Pre-Analysis Plan:
Gender and the Price of Prejudice

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Abstract

We conduct an online experiment on Prolific to measure the willingness-to-pay to discriminate against female coworkers, using the price-of-prejudice paradigm of Hedegaard and Tyran (2018). We add a treatment of hidden productivity to highlight the differences between taste-based and statistical discrimination. This document pre-registers the hypotheses, estimation strategy, and power analysis.

Keywords: gender, discrimination, experiment

JEL Classification: J15, J16, C92

1 Introduction

Identifying sources of discrimination has been a subject of debate in economics for decades. The debate often differentiates between taste-based (Becker, 1957) and statistical (Phelps, 1972; Arrow, 1972) discrimination, the latter more recently divided into accurate and inaccurate statistical discrimination (Bohren et al., 2023).

In a laboratory experiment, Hedegaard and Tyran (2018) showed that a substantial share of decision makers (38%) chose a less productive same-ethnicity partner when names and productivity were revealed, forgoing on average 8% of earnings. Crucially, discrimination was *price-elastic*: a 10% increase in the cost of choosing the same-ethnicity partner reduced discrimination by approximately 9%. Andersen et al. (2026) replicate the protocol and find comparable results in Japan. While the literature has extensively studied the origin (taste-based or statistical) of ethnic discrimination (Neumark, 2018), less is known about the relative importance of gender discrimination in the labor market.

In this paper, we adapt the methodology from Hedegaard and Tyran (2018) to measure the willingness to discriminate against female coworkers. We also add a treatment where productivity are not revealed, to differentiate between taste-based and statistical discrimination. The experiment is to be run on Prolific.

2 Experiment and sample

Sample The sample will consist in approximately 600 workers recruited through the Prolific platform, and will consist in US workers.

Experimental Design The experiment will resemble the protocol of Hedegaard and Tyran (2018), adapted to an online experiment and to specifically study gender.

Workers will start with a production task, where they will have to answer 6 math questions as quickly as possible, while remaining accurate. Their performance (the time it took them to perform the task) will be recorded.

They will then be asked to choose potential partners to perform the task again, the second

time with a joint production incentive. Specifically, subjects and their pairs will have to answer other mathematical questions, and subjects will only be able to move on to the next task when both them and their pair will have answered questions correctly.[1] For this partner choice task, they will **not have any information about the productivity of the partner**, this is the *No Info* condition. Subjects will choose one partner in each of 16 potential partner pairs (presented in random order), the list of which is displayed in Table A.1, and one decision will be implemented. An example of choice is displayed in Figure A.1. They will perform the math-task a second time, with the incentive implemented.

After the second production task, subjects will be asked to select among the same exact pairs, this time with **partner-productivity revealed**. This is the *Info* condition. Subjects will again make 16 binary decisions, this time observing productivity of the partners. An example of choice for the second pair choice is displayed in Figure A.2.

The third task is not relevant to the study, so we decided not to make participants perform the task a third time.

For a limited sample ($N \sim 100$), the order of the blocks (without productivity information, with productivity information) will be reversed. This group is added to measure differences between between-subject and within-subject variations (List, 2025). For two other samples ($N \sim 50$), they will face twice the same information, to measure the violations from within-subject designs hypotheses (Clochard et al., 2026). The order of participation in each task will be the treatment variable.

The experimental flow for the main treatment arm is summarized in Figure 1, and the treatments are displayed in Figure B.1.

Decision rules for dropping observations If participants do not complete the experiment, we will exclude their observation.

Decision rules for dropping variables If 90 percent or more of the sample answers the same value on a given variable, we will define this as limited variation, and therefore will drop variables in question from the analysis.

[1] If the subjects finish the task in advance, they will be redirected to a wait screen.

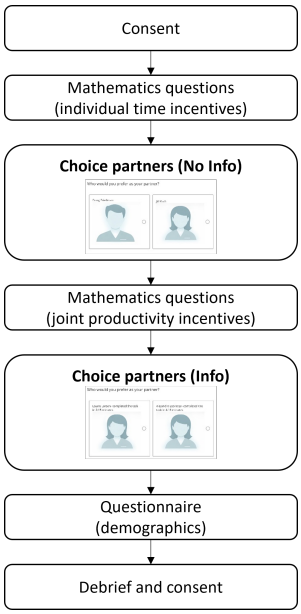

Figure 1: Experimental flow (No Info - Info treatment)

Missing values If more than 30 percent of the respondents do not answer a particular question, it will no longer be seen as a variable of interest.

