

Beliefs about Racial Discrimination

Pre-Analysis Plan II

Ingar Haaland* Christopher Roth†

June 30, 2017

We collect novel data on people's beliefs about the extent of racial discrimination in the United States and examine to what extent these beliefs drive support for racial affirmative action policies. In the experiment, we elicit incentivized beliefs about how likely resumes with black-sounding names are to receive a callback for an interview relative to resumes with white-sounding names. We then provide a random subset of our subjects with information about the results from an audit study that found evidence of racial discrimination in the labor market. We then measure support for racial affirmative action with self-reported and behavioral measures.

JEL Codes: C91, D83, J16

Keywords: racial discrimination, belief updating, racial inequality

*Department of Economics, NHH Norwegian School of Economics and The Choice Lab;
e-mail: Ingar.Haaland@nhh.no

†Department of Economics, University of Oxford and CSAE;
e-mail: Christopher.Roth@economics.ox.ac.uk

1. Introduction

We collect novel data on people's beliefs about the extent of racial discrimination in the United States and examine to what extent these beliefs drive support for racial affirmative action policies. In this document, we outline our plan for analysis of the data, which will be collected from a high-quality probability-based sample of the US population. In a separate but related experiment, we collect data from a sample representative of the US population in terms of observable characteristics. The pre-analysis plans for both projects will be uploaded to the same AEA RCT Registry trial.

2. Experimental design

We leverage a seminal audit study by Bertrand and Mullainathan (2004), which tested for racial discrimination in the labor market, to measure people's beliefs about racial labor market discrimination. We tell our subjects that researchers from Boston and Chicago conducted an experiment where they sent out resumes to help wanted ads that were identical in all respects except for the perceived race of the sender. We explain to our subjects to manipulate perceived race, half of the resumes had typical white-sounding names and the other half of the resumes had typical black-sounding names. Furthermore, we tell our subjects that resumes with white-sounding names had to be sent out on average 10 times to get one callback for an interview. Subsequently, we ask our subjects to estimate how many times resumes with black-sounding names on average had to be sent out to get one callback for an interview. We incentivize correct answers with a \$2 bonus.

2.1. Treatment group

All subjects in the treatment group are told the number of times resumes with black-sounding names on average had to be sent out to get one callback for an interview (15). They are also told that this implies that resumes with white-sounding names are 50 percent more likely to receive a callback than resumes with black-sounding names.

2.2. Control group

Subjects in the control group do not receive any information and go straight from the belief elicitation to the outcome questions.

2.3. Outcomes: Self-reported measures

We first check whether the treatment shifted people's beliefs by asking them whether they think that racial labor market discrimination against blacks is a serious problem. We then measure our subjects' support for affirmative action with two self-reported measures: (i) whether they support public and private programs that give qualified black candidates *preference* over equally qualified white candidates in getting a job and (ii) whether they support public and private programs that give qualified black candidates *assistance* in getting a job. Furthermore, we ask our subjects whether they support name-blind recruitment for public and private jobs.

2.4. Outcomes: Behavioral measure of support for an NGO

We assess our subjects' willingness to donate to an NGO concerned with discrimination against blacks in the labor market. We employ a multiple price list in order to elicit their marginal rate of substitution between money for themselves and money for the NGO.

2.5. Outcomes: Belief extrapolation

We also assess whether our subjects use the information they receive about racial discrimination in the labor market to update their beliefs about racial discrimination in the rental market; i.e., whether they engage in *belief extrapolation*. We do this by informing our subjects about a field experiment that tested for racial discrimination in the rental market. First, we tell our subjects that reservation requests from white-sounding names were accepted 49 percent of the time. We then ask them to estimate how many percent of the time they think reservation requests from black-sounding names were accepted. Again we incentivize correct answers with a \$2 bonus.

3. Setting, sample size and power

We will recruit 1500 subjects through NORC’s *AmeriSpeak* panel. *AmeriSpeak* is a probability-based and highly respected survey platform designed to be representative of the US household population.¹ The panel uses NORC’s National Frame, which is also used for several landmark studies such as the General Social Survey and the Federal Reserve’s Survey of Consumer Finances.

With 1500 subjects, we have 0.8 power to detect an effect size of about 0.15 of a standard deviation between the treatment and the control group at a .05 significance level.

