

Discrimination

I. Measuring Wage Discrimination

A. Raw wage differences (CPS 1992)

1. white men: \$33,200
2. white women: \$19,200
3. black men: \$21,400
4. black women: \$17,495

white men make more than minorities and women

B. Characteristic differences

1. white men employed full time: \$38,177
2. white women employed full time: \$25,244

in (A) men earn 73% more; in (B) men only earn 51% more - some of the differential is due to characteristic differences that market should "rightfully" reward

C. Measuring premarket differences versus labor-market discrimination

1. wage differential between average man and women

$$\Delta w = \bar{w}_M - \bar{w}_F$$

2. wage differential between "comparably-skilled" men and women

male earnings function: $w_M = \alpha_M + \beta s_M$

female earnings function: $w_F = \alpha_F + \beta s_F$

3. wage differential using earnings functions

$$\begin{aligned}\Delta w &= \bar{w}_M - \bar{w}_F = \alpha_M + \beta_M \bar{s}_M - \alpha_F - \beta_F \bar{s}_F \\ &= (\alpha_M - \alpha_F) + (\beta_M \bar{s}_M - \beta_F \bar{s}_F)\end{aligned}$$

4. Oaxaca decomposition

- i. distinguish between differences due to premarket differences in skills and labor market discrimination
- ii. trick - add and subtract $\beta_M \bar{s}_F$

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

rewrite:

$$\begin{aligned}&= (\alpha_M - \alpha_F) + (\beta_M \bar{s}_F - \beta_F \bar{s}_F) + (\beta_M \bar{s}_M - \beta_M \bar{s}_F) \\ &= (\alpha_M - \alpha_F) + \bar{s}_F (\beta_M - \beta_F) + \beta_M (\bar{s}_M - \bar{s}_F)\end{aligned}$$

5. graphical explanation



D. Empirical evidence

1. black-white wage differential:

- i. 1940 to 1980 rose from 0.4 to 0.77 %
- ii. 1980-90's relatively stable 20-30 %

Oaxaca decomposition indicates 50% due to skill differential

2. male-female wage differential:

- i. 1930-1980 relative stable between 56-60 %
- ii. 1980-90 increase to 0.72%

Oaxaca decomposition indicates 66% due to skill differential

Point: discrimination (what ever the exact measure) appears to be still with us: employer discrimination model indicates discrimination should not persist so what other models can yield persistent discrimination

E. Deriving persistent discrimination

1. different source than employer
 - i. customer
 - ii. statistical discrimination
2. a non competitive market
 - i. occupational crowding

II. Customer Discrimination

A. Definition:

Customers do not like (prefer) being served by minorities and women (whites and men)

ex: professional sports (i.e., basketball)

B. Female vs. male sales persons

1. assumption 1: men and women are equally productive

$$MP_w = MP_M = MP$$

2. assumption 2: customers prefer to have male sales persons-
customers perceive that they pay more when helped by women

$$P_M = P_F(1+d)$$

in equilibrium perceived female price must be equal to price paid
when helped by a man

C. graph



D. male-female wage differential

$$w_M - w_F = VMP_M - VMP_F$$

$$w_M - w_F = P_M * MP - P_F * MP$$

$$w_M - w_F = (P_M - P_F) * MP$$

$$w_M - w_F = (P_F(1+d) - P_F) * MP$$

$$w_M - w_F = (P_F d) * MP$$

E. Predictions

1. men earn more than comparably-skilled women
2. women have to have to be more productive (i.e., have higher MP) to earn the same as a man
3. women have a lower return to human capital (i.e., less incentive to invest)
4. wage differential will persist as long as taste for discrimination persists - this is not discrimination in the economic sense

F. Evidence

1. government agencies pay employees more who resemble the constituents of the department
 - i. department of agriculture vs. EEOC
 - ii. Oregon vs. Mississippi
2. baseball-card prices - baseball cards for white players are worth more than baseball cards for black and Hispanic players who were comparably skilled

III. Statistical Discrimination

A. Educated Guess

1. Employers must guess about the potential productivity of applicants
2. Try to find information about applicant that is correlated with productivity (GPA, SAT, recommendations)
3. Information is generally not perfectly correlated with productivity

B. Example 1: PLC Elevator

C. Example 2: Insurance for Young Men

moral 1: decisions are made on rationale utility or profit maximizing objectives and not based on prejudice

moral 2. In some cases, productivity may be correlated with observable attributes of a group (e.g., gender or race)

moral 3. People pay for the characteristics of their group

D. Arrow's Model of Statistical Discrimination

1. Assumptions

- 2 types of people: qualified (Q) & unqualified (U)
- firm has test that is a perfect predictor of ability
- test is costly

2. Employer will make you pay for test in a competitive market (test could be stay for the first year and complete training)

3. Suppose all people were qualified

$$C = (MP_i - r_i) \quad \text{where } I = \text{group (male or female)}$$

4. But all workers are not qualified. Workers must pay for persons who do not pass the test.

$$C = (MP_i - r_i) * P(Q_i)$$

Where $P(Q_i)$ = probability of passing test

5. Example: Suppose $P=0.5$

$$C = (MP_i - r_i) * (.05)$$

or

$$2C = (MP_i - r_i)$$

6. Solve for wage;

$$r_i = MP_i - C/P(Q_i)$$

7. Male-Female differences

$$r_M = MP_M - C/P(Q_M)$$

$$r_F = MP_F - C/P(Q_F)$$

8. Assumed men and women are equally productive ($MP_M = MP_F$)

result: if $P(Q_M) > P(Q_F)$ the men will make more than women & it is profit maximizing

9. Predictions: Statistically discriminated group will:

- make less
- be more qualified
- be under-represented based on their population proportion
- the problem will become worse as you move up the job hierarchy (i.e., glass ceiling) if there are success tests.
- discrimination will disappear on its own as groups become more similar (statistically)

10. Some conclusions:

- problem with statistical discrimination is that it puts the stigma on the individual even though it is a group characteristic
- differences in probabilities may be due to pre-market differences (expectations for boys & girls), but it is unprofitable for the firm not to take differences into account
- women have been historically more likely to leave the job market and thus may be more costly to hire. Statistical discrimination is self-perpetuating because it lowers the return to human capital.
- if firm has a bad test (in the sense it does not identify the productivity), then it would lower its profits. There is an incentive to develop a good test.

IV. Is Affirmative Action an Effective Policy - 3 Cases

A. Answer - depends!

1. the source
2. the market structure

B. Employer discrimination

1. competitive market - discrimination is predicted to disappear without intervention; however, how long does it take
2. imperfect competition - firms earn rents, some of which may be spent on satisfying discriminatory preferences: thus AA may be necessary

moral of story: affirmative action improves efficiency and (at least in case 1) may no longer be necessary once discrimination is driven from market

C. Customer discrimination

1. AA does not address source of bias
2. increase employment of disadvantaged groups by "artificially" increase costs of not hiring women or a minority for firm
3. hiring women and minorities may change preferences of customer over time (however, not clear it changes preferences for good)
4. if preferences of customer do not change AA will need to be in place forever

may not be an efficient means of changing preferences

D. Premarket discrimination

1. AA does not address the source of bias
2. increase employment of disadvantaged groups by "artificially" raising the return to education of minorities and women
3. AA will become unnecessary if premarket differences go away

may not be an efficient means of equalizing educational opportunities