

Reforms in the Public Sector Spring 2017

Labor market discrimination

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Gary Becker (1957) – The economics of discrimination

Definition of labor market discrimination is based on the **unequal treatment of equally qualified workers.**

In general discrimination is difficult to prove.



Wage differentials

- Different people earn different wages
- Explaining why different people earn different wages is a classic question in labor economics
- Typically, we can only explain about 30 or 40 percent of observed wage variation on the basis of observable characteristics of workers and firms
- We call the differences in the wages earned by people with different characteristics wage differentials
- Many factors that might generate wage differentials

Measuring discrimination

- Suppose that we have two groups of workers, say, male and female. The average male wage is given by \overline{W}_M , while the average female wage is given by \overline{W}_F .

One possible definition of discrimination is given by the difference in mean wages, or: $\Delta\overline{W} = \overline{W}_M - \overline{W}_F$



- A more appropriate definition of labor market discrimination compares the wages of equally skilled workers. Suppose that only one variable, schooling (which we denote by s), affects earnings. The earnings functions for each of the two groups can then be written as:

Male earnings function: $W_M = \alpha_M + \beta_M S_M$

Female earnings function: $W_F = \alpha_F + \beta_F S_F$

- The coefficient β_M tell us by how much a man's earnings increase if he gets one more year of schooling, while the coefficient β_F gives the same statistic for a woman.
- The regression model implies that the raw wage differential can be written as:

$$\Delta \bar{W} = \bar{W}_M - \bar{W}_F = \alpha_M + \beta_M \bar{S}_M - \alpha_F - \beta_F \bar{S}_F$$

