m}}^{>0}}{\underbrace{|J|}_{>0}} \quad (21)$$

Again, substituting  $\frac{\partial L_f^D}{\partial w_f}$ ,  $\frac{\partial L_f^D}{\partial c_f}$ ,  $\frac{\partial L_m^D}{\partial w_m}$  in equation 21:

$$\frac{\partial L_m^*}{\partial c_f} = \frac{|J_2|}{|J|} = \frac{\overbrace{\left( \frac{\partial L_f^D}{\partial w_f} \frac{\partial L_f^S}{\partial c_f} - \frac{\partial L_f^D}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right) \frac{\partial L_m^S}{\partial w_m} \frac{\partial^2 Y^E}{\partial L_m \partial L_f}}^{<0}}{\underbrace{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \frac{\partial^2 Y^E}{\partial L_{kf} \partial L_m}}_{>0}}$$

The effect of an increase in costs to female labor depends on the substitutability of male and female worker.  $\frac{\partial L_m^*}{\partial c_f} = 0$  iff male and female workers are unrelated,  $\frac{\partial L_m^*}{\partial c_f} > 0$  iff male and female workers are substitutes and  $\frac{\partial L_m^*}{\partial c_f} < 0$  iff male and female workers are complements. This is true for any  $\alpha_f \in [0, 1]$ . The results are equivalent when considering  $\frac{\partial L_f^*}{\partial c_m}$ .

Finally, we calculate the change in equilibrium male wages in response to an increase in gender-specific costs to female labor:

$$\frac{\partial w_m^*}{\partial c_f} = \frac{|J_4|}{|J|} = - \frac{\overbrace{\left( -(1 - \alpha_f) \frac{\partial L_f^S}{\partial c_f} - \alpha_f \frac{\partial W_f}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right) \frac{\partial^2 Y^E}{\partial L_f \partial L_m}}^{>0}}{\underbrace{|J|}_{>0}} \quad (22)$$

Substituting  $\frac{\partial L_f^D}{\partial w_f}$ ,  $\frac{\partial L_f^D}{\partial c_f}$ ,  $\frac{\partial L_m^D}{\partial w_m}$  in equation 22:

$$\frac{\partial w_m^*}{\partial c_f} = \frac{|J_4|}{|J|} = \frac{\overbrace{\frac{\partial^2 Y^E}{\partial L_m^2} \left( \frac{\partial L_f^D}{\partial w_f} \frac{\partial L_f^S}{\partial c_f} - \frac{\partial L_f^D}{\partial c_f} \frac{\partial L_f^S}{\partial w_f} \right) \frac{\partial^2 Y^E}{\partial L_f \partial L_m}}^{<0}}{\underbrace{\frac{\partial^2 Y^E}{\partial L_f^2} \frac{\partial^2 Y^E}{\partial L_m^2} - \left( \frac{\partial^2 Y^E}{\partial L_m \partial L_f} \right)^2}_{>0}}$$

The effect of an increase in costs to female labor depends on the substitutability of male and female workers.  $\frac{\partial w_m^*}{\partial c_f} = 0$  iff male and female workers are unrelated,  $\frac{\partial w_m^*}{\partial c_f} > 0$  iff male and female workers are substitutes as the demand for male labor increases and  $\frac{\partial w_m^*}{\partial c_f} < 0$  iff male and female workers are complements as the demand for male labor decreases. This is again true for any  $\alpha_f \in [0, 1]$ . The results are equivalent when considering  $\frac{\partial w_f^*}{\partial c_m}$ .

## A.8 Examples with CES and Cobb–Douglas Production Functions

To illustrate the mechanisms, we assume that the worker's utility function is linear and additive in wages and benefits and convex in job costs and that the production function is either constant elasticity of substitution or Cobb–Douglas.

### A.8.1 CES Production Function

Assuming that the expected productivity of workers equals their real productivity in equilibrium, the production function of employers in industry  $j$  is:

$$Y^E(L_{kf}, L_{km}) = p \left( a_{jf} (\widehat{Y}_{jf} L_{kf})^\rho + a_{jm} (\widehat{Y}_{jm} L_{km})^\rho \right)^{\frac{v}{\rho}},$$

where  $p$  is the piece rate,  $\widehat{Y}_{jf}$  and  $\widehat{Y}_{jm}$  are the productivity of female and male workers in industry  $j$ ,  $\rho < 1$  is the substitution parameter,  $v$  is the degree of homogeneity of the production function (where  $v = 1$  is constant returns to scale,  $v < 1$  is decreasing returns to scale, and  $v > 1$  is increasing returns to scale) and  $a_{jf}$  and  $a_{jm} = 1 - a_{jf}$  are the share parameters. The employer's utility from profits is  $\beta_j$  (we use this notation to match our structural analysis, in monetary terms  $\beta_j = 1$ ). In addition, the employer receives non-pecuniary benefits  $d_{kg}$  from hiring a worker of gender  $g$ , and internalizes fraction  $\alpha_{kg}$  of the applicant's expected net on-the-job utility  $\mathcal{W}_{kg}$ .

The first-order conditions are:

$$FOC_{L_{kg}} \quad d_{kg} + \beta_j p a_{jf} \widehat{Y}_{jf}^\rho L_{kf}^{\rho-1} v (a_{jf} (\widehat{Y}_{jf} L_{kf})^\rho + a_{jm} (\widehat{Y}_{jm} L_{km})^\rho)^{\frac{v-\rho}{\rho}} + \alpha_{kg} \mathcal{W}_{kg} - w_g = 0$$

Rearranging, we can solve for the labor  $g$  demand:

$$L_{kg} = \frac{(\beta_j p v)^{\frac{1}{1-v}} \left( \frac{a_{jg} \widehat{Y}_{jg}^\rho}{(w_g - d_{kg} - \alpha_{kg} \mathcal{W}_{kg})^\rho} \right)^{\frac{1}{1-\rho}}}{\left( \sum_{g' \in \{f, m\}} \left( \frac{a_{jg'} \widehat{Y}_{jg'}^\rho}{(w_{g'} - d_{kg'} - \alpha_{kg'} \mathcal{W}_{kg'})^\rho} \right)^{\frac{1}{1-\rho}} \right)^{\frac{\rho-v}{\rho(1-v)}}}.$$

### A.8.2 Cobb–Douglas Production Function

Let the production function of employers in industry  $j$  be given by:

$$Y^E(L_{kf}, L_{km}) = L_{kf}^{a_{jf}} L_{km}^{a_{jm}},$$

where  $a_{jf}$  and  $a_{jm}$  are the output elasticities of female and male workers, respectively. The employer's utility from profits is  $\beta_j$ .

The first-order conditions are:

$$FOC_{L_{kg}} \quad d_{kg} + \beta_j p a_{jg} L_{kg}^{a_{jg}-1} L_{kg'}^{a_{jg'}} + \alpha_{kg} \mathcal{W}_{kg} - w_g = 0$$

Rearranging, we can solve for the labor  $g$  demand:

$$L_{kg} = \left[ \frac{1}{\beta_j p} \left( \frac{w_g - d_{kg} - \alpha_{kg} \mathcal{W}_{kg}}{a_{jg}} \right)^{1-a_{jg'}} \left( \frac{w_{g'} - d_{kg'} - \alpha_{kg'} \mathcal{W}_{kg'}}{a_{jg'}} \right)^{a_{jg'}} \right]^{\frac{1}{a_{jg} + a_{jg'} - 1}}.$$

## B Technical Appendix

### B.1 Ethical Considerations

We took several steps to ensure the safety of all participants. First, we informed all participants about the experiment and obtained informed consent for participation, that is, in the classification system of [Harrison and List \(2004\)](#), we conducted a framed field experiment rather than a natural field experiment. This ensured that applicants could evaluate their risks before joining the study. Second, we calibrated the payments with input from our local partners to be sufficiently rewarding for the inconvenience of a night-shift job without being coercive ([Ambuehl et al., 2022](#)). Finally, to ensure that all night-shift workers in the experiment arrived home safely, we provided transport to all workers at the end of the shift through a private transportation firm with vetted drivers. Instead of randomizing the safety of the job, we randomized the perception of safety among employers as described in more detail in section 4. This allowed us to identify employers' responses to perceptions of safety without jeopardizing the actual safety of any applicants.

### B.2 Information about Sample Industries

We recruit employers from three industries: Manufacturing, Retail & Services, and Education. These industries employ substantially different numbers of men and women, giving us the opportunity to test whether hiring behavior in the experiment reflects aspects of the employers' usual market. Urban workers in Retail & Services are 77% male, Manufacturing workers 61% male, and Education workers 53% male. We calculate the Retail & Services employment rate combining repair of wholesale and retail trade and repair of motor vehicles; accommodation and food service activities, activities of households as employers, and other service activities.

The gender wage gap is largest in Manufacturing, where men earn about BDT 4,200 more than women per month (USD 42; 14,570 for men vs. 10,346 for women). Male Services & Retail workers in urban areas earn about BDT 3800 more than their female counterparts (USD 38; BDT 14,131 for men vs. BDT 10,313 for women). In Education, men earn about

BDT 3,200 more than women per month (USD 32; BDT 26,790 for men vs. 23,568 for women) [BBS \(2018\)](#).

### B.3 Field Setup

Figure C.1: Applicant Recruitment Setup



*Notes:* The picture shows one of our applicant recruitment booths on a university campus.

Figure C.2: Night-Shift Workshop and Job




*Notes:* The picture shows one of our night-shift workshops.


## B.4 Experimental Interfaces

### B.4.1 Hiring Experiment

Figure C.3: Experimental Interface to Make Productivity Predictions

Shift time





Niloy  
Unmarried  
Passed Honors 1st year  
Less than 1 year of experience  
Excel Score: 35%

What is the likelihood (0-100) the applicant shows up and completes the shift?


Given that the applicant showed up, what percentage (out of 100%) of tasks on the job do you think the applicant will complete?

Given that the applicant showed up, what do you think the applicant Excel test score will be, on a final assessment test measuring the workers' final Excel ability after completing the workshop out of 100?

Notes: Translated from Bangla to English.

Figure C.4: Experimental Interface to Make Cost Predictions without (left) and with transport (right)

**Shift time**



**Candidate Profile:**

Niloy  
Unmarried  
Passed Honors 1st year  
Less than 1 year of experience  
Excel Score: 35%

How useful do you think it is to participate in the job for five hours for Niloy in terms of the skills they will acquire as well as future career opportunities on a scale of 0 (not useful at all) to 10 (extremely useful)? Please answer using this scale below.

0 1 2 3 4 5 6 7 8 9 10

How useful do you think is this job for Niloy

---

How dangerous, unpleasant or socially unacceptable do you think this job is for Niloy, including their commute from and to their home, with 0 indicating a very safe job, equivalent to working from home and 10 indicating that the job is very dangerous or very unpleasant or very socially unacceptable.

Very dangerous, very unpleasant or very socially unacceptable

0 1 2 3 4 5 6 7 8 9 10

Scale

---


I will now ask you what you think should be the minimum wage Niloy should accept the job for.

Some reminders for answering this question:


- Based on your beliefs about the candidate's performance on the final test and the promotion rates of men, you previously said the candidate's likelihood of promotion is 20%.
- Keep in mind the usefulness of the job as well as how dangerous, unpleasant or socially unacceptable you think this job is for Niloy.

What do you think should be the minimum wage at which Niloy should accept this job with the benefits we mentioned? Meaning they should not do the job for less than this amount as it would not fairly compensate them.

**Shift time**



**Transport facility**



**Candidate Profile:**

Khadiza  
Unmarried  
Passed Honors 2nd year  
Less than 1 year of experience  
Excel Score: 40%

How useful do you think it is to participate in the job for five hours for Khadiza in terms of the skills they will acquire as well as future career opportunities on a scale of 0 (not useful at all) to 10 (extremely useful)? Please answer using this scale below.

0 1 2 3 4 5 6 7 8 9 10

How useful do you think is this job for Khadiza

---

How dangerous, unpleasant or socially unacceptable do you think this job is for Khadiza, including their commute from and to their home, with 0 indicating a very safe job, equivalent to working from home and 10 indicating that the job is very dangerous or very unpleasant or very socially unacceptable.

Very dangerous, very unpleasant or very socially unacceptable

0 1 2 3 4 5 6 7 8 9 10

Scale

---

I will now ask you what you think should be the minimum wage Khadiza should accept the job for.

Some reminders for answering this question:


- We will provide hired candidates with a safe private transport with accompanying supervisors to ensure all workers reach home safely and without problems. We are providing this as a job benefit.
- Based on your beliefs about the candidate's performance on the final test and the promotion rates of women, you previously said the candidate's likelihood of promotion is 0%.
- Keep in mind the usefulness of the job as well as how dangerous, unpleasant or socially unacceptable you think this job is for Khadiza.