3 Data and coding of main variables

Treatment variables The treatment variable will be a categorical variable, describing the order of display of the productivity condition for partner choices. The variable will take four potential values: *No info, Info* (N = 400), *Info, No info* (N = 100), *Info-Info* (N = 50), *No Info, No Info* (N = 50).

Primary outcome variables The primary outcome variables will be the share of "male" choices made by the subject in both conditions (with and without information about the other partner's productivity). Because we created partner pairs to be symmetric in productivity, we can define the variable *Discrimination* if the share of male choices is strictly higher than 0.5.

Secondary outcomes In the task with information about productivity, we will also be able to measure the willingness to pay to work with a female worker. Another secondary outcome will

be the willingness to pay not to interact with Hispanic workers.

Controls We will control for subject age, gender, race, and occupation. We will also record individual productivity.

Heterogeneity We will measure heterogeneity by subject gender and race. We will also perform heterogeneity by doing a median split of individual productivity (measured with individual incentives).

4 Empirical Strategy

Presence of discrimination against women Across all conditions and all treatments, we want to test whether the probability of choosing a female partner is lower than 0.5. As defined already, we will run a logistic regression. Specifically, we will perform a t-test for whether the variable *Discrimination* is different from 0.

Difference between Info and no Info

$$\Pr(F_{ij} = 1) = \Lambda(\alpha + \beta\,\Delta Prod_j + \gamma Info_j + \delta(Info_j \times \Delta Prod_j) + \epsilon_{ij})) \tag{1}$$

Willingness to pay For the Info treatment, because we have a series of different productivity differences, we can estimate a willingness-to-pay not to interact with a female worker. Specifically, we can estimate the previous equation.

The willingness-to-pay is then measured as the indifference point: $WTP = -\frac{\alpha+\gamma}{\beta+\delta}$.

Within vs between Our main analysis will be conducted with the *No Info-Info* group. However, the presence of the alternative treatments will enable us to compare the treatment effect in the within-design context (our main specification) and in a between context, by estimating the same equations by comparing the groups that are subject to the *No Info* condition first and the groups exposed to *Info* condition first (Clochard et al., 2026).

5 Hypotheses

- **H1 (Primary): Presence of discrimination** Over all treatments and conditions, people are less likely to select female partners. This corresponds to the *Discrimination* variable being strictly positive.
- **H2 (Primary): Statistical discrimination** Discrimination is lower in the information condition, which corresponds to $\gamma \neq 0$ in Equation 1.
- **H3 (Secondary): Price of discrimination** Demand for discrimination is price-elastic: the probability of choosing the female partner increases in the *Info* condition as the productivity advantage of the female partner increases. The price of prejudice is therefore defined as the point of indifference point between female and male partners, corresponding to the parameter $-\frac{\alpha+\gamma}{\beta+\delta}$ in Equation 1.

All tests are two-sided with $\alpha = 0.05$.

6 Power Calculation

We conduct power analyses using both analytical formulas and Monte Carlo simulations.

For the willingness-to-pay analysis (Equation 1), we used $\beta = 0.2$, $WTP_i \sim \mathcal{N}(\mu, \sigma)$ with a grid for μ from 0 to 2, and $\sigma = 4$ and performed 500 simulations of 16 choices. This simulation gives an MDE of 0.7 τ units.

7 IRB Approval and Consent

We will ask for informed consent at the beginning of the experiment. In this case, they will not be compensated.

In addition, we will inform subject at the end of the experiment that the survey was about measuring gender discrimination, and that they are allowed not to submit their answers. Subjects will then be asked if they consent to share their data.

The project received approval from the Institutional Review Board from the Tulane University Human Research Protection Office (#2025-1631) on February 24, 2026.

8 Archive

The pre-analysis plan is archived before any data is collected. We will archive it at the registry for randomized controlled trials in economics held by the American Economic Association: https://www.socialscienceregistry.org/ on June 8, 2026.

