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Race Has a Hand in Determining Market Outcomes

By Jennifer L. Doleac and Luke C.D. Stein

Economic outcomes in the United States are highly correlated with race, but it is not clear what causal mechanisms underlie these correlations. In particular, how much is due to discrimination? How much is due to other characteristics—such as education—that vary across racial groups? Assuming that discrimination does occur, it is also unclear how much is “taste-based” (against race itself) rather than “statistical” (where race is used as a proxy for unobservable negative characteristics). The relative importance of these various effects has important policy implications.

Economists have worked for years to identify discrimination and disentangle these two different sources. Much of this

research has used field experiments to avoid the biases that can plague observational studies. (Observational studies, which compare groups of black subjects and white subjects, typically have non-random samples and cannot control for unobservable characteristics.) Experiments can of course have their own shortcomings. For example, actor-based audit studies—in which actors apply for jobs, consider housing, or negotiate sales—attempt to match different-race candidates on as many dimensions as possible, but the match quality will never be perfect and these studies are typically not double-blind. Other researchers, beginning with Bertrand and

continued on inside...

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Mullainathan (2004), have used stereotypically black and white names to indicate the race of market participants. However, these names likely send signals about family background and socioeconomic status that go well beyond race.

With these earlier studies in mind, we conducted a yearlong field experiment, selling iPods via online classified advertisements in several hundred locally focused markets across the United States (Doleac and Stein 2010). To avoid the confounding methodological issues mentioned above, we directly signaled the race of each seller using photographs: Each ad contained a photo of the iPod held by a black hand, a white hand, or a white hand with a wrist tattoo. (Tattooed sellers are likely statistically discriminated against for the same reasons as black sellers and can be thought of as a “suspicious” white control group.)

The environment in which we conducted our experiment has many advantages: Buyers have no reason to make offers that they do not anticipate ending in a transaction. Also, they expect to meet a seller in order to complete the transaction with the real possibility of deception or theft; trust plays a key role in the interactions. These characteristics of many “real-world” market

transactions are not necessarily present in the markets considered by other studies.

Field experiment: procedure and results

We posted at least three advertisements in each of approximately 300 markets between March 2009 and March 2010, for a total of 1,200 advertisements. Each ad was online for 12 hours (daytime or overnight) during which potential buyers could respond via e-mail. Photos were randomly assigned across several other ad characteristics.

We asked each respondent for his or her best offer by e-mail and ultimately offered to ship the iPod to the highest bidder in exchange for payment by PayPal, an online payments processor. This was a somewhat suspicious proposal in these markets, where participants expect to meet locally, and we interpret buyers’ responses to this offer as an indicator of underlying trust. We then compared how each group of sellers fared on a variety of dimensions. Here is what we found:

- Black sellers received 13 percent fewer responses and 17 percent fewer offers than white sellers.
- The average offer received by black sellers was 2 percent to

4 percent lower, despite the self-selected—and presumably less biased—pool of bidders responding to these ads.

- The effects were similar for tattooed sellers, suggesting a role for statistical discrimination.
- Buyers corresponding with black sellers exhibited lower trust: They were 17 percent less likely to include their name in e-mails, 44 percent less likely to accept delivery by mail, and 56 percent more likely to express concern about making a long-distance payment.

Clearly, black sellers are at a significant disadvantage to whites. In addition, the geographic variation among our markets provides a unique opportunity to delve deeper, enabling us to investigate how discrimination varies with market characteristics. In particular, we found the following.

Competition limits discrimination

In markets with more traffic, there is presumably more competitive pressure not to discriminate. In markets with at least 20 iPod advertisements posted per week, we found that black sellers received the same number of offers and equal best offers relative to whites; in less competitive markets, they received 24 percent fewer offers

and best offers that were almost \$5 lower.

Discrimination varies across the country

Local cultural norms should be an important determinant of individuals' racial biases, and culture differs greatly throughout the United States. Contrary to popular conceptions about race relations in the United States, we found that black sellers were at the greatest disadvantage in the Northeast, where they received 32 percent fewer offers than whites. In contrast, this gap was 23 percent in the Midwest and 15 percent in the South. Black sellers received approximately the same number of offers as white sellers in the West.

Buyers statistically discriminate

Buyers might statistically discriminate in this market to avoid (1) buying fake or stolen goods, (2) meeting sellers in an inconvenient or dangerous neighborhood, or (3) dealing with unreliable sellers who might not complete the transaction. Using local property crime rates to test (1) and (2) and an index of local racial isolation (from Glaeser and Vigdor 2001) to test (2) and (3) we found black sellers indeed do worse than whites in high-crime and high-isolation markets,

suggesting a role for statistical discrimination:

- In high-crime areas, black sellers received 27 percent fewer offers and \$8 lower best offers than white sellers, compared with 10 percent fewer offers and \$2 lower best offers in low-crime areas.
- In high-isolation markets, black sellers received 39 percent fewer offers and \$8 lower best offers than white sellers, compared with 4 percent fewer offers and \$2 lower best offers in low-isolation markets.

We believe our study isolates the effect of race on market outcomes more convincingly than previous studies and provides some insight into why buyers are discriminating. Black sellers are at a significant disadvantage on average, but their outcomes depend greatly on various features of their local markets, including the level of competition and the degree to which local buyers are wary of unobservable negative characteristics.

References

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A publication of the
Stanford Institute for Economic Policy Research
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