Discrimination: Two theories

Urban Economics

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Discrimination: Two theories

- The two workhorse models of discrimination in the economics literature give drastically different answers, particularly with respect to the societal consequences.
  1. Taste based
  2. Statistical Discrimination

Discrimination: Two theories

Taste based

- The first model, developed in Becker (1957) for the context of the labor market, some employers have a distaste for hiring members of the minority group. They may indulge this distaste by refusing to hire, say, Blacks or, if they do hire them, paying them less than other employees for the same level of productivity.
- If the fraction of discriminating employers in the economy is sufficiently large, a wage differential will emerge in equilibrium between otherwise identically productive minority and majority employees and this wage differential will be a reflection of the distaste parameter of the marginal employer for minority workers (Becker, 1957; Charles and Guryan, 2008).
- By electing to not hire minority workers, infra-margin racist employers will experience lower profits.
- In fact, if the conditions of perfect competition were satisfied, discriminating employers would be wiped away and taste-based discrimination would disappear.

Discrimination: Two theories

Statistical discrimination (Phelps, 1972; Arrow, 1973; Aigner and Cain, 1977)

- In a "statistical discrimination" model the differential treatment of members of the minority group is due to imperfect information, and discrimination is the result of a signal extraction problem.
- As a profit-maximizing prospective renter, employer, or car salesman, tries to infer the characteristics of a person that are relevant to the market transaction they are considering to complete with that person, they use all the information available to them.
- When the person-specific information is limited, group- specific membership may provide additional valuable information about expected behavior.

Ewens et al. paper

- Test: taste based vs statistical discrimination
- Use vacancy listings on Craigslist.org, across 34 U.S. cities,
- They send inquiry e-mails to 14,000 landlords.
- E-mails have information about the applicants: positive, negative, and no signals beyond race.
  - In the no-signal inquiry, landlords receive e-mails with racial-sounding names as the only signal.
  - In the positive information inquiry, the fictional applicant informs the landlord that she is a nonsmoker with a respectable job.
  - In the negative information inquiry, the applicant tells the landlord she has a below-average credit rating and smokes.

Ewens et al. model

Ewens et al. results

- H1 Stat: On average, a white applicant is more likely to receive a positive response than a black applicant in the no-signal base case
- H1 Taste: On average, a white applicant is more likely to receive a positive response than a black applicant in the no-signal base case.

$$R_i = \alpha_W + \alpha_B B_i + u_i$$

Ewens et al. results

TABLE 6.—DIFFERENTIAL TREATMENT BY RACE AND INFORMATIONAL SIGNALS

	(1)	(2)	(3)
Black	−0.093***		
	(0.015)		
Positive Information			
Positive Information × Black			
Negative Information			
Negative Information × Black			
% Black			
Black × %Black			
Positive Information × %Black			
Positive Information × Black × %Black			
Negative Information × %Black			
Negative Information × Black × %Black			
Constant	0.581***		
	(0.012)		
Omitted category	White		
	Baseline		
Observations	4,226		
R^2	0.009		

Ewens et al. results

- H2 Stat: On average, the positive response gap between white and black applicants is larger with a positive signal sent than with a negative signal sent.
- H2 Taste: On average, the response gap between white and black applicants when a positive signal is sent is larger than the response gap between white and black applicants when a negative signal is sent.

$$R_i = \alpha_{PW} + \alpha_{PB}B_i + \alpha_{NW}N_i + \alpha_{NB}(N_i \times B_i) + u_i \tag{1}$$

Ewens et al. results

TABLE 6.—DIFFERENTIAL TREATMENT BY RACE AND INFORMATIONAL SIGNALS

	(1)	(2)	(3)
Black	−0.093***	−0.092***	
	(0.015)	(0.012)	
Positive Information			
Positive Information × Black			
Negative Information		−0.377***	
		(0.013)	
Negative Information × Black		0.044**	
		(0.018)	
% Black			
Black × %Black			
Positive Information × %Black			
Positive Information × Black × %Black			
Negative Information × %Black			
Negative Information × Black × %Black			
Constant	0.581***	0.619***	
	(0.012)	(0.009)	
Omitted category	White	White	
	Baseline	Positive information	
Observations	4,226	10,011	
R^2	0.009	0.128	

Ewens et al. results

- H3 Stat: On average, negative information will shrink the racial gap observed in the base case, but positive information will have an ambiguous effect on the racial gap observed in the base case.
- H3 Taste: On average, negative information will unambiguously narrow the racial gap observed in the no-signal base case, but positive information will unambiguously widen the racial gap observed in the base case.

$$R_i = \beta_W + \beta_B B_i + \beta_P P_i + \beta_{PB}(P_i \times B_I) + \beta_{NW} N_i + \beta_{NB}(N_i \times B_i) + u_i \tag{2}$$

Ewens et al. results

TABLE 6.—DIFFERENTIAL TREATMENT BY RACE AND INFORMATIONAL SIGNALS

	(1)	(2)	(3)
Black	−0.093***	−0.092***	−0.093***
	(0.015)	(0.012)	(0.015)
Positive Information			0.039***
			(0.013)
Positive Information × Black			0.001
			(0.019)
Negative Information		−0.377***	−0.338***
		(0.013)	(0.016)
Negative Information × Black		0.044**	0.045**
		(0.018)	(0.020)
% Black			
Black × %Black			
Positive Information × %Black			
Positive Information × Black × %Black			
Negative Information × %Black			
Negative Information × Black × %Black			
Constant	0.581***	0.619***	0.581***
	(0.012)	(0.009)	(0.012)
Omitted category	White	White	White
	Baseline	Positive information	Baseline
Observations	4,226	10,011	14,237
R^2	0.009	0.128	0.109