What do you think should be the minimum wage at which Khadiza should accept this job with the benefits we mentioned? Meaning they should not do the job for less than this amount as it would not fairly compensate them.


Notes: Translated from Bangla to English.

Figure C.5: Experimental Interface to Make Hiring Decisions without (left) and with transport (right)

**Shift time**



**Transport facility**





**Recruited candidate's payment**

1500	1500
+	+
0	0

**Employer's payment**

500	500
+	+
0	0


Do you want to hire **Mahfuz** or **Sumona** for the job?

☐  ☐ 


**Shimu**  
Unmarried  
☐ Passed HSC/Equivalent  
1 to 3 years of experience  
Excel Score: 25%

**Faroque**  
Unmarried  
☐ Passed Honors 2nd year  
<1 year of experience  
Excel Score: 35%

**Shift time**



**Transport facility**





**Recruited candidate's payment**

1500	1500
+	+
0	0

**Employer's payment**

500	500
+	+
0	0

Do you want to hire **Murad** or **Sayma** for the job?

☐  ☐ 




**Murad**  
Unmarried  
☐ Passed HSC/Equivalent  
Less than 1 year of experience  
Excel score: 25%

**Sayma**  
Unmarried  
☐ Passed HSC/Equivalent  
Less than 1 year of experience  
Excel score: 25%

Notes: Translated from Bangla to English.



Figure C.6: Experimental Interface to Make Hiring Decisions without (left) and with transport (right) in the Candidate 1 versus Candidate 2 Setup

Shift time	Recruited candidate's payment	Employer's payment	Shift time	Transport facility	Recruited candidate's payment	Employer's payment
	<div style="font-size: 2em; font-weight: bold;">1    2</div> <div style="font-size: 0.8em;">1500 + 0    1500 + 0</div>	<div style="font-size: 1.5em;">1    2</div> <div style="font-size: 0.8em;">1500 + 0    1500 + 0</div>			<div style="font-size: 2em; font-weight: bold;">1    2</div> <div style="font-size: 0.8em;">1500 + 0    1500 + 0</div>	<div style="font-size: 1.5em;">1    2</div> <div style="font-size: 0.8em;">1500 + 0    1500 + 0</div>
Do you want to hire <b>Sumalya</b> or <b>Ovi</b> for the job?			Do you want to hire <b>Rifat</b> or <b>Nondini</b> for the job?			

1	2	1	2
<b>Sumalya</b> Female Unmarried <input type="radio"/> Passed Class 10 Less than 1 year of full-time experience Excel score: 25%	<b>Ovi</b> Male Unmarried <input type="radio"/> Passed Honor's 2nd year 1 to 3 years of full-time experience Excel score: 25%	<b>Rifat</b> Male Unmarried <input type="radio"/> Passed HSC 2nd year Less than 1 year of experience Excel score: 15%	<b>Nondini</b> Female Unmarried <input type="radio"/> Passed Honors 2nd year 1 to 3 years of experience Excel score: 20%

Notes: Translated from Bangla to English.

## B.4.2 Application Experiment

Figure C.7: Experimental Interface to Elicit Reservation Wage Decisions without (left) and with transport (right)

Shift time	10% of applicants will be promoted	Shift time	Transport facility	10% of applicants will be promoted
	<div style="font-size: 1.5em; font-weight: bold;">10%</div>  <div style="font-size: 0.8em;">+ 500 Taka</div>			<div style="font-size: 1.5em; font-weight: bold;">10%</div>  <div style="font-size: 0.8em;">+ 500 Taka</div>
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;">Wage and amenities</div> <div style="width: 48%;">Basic Wage Switching Point</div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;">Wage and amenities</div> <div style="width: 48%;">Basic Wage Switching Point</div> </div>		
Basic wage 100 Taka 10% of applicants will be promoted		Basic wage 100 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 250 Taka 10% of applicants will be promoted		Basic wage 250 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 500 Taka 10% of applicants will be promoted		Basic wage 500 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 750 Taka 10% of applicants will be promoted		Basic wage 750 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 1000 Taka 10% of applicants will be promoted		Basic wage 1000 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 1250 Taka 10% of applicants will be promoted		Basic wage 1250 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 1500 Taka 10% of applicants will be promoted		Basic wage 1500 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 1750 Taka 10% of applicants will be promoted		Basic wage 1750 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 2000 Taka 10% of applicants will be promoted		Basic wage 2000 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 2250 Taka 10% of applicants will be promoted		Basic wage 2250 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 2500 Taka 10% of applicants will be promoted		Basic wage 2500 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input checked="" type="radio"/>		<input checked="" type="radio"/>		
Basic wage 2750 Taka 10% of applicants will be promoted		Basic wage 2750 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 3000 Taka 10% of applicants will be promoted		Basic wage 3000 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 3250 Taka 10% of applicants will be promoted		Basic wage 3250 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 3500 Taka 10% of applicants will be promoted		Basic wage 3500 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 3750 Taka 10% of applicants will be promoted		Basic wage 3750 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 4000 Taka 10% of applicants will be promoted		Basic wage 4000 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 4250 Taka 10% of applicants will be promoted		Basic wage 4250 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 4500 Taka 10% of applicants will be promoted		Basic wage 4500 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 4750 Taka 10% of applicants will be promoted		Basic wage 4750 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		
Basic wage 5000 Taka 10% of applicants will be promoted		Basic wage 5000 Taka Will be dropped home in office transport 10% of applicants will be promoted		
<input type="radio"/>		<input type="radio"/>		

Notes: Translated from Bangla to English.

## **B.5 Matching of Applicant Pairs in the Hiring Experiment**

To mimic a realistic hiring process in which similar applicants apply for the same job, we randomly matched applicants with similar scores to each other using the following procedure. First, we ordered the 14 male and ten female workers by score. Second, we randomly matched two men from the bottom half with each other and two men from the top half. Third, we randomly matched the remaining top five men with the top five women and the remaining bottom five men with the bottom five women.

## **B.6 Survey Questions**

### **B.6.1 Understanding Questions in the Hiring Experiment**

1. What's the timing of the Excel workshop and job? a) 9 a.m.to 5 p.m.. b) 7 p.m. to 12 a.m.. c) 9 p.m. to 5 a.m..
2. *Transport*: When will the recruited workers learn about the safe transport? a) Before the shift. b) At the end of the shift. *No Transport*: When do workers learn that the Excel workshop and job takes place from 7 p.m. to 12 a.m.? a) They already learned when they applied for the job. b) Before the shift. c) At the end of the shift.
3. How much compensation do you receive per task your recruited worker completes? a) 3 Taka. b) 4 Taka. c) 5 Taka.
4. Based on the lottery, what is the bonus payment that you are going to receive? a) 0 Taka. b) 1,000 Taka if the recruited worker is male. c) 1,000 Taka if the recruited worker is female.
5. Based on the lottery, what is the bonus payment that the recruited worker will receive? a) 0 Taka. b) 1,000 Taka if the recruited worker is male. c) 1,000 Taka if the recruited worker is female.

### **B.6.2 Understanding Questions in the Application Experiment**

1. What's the timing of the Excel workshop and job? a) 9 a.m.to 5 p.m.. b) 7 p.m. to 12 a.m.. c) 9 p.m. to 5 a.m..
2. For the job and amenities that you are eligible for, which of the following is true? a) Most applicants do not receive a promotion premium and a promotion certificate. b) Most applicants receive a promotion premium and a promotion certificate. c) Some applicants will receive a promotion premium, and other applicants will receive a promotion certificate.

3. If someone is offered a job with a benefit that they like, then how would the minimum wage at which they would accept the job change? a) It would increase. b) It would decrease. c) It would not change.

## B.7 Structural Estimation

### B.7.1 Calculating the Cost Conversion Rate

First, we estimate equation 3 replacing the *No Transport* indicator with the predicted costs for the female and male workers compared in each pair. We also replace the applicant fixed effects with the worker characteristics shown to the employer as we only have two male and female cost predictions per employer. Second, we calculate the conversion factors as the coefficients on the costs for men or women divided by the coefficients on the male and female subsidies from equation 3, multiplied by -1,000.

### B.7.2 Maximum Likelihood

To estimate the McFadden's conditional logit model, we maximize the log-likelihood function given our data (McFadden, 1974).

The likelihood function is

$$\mathcal{L}(d, \beta, \alpha_f, \alpha_m) = \prod_k \prod_i \prod_{i' \neq i} (P_{kii'})^{H_{kii'}}, \quad (23)$$

where  $H_{kii'}$  is an indicator that is 1 if employer  $k$  hires applicant  $i$  over  $i'$ .

Taking the log of equation 23, we get the log-likelihood function:

$$\log \mathcal{L} = \sum_k \sum_i \sum_{i' \neq i} H_{kii'} \ln(P_{kii'}).$$

### B.7.3 Control Function Approach

We would like to estimate the following equation:

$$v_{ik} + \varepsilon_{ik} = d_j + \beta_j \Pi_{ik} + \alpha_{gj} \mathcal{W}_{ik} + \varepsilon_{ik}. \quad (24)$$

Assume we do not observe the true profit and welfare beliefs because of measurement error or misreporting. Instead, we observe  $\Pi_{ik}^* = \Pi_{ik} + \varepsilon_{ik}^\Pi$  and  $\mathcal{W}_{ik}^* = \mathcal{W}_{ik} + \varepsilon_{ik}^\mathcal{W}$  (for example, employers with high social image concerns might report low profits or welfare whenever

they do not hire women in order not to appear sexist). We can thus rewrite equation 24:

$$v_{ik} + \varepsilon_{ik} = d_j + \beta_j \Pi_{ik} + \alpha_{gj} \mathcal{W}_{ik} + \underbrace{\beta_j \varepsilon_{ik}^{\Pi} + \alpha_{gj} \varepsilon_{ik}^{\mathcal{W}}}_{\varepsilon_{ik}^{end}} + \varepsilon_{ik}^{ex}, \quad (25)$$

where  $\varepsilon_{ik}^{end}$  is correlated with  $\Pi_{ik}$  and  $\mathcal{W}_{ik}$  and  $\varepsilon_{ik}^{ex}$  is neither correlated with  $\mathcal{W}_{ik}$  nor  $\Pi_{ik}$ .

We adopt a two-step procedure similar to that developed by Rivers and Vuong (1988).<sup>52</sup> First, let

$$\Pi_{ik} = Z'_k \kappa_j^{\Pi} + X'_i \gamma_j^{\Pi} + \mu_j + \tilde{\varepsilon}_{ik}^{\Pi} \quad (26)$$

and

$$\mathcal{W}_{ik} = Z'_k \kappa_j^{\mathcal{W}} + X'_i \gamma_j^{\mathcal{W}} + \mu_j + \tilde{\varepsilon}_{ik}^{\mathcal{W}}, \quad (27)$$

where  $X_i$  is a vector of worker characteristics shown to the employer, i.e., the applicant's gender, Excel screening score, education, work experience, and marital status,  $\mu_j$  are employer industry fixed effects, and  $Z_{ik}$  constitutes a vector of transport and subsidy treatment assignments, which are independent of  $X_i$ ,  $\mu_j$ ,  $\varepsilon_{ik}^{\Pi}$ ,  $\varepsilon_{ik}^{\mathcal{W}}$ ,  $\varepsilon_{ik}^{end}$ , and  $\varepsilon_{ik}^{ex}$ .  $\tilde{\varepsilon}_{ik}^{\mathcal{W}}$ ,  $\tilde{\varepsilon}_{ik}^{\Pi}$ , and  $\varepsilon_{ik}^{end}$  are jointly normal. We estimate equations 26 and 27 using OLS separately by industry.

Second, we plug the fitted residuals  $\hat{\varepsilon}_{ik}^{\Pi}$  and  $\hat{\varepsilon}_{ik}^{\mathcal{W}}$  (i.e., the endogenous parts of  $\Pi_{ik}$  and  $\mathcal{W}_{ik}$  not explained by the random treatment assignments  $Z_k$ , applicant characteristics  $X_i$  or fixed effects  $\mu_{jt}$  and  $\mu_{enum}$ ) into equation 24 and estimate the following logit model:

$$v_{ik} + \varepsilon_{ik} = d_j + \beta_j \Pi_{ik} + \alpha_{gj} \mathcal{W}_{ik} + X_i \gamma + \mu_j + \delta^{\Pi} \hat{\varepsilon}_{ik}^{\Pi} + \delta^{\mathcal{W}} \hat{\varepsilon}_{ik}^{\mathcal{W}} + \tilde{\varepsilon}_{ik}^{ex}, \quad (28)$$

where  $\tilde{\varepsilon}_{ik}^{ex} \sim EV1$  is the error term after controlling for the fitted residuals.