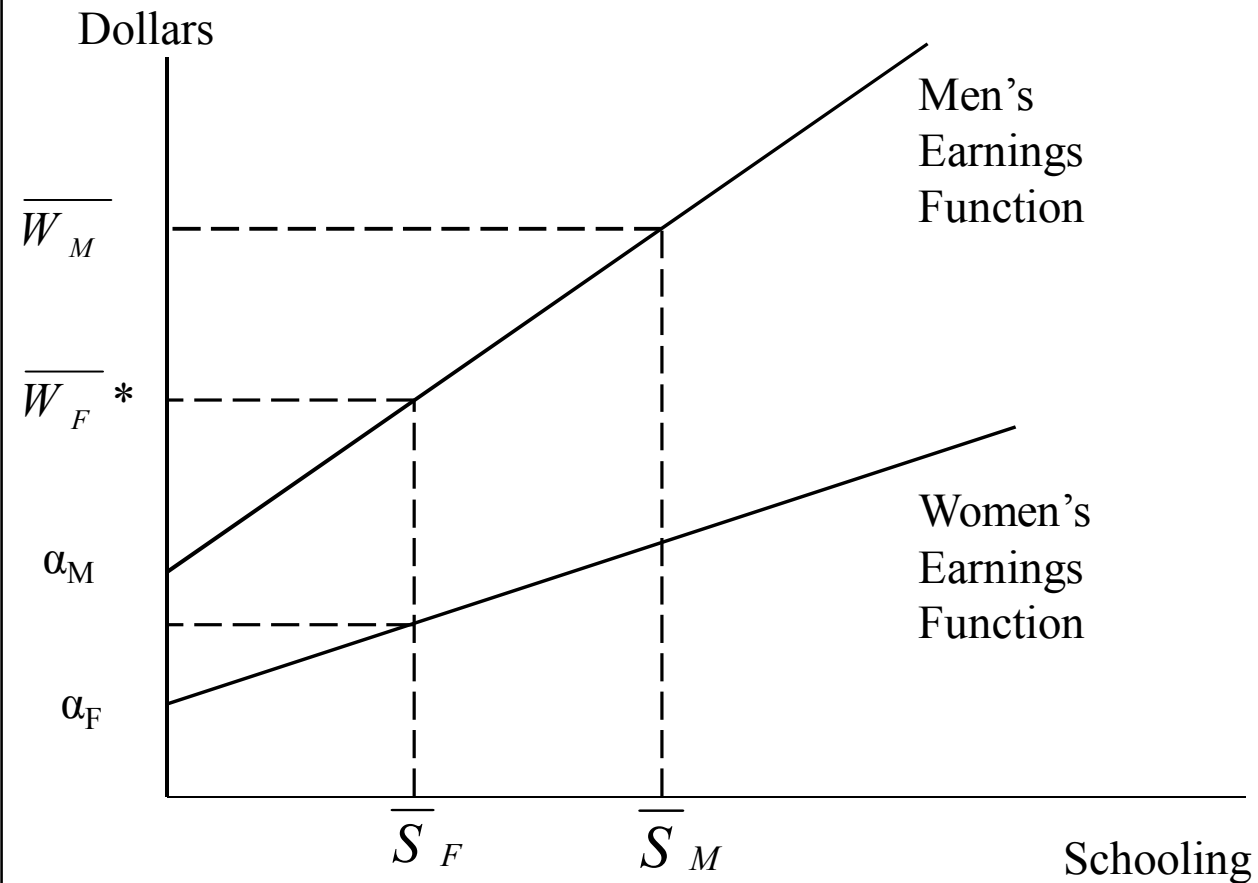
The Oaxaca Decomposition

We can rewrite the raw wage differential as:

$$\Delta \bar{W} = \underbrace{(\alpha_M - \alpha_F) + (\beta_M - \beta_F) \bar{S}_F}_{\text{Differential due to discrimination}} + \underbrace{\beta_M (\bar{S}_M - \bar{S}_F)}_{\text{Differential due to difference in skills}}$$

The second term in the equation arises because the two groups differ in their skills. The first term in the equation arises because of this differential treatment of men and women which is typically defined as discrimination.

→ The raw wage differential can be decomposed into a portion due to **differences in characteristics (explained)** between the two groups, and a portion that remains **unexplained**.



The average woman has S_F years of schooling and earns W_F dollars. The average man has S_M years of schooling and earns W_M dollars. Part of the wage differential arises because men have more schooling than women. If the average woman was paid as if she were a man, she would earn W_F^* dollars. A measure of discrimination is then given by $(W_F^* - W_F)$.

Easy math

- Suppose years of schooling, s , is the only variable that affects earnings. The equations for the weekly salaries of male and female workers are given by $W_M = 500 + 100 S_M$ $W_F = 300 + 75 S_F$

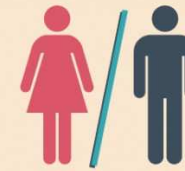
On average, men have 14 years of schooling and women 12.

A) What is the male-female wage differential in the labor market?

B) Using the Oaxaca decomposition, calculate how much of this wage differential is due to discrimination?

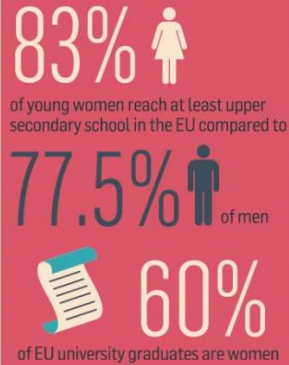
$$\Delta \bar{W} = (\alpha_M - \alpha_F) + (\beta_M - \beta_F) \bar{S}_F + \beta_M (\bar{S}_M - \bar{S}_F)$$

GENDER PAY GAP ACROSS EUROPE



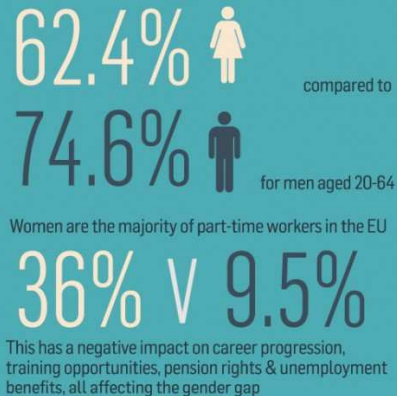
EDUCATION

The gender gap exists even though women do better at school & university than men



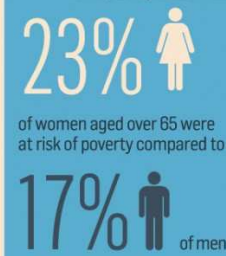
EMPLOYMENT

The overall employment rate for women in Europe is



POVERTY

The effects of the gender gap can result in poverty over time, as reported in 2011



