

# Gender and the labor market: What have we learned from field and lab experiments?

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# Motivation

## Experiment vs Regression

- ▶ Regression approach
  - ▶ Naturally-occurring data
  - ▶ No control over the information elicited or the economic environment
  - ▶ Identifying assumptions are needed to estimate the causal effect of treatment.
- ▶ Experimental approach
  - ▶ Lab experiments
  - ▶ Field experiments

# Experimental approach

- ▶ Lab experiments
  - ▶ Use randomization to identify the effect of treatment in the lab
  - ▶ Full control over the environment
  - ▶ The causal effect of treatment is identified simply by the difference in mean treatment and control outcomes.
- ▶ Field experiments
  - ▶ Audit and correspondence studies
  - ▶ Use randomization in a natural-occurring environment
  - ▶ Relevant sample pools that may not be aware of their participation in an experiment
  - ▶ Allowing for a combination of control and realism ([Harrison and List, 2004](#))

# Why using experiments in labor research?

- ▶ Expansion of labor economists' perspectives to largely unexplored fields at the border between economics and psychology ([Bertrand, 2011](#), a survey on new perspectives on gender disparities)
- ▶ Clear awareness of the limitations of observational data and at the same time setting higher standards for empirical inference
- ▶ Letting questions determine the data to be obtained, instead of the data determining the questions that can be asked ([Duflo, 2006](#))

# Contributions

This paper reviews recent advances in the economics of gender that have been achieved via the experimental approach. We may consider the cases below:

- ▶ Discrimination
- ▶ Individual preferences
- ▶ Group preferences

# Regression approach in discrimination

- ▶ The study of discrimination in the gender literature since [Becker's \(1957\)](#) seminal work.
- ▶ The early literature has used regression-based methods on observational data, typically labor force or household survey data to test for discrimination in the labor market.
- ▶ Decomposing wage (or participation) differentials between men and women into an "explained" gap and "unexplained" gap ([Oaxaca, 1973](#); [Blinder, 1973](#))
- ▶ [Altonji and Blank \(1999\)](#) Point to large unexplained gaps in gender wages and participation rates, which is certainly consistent with discrimination.

## Shifting to experiments

There are two main shortcomings in regression approach:

- ▶ Most observational data inevitably lack information on some of the determinants of a worker's productivity, which are nevertheless observed and valued by employers. Thus the "unexplained" gap is contaminated by unobserved differences in productivity.
  - ▶ The regression approach would control for "too little".
- ▶ If pre-labor market investment in human capital is affected by expectations of future discrimination, part of the impact of discrimination is captured by observable productivity differences, and the resulting "unexplained" gap would underestimate the true extent of discrimination.
  - ▶ The regression approach would control for "too much".

# Audit studies in discrimination

## Introduction

Audit studies on gender compare callback rates and/or offer rates on a given job opening for pairs of applicants, one male and one female with identical resumes, who are coached to act alike.

- ▶ **Neumark(1996)** Conducts an audit study of hiring discrimination in the US restaurant industry.
  - ▶ Results show that women are significantly less likely to be invited for interviews and to receive job offers from high-price restaurants.



# Audit studies in discrimination

## Shortcomings

While audit studies provide cleaner evidence on discrimination than the typical regression approach on survey data, there are two main shortcomings:

- ▶ Submitting identical pairs may not be fully accomplished.
- ▶ Auditors, who are instructed about the purpose of the study may induce conscious or subconscious behavior that is correlated with gender.

Such weaknesses can be overcome in "**blind**" studies.

# Blind studies

**Goldin and Rouse (2000)** Their well-known study exploits the gradual adoption of blind auditioning by US orchestras during the 1970s and 1980s.

- ▶ Some of the cleanest evidence available of discrimination against women.
- ▶ Overall conclusion of the paper is that blind auditioning reduced discrimination against women and thus contributed to the recent increase in the presence of women in top orchestras.

## Correspondence studies

In the absence of viable blind studies, correspondence studies have recently provided a promising alternative to audit studies.

By sending resumes on fictitious applicants instead of real-life auditors, correspondence studies overcome the main weaknesses of the personal approach in audit studies.