As expected, the employer subsidy increases the expected profit by approximately BDT 1,000 (USD 10) for female applicants but not male applicants in equation 26 (table C.9). By contrast, the *No Transport* treatment reduces the expected welfare by BDT 641 (USD 6) and BDT 1,672 (USD 16) for male and female applicants, respectively. The male and female worker subsidies increase the expected welfare of male and female workers by approximately BDT 1,000 (USD 10) each.

The results from equation 28 suggest mismeasurement of reported welfare but not profits ( $\hat{\delta}^{\Pi} = 2.1$   $\hat{\delta}^{\mathcal{W}} = -0.4$ , table C.10). Controlling for misreporting increases the weight placed on female welfare.

<sup>52</sup>See also Villas-Boas and Winer (1999), Petrin and Train (2010), Wooldridge (2015) and Hahn and Ridder (2017).

#### B.7.4 Random Forest Algorithm

We use a random forest algorithm to predict out-of-sample employer beliefs about profits and welfare. The random forest algorithm avoids over-fitting given our relatively high number of independent variables and low number of observations (Breiman, 2001).<sup>53</sup> The algorithm operates on the principle of ensemble learning. Initially,  $N_1$  subsets of the data are created by randomly selecting observations with replacement. Subsequently, individual decision trees are constructed for each of the subsets. Here, the random forest algorithm restricts the number of variables considered at each split ( $N_2$ ) to a randomly selected subset, thereby introducing an additional layer of randomness. The resulting decision trees are then collectively applied to generate predictions. Since we use a regression model, the final predictions typically are the mean of the predictions across all trees.

We tune the hyperparameters  $N_1$  and  $N_2$  using a grid search. We try values between 25 and 1,000 in steps of 25 for  $N_1$  and values between 1 and the number of independent values for  $N_2$ . We then select the combination of iterations and number of variables that creates the lowest out-of-bag (OOB) error and use those parameters for our final predictions.

The OOB error is measuring the prediction without the need for a separate test set. This allows us to utilize all of our experimental data for training the algorithm. As we mentioned above, in the random forest algorithm, each decision tree is trained on a different bootstrap sample of the original dataset. The data points from the original dataset that are not included in a given bootstrap sample are out-of-bag for the corresponding decision tree. After the random forest algorithm has been trained, we generate predictions for datapoints using the decision trees that were not trained on them. The resulting predictions are then compared with the actual target values for those data points to calculate the OOB error.

The main predictors of productivity are whether the job provides transport, the number of male employees the employer has, the employer's industry, and the worker's Excel screening score. The main predictors of perceived costs are whether the job provides transport, applicant gender, the employer's industry, and how many hiring choices the employer made in the last three years. The OOB root mean squared prediction errors are 11.8/100 and 0.66/10, respectively.

### B.8 Demand Simulation

To estimate demand, we construct a large number (1,000) of simulated employers by using the estimated preference and calculating the expected value of a male and female hire to each simulated employer at any given wage with and without transport:

$$\widehat{v}_{kg}(w_{jg}, NT_{jg}) = \widehat{d}_j + \widehat{\beta_j} \widehat{\Pi_{jg}}(w_g, NT_{jg}) + \widehat{\alpha_j} \widehat{\mathcal{W}_{jg}^E}(w_{jg}, NT_{jg}). \quad (29)$$

---

<sup>53</sup>We use the implementation in Stata by [Schonlau and Zou \(2020\)](#).

The probability that employer  $k$  in industry  $j$  hires a worker of gender  $g$  at wage  $w_{jg}$  with and without transport,  $NT_{gj} \in \{0, 1\}$ , is then given by:

$$\widehat{P}_{kg}(w_{jg}, NT_{jg}) = \Pr(\widehat{v}_{kg}(w_{jg}, NT_{jg}) + \Delta\eta_{kg} > 0) = \frac{\exp(\widehat{v}_{kg}(w_{jg}, NT_{jg}))}{1 + \exp(\widehat{v}_{kg}(w_{jg}, NT_{jg}))}, \quad (30)$$

where  $\Delta\eta_{kg} = \eta_{kg} - \eta_{k0} \sim \text{Logistic}(0, 1)$ , with  $\eta_{k0} \sim EV1$  being the unobserved demand shock of not hiring a worker. We then calculate the aggregate labor demand as the average hiring probability among the 1,000 simulated employers for the pool of applicants willing to work at each wage on a BDT-100 grid between 100 and 5,000 with and without transport.

$$\widehat{L}_g^D(w_{jg}, NT_{jg}) = \frac{1}{1,000} \sum_k \widehat{P}_{kg}(w_{jg}, NT_{jg}). \quad (31)$$

## B.9 Generalizability and External Relevance

We believe paternalistic discrimination may guide decisions in a variety of settings. Following the ‘‘SANS’’ framework of [List \(2020\)](#), we assess the generalizability of our results, considering the selection of participants, attrition from the experiment, the naturalness of the environment, and issues related to scaling.

**Selection** We recruit real employers with recent hiring experience across a range of industries to hire from a pool of real job seekers. We specifically measure selection into the labor market at different wages to model selection explicitly.

**Attrition** Workers engage in a one-time, one-shift workshop and job to eliminate concerns about worker attrition within the experiment. In jobs with repeated interactions, attrition can change the composition of employers and workers. For example, employers with other-regarding preferences may go out of business competing against profit-focused firms, reducing paternalistic discrimination. Paternalistic discrimination may also decrease over time if employers learn more about the true costs of the job as they observe hired workers. On the other hand, the market may sustain paternalistic discrimination if employers do not learn over time (e.g., if discrimination is so strong that observations of the discriminated-against group are rare) or if employers develop stronger feelings of responsibility through repeated interaction.

**Naturalness** To isolate paternalism from other forms of discrimination, we designed our work environment without direct interaction between employer and applicant. We suspect that in natural settings where employers interact directly with workers, employers would feel a greater responsibility for their workers, leading to higher levels of paternalism. Similarly, while we focus on paternalism toward women in the absence of safe transportation at night,

we suspect that paternalism is likely to be more prevalent when comparing situations with a larger gap in safety (e.g., hiring on the day shift versus the night shift). Paternalism is likely a larger factor in hiring in settings where the information gap between employers and applicants is large. We believe that the magnitude of paternalism in our setting is likely similar to other settings in which safety is a salient factor. We can only speculate about whether paternalism drives discrimination in other markets (e.g., in developed countries) or with respect to characteristics other than gender (e.g., race, pregnancy, or parental status), but we have no reason to suspect paternalistic discrimination is limited—or even particularly strong—in the development context we study. Discriminatory hiring is likely more muted in markets where differential treatment is banned by law.<sup>54</sup>

**Scaling** While scaling a particular intervention is not the primary objective of the study, we estimate the equilibrium effects of offering safe transportation experimentally by observing changes in supply and demand. Large-scale safety measures could lead to long-term changes in supply and demand that we do not capture in our experiment, such as adjustments to traffic patterns and criminal behavior.

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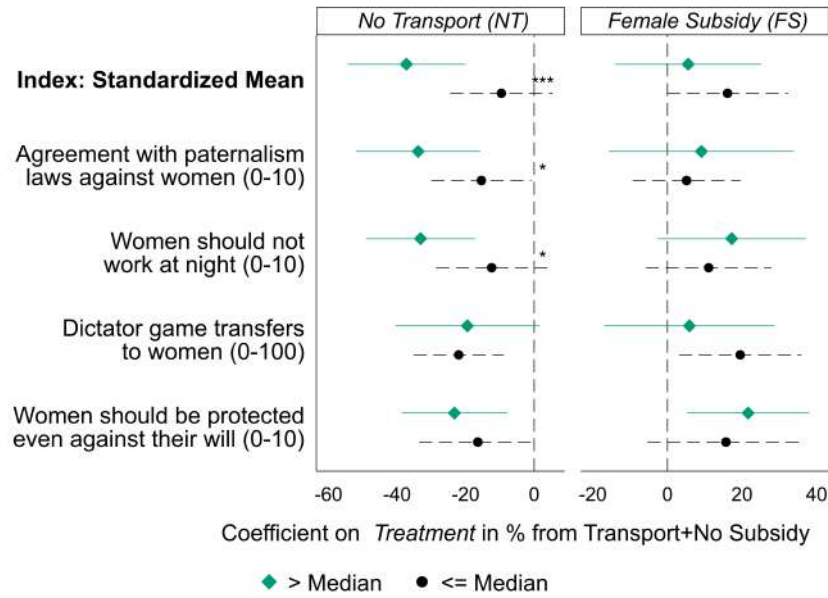
<sup>54</sup>However, paternalistic discrimination on the basis of age is sufficiently problematic even in the US to prompt the Equal Employment Opportunity Commission to issue specific guidelines: “The ADEA [Age Discrimination in Employment Act] would prohibit a covered employer from excluding an individual involuntarily from the workplace based on being older, even if the employer acted for benevolent reasons such as protecting the employee due to higher risk of severe illness from COVID-19” ([U.S. EEOC, 2022](#)).



## C Empirical Appendix

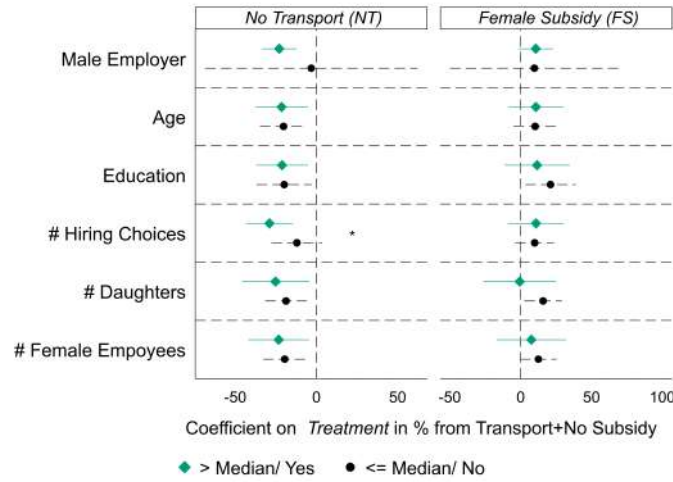
### C.1 Figures

Figure C.8: Hiring by Transport Information, Female Subsidy and Other-Regarding Preferences



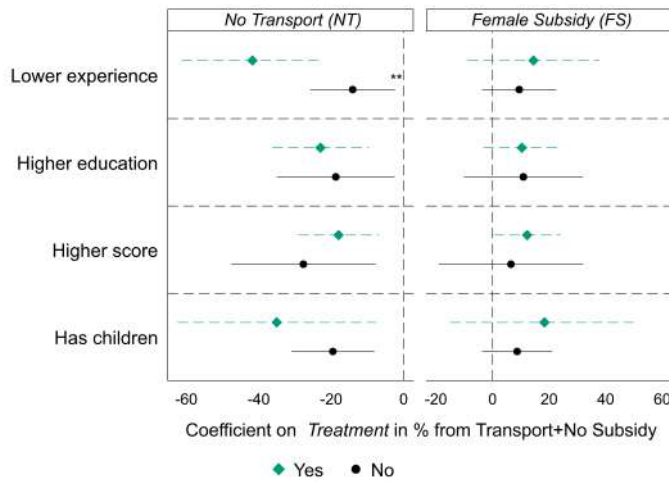
*Notes:* The graph shows the coefficients on the *No Transport* and *Female Subsidy* indicators from regression 3, respectively. Regressions are run separately among different subsets of employers (see section 4.2). That is, each coefficient shows how much employers in that group reduce female hiring when they do not know about the safe transport or increase female hiring when they know about the female subsidy. The index is formed as the mean of the standardized continuous and not binary variables. Thus, the treatment effects do not need to be the averages of the treatment effects of the binary measures. Asterisks from comparing the coefficients across subsamples.  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$ .