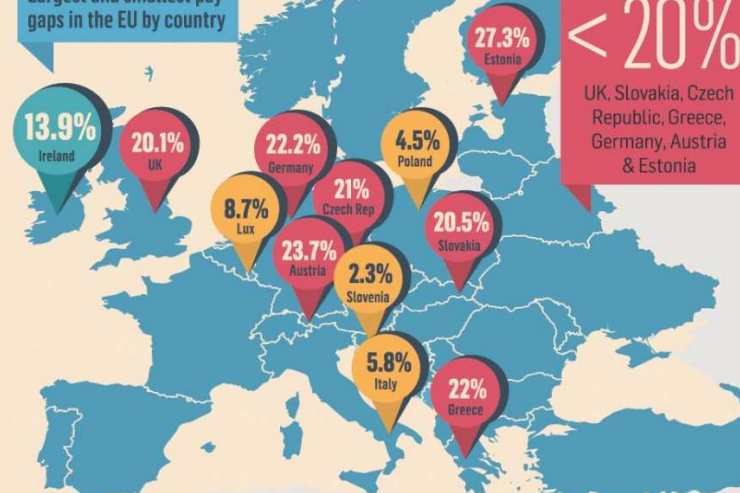
On average, women in the EU earn 16.2% less per hour than men

>10% Slovenia, Poland, Italy & Luxembourg

CAUSES OF THE GENDER GAP

- Discrimination in the workplace
 - 80% Different jobs, different sectors - In the health & social work sector alone, women make up 80% of all workers. Sectors where women are in the majority have lower wages than those dominated by men
- Workplace practices & pay systems
- Undervaluing of women's work & skills
 - 32% Few women in senior & leadership positions 32% of scientists and engineers across Europe are women. 15.8% of board members in the biggest publicly-listed companies across the EU are women
- Gender roles & traditions
 - 64.7% Balancing work & family responsibilities - In 2010, the employment rate for women with dependant children was only 64.7% compared with 89.7% for men with children

Largest and smallest pay gaps in the EU by country



< 20% UK, Slovakia, Czech Republic, Greece, Germany, Austria & Estonia

Source - 'Tackling the gender pay gap in the EU' European Commission Report 2013 - <http://ec.europa.eu>

Design - Heather Griffin

Theories of discrimination

Taste discrimination: individuals prefer certain individuals to others.

Statistical discrimination: agents make decisions about individuals based on their attributes and those of their group.



Employer discrimination

- Employer discrimination occurs when employers have preferences for hiring certain “types” of workers (assume two types of workers A and B).
- Prejudiced employer incurs a psychic cost $d > 0$ that raises the cost of hiring a worker from minority group B to $(w_B + d)$ and will hire B workers only if $w_A \geq w_B + d$.
- B workers are employed by the least prejudiced firms; A and B workers will be segregated into different firms.
- If discriminating tastes are widespread and there are many B workers seeking employment, some B workers will have to find jobs at discriminating firms (at the lower wage).
- A wage differential $w_A \geq w_B$ will arise only if the fraction of discriminating employers is sufficiently large

Customer discrimination

- Customers have discriminatory preferences
- Prejudiced consumers in group M get less utility if they purchase from a group F member than from a group M member. They act as if the price was $p(1+d_C)$
i.e. They are willing to pay M higher price than p to avoid buying from F.
- The effect of such discrimination on wages is eliminated if F workers can serve only F customers and unprejudiced M customers, or if F workers are employed in occupations without consumer contact.

Discrimination at the group level.

- Employers want to hire the “best person for the job,” but this can be a difficult thing to assess on the basis of interviews, resumes.
- Instead, the employer can observe things that may be correlated with productivity
 - Education, experience, references, etc.
- Employers might have low demand for particular “types” of workers because being that type might be associated with low productivity on average
- **Statistical discrimination** is often used and tolerated. Why?

The cost of discrimination

- Discriminating against an individual based on the perceived characteristics of his or her group is illegal in many cases.
- Discrimination should not survive in the face of market forces because non-discriminating employers should out-perform discriminating employers because they are willing to hire the cheaper but equally productive inputs.
- Non-discriminating employers should expand and discriminating ones contract, until discriminatory wage differentials are eliminated all firms earn zero profits

Policy responses

- Discrimination raises problems of **inequity** and **inefficiency**.
- Many countries have responded to these perceived inequities by enacting equality promoting legislation.
- European Union (EU) laws clearly prohibit discrimination in employment based on race or ethnicity, gender, age, disability, and religion or beliefs.
- Color-blind treatment
- Quotas (reversed discrimination)



We all have **subconscious biases**. Studies have shown that personal information, such as a name, can trigger these subconscious biases about ethnic origin, immigrant status and gender, for example, and prevent employers from objectively seeing the rest of what's in the application.