- ▶ [Bertrand and Mullainathan \(2004\)](#) Provide the largest and probably best-known correspondence study of racial discrimination.
  - ▶ Bertrand and Mullainathan detect no evidence of lower callback rates for females than for males.
- ▶ [Riach and Rich \(2006\)](#) and [Petit \(2007\)](#) are other well known correspondence studies
- ▶ [Heckman and Siegelman \(1993\)](#) critique.

# Evidence from experiments

## Discrimination

Other well known experiments on gender discrimination:

- ▶ [List \(2004\)](#)
  - ▶ A clear indication of statistical, rather than taste-based, discrimination in the market for sports cards.
- ▶ [Manning \(2003\)](#)
  - ▶ Substantial search frictions in the labor market translate differences in hiring rates into persistent differences in wages.
- ▶ [Bertrand and Mullainathan \(2004\)](#)
  - ▶ Addressing [Heckman and Siegelman \(1993\)](#) critique.

# Individual preferences

- ▶ The traditional approach in labor economics to understanding gender differences has considered:
  - ▶ Demand-side explanations such as discrimination
  - ▶ Supply-side explanations based on the accumulation of human capital and family constraints
- ▶ More recently, however, economists have looked into alternative supply-side explanations for gender differences in outcomes that are related to psychological attributes and preferences.
- ▶ Experimental findings on gender differences in preferences may affect job choice and on-the-job outcomes.

# Evidence from experiments

## Individual preferences

- ▶ **Eckel and Grossman (2008)** Men are more risk-prone than women.
- ▶ **Babcock and Laschever (2003)** Women "don't ask" for a pay increase.
- ▶ **Rustichini (2004)** Opponent's gender matters for individual performance.
  - ▶ Girls' speed decreases when they run against other girls, while it slightly increases when they run against boys.

# Evidence from experiments

## Individual preferences

- ▶ **Niederle and Vesterlund (2007)** Women prefer to be compensated piece-rate, while men prefer tournaments.
- ▶ **Booth and Nolen (2012)** Girls from single sex schools have risk preferences similar to boys', while girls in coed schools are more risk averse.
- ▶ **Gill and Prowse (2014)** Women's performance is negatively affected by previous losses, while men's performance is only negatively affected when stakes are sufficiently high.

## Group preferences

- ▶ If different psychological traits lead men and women to make different choices in similar contexts, the gender composition of teams becomes a relevant factor in collective decision-making.
- ▶ Various studies have shown that individual behavior changes in the presence of people from the same or opposite sex, highlighting the role of group interactions.



# Evidence from experiments

## Group preferences

- ▶ [Ahern and Dittmar \(2012\)](#) Quota setting in Norway implied a decline in stock prices and operating profits.
- ▶ [Matsa and Miller \(2013\)](#) Quota setting in Norway has changed the style of corporate leadership.
- ▶ [Bagues and Esteve-Volart \(2010\)](#) Female candidates are less likely to be hired whenever they are randomly assigned to a committee with a stronger female presence.
- ▶ [Hoogendoorn et al. \(2013\)](#) Detecting an inverse u-shaped relationship between the share of women and a team's business performance, such that teams with an equal gender mix perform best.

# Evidence from the field

## Group preferences

### Apesteguia et al. (2010, 2012)

- ▶ Studying how a female presence on a team affects collective choices and performance.
  - ▶ A large online business game by teams of three
  - ▶ Taking the role of a general manager of a beauty-industry company, competing in a market composed of four other simulated companies.
- ▶ The analysis shows that teams composed of three women are significantly outperformed by any other gender combination of four other simulated companies.
- ▶ All-women teams
  - ▶ Are less aggressive in their pricing strategies
  - ▶ Invest less in R&D
  - ▶ Invest more in social sustainability initiatives

# Conclusion

- ▶ In gender economics, the experimental approach offers a way to answer questions previously believed to be unanswerable because of data limitations, as well as new techniques to cleanly identify mechanisms and results in older topics traditionally studied by labor economists.
- ▶ The psychology and behavioral economics studies on gender preferences and attitudes have helped shed light on gender disparities in choice.

Thanks!