Figure C.9: Hiring by Transport and Female Subsidy Information and Employer Characteristics



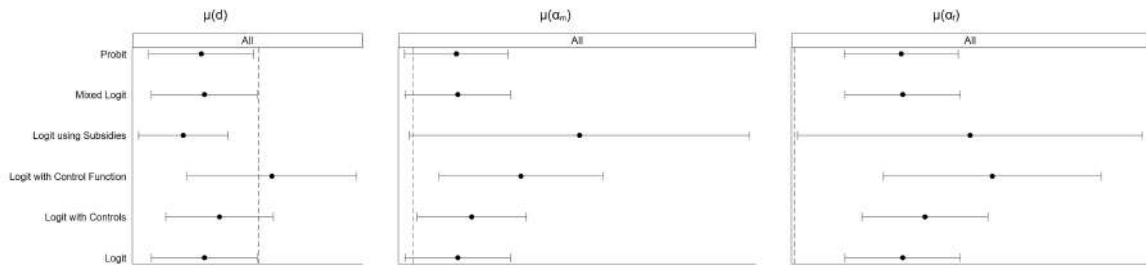
Notes: The graphs show the coefficients on the *No Transport* and the *Female Subsidy* indicators from regression 3 run separately within different employer subsamples. We do not include applicant fixed effects for insufficient observations and instead control for all characteristics of both applicants shown to the employer. We compare female versus male employers, employers who made up to seven hiring choices in the last three years (the median) versus employers who made more than seven hiring choices, employers age 30 or younger (the median) with employers that are older than 30, employers with a High School degree or less (the median) with employers with more than a High School degree, employers with or without daughters and with or without female employees. Asterisks from comparing the coefficients across subsamples.  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$ .

Figure C.10: Hiring by Transport and Female Subsidy Information and Applicant Characteristics



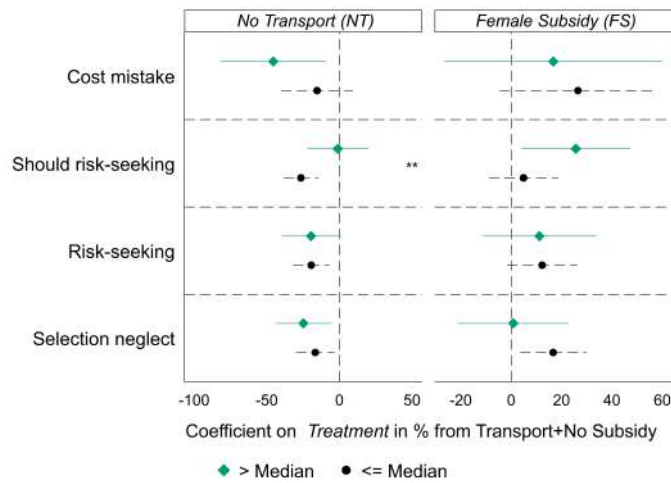
Notes: The graphs show the coefficients on the *No Transport* and the *Female Subsidy* indicators from regression 3 run separately within different pairs. We do not include applicant fixed effects for insufficient observations and instead control for all characteristics of both applicants shown to the employer. We compare pairs in which the female applicant has less work experience, higher education, or a higher Excel score than the male applicant versus pairs in which the woman has the same or more work experience, the same or less education, or the same or a lower Excel score as well as pairs in which the female applicant has children versus pairs in which she does not. Asterisks from comparing the coefficients across subsamples.  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$ .

Figure C.12: Parameter Robustness



Notes: The graph shows the estimated coefficients and 95% confidence intervals of the preference parameters for a series of specifications.

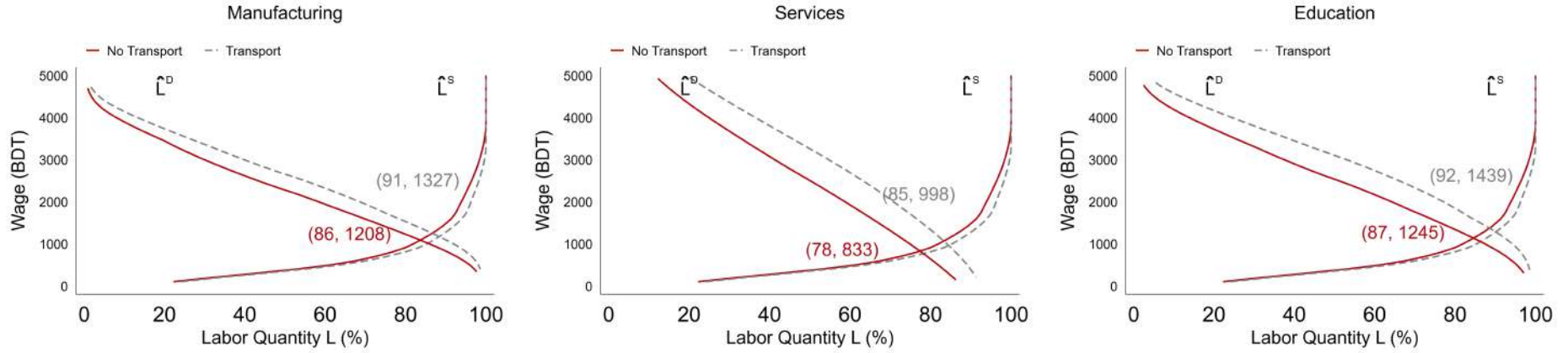
Figure C.11: Hiring by Transport and Female Subsidy Information and Employer Characteristics



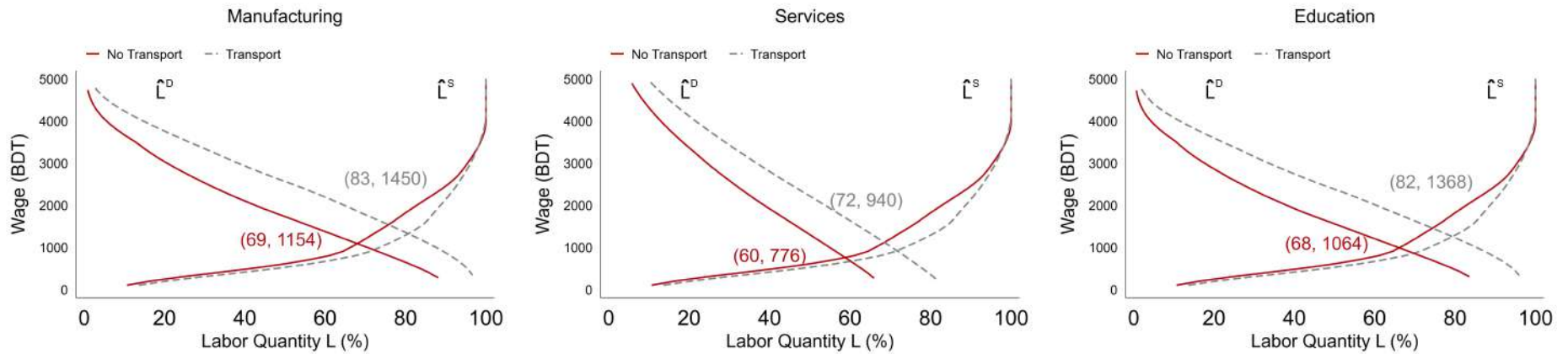
Notes: The graphs show the coefficients on the *No Transport* and the *Female Subsidy* indicators from regression 3 run separately among employers without subsidy (on the left) and with transport (on the right). We run the regressions in different subsets of employers (see section 4.2). Asterisks from comparing the coefficients across subsamples.  $p < 0.10^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$ .

Figure C.13: Equilibria in the Male and Female Labor Markets using the Preferred Piece Rate

(C.13.1) Market for Male Workers



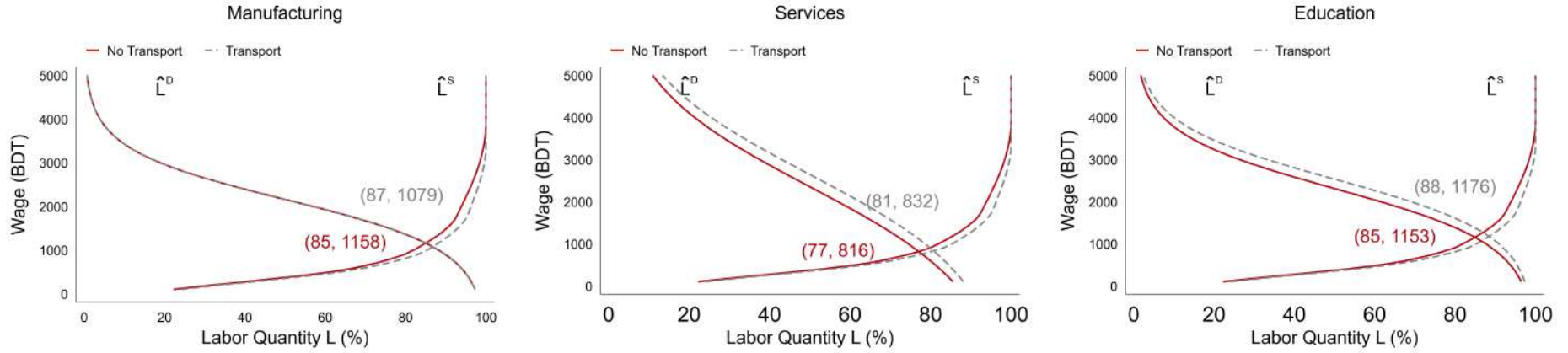
(C.13.2) Market for Female Workers



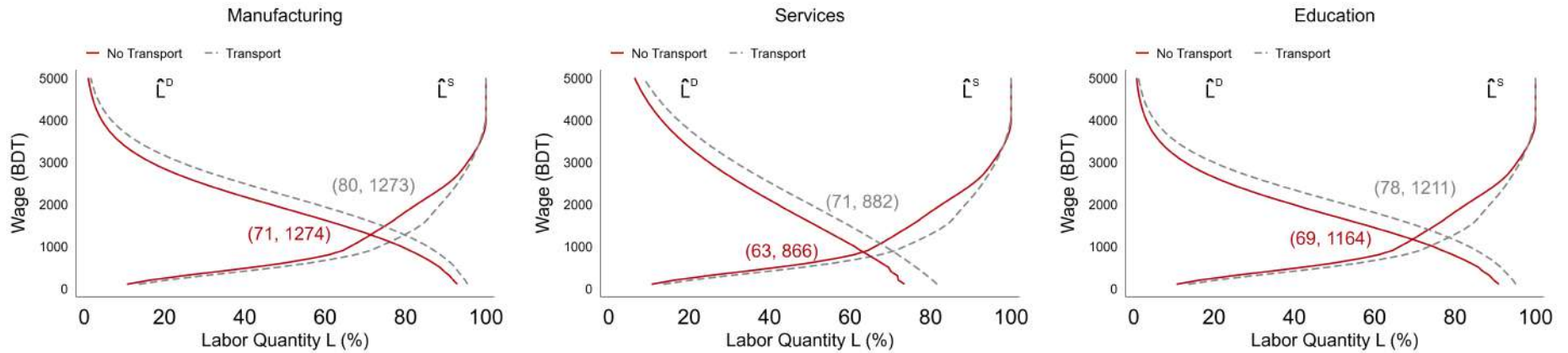
Notes: The graph shows the share of male and female workers demanded from equation 31 and the share of male and female workers supplied from equation 7 at each wage on a grid from 0 to 5,000 with and without transport by industry. We use predicted productivity and cost beliefs from the *Beliefs-Elicitation* employers (see section 6.1.3) and calculate profits using a piece rate of BDT 62 (USD 0.6). Numbers in parentheses in the graph give  $(L_g^*, w_g^*)$ . Numbers in gray in the top right are the equilibrium with transport and numbers in red on the bottom left are the equilibrium without transport.