Testing for discrimination

- Identifying discriminatory practices is not an easy task.
- **Correspondence testing** can be used to test for hiring discrimination based on race or ethnicity, gender, age, sexual orientation.
- The method involves sending matched pairs of identical job applications to employers posting jobs—the only difference being a characteristic that signals membership to a group.
- Correspondence studies than compare call-back rates for fictitious applications.



Fig. 1. Names and photographs, indicators for identity

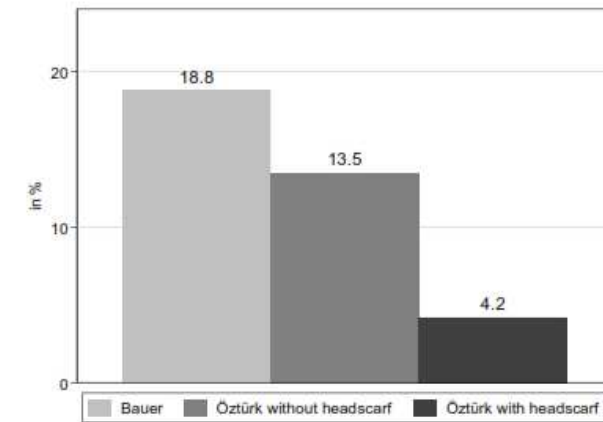


Fig. 2. Callbacks by identity

- Everything else equal, a female with a Turkish name who wears a headscarf has to send 4.5 times as many applications (and even 7.6 times as many for higher-ranking jobs) as an applicant with a German name and no headscarf to receive the same number of callbacks for an interview

Source: Discrimination against Female Migrants Wearing Headscarves by Doris Weichselbaumer, 2016



Statistical reasoning behind unequal treatment

- Applicants aged 23, single, from South Paris, work experience <2 years
- Signal is the language ability (e.g. teacher, writer, reading club)
- Sent 3204 resumes to 504 job postings (accounting jobs, assistant)
- Experiment conducted between Sep 2011 and Feb 2012 in Paris

Callback rates:

	French Names			North African Names			Foreign Names		
	Control	Signal	Overall	Control	Signal	Overall	Control	Signal	Overall
Male	14.3%	15.5%	14.9%	6.0%	8.3%	7.1%	8.3%	7.9%	8.1%
Female	20.6%	18.7%	19.5%	10.7%	14.7%	12.7%	9.1%	15.1%	12.1%
Total	17.5%	17.1%	17.3%	8.3%	11.5%	9.9%	8.7%	11.5%	10.1%

- Applications with French names always elicit far more callbacks (17%) than non-French ones (10%).
- North African (9.9%) and Foreign applicants (10.1%) are equally treated
- Females are considerably more successful than males
- The effect of the signal improves rates for non-French applicants but no effect on French (stronger effect for females)
- Employer discrimination towards men may be primarily taste based (job), while women may suffer from statistical discrimination
- Language ability potentially signals assimilation.
- Discrimination is greater in the city of Paris than in the suburbs.
- Discrimination disappears for recruiters with non-European name which points to **Homophilous discrimination** (preference for similar individuals)

Edo, Anthony, Nicolas Jacquemet, and Constantine Yannelis. "Language Skills and Homophilous Hiring Discrimination: Evidence from Gender-and Racially-Differentiated Applications." (2013).

Does publicly available information on Facebook matters for hiring?