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Appendices

A Partner choices

Table A.1: Partner List

Partner 1				Partner 2				Time
Name	Time	Gender	Race	Name	Time	Gender	Race	diff.
Beth Schneider	0:59	F	W	Scott Yoder	4:01	M	W	3:02
Doug Friedman	1:27	M	W	Jill Koch	3:58	F	W	2:31
Todd Schwartz	1:58	M	W	Kathleen Schaefer	3:57	F	W	1:59
Guadalupe Ibarra	2:29	F	H	Jesus Barajas	4:00	M	H	1:31
Jorge Velazquez	2:45	M	H	Blanca Cervantes	3:44	F	H	0:59
Mayra Villalobos	3:00	F	H	Juan Avalos	3:29	M	H	0:29
Brad Weiss	1:56	M	W	Yesenia Rosas	4:58	F	H	3:02
Colleen Oconnell	1:27	F	W	Luis Zavala	3:57	M	H	2:30
Lynne Odonnell	0:59	F	W	Jose Vazquez	3:02	M	H	2:03
Alejandro Orozco	3:32	M	H	Jodi Reilly	3:59	F	W	0:27
Juana Hernandez	2:58	F	H	Stuart Krueger	4:02	M	W	1:04
Hector Juarez	2:22	M	H	Carole Huber	2:54	F	W	0:32
Javier Huerta	1:27	M	H	Graham Schmitt	4:30	M	W	3:03
Kurt Klein	1:56	M	W	Guillermo Trejo	4:28	M	H	2:32
Laurie Larson	2:15	F	W	Alejandra Espinoza	4:16	F	H	2:01
Marisol Mejia	1:59	F	H	Suzanne Meyer	3:26	F	W	1:27

Note: Gender: F: Female, M: Male; Race: W: White, H: Hispanic.

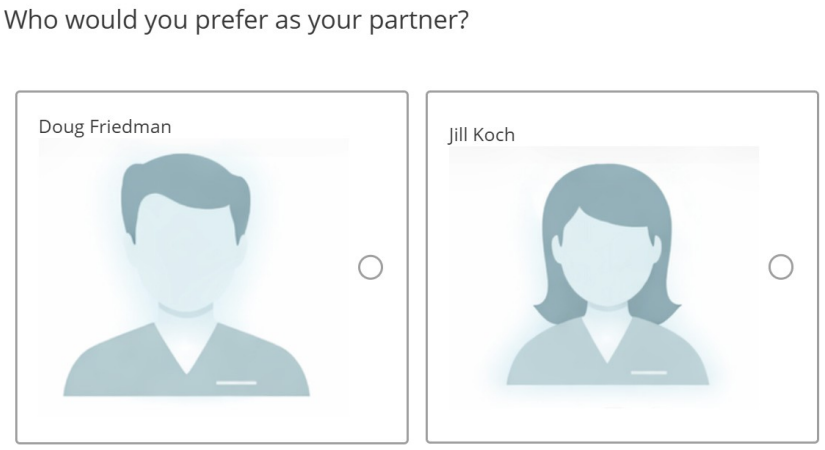

Figure A.1: Example of partner choice (No Info condition)

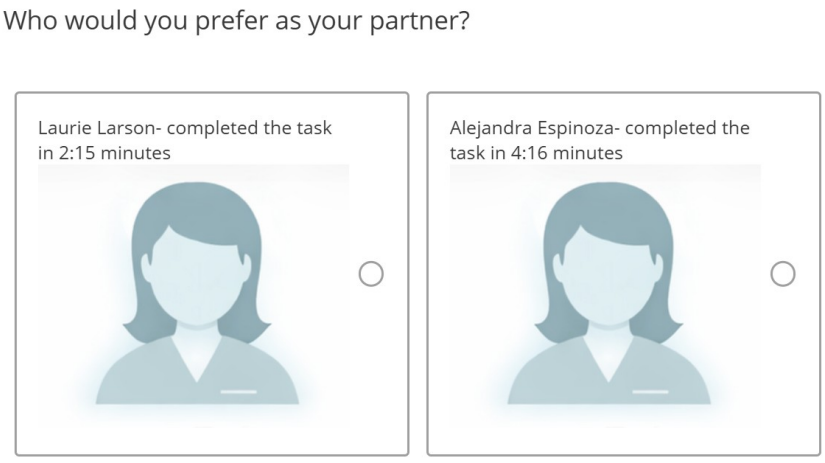

Figure A.2: Example of partner choice (Info condition)

B Experimental Design

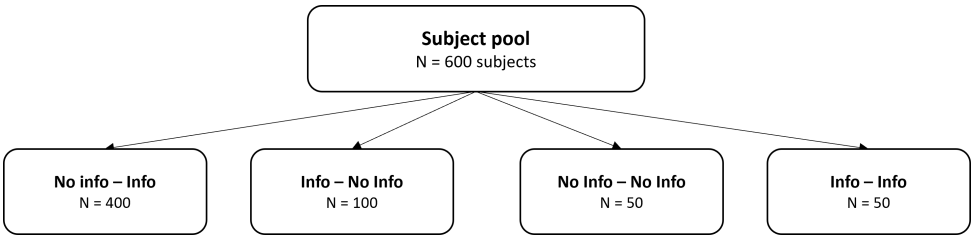

Figure B.1: Experimental treatments