Figure C.14: Equilibria in the Male and Female Labor Markets using the Experimental Payoffs

(C.14.1) Market for Male Workers



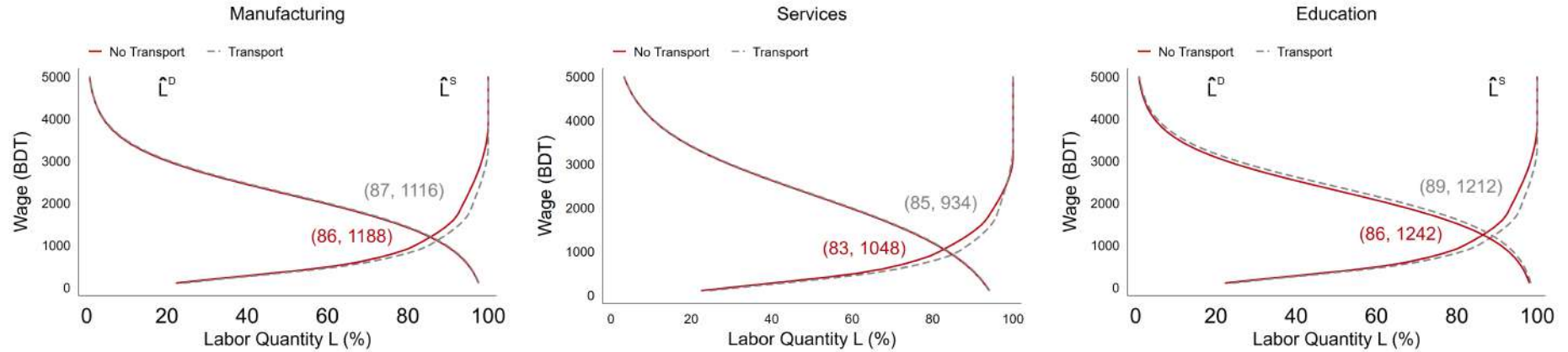
(C.14.2) Market for Female Workers



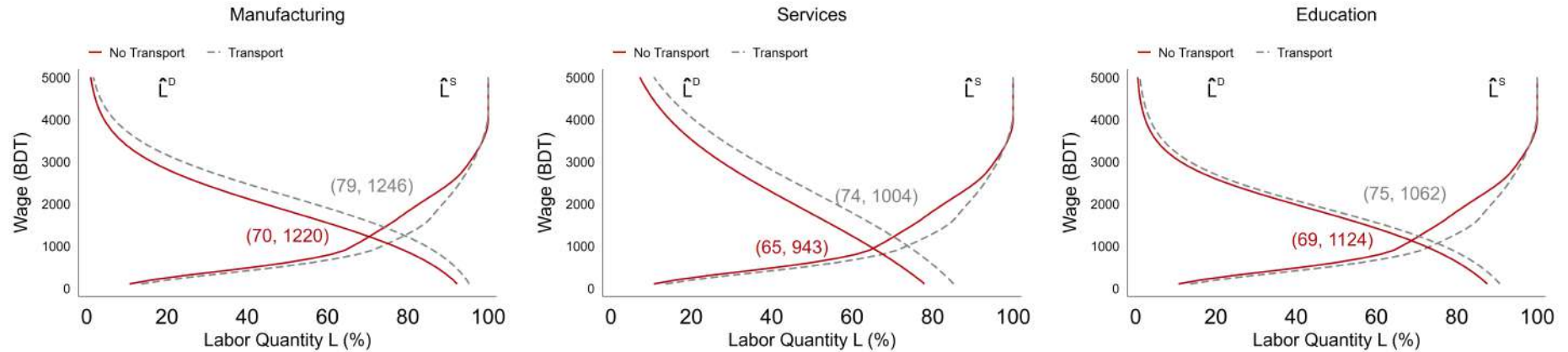
Notes: The graph shows the share of male and female workers demanded from equation 31 and the share of male and female workers supplied from equation 7 at each wage on a grid from 0 to 5,000 with and without transport by industry. We use predicted productivity and cost beliefs from the *Beliefs-Elicitation* employers (see section 6.1.3) and calculate profits using a base payment of BDT 2,000 (USD 20) and a piece rate of BDT 5 (USD 0.05). Numbers in parentheses in the graph give  $(L_g^*, w_g^*)$ . Numbers in gray on the right-top are the equilibrium with transport and numbers in red on the left-bottom are the equilibrium without transport.

Figure C.15: Equilibria in the Male and Female Labor Markets, Holding Selection and Productivity Constant Across Wages and Transport Conditions

(C.15.1) Market for Male Workers



(C.15.2) Market for Female Workers



Notes: The graph shows the share of male and female workers demanded from equation 31 and the share of male and female workers supplied from equation 7 at each wage on a grid from 0 to 5,000 with and without transport by industry. We use predicted productivity and cost beliefs from the *Hiring* employers (see section 6.1.3) and calculate profits using a piece rate of BDT 62 (USD 0.6). Numbers in parentheses in the graph give  $(L_g^*, w_g^*)$ . Numbers in gray on the right-top are the equilibrium with transport and numbers in red on the left-bottom are the equilibrium without transport.

## C.2 Tables

Table C.1: Employer Characteristics, by Industry

	Manufacturing		Services		Education	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Female (%)	3.9	19.5	1.3	11.5	13.3	34.1
Age (Years)	32.4	7.8	32.2	7.8	29.9	7.7
Married (%)	72.5	44.8	62.4	48.6	41.1	49.4
Children (%)	58.2	49.5	49.7	50.2	28.5	45.3
Bachelor's (%)	11.8	32.4	32.0	46.8	81.0	39.3
# Male Employees	11.0	37.6	3.2	4.0	12.4	17.0
# Female Employees	11.5	71.0	0.2	0.9	6.3	9.6
# Hiring Decisions Last 3 Years	53.2	405.3	10.3	25.5	17.8	37.1

*Notes:* The table shows the means and standard deviations of characteristics of employers by industry in the analysis sample of the hiring experiment. *Children* is an indicator that is 1 if the applicant has children.



Table C.2: Employer Characteristics in the Hiring Experiment, By Transport Information and Subsidy Assignment

	No Transport (NT)		Male Subsidy (MS)		Female Subsidy (FS)		Employer Subsidy (ES)		NT+MS		NT+FS		NT+ES		Control
N	101		36		47		60		39		47		36		94
	Mean (SD)	$\beta_{NT}$ (p-val)	Mean (SD)	$\beta_{MS}$ (p-val)	Mean (SD)	$\beta_{FS}$ (p-val)	Mean (SD)	$\beta_{ES}$ (p-val)	Mean (SD)	$\beta_{NT+MS}$ (p-val)	Mean (SD)	$\beta_{NT+FS}$ (p-val)	Mean (SD)	$\beta_{NT+ES}$ (p-val)	Mean (SD)
Manufacturing (%)	34.65 (47.82)	3.80 (0.57)	36.11 (48.71)	5.26 (0.58)	36.17 (48.57)	5.32 (0.53)	33.33 (47.54)	2.48 (0.75)	41.03 (49.83)	1.11 (0.93)	27.66 (45.22)	-12.31 (0.30)	27.78 (45.43)	-9.36 (0.43)	30.85 (46.44)
Retail & Services (%)	37.62 (48.69)	0.39 (0.96)	33.33 (47.81)	-3.90 (0.68)	25.53 (44.08)	-11.70 (0.15)	30.00 (46.21)	-7.23 (0.35)	35.90 (48.60)	2.17 (0.87)	23.40 (42.80)	-2.52 (0.82)	25.00 (43.92)	-5.39 (0.65)	37.23 (48.60)
Education (%)	27.72 (44.99)	-4.19 (0.53)	30.56 (46.72)	-1.36 (0.88)	38.30 (49.14)	6.38 (0.46)	36.67 (48.60)	4.75 (0.55)	23.08 (42.68)	-3.29 (0.79)	48.94 (50.53)	14.83 (0.22)	47.22 (50.63)	14.75 (0.23)	31.91 (46.86)
Age	31.51 (7.28)	0.36 (0.74)	31.25 (7.00)	0.09 (0.95)	30.94 (7.81)	-0.22 (0.87)	32.27 (8.98)	1.11 (0.43)	32.62 (7.54)	1.01 (0.61)	29.23 (7.22)	-2.06 (0.28)	33.31 (9.14)	0.68 (0.76)	31.16 (7.80)
Bachelor's (%)	41.58 (49.53)	-3.58 (0.62)	44.44 (50.40)	-0.72 (0.94)	42.55 (49.98)	-2.61 (0.77)	38.33 (49.03)	-6.83 (0.41)	32.43 (47.46)	-8.43 (0.53)	40.43 (49.61)	1.45 (0.91)	52.78 (50.63)	18.02 (0.16)	45.16 (50.04)
Married (%)	66.34 (47.49)	15.27 (0.03)	55.56 (50.40)	4.49 (0.65)	57.45 (49.98)	6.38 (0.48)	58.33 (49.72)	7.27 (0.38)	71.79 (45.59)	0.97 (0.94)	48.94 (50.53)	-23.78 (0.06)	58.33 (50.00)	-15.27 (0.23)	51.06 (50.26)
Children (%)	49.50 (50.25)	11.21 (0.12)	41.67 (50.00)	3.37 (0.73)	44.68 (50.25)	6.38 (0.47)	50.00 (50.42)	11.70 (0.16)	61.54 (49.29)	8.66 (0.52)	34.04 (47.90)	-21.85 (0.08)	44.44 (50.40)	-16.76 (0.19)	38.30 (48.87)
Daughters	0.36 (0.61)	0.05 (0.59)	0.36 (0.64)	0.05 (0.67)	0.34 (0.64)	0.03 (0.78)	0.48 (0.77)	0.17 (0.14)	0.44 (0.72)	0.03 (0.88)	0.34 (0.67)	-0.05 (0.77)	0.39 (0.69)	-0.14 (0.42)	0.31 (0.64)
Female Employees	13.99 (86.55)	11.34 (0.19)	2.69 (4.90)	0.05 (0.97)	2.51 (6.27)	-0.14 (0.91)	4.68 (11.26)	2.03 (0.22)	6.00 (15.20)	-8.04 (0.38)	6.40 (12.36)	-7.45 (0.40)	2.58 (5.65)	-13.44 (0.13)	2.65 (7.59)
Hiring Decisions Last 6 Months	66.75 (496.98)	55.78 (0.26)	11.19 (16.59)	0.23 (0.94)	12.04 (19.00)	1.07 (0.72)	14.10 (19.55)	3.13 (0.26)	29.41 (85.42)	-37.57 (0.47)	17.57 (27.72)	-50.25 (0.31)	25.83 (66.02)	-44.05 (0.39)	10.97 (11.20)
All Understanding Questions Correct (%)	96.19 (19.23)	0.27 (0.92)	94.74 (22.63)	-1.18 (0.78)	95.92 (19.99)	-0.00 (1.00)	98.36 (12.80)	2.44 (0.35)	86.67 (34.38)	-8.34 (0.22)	87.04 (33.90)	-9.15 (0.13)	92.31 (27.00)	-6.33 (0.24)	95.92 (19.89)
Made Hiring Choices b/c of Taste (%)	4.95 (21.80)	2.82 (0.29)	5.56 (23.23)	3.43 (0.41)	0.00 (0.00)	-2.13 (0.16)	0.00 (0.00)	-2.13 (0.16)	7.69 (27.00)	-0.69 (0.91)	2.13 (14.59)	-0.70 (0.84)	0.00 (0.00)	-2.82 (0.29)	2.13 (14.51)
Made Hiring Choices b/c of Productivity (%)	100.00 (0.00)	2.13 (0.16)	97.22 (16.67)	-0.65 (0.84)	100.00 (0.00)	2.13 (0.16)	100.00 (0.00)	2.13 (0.16)	100.00 (0.00)	0.65 (0.84)	100.00 (0.00)	-2.13 (0.16)	100.00 (0.00)	-2.13 (0.16)	97.87 (14.51)
<b>P-value from joint significance test</b>		0.47		0.99		0.72		0.29		0.96		0.47		0.19	
Made Hiring Choices b/c of Applicant Welfare (%)	82.39 (38.10)	25.72 (0.00)	80.91 (39.33)	24.25 (0.00)	65.63 (47.52)	8.96 (0.30)	73.43 (44.19)	16.76 (0.03)	67.19 (46.98)	-39.45 (0.00)	74.36 (43.69)	-16.99 (0.14)	58.32 (49.34)	-40.83 (0.00)	56.67 (49.57)

*Notes:* The table shows characteristics by treatment arm of all employers in the analysis sample of the hiring experiment (except for “All Understanding Questions Correct (%)”, for which we include all employers). “Made Hiring Choices b/c of Taste” is an indicator that is 1 for employers who reported that women belong at home. “Made Hiring Choices b/c of Productivity” is an indicator that is 1 for employers who report that they based their hiring choices based on absenteeism, performance, firm reputation, experience, education, or because women are hard to manage. “Made Hiring Choices b/c of Applicant Welfare” is an indicator that is 1 for employers who report that they based their hiring choices based on the applicants’ safety, health, or marital status, or because they stated it would be inappropriate for women to work at night or that men would need money more than women. We show means and standard deviations within treatment arms as well as coefficients and p-values on the treatment indicators in OLS regressions with modified Huber-White robust SEs. P-values from joint significance test do not include the variable “Education (%)”, which is perfectly collinear with “Manufacturing (%)” and “Retail & Services (%)”.