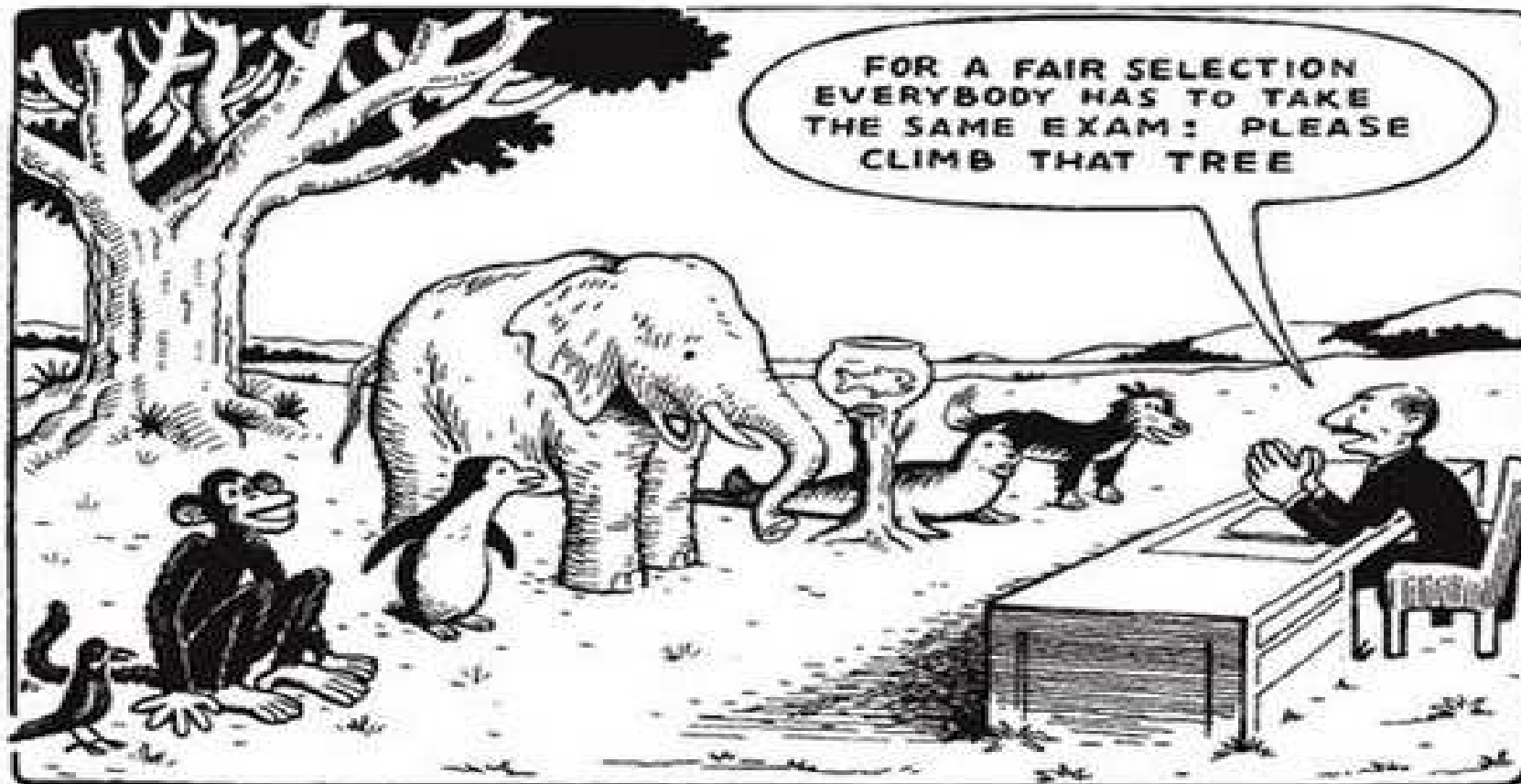
- For half applications pictures were pasted into the resumes, and other half with unique Facebook profile with name and picture
- 1056 job openings in Belgium
- Results: candidates with the most beneficial FB picture obtain approximately 39% more job invitations relative to candidates with the least beneficial picture.

Baert, Stijn. "Do They Find You on Facebook? Facebook Profile Picture and Hiring Chances." (2015).