4. Analysis

4.1. Treatment differences

In the first specification, we regress each outcome y_i on a treatment indicator, Treatment_i , that takes the value one if subject i received the informational treatment and zero otherwise:²

$$y_i = \alpha_0 + \alpha_1 \text{Treatment}_i + \mathbf{A}^T \mathbf{X}_i + \varepsilon_i$$

where ε_i is an individual-specific error term³ and \mathbf{X}_i is a vector of controls.⁴

4.2. Heterogeneous treatment effects: Prior beliefs

In the second specification, we estimate heterogeneous responses to the informational treatment based on our subjects’ prior beliefs about racial labor market discrimination, Belief_i , which is a dummy variable taking value one if subject i strictly

¹By the time of submission of this pre-analysis plan, NORC has started the data collection, but we have not received any of the data collected.

²We recode our outcomes such that they take a high value for positive attitudes towards affirmative action.

³For all the specifications, we use robust standard errors.

⁴The control variables are described in Section 5.4. In the regression tables, we also report the results of this regression without the inclusion of controls.

overestimated the extent of racial discrimination in society ($\text{Belief}_i > 15$) and zero otherwise. We include an interaction term between the treatment indicator and prior beliefs, $\text{Treatment}_i \times \text{Belief}_i$, and estimate the following equation:

$$y_i = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Belief}_i + \beta_3 \text{Treatment}_i \times \text{Belief}_i + \mathbf{B}^T \mathbf{X}_i + \varepsilon_i$$

As a robustness check, we will also estimate the same equation with a continuous belief measure about how many times a resume with a black-sounding name on average had to be sent out to get one callback for an interview instead of the binary belief measure.⁵

4.3. Heterogeneous treatment effects: Party affiliation

In the third specification, we estimate the following equation to look at heterogeneity by political party affiliation:

$$y_i = \delta_0 + \delta_1 \text{Treatment}_i + \delta_2 \text{Republican}_i + \delta_3 \text{Treatment}_i \times \text{Republican}_i + \mathbf{\Delta}^T \mathbf{X}_i + \varepsilon_i$$

where Republican_i takes value one if respondent i is Republican and zero otherwise.

4.4. Treatment interaction effect: Prior beliefs and party affiliation

In the fourth specification, we will estimate the following equation to study interaction effects between prior beliefs and party affiliation:

$$y_i = \gamma_0 + \gamma_1 \text{Treatment}_i + \gamma_2 \text{Belief}_i + \gamma_3 \text{Republican}_i + \gamma_4 \text{Treatment}_i \times \text{Belief}_i + \gamma_5 \text{Treatment}_i \times \text{Republican}_i + \gamma_6 \text{Belief}_i \times \text{Republican}_i + \gamma_7 \text{Belief}_i \times \text{Republican}_i \times \text{Treatment}_i + \mathbf{\Gamma}^T \mathbf{X}_i + \varepsilon_i$$

γ_7 is our key object of interest and provides us with an estimate of whether Republicans who overestimate discrimination respond differently to the to the information than

⁵For this variable, we will re-code observations with values above 50 to 50 to avoid extreme observations that are more likely to be expressions of erroneous entries or misunderstandings than true expressions of beliefs.

non-Republicans who overestimate discrimination.

4.5. Multiple hypothesis adjustment

To deal with the issue of multiple hypotheses testing, we adopt two strategies: (i) use of indices and (ii) accounting for the False Discovery Rate.

4.5.1. Use of indices

We have one main family of outcomes. We will create an unweighted index for this main family, which is defined as follows:

- **Attitudes towards pro-black policies:** We compute an unweighted index of people's support for policies aimed at reducing racial discrimination based on the following two questions:
 - Do you support or oppose government and private programs that give qualified black candidates preference over equally qualified white candidates in getting a job?
 - Do you support or oppose government and private programs that give qualified black candidates assistance in getting a job?

We also have a series of additional outcomes that will not be part of any family:

- **Willingness to give to the NGO:** We count the number of times the subjects prefer money for the NGO over money for themselves.
- **Support for name-blind recruitment:** Do you support or oppose mandatory name-blind recruitment for hiring in public and private jobs?
- **Belief extrapolation (rental market):** How many percent of the time do you think reservation requests from black-sounding names were accepted?
- **Manipulation check:** In the United States today, do you think racial discrimination against blacks in the labor market is a serious problem?

4.5.2. Accounting for the False Discovery Rate

The second method uses the “sharpened q-value approach” (Benjamini et al. 2006; Anderson 2008). We use the same family of outcomes as the one defined above. For the family of outcomes, we control for a false discovery rate of 5 percent; i.e., the expected proportion of rejections that are Type I errors (Anderson 2008).