Table C.3: Applicant Characteristics and Beliefs about Applicants in the Hiring Experiment, By Transport Information and Subsidy Assignment

	No Transport (NT)		Male Subsidy (MS)		Female Subsidy (FS)		Employer Subsidy (ES)		NT+MS		NT+FS		NT+ES		Control
	Mean (SD)	$\beta_{NT}$ (p-val)	Mean (SD)	$\beta_{MS}$ (p-val)	Mean (SD)	$\beta_{FS}$ (p-val)	Mean (SD)	$\beta_{ES}$ (p-val)	Mean (SD)	$\beta_{NT+MS}$ (p-val)	Mean (SD)	$\beta_{NT+FS}$ (p-val)	Mean (SD)	$\beta_{NT+ES}$ (p-val)	Mean (SD)
<b>Male Applicants: N</b>	994		350		465		589		385		468		357		929
Age	24.43 (5.47)	0.25 (0.32)	24.44 (5.63)	0.26 (0.38)	24.45 (5.67)	0.26 (0.35)	25.02 (6.21)	0.84 (0.01)	24.99 (6.24)	0.31 (0.48)	24.52 (5.83)	-0.17 (0.69)	24.05 (5.22)	-1.22 (0.01)	24.19 (5.22)
Education (Yrs)	39.33 (48.87)	2.68 (0.21)	36.78 (48.29)	0.13 (0.96)	36.74 (48.26)	0.09 (0.97)	40.55 (49.14)	3.89 (0.12)	39.95 (49.04)	0.49 (0.90)	35.71 (47.97)	-3.71 (0.29)	36.83 (48.30)	-6.40 (0.09)	36.65 (48.21)
$\leq 3$ Years Work Experience (%)	81.99 (38.44)	-0.03 (0.98)	77.71 (41.68)	-4.31 (0.06)	79.78 (40.20)	-2.24 (0.26)	81.66 (38.73)	-0.36 (0.85)	80.78 (39.45)	3.10 (0.31)	80.98 (39.29)	1.23 (0.68)	82.35 (38.18)	0.72 (0.80)	82.02 (38.42)
Excel Screening Score (%)	23.45 (13.30)	0.77 (0.20)	23.17 (12.71)	0.49 (0.57)	22.76 (12.20)	0.08 (0.91)	23.47 (13.56)	0.79 (0.22)	23.19 (12.11)	-0.75 (0.51)	22.18 (12.21)	-1.35 (0.17)	23.05 (13.29)	-1.19 (0.27)	22.68 (12.61)
Married (%)	18.41 (38.78)	0.33 (0.84)	18.86 (39.17)	0.77 (0.71)	18.92 (39.21)	0.84 (0.64)	20.54 (40.44)	2.46 (0.23)	20.52 (40.44)	1.34 (0.65)	18.59 (38.94)	-0.66 (0.82)	17.37 (37.94)	-3.50 (0.22)	18.08 (38.51)
Children (%)	10.26 (30.36)	0.25 (0.85)	11.14 (31.51)	1.13 (0.54)	11.18 (31.55)	1.17 (0.43)	12.39 (32.98)	2.38 (0.15)	13.77 (34.50)	2.37 (0.34)	11.11 (31.46)	-0.32 (0.89)	9.24 (29.00)	-3.40 (0.14)	10.01 (30.03)
<b>P-value from joint significance test</b>		0.60		0.72		0.96		0.03		0.87		0.59		0.04	
Productivity ( $P(\text{Show-up}) \times E[\text{Tasks} \text{Show-up}]$ )	39.81 (21.24)	1.14 (0.65)	39.75 (21.04)	1.09 (0.76)	34.86 (18.47)	-3.81 (0.20)	38.05 (21.32)	-0.62 (0.84)	47.78 (22.28)	6.88 (0.17)	40.99 (22.19)	4.99 (0.26)	35.05 (19.66)	-4.14 (0.35)	38.67 (20.17)
Predicted Revenue (BDT)	698.57 (106.61)	3.78 (0.77)	701.14 (106.36)	6.35 (0.73)	674.57 (92.82)	-20.22 (0.18)	690.32 (107.07)	-4.47 (0.77)	738.36 (112.02)	33.43 (0.19)	704.97 (110.95)	26.62 (0.23)	674.71 (97.36)	-19.40 (0.38)	694.80 (100.85)
Actual Revenue (BDT)	585.27 (28.53)	0.57 (0.79)	585.45 (29.46)	0.75 (0.79)	586.02 (27.81)	1.32 (0.61)	583.98 (29.50)	-0.72 (0.77)	587.80 (29.35)	1.78 (0.65)	586.07 (27.88)	-0.52 (0.88)	583.99 (29.20)	-0.56 (0.88)	584.70 (29.18)
<b>P-value from joint significance test</b>		0.43		0.19		0.70		0.44		0.52		0.17		0.67	
Perceived Costs (0–10)	2.49 (2.17)	1.62 (0.00)	1.08 (1.10)	0.22 (0.29)	0.63 (1.25)	-0.23 (0.22)	0.72 (1.21)	-0.14 (0.43)	1.90 (1.80)	-0.81 (0.04)	2.18 (1.86)	-0.07 (0.85)	1.81 (2.04)	-0.54 (0.21)	0.87 (1.20)
Perceived Costs (BDT)	1420.89 (1235.65)	936.88 (0.00)	608.93 (625.92)	124.92 (0.29)	364.12 (712.16)	-119.89 (0.27)	413.81 (691.06)	-70.20 (0.49)	1068.33 (1028.17)	-477.47 (0.04)	1239.36 (1058.75)	-61.64 (0.78)	1054.46 (1161.15)	-296.23 (0.22)	484.01 (682.56)
<b>Female Applicants: N</b>	993		352		466		589		386		468		358		931
Age	23.65 (5.89)	0.10 (0.75)	23.44 (5.88)	-0.11 (0.76)	23.70 (6.06)	0.14 (0.69)	23.51 (5.82)	-0.05 (0.88)	23.53 (5.70)	-0.01 (0.99)	23.54 (5.72)	-0.26 (0.61)	24.03 (6.52)	0.43 (0.40)	23.55 (6.12)
Education (Yrs)	37.76 (48.50)	1.30 (0.57)	35.90 (48.04)	-0.56 (0.84)	34.19 (47.49)	-2.27 (0.37)	36.69 (48.24)	0.23 (0.93)	35.77 (48.00)	-1.43 (0.72)	33.98 (47.41)	-1.52 (0.69)	38.20 (48.66)	0.21 (0.95)	36.46 (48.16)
$\leq 3$ Years Work Experience (%)	89.12 (31.15)	-0.03 (0.98)	89.77 (30.34)	0.62 (0.70)	87.55 (33.05)	-1.60 (0.34)	89.64 (30.50)	0.49 (0.75)	86.53 (34.19)	-3.22 (0.16)	89.32 (30.92)	1.79 (0.42)	86.87 (33.82)	-2.74 (0.29)	89.15 (31.12)
Excel Screening Score (%)	24.78 (13.55)	0.71 (0.30)	24.56 (13.62)	0.48 (0.61)	24.62 (13.40)	0.55 (0.52)	24.26 (13.53)	0.19 (0.81)	25.41 (13.79)	0.15 (0.91)	24.41 (13.31)	-0.92 (0.43)	24.58 (14.04)	-0.39 (0.75)	24.08 (13.07)
Married (%)	22.05 (41.48)	-0.39 (0.84)	21.59 (41.20)	-0.86 (0.72)	22.53 (41.82)	0.08 (0.97)	22.24 (41.62)	-0.21 (0.92)	23.32 (42.34)	2.12 (0.53)	22.01 (41.47)	-0.13 (0.97)	22.07 (41.53)	0.22 (0.95)	22.45 (41.75)
Children (%)	11.28 (31.65)	0.32 (0.83)	10.51 (30.71)	-0.44 (0.82)	12.45 (33.05)	1.49 (0.46)	12.56 (33.17)	1.61 (0.37)	11.40 (31.82)	0.56 (0.84)	11.11 (31.46)	-1.66 (0.54)	12.29 (32.88)	-0.60 (0.84)	10.96 (31.25)
<b>P-value from joint significance test</b>		0.87		0.99		0.51		0.43		0.92		0.57		0.71	
Productivity ( $P(\text{Show-up}) \times E[\text{Tasks} \text{Show-up}]$ )	31.72 (19.50)	0.62 (0.80)	28.87 (17.96)	-2.23 (0.45)	25.37 (17.63)	-5.73 (0.04)	30.83 (20.83)	-0.27 (0.93)	36.60 (22.98)	7.12 (0.13)	32.23 (21.55)	6.25 (0.14)	27.35 (19.81)	-4.10 (0.35)	31.10 (21.20)
Predicted Revenue (BDT)	657.81 (97.07)	2.01 (0.87)	644.95 (90.27)	-10.84 (0.47)	626.83 (88.17)	-28.97 (0.04)	654.51 (104.53)	-1.28 (0.93)	683.02 (114.88)	36.06 (0.13)	661.17 (107.75)	32.33 (0.12)	635.79 (99.39)	-20.74 (0.35)	655.80 (106.19)
Actual Revenue (BDT)	588.25 (28.26)	5.43 (0.10)	583.17 (30.32)	0.35 (0.94)	587.39 (30.64)	4.57 (0.29)	592.52 (26.52)	9.70 (0.01)	588.39 (28.23)	-0.21 (0.97)	586.05 (29.21)	-6.77 (0.27)	590.76 (27.65)	-7.19 (0.17)	582.82 (29.42)
<b>P-value from joint significance test</b>		0.72		0.05		0.62		0.69		0.13		0.28		0.84	
Perceived Costs (0–10)	6.30 (2.50)	3.05 (0.00)	4.43 (2.02)	1.18 (0.00)	3.00 (2.20)	-0.25 (0.48)	3.07 (2.18)	-0.19 (0.59)	6.01 (2.17)	-1.46 (0.01)	5.84 (2.31)	-0.21 (0.70)	5.17 (2.92)	-0.95 (0.13)	3.25 (2.20)
Perceived Costs (BDT)	3576.57 (1428.11)	1736.24 (0.00)	2525.49 (1150.13)	685.16 (0.00)	1702.31 (1246.57)	-138.03 (0.50)	1735.97 (1242.07)	-104.36 (0.60)	3411.99 (1229.81)	-849.74 (0.01)	3313.10 (1310.32)	-125.45 (0.68)	2917.11 (1662.10)	-555.10 (0.12)	1840.34 (1249.41)

Notes: The table shows characteristics by treatment arm of all applicants in the hiring experiment as well as employers' beliefs about them. We show means and standard deviations within treatment arms as well as coefficients and p-values on the treatment indicators in OLS regressions with modified Huber–White robust SEs.

Table C.4: Productivity and Costs Predictions from *Hiring* and *Prediction-Only* Employers

	Employer Type		
	Hiring	$\beta_{Prediction}$	Prediction
	Mean (SD)	(p-val)	Mean (SD)
<b>Male Applicants: N</b>	1,414		320
Productivity ( $P(\text{Show-up}) \times E[\text{Tasks} \text{Show-up}]$ )	41.54 (22.09)	-3.74 (0.12)	37.80 (21.27)
Perceived Costs (0–10)	2.27 (2.06)	0.17 (0.56)	2.44 (2.22)
<b>Female Applicants: N</b>	1,412		320
Productivity ( $P(\text{Show-up}) \times E[\text{Tasks} \text{Show-up}]$ )	32.27 (21.92)	-2.92 (0.22)	29.35 (20.00)
Perceived Costs (0–10)	6.06 (2.44)	-0.41 (0.18)	5.64 (2.27)

*Notes:* The table shows predictions for a subset of applicants for which both *Hiring* and *Prediction-Only* employers made predictions. We show means, standard deviations, and results from OLS regressions with modified Huber–White SEs. We show coefficients and p-values on an indicator that is 1 for Prediction-Only employers. Including all data once prediction surveys started (as Prediction-Only surveys were only conducted during the second half of data collection).