	(1) Positive call-back rate Picture 1	(2) Positive call-back rate Picture 2	(3) Positive call-back rate Picture 3	(4) Positive call-back rate Picture 4
A. Positive call-back sensu stricto				
A.1. Pictures used as Facebook profile pictures	0.098	0.076	0.076	0.053
A.2. Pictures used as resume pictures	0.068	0.095	0.057	0.053
B. Positive call-back sensu lato				
B.1. Pictures used as Facebook profile pictures	0.227	0.193	0.227	0.170
B.2. Pictures used as resume pictures	0.189	0.204	0.186	0.148

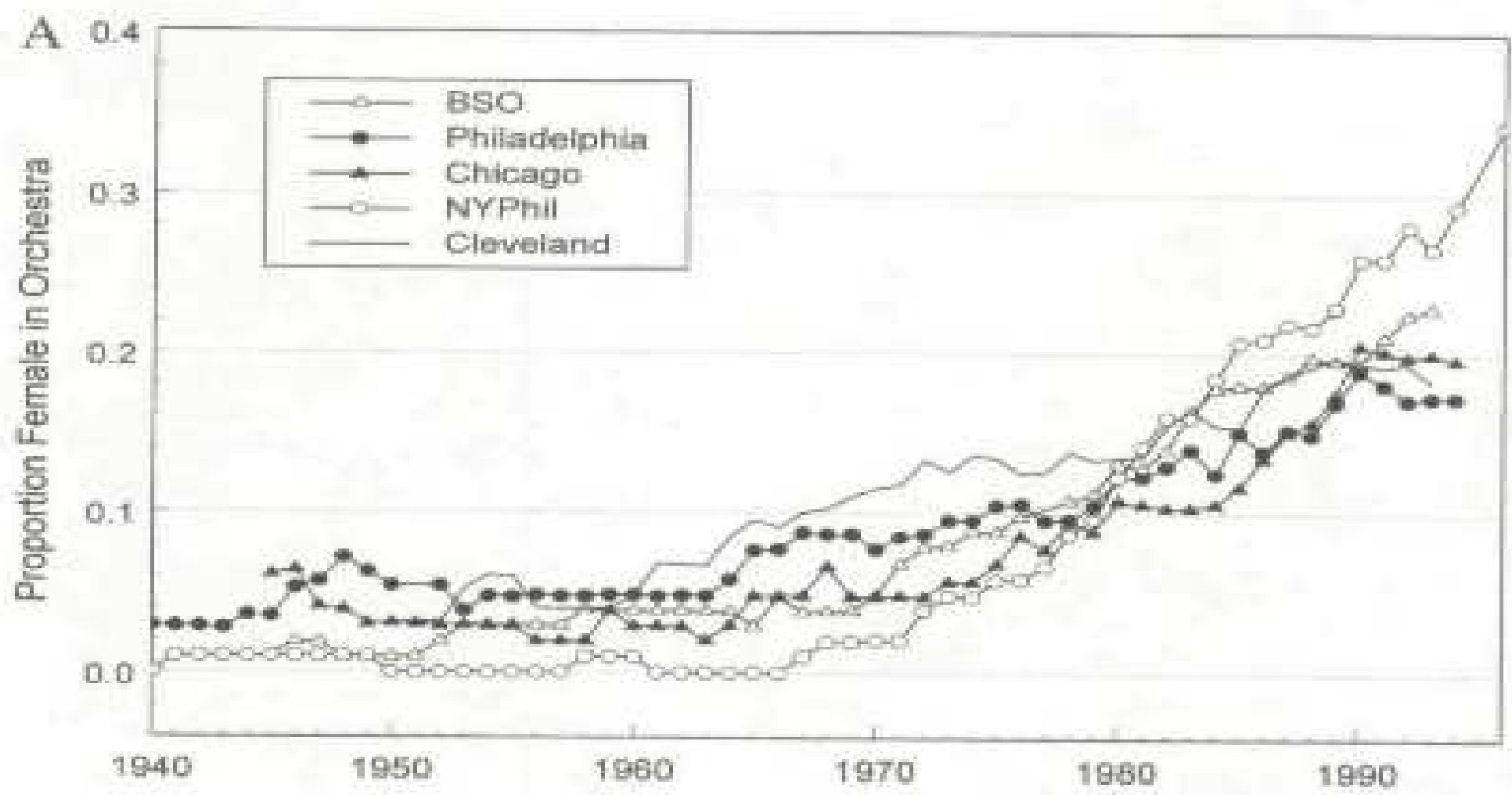
Positive call-back **sensu stricto** means the applicant was invited for an interview concerning the posted job.
Positive call-back **sensu lato** also includes the request to contact the recruiter to provide more information.



The hiring process and discrimination.