5. Definition of outcome variables

5.1. Self-reported measures

For simplicity, we will consider all of the self-reported measures on attitudes toward affirmative actions as continuous.⁶ For instance, when participants need to state to what extent they agree with a particular statement, we will code “Strongly oppose” as 1, “Oppose” as 2, “Neither support nor oppose” as 3, “Support” as 4, and “Strongly support” as 5. Furthermore, we standardize these variables by, for each variable, subtracting the control group mean and dividing by the control group standard deviation for each observation.

5.2. Behavioural measures

5.2.1. Donation

For the donation measure, we will count the number of times the subjects prefer money for the NGO over money for themselves which gives us an outcome measure between 0 and 6. We also normalize this measure using the mean and standard deviation of the control group.

5.2.2. Belief extrapolation

We normalize people’s estimate of the acceptance rate for accounts with black-sounding names, which for each subjects is a number between 0 and 100.

⁶See Section A.3 for details about these measures

5.3. Variables with limited variation

We will drop from the analysis variables which have very limited variation, as they are not informative. Specifically, we will drop variables for which more than 95 percent of observations have the same value. If these variables are part of an index, we will recalculate the index without them.

5.4. Control variables

Subjects in the *AmeriSpeak* panel are deeply profiled, and we get demographic variables directly from the survey provider.⁷ The controls we use will be coded as follows:

- Gender will be coded as a dummy.
- Age will be coded continuously as “age in years”.
- We include two ethnicity dummies: one dummy equal to one if respondent i is “White, Non-Hispanic” and one dummy equal to one if respondent i is “Black, Non-Hispanic”.
- State will be coded as three regional dummies (three of the following: Northeast, Midwest, South, and West).
- Household size will be coded continuously as the “total number of members in household”.
- Household income will be coded as the log of the midpoint of the interval specified by the respondent.
- Education will be coded as a dummy for whether the respondent has at least “some college, no degree”.
- Employment status will be coded as a dummy equal to one if respondent i is “Working - as a paid employee” or “Working - self-employed”.
- We include two party affiliation dummies: one dummy equal to one if respondent i consider himself to be a Democrat and a dummy equal to one if respondent i consider himself to be a Republican.

As controls, we also include prior beliefs about racial labor market discrimination,

⁷For a complete list, see here: <https://goo.gl/p3arsd>.

Belief_{*i*} (equal to 1 if subject *i* thinks resumes with black-sounding names on average had to be sent out strictly above 15 times to get one callback for an interview)⁸.

⁸As discussed in Section 4.2.

References

- Anderson, Michael L. 2008. "Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association* 103 (484): 1481–1495.
- Benjamini, Yoav, Abba M Krieger, and Daniel Yekutieli. 2006. "Adaptive linear step-up procedures that control the false discovery rate." *Biometrika* 93 (3): 491–507.
- Bertrand, Marianne, and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination." *American Economic Review* 94 (4): 991–1013.

A. Instructions

A.1. Elicitation of beliefs about racial discrimination

Researchers from Harvard University and the University of Chicago conducted an experiment to study racial discrimination in the labor market. They did so by sending out fictitious resumes to help-wanted ads in Boston and Chicago newspapers.

The resumes were exactly the same except for one thing: the name of the job applicant. Half of the resumes had typically white-sounding names like “Carrie” and “Todd”. The other half of the resumes had typically black-sounding names like “Tanisha” and “Kareem”. The idea was to make sure that the applicants were seen as having identical qualifications, but that the employers would use the applicants’ names to infer whether they were white or black.

Resumes with white-sounding names had to be sent out on average 10 times to get one callback for an interview.

What do you think?

How many times do you think resumes with black-sounding names on average had to be sent out to get one callback for an interview?

I think resumes with black-sounding names on average had to be sent out times to get one callback for an interview.

If your answer is the same as what the researchers found, you will be rewarded a bonus of \$2 (2,000 AmeriPoints) in addition to your current incentive of 2,000 AmeriPoints.

A.2. Treatment screen

The researchers found that resumes with black-sounding names on average had to be sent out 15 times to get one callback for an interview.

Since resumes with white-sounding names on average only had to be sent out 10 times to get one callback for an interview, this means that employers were 50 percent more likely to give callbacks to applicants with white-sounding names compared to applicants with black