Table C.5: Hired by Transport Information and Subsidy Assignment, Robustness Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
No transport (NT)	-9.923*** (2.480)	-9.745*** (2.449)	-9.923*** (2.482)	-9.319*** (2.467)	-9.556*** (2.442)	-10.160*** (2.464)	-11.611*** (3.538)	-9.927*** (2.585)	-9.923*** (2.655)	-0.627*** (0.149)	-34.902*** (6.033)
Male subsidy (MS)	-6.938** (3.268)	-6.920** (3.269)	-6.938** (3.270)	-6.161* (3.288)	-6.570** (3.080)	-6.563** (3.232)	-9.187** (4.221)	-6.809** (3.273)	-6.938** (3.479)	-0.439** (0.191)	
Female subsidy (FS)	7.436*** (2.802)	4.773* (2.677)	7.436*** (2.805)	4.884* (2.712)	7.912*** (2.769)	7.849*** (2.847)	8.485** (3.695)	7.119** (2.890)	7.436** (3.033)	0.448*** (0.161)	
Employer subsidy (ES)	23.113*** (3.106)	22.903*** (3.076)	23.113*** (3.109)	23.034*** (3.093)	23.075*** (3.067)	23.248*** (3.124)	23.506*** (4.399)	22.519*** (3.206)	23.113*** (3.213)	1.389*** (0.189)	
NT*MS	1.018 (4.392)	-0.624 (4.318)	1.018 (4.395)	-0.941 (4.381)	1.166 (4.289)	1.068 (4.369)	3.108 (6.012)	1.650 (4.576)	1.018 (4.731)	0.074 (0.267)	
NT*FS	-4.754 (4.127)	-3.634 (4.039)	-4.754 (4.131)	-4.168 (4.052)	-6.587* (3.947)	-4.683 (4.149)	-7.172 (5.926)	-4.878 (4.195)	-4.754 (4.388)	-0.255 (0.240)	
NT*ES	-3.768 (5.348)	-4.312 (5.203)	-3.768 (5.352)	-4.784 (5.226)	-3.594 (5.136)	-3.117 (5.384)	-4.665 (7.885)	-3.222 (5.442)	-3.768 (5.532)	-0.217 (0.306)	
Applicant: Excel score		1.338*** (0.059)		1.321*** (0.060)							
Applicant: Education		2.250*** (0.309)		1.852*** (0.302)							
Applicant: $\leq 3$ yrs work experience		-10.734*** (2.308)									
Applicant: Married		-5.870*** (2.051)									
Applicant: Has children		-1.664 (2.801)									
Control Mean	45.328	45.279	45.279	45.328	45.979	45.168	48.092	46.007	45.328	45.328	55.000
Observations	4602	4610	4610	4602	4885	4552	2602	4145	4602	4238	242
Main	✓										
No fixed effects		✓									
No controls			✓								
Post-Double-Selection				✓							
Understanding					✓						
Correct commute						✓					
Before first shift							✓				
No prediction applicants								✓			
Two-way clustering									✓		
Logit										✓	
Candidate 1 versus 2											✓

Notes: The table shows results from OLS regressions with Huber–White robust SEs clustered at the employer level (see notes to figure 3). Column (2) excludes applicant fixed effects, column (3) excludes all covariates, and column (4) uses covariates selected using the post-double selection (PSD) Lasso method of Belloni et al. (2014). Column (5) includes employers who answer understanding questions incorrectly, column (6) includes only employers who report that women in the *Transport* treatment will get home using provided transport and that women in the *No Transport* treatment will not get home using provided transport, and column (7) includes only employers surveyed before the first night shift. Column (8) excludes the applicants from the application experiment. column (9) clusters standard errors both at the employer and the applicant level, column (10) uses a Logit specification, and column (11) includes hiring decisions over candidate 1 versus 2 (not disaggregated by subsidies and using the covariates from column (2) as we do not have sufficient observations).

Table C.6: Hired by Transport Information and Subsidy Assignment, Extensive versus Intensive Margin Effects

	Hired Woman (%)	# Women
	(1)	(2)
No transport (NT)	-0.016 (0.023)	-0.987*** (0.239)
Male subsidy (MS)	-0.033 (0.040)	-0.632** (0.270)
Female subsidy (FS)	0.003 (0.027)	0.573** (0.250)
Employer subsidy (ES)	0.024 (0.015)	2.005*** (0.298)
NT*MS	-0.001 (0.062)	0.105 (0.398)
NT*FS	0.012 (0.038)	-0.276 (0.388)
NT*ES	-0.014 (0.035)	0.393 (0.515)
Control Mean	0.979	4.598
Observations	460	446

*Notes:* The table shows results from OLS regressions with Huber–White robust SEs, controlling for the mean characteristics of both applicants per employer and industry fixed effects. The unit of observation is the employer. Column (1) keeps all employers who correctly answer the understanding questions. The outcome is whether the employer hires at least one woman. Column (2) keeps all employers who answer the understanding questions correctly and hire at least one woman. The outcome is the number of women hired by the employer.

Table C.7: Applicant Characteristics in the Application Experiment, by Transport Information

	No Transport (NT)		Control
Male Applicants			
N	171		183
	Mean (SD)	$\beta_{NT}$ (p-val)	Mean (SD)
Age	25.34 (7.26)	-1.07 (0.36)	26.49 (8.56)
Education (Years)	14.43 (2.36)	-0.05 (0.89)	14.64 (2.29)
≤ 3 Years Work Experience (%)	73.68 (44.16)	3.68 (0.59)	71.58 (45.22)
Excel Screening Score (%)	24.65 (11.65)	0.44 (0.80)	25.08 (11.38)
Married (%)	23.98 (42.82)	-2.12 (0.74)	27.32 (44.68)
Children (%)	18.71 (39.12)	-0.58 (0.92)	18.03 (38.55)
All Understanding Questions Correct (%)	89.53 (30.70)	-4.15 (0.30)	91.50 (27.96)
P-value from joint significance test		0.80	
Reported Costs (0–10)	2.30 (2.44)	0.35 (0.23)	1.81 (2.33)
Female Applicants			
N	175		169
	Mean (SD)	$\beta_{NT}$ (p-val)	Mean (SD)
Age	23.01 (6.37)	0.76 (0.49)	23.05 (6.64)
Education (Years)	13.70 (2.21)	-0.29 (0.43)	13.86 (2.30)
≤ 3 Years Work Experience (%)	86.29 (34.50)	-9.62 (0.08)	90.53 (29.36)
Excel Screening Score (%)	26.31 (12.01)	0.06 (0.97)	26.42 (12.27)
Married (%)	21.14 (40.95)	-6.38 (0.37)	27.22 (44.64)
Children (%)	10.29 (30.46)	-8.92 (0.13)	17.16 (37.82)
All Understanding Questions Correct (%)	93.58 (24.57)	6.43 (0.10)	88.02 (32.56)
P-value from joint significance test		0.14	
Reported Costs (0–10)	5.89 (2.97)	0.82 (0.03)	4.88 (3.05)

*Notes:* The table shows characteristics by treatment arm of all female and male workers in the application experiment. We show means and standard deviations within treatment arms as well as coefficients and p-values on the treatment indicators from regression 4 without applicant controls.

Table C.8: Reservation Wages in the Application Experiment by Transport Information, Robustness Analysis

	Male Workers								Female Workers							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
No transport (NT)	164.874*	-0.044	136.797*	215.348	177.072**	201.023**	100.763*	174.136**	239.841*	-0.130*	246.949*	215.525	238.095*	221.388	-16.016	162.023
Control Mean	(92.092)	(0.047)	(75.948)	(145.723)	(88.047)	(89.544)	(59.760)	(85.580)	(141.490)	(0.069)	(128.997)	(173.132)	(137.016)	(136.263)	(64.003)	(135.064)
Observations	479.781	0.934	410.286	553.552	479.781	479.781	373.099	476.000	802.663	0.858	735.671	848.521	802.663	802.663	521.724	810.677
	354	354	337	354	354	354	328	391	344	344	333	344	344	344	279	379
Main	✓								✓							
Applied		✓								✓						
Truncating			✓								✓					
Keep outliers				✓								✓				
No controls					✓								✓			
Post-Double-Selection						✓								✓		
Reservation wage $\leq 1,500$							✓								✓	
Understanding								✓								✓

Notes: The table shows results from OLS regressions with Huber–White robust SEs (see equation 4 and notes to figure 5). We always control for assignment to the *High promotion* treatment and its interaction with *No transport*. We winsorize the data at the 95th percentile and control for the worker’s education, marriage status (unmarried, married without children, or married with children), work experience, Excel screening score, and age in the main specification in columns (1) and (9). We use a reservation wage of  $\leq$  BDT 1,500 (the wage in the hiring experiment) as an outcome in columns (2) and (10). We truncate the data at the 95th percentile in columns (3) and (11) and do not exclude outliers in columns (4) and (12). We exclude all covariates in columns (5) and (13) and include covariates selected using the post-double selection (PSD) Lasso method of Belloni et al. (2014) in columns (6) and (14). We only keep applicants with a reservation wage of  $\leq$  BDT 1,500 in columns (7) and (15) and include applicants with incorrect understanding questions in columns (8) and (16).



Table C.9: Control Functions

	Outcome: $\Pi_{ik}$				Outcome: $\mathcal{W}_{ik}$			
	Pooled	Manufacturing	Services	Education	Pooled	Manufacturing	Services	Education
		$j = 1$	$j = 2$	$j = 3$		$j = 1$	$j = 2$	$j = 3$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-0.022 (0.019)	-0.048*** (0.017)	-0.042*** (0.013)	-0.038*** (0.009)	-1.374*** (0.182)	-1.328*** (0.171)	-1.411*** (0.197)	-1.372*** (0.105)
No transport (NT)	-0.018 (0.017)	-0.013 (0.017)	0.054*** (0.017)	0.004 (0.010)	-0.641*** (0.165)	-0.814*** (0.158)	-1.413*** (0.201)	-0.936*** (0.099)
Employer subsidy (ES)	-0.016 (0.018)	-0.028 (0.019)	0.037** (0.018)	-0.004 (0.011)	0.171 (0.156)	0.136 (0.096)	0.010 (0.159)	0.104 (0.081)
Male subsidy (MS)	0.046* (0.026)	-0.036** (0.018)	0.010 (0.023)	0.007 (0.014)	1.146*** (0.168)	0.765*** (0.139)	0.721*** (0.179)	0.889*** (0.094)
Female subsidy (FS)	-0.011 (0.020)	-0.035 (0.024)	-0.002 (0.016)	-0.017 (0.011)	0.235 (0.190)	0.084 (0.132)	0.156 (0.143)	0.183** (0.090)
NT*ES	0.005 (0.032)	0.020 (0.036)	-0.083*** (0.026)	-0.014 (0.017)	-0.345 (0.315)	0.748*** (0.223)	0.762** (0.325)	0.353** (0.176)
NT*MS	-0.001 (0.032)	0.096*** (0.032)	-0.005 (0.035)	0.031 (0.019)	0.113 (0.291)	0.299 (0.298)	1.195*** (0.311)	0.472*** (0.174)
NT*FS	0.037 (0.028)	0.026 (0.035)	-0.007 (0.027)	0.026 (0.017)	-0.304 (0.328)	0.458* (0.240)	0.291 (0.286)	0.075 (0.164)
NT*Female	-0.003 (0.024)	0.006 (0.024)	-0.007 (0.024)	0.001 (0.014)	-1.031*** (0.283)	-0.945*** (0.277)	-0.321 (0.326)	-0.798*** (0.168)
ES*Female	1.007*** (0.027)	1.023*** (0.028)	0.986*** (0.024)	1.008*** (0.015)	-0.068 (0.272)	0.506** (0.245)	-0.276 (0.316)	0.039 (0.163)
MS*Female	-0.069** (0.035)	0.030 (0.029)	-0.008 (0.028)	-0.015 (0.018)	-1.720*** (0.345)	-1.256*** (0.288)	-1.630*** (0.335)	-1.532*** (0.185)
FS*Female	-0.026 (0.029)	-0.003 (0.032)	0.002 (0.023)	-0.005 (0.016)	1.067*** (0.322)	1.549*** (0.274)	0.592* (0.317)	1.032*** (0.178)
NT*ES*Female	-0.016 (0.044)	-0.003 (0.052)	0.016 (0.036)	-0.009 (0.024)	0.399 (0.530)	-0.059 (0.494)	0.183 (0.553)	0.232 (0.311)
NT*MS*Female	0.025 (0.044)	-0.052 (0.047)	0.028 (0.049)	-0.005 (0.027)	0.321 (0.513)	0.361 (0.489)	0.349 (0.496)	0.331 (0.294)
NT*FS*Female	0.003 (0.040)	0.010 (0.048)	-0.003 (0.038)	-0.004 (0.024)	0.445 (0.526)	-0.231 (0.467)	-0.107 (0.473)	0.047 (0.278)
Male Mean (NT+NS)	0.700	0.713	0.664	0.693	0.913	1.113	0.980	1.009
F-Stat	305.291	187.621	388.760	739.905	36.917	33.753	54.230	88.860
Observations	610	592	624	1826	610	592	624	1826

Notes: The table shows results from OLS regressions with Huber–White robust SEs clustered at the employer level. Controlling for all characteristics shown to the employer (initial Excel score, education, work experience, marriage status) as well as employer industry fixed effects.

Table C.10: Second-Stage Regression with fitted residuals, Outcome: Hired

	Pooled	Manufacturing	Services	Education
		$j = 1$	$j = 2$	$j = 3$
	(1)	(2)	(3)	(4)
$\Pi$ (BDT '000)	1.637*** (0.422)	1.106*** (0.351)	1.932*** (0.367)	1.491*** (0.210)
Female	0.446 (0.303)	-0.174 (0.328)	-0.122 (0.393)	0.056 (0.179)
$\mathcal{W}_m$ (BDT '000)	0.284 (0.176)	0.221 (0.214)	0.389 (0.266)	0.308*** (0.111)
$\mathcal{W}_f$ (BDT '000)	0.551*** (0.133)	0.203 (0.143)	0.418 (0.259)	0.382*** (0.090)
$\widehat{\varepsilon}^\Pi$ (BDT '000)	2.083 (1.589)	0.195 (1.545)	0.570 (2.009)	0.962 (0.946)
$\widehat{\varepsilon}^\mathcal{W}$ (BDT '000)	-0.396** (0.178)	0.094 (0.179)	-0.183 (0.278)	-0.177 (0.109)
Observations	610	592	624	1826

*Notes:* The table shows results from Logit with Huber–White robust SEs clustered at the employer level. Controlling for all characteristics shown to the employer (initial Excel score, education, work experience, marriage status) as well as employer industry fixed effects.