- Discrimination is more frequent at the hiring level than the compensation plan
- Discrimination appears to be strongest when employers decide about invitations to interviews





Study: The impact of blind auditions on female musicians

- Symphony orchestra has 95-105 musicians
- Types of jobs are identical and turnover is low (only few female-dominant instruments: harp)
- Before 1970s the US finest orchestras had less than 10% of women.
- Most renewed conductors claimed: female musicians are not the equal of male musicians.
- The audition procedures began to change in 70s.
- The blind hiring procedure could eliminate the possibility of discrimination.

- Goldin, Claudia, and Cecilia Rouse. *Orchestrating impartiality: The impact of "blind" auditions on female musicians*. No. w5903. National bureau of economic research, 1997.

Anonymous job applications in Europe

- In 2010 Germany's Anti-Discrimination Agency, an advisory body, sponsored a voluntary scheme to get businesses to try it.
- In France a law passed in 2006 made the anonymising of applicants' CVs compulsory for firms of over 50 employees.
- In the UK, big employers in the public and private sectors—including the civil service, HSBC and Deloitte—have agreed to start recruiting on a “name-blind” basis in Britain.
- “IF YOU’VE got the grades, the skills and the determination, this government will ensure you can succeed” (David Cameron, 2015)

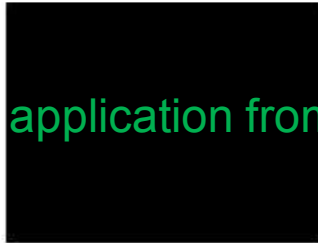
Anonymous job applications

- Achieve better outcome with less information
- In most cases, anonymous job applications lead to the desired effect of increasing the interview invitation probabilities of disadvantaged groups.
- An attractive policy instrument to combat hiring discrimination in public sector.
- Anonymous hiring can reduce discrimination if discrimination is present beforehand.



Lebenslauf

Persönliche Daten



Anonymous application from German experiment

Bürokauf

Fachspezifische Erfahrungen



Assistent der Geschäftsführung, Bereich Groß- und Einzelhandel
Beispiel GmbH, Berlin

Aufgaben:

- > Vorbereitung der Buchhaltung
- > Erstellung von Budgets
- > Protokollführung bei Sitzungen und Besprechungen



Projektassistent
Muster AG, Berlin

Aufgaben:

- > Terminplanung und -überwachung
- > Erstellen von Präsentationen

Berufsausbildung



Muster AG, Berlin
Bürokauf

Schulbildung



Georg-Büchner-Schule, Berlin
Realschulabschluss

Kenntnisse und Fähigkeiten

Sprachkenntnisse

Englisch, Grundkenntnisse

EDV-Kenntnisse

Gute MS-Office-Kenntnisse, sicherer Umgang mit dem Internet

Sonstige

Führerschein Klassen B

Hobbys

Schwimmen, Segeln, Volleyball

- **Employers that have online applications** or that use a particular type of software could hide certain information—such as name, age or gender—during the initial screening stage.
- **Employers that use traditional paper or e-mail applications** could simply instruct the applicants to submit two versions of their resume—one anonymous, one conventional—or to put their personal information on the last page.



Not all information can be removed

- Recruiters may have used other indicators, such as knowledge of Arabic, to identify race. In places fraught with religious tension, such as Northern Ireland, the name of a school can reveal a candidate's faith, while a few years missing on a CV may suggest maternity leave, and thus that the candidate is female.
- When documents are not effectively anonymous then the result is worst than a normal application

Self-perceived objectivity

- A sense of personal objectivity gives rise to an **'I think it, therefore it's true'** mindset, which increases people's confidence in the validity of stereotypic beliefs, thoughts, and intuitions they have, and therefore increases their likelihood of acting on them.
- When people feel objective, their hiring judgments should be relatively more influenced by stereotypic beliefs and thoughts.
- Decision-makers who endorse stereotypic beliefs.

When the anonymous (blind) job hiring process is least efficient?

- a) In public sector
- b) In a small company
- c) When a soccer player is hired
- d) When a violinist for orchestra is hired



In what situation anonymous job application cannot be used?

“jobs in the worlds of sports, arts, and letters, since in such creative, highly skilled, and very competitive labor markets discrimination is limited.”

If diversity of workers leads to innovations and larger productivity, the company may not want to use anonymous hiring procedure