Table C.11: Counterfactuals: Benchmarking the Importance of Paternalistic Discrimination

	Status Quo	$\alpha_m \mathcal{W}_m^E = \alpha_f \mathcal{W}_f^E$	$\mathcal{W}_m^E = \mathcal{W}_f^E$	$\alpha_m = \alpha_f$	$d = 0$	$\Pi_m^E = \Pi_f^E$	$L_m^S = L_f^S$	$\mathcal{W}_g^E = \mathcal{W}_g^{E:A}$	$\mathcal{W}_g^E = \mathcal{W}_g^A$
$L_m^*$ (%)	84.00	84.00	84.00	84.00	84.00	84.00	84.00	84.00	85.00
$L_f^*$ (%)	67.00	70.00	70.00	68.00	69.00	70.00	73.00	68.00	72.00
$L_m^* - L_f^*$ (ppts)	17.00	14.00	14.00	16.00	15.00	14.00	11.00	16.00	13.00
$w_m^*$ (BDT)	1106.00	1106.00	1106.00	1106.00	1106.00	1106.00	1106.00	1124.00	1155.00
$w_f^*$ (BDT)	1013.00	1222.00	1213.00	1104.00	1116.00	1218.00	699.00	1064.00	1312.00
$w_m^* - w_f^*$ (BDT)	93.00	-116.00	-107.00	2.00	-10.00	-112.00	407.00	60.00	-157.00
$\mathcal{W}_m^E$ ('000 BDT)	-147.00	-147.00	-147.00	-147.00	-147.00	-147.00	-147.00	-139.51	-128.13
$\mathcal{W}_m^A$ ('000 BDT)	202.32	202.32	202.32	202.32	202.32	202.32	202.32	209.81	220.61
$\mathcal{W}_f^E$ ('000 BDT)	-835.50	-800.50	-803.61	-817.34	-825.26	-801.88	-1040.10	-830.81	-790.83
$\mathcal{W}_f^A$ ('000 BDT)	105.95	179.96	176.85	137.84	143.96	178.58	74.74	124.37	216.62

*Notes:* The table shows the results from the industry counterfactuals. We use both employers' and applicants' beliefs about the job costs and productivity in our experiment. We conduct the following counterfactual exercises: 1) eliminating paternalistic discrimination, either by equalizing male and female other-regarding utility,  $\alpha_m \mathcal{W}_m^E = \alpha_f \mathcal{W}_f^E$ , by equalizing male and female perceived welfare,  $\mathcal{W}_m^E = \mathcal{W}_f^E$ , or equalizing the welfare weights,  $\alpha_m = \alpha_f$ , 2) eliminating taste-based discrimination by setting  $d = 0$ , 3) eliminating statistical discrimination by equalizing male and female perceived profits,  $\Pi_m^E = \Pi_f^E$ , or 4) eliminating differences in labor supply by equalizing male and female labor supply,  $L_m^S = L_f^S$ . We present effects on the following outcomes: 1) male and female employment as well as the gender employment gap,  $L_m^*$ ,  $L_f^*$ ,  $L_m^* - L_f^*$  (in percentage points), 2) male and female wages as well as the gender wage gap,  $w_m^*$ ,  $w_f^*$ ,  $w_m^* - w_f^*$  (in BDT), 3) total male welfare as perceived by employers,  $\mathcal{W}_m^E$  (in '000 BDT), and applicants,  $\mathcal{W}_m^A$  (in '000 BDT), 4) total female welfare as perceived by employers,  $\mathcal{W}_f^E$  (in '000 BDT) and applicants,  $\mathcal{W}_f^A$  (in '000 BDT).

Table C.12: Counterfactuals: Benchmarking the Importance of Paternalistic Discrimination Across Industries

	Status Quo	$\alpha_m \mathcal{W}_m^E = \alpha_f \mathcal{W}_f^E$	$\mathcal{W}_m^E = \mathcal{W}_f^E$	$\alpha_m = \alpha_f$	$d = 0$	$\Pi_m^E = \Pi_f^E$	$L_m^S = L_f^S$	$\mathcal{W}_g^E = \mathcal{W}_g^{E:A}$	$\mathcal{W}_g^E = \mathcal{W}_g^A$
<b>Manufacturing</b>									
$L_m^*$ (%)	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00	86.00
$L_f^*$ (%)	69.00	72.00	72.00	73.00	70.00	73.00	77.00	74.00	70.00
$L_m^* - L_f^*$ (ppts)	17.00	14.00	14.00	13.00	16.00	13.00	9.00	12.00	16.00
$w_m^*$ (BDT)	1208.00	1208.00	1208.00	1208.00	1208.00	1208.00	1208.00	1191.00	1201.00
$w_f^*$ (BDT)	1154.00	1335.00	1335.00	1377.00	1221.00	1360.00	823.00	1414.00	1180.00
$w_m^* - w_f^*$ (BDT)	54.00	-127.00	-127.00	-169.00	-13.00	-152.00	385.00	-223.00	21.00
$\mathcal{W}_m^E$ ('000 BDT)	-55.32	-55.32	-55.32	-55.32	-55.32	-55.32	-55.32	-62.56	-58.30
$\mathcal{W}_m^A$ ('000 BDT)	245.77	245.77	245.77	245.77	245.77	245.77	245.77	238.53	242.79
$\mathcal{W}_f^E$ ('000 BDT)	-737.13	-704.36	-704.36	-698.97	-724.60	-705.11	-954.68	-694.99	-738.81
$\mathcal{W}_f^A$ ('000 BDT)	154.17	224.81	224.81	243.11	179.62	236.97	113.60	260.00	165.41
<b>Services</b>									
$L_m^*$ (%)	78.00	78.00	78.00	78.00	78.00	78.00	78.00	80.00	78.00
$L_f^*$ (%)	60.00	66.00	66.00	60.00	63.00	64.00	63.00	68.00	62.00
$L_m^* - L_f^*$ (ppts)	18.00	12.00	12.00	18.00	15.00	14.00	15.00	12.00	16.00
$w_m^*$ (BDT)	833.00	833.00	833.00	833.00	833.00	833.00	833.00	919.00	856.00
$w_f^*$ (BDT)	776.00	984.00	981.00	783.00	858.00	897.00	525.00	1098.00	819.00
$w_m^* - w_f^*$ (BDT)	57.00	-151.00	-148.00	50.00	-25.00	-64.00	308.00	-179.00	37.00
$\mathcal{W}_m^E$ ('000 BDT)	-246.80	-246.80	-246.80	-246.80	-246.80	-246.80	-246.80	-219.07	-237.92
$\mathcal{W}_m^A$ ('000 BDT)	144.65	144.65	144.65	144.65	144.65	144.65	144.65	181.95	153.08
$\mathcal{W}_f^E$ ('000 BDT)	-835.43	-835.92	-836.90	-833.35	-851.63	-852.79	-959.97	-822.88	-850.08
$\mathcal{W}_f^A$ ('000 BDT)	74.56	94.90	93.92	76.64	101.36	115.32	20.33	135.82	90.25
<b>Education</b>									
$L_m^*$ (%)	87.00	87.00	87.00	87.00	87.00	87.00	87.00	88.00	87.00
$L_f^*$ (%)	68.00	72.00	72.00	67.00	70.00	72.00	74.00	74.00	69.00
$L_m^* - L_f^*$ (ppts)	19.00	15.00	15.00	20.00	17.00	15.00	13.00	14.00	18.00
$w_m^*$ (BDT)	1245.00	1245.00	1245.00	1245.00	1245.00	1245.00	1245.00	1363.00	1287.00
$w_f^*$ (BDT)	1064.00	1322.00	1324.00	1052.00	1171.00	1300.00	744.00	1455.00	1151.00
$w_m^* - w_f^*$ (BDT)	181.00	-77.00	-79.00	193.00	74.00	-55.00	501.00	-92.00	136.00
$\mathcal{W}_m^E$ ('000 BDT)	-143.83	-143.83	-143.83	-143.83	-143.83	-143.83	-143.83	-93.64	-125.30
$\mathcal{W}_m^A$ ('000 BDT)	264.56	264.56	264.56	264.56	264.56	264.56	264.56	317.31	280.98
$\mathcal{W}_f^E$ ('000 BDT)	-899.22	-859.63	-858.91	-889.97	-888.59	-867.47	-1116.38	-832.03	-882.72
$\mathcal{W}_f^A$ ('000 BDT)	124.37	220.18	220.89	118.56	162.29	212.34	92.24	232.13	153.14

*Notes:* The table shows the results from the industry counterfactuals. We use both employers' and applicants' beliefs about the job costs and productivity in our experiment. We conduct the following counterfactual exercises: 1) eliminating paternalistic discrimination, either by equalizing male and female other-regarding utility,  $\alpha_m \mathcal{W}_m^E = \alpha_f \mathcal{W}_f^E$ , by equalizing male and female perceived welfare,  $\mathcal{W}_m^E = \mathcal{W}_f^E$ , or equalizing the welfare weights,  $\alpha_m = \alpha_f$ , 2) eliminating taste-based discrimination by setting  $d = 0$ , 3) eliminating statistical discrimination by equalizing male and female perceived profits,  $\Pi_m^E = \Pi_f^E$ , or 4) eliminating differences in labor supply by equalizing male and female labor supply,  $L_m^S = L_f^S$ . We present effects on the following outcomes: 1) male and female employment as well as the the gender employment gap,  $L_m^*$ ,  $L_f^*$ ,  $L_m^* - L_f^*$  (in percentage points), 2) male and female wages as well as the gender wage gap,  $w_m^*$ ,  $w_f^*$ ,  $w_m^* - w_f^*$  (in BDT), 3) total male welfare as perceived by employers,  $\mathcal{W}_m^E$  (in '000 BDT), and applicants,  $\mathcal{W}_m^A$  (in '000 BDT), 4) total female welfare as perceived by employers,  $\mathcal{W}_f^E$  (in '000 BDT) and applicants,  $\mathcal{W}_f^A$  (in '000 BDT).

Table C.13: Counterfactuals: Estimating the Welfare Effects of Transport and Subsidy Interventions

	Status Quo	Govt Trans	Subsidies	Empl Trans
$L_m^*$ (%)	84.00	84.00	84.00	84.00
$L_f^*$ (%)	67.00	79.00	77.00	32.00
$L_m^* - L_f^*$ (ppts)	17.00	5.00	7.00	52.00
$w_m^*$ (BDT)	1106.00	1106.00	1106.00	1106.00
$w_f^*$ (BDT)	1013.00	1250.00	1640.00	391.00
$w_m^* - w_f^*$ (BDT)	93.00	-144.00	-534.00	715.00
$\mathcal{W}_m^E$ ('000 BDT)	-147.00	-147.00	-147.00	-147.00
$\mathcal{W}_m^A$ ('000 BDT)	202.32	202.32	202.32	202.32
$\mathcal{W}_f^E$ ('000 BDT)	-835.50	-210.74	-718.72	-525.62
$\mathcal{W}_f^A$ ('000 BDT)	105.95	199.11	427.91	34.71
$\Pi$ ('000 BDT)	827.90	931.68	997.44	725.16
Total Cost ('000 BDT)	0.00	312.84	343.04	0.00

*Notes:* The table shows the results from evaluating the effectiveness of transport and subsidy interventions. We use both employers' and applicants' beliefs about the job costs and productivity of the three industries in our sample. We evaluate the following interventions: 1) female transport paid by the policymaker, 2) a BDT 900 subsidy for hiring female workers paid to the employer, 3) female transport paid by the employer. We present effects on the following outcomes: We present effects on the following outcomes: 1) male and female employment as well as the gender employment gap,  $L_m^*$ ,  $L_f^*$ ,  $L_m^* - L_f^*$  (in percentage points), 2) male and female wages as well as the gender wage gap,  $w_m^*$ ,  $w_f^*$ ,  $w_m^* - w_f^*$  (in BDT), 3) total male welfare as perceived by employers,  $\mathcal{W}_m^E$  (in '000 BDT), and applicants,  $\mathcal{W}_m^A$  (in '000 BDT), 4) total female welfare as perceived by employers,  $\mathcal{W}_f^E$  (in '000 BDT) and applicants,  $\mathcal{W}_f^A$  (in '000 BDT), 5) total profits (in '000 BDT), 6) total costs to the implementer (in '000 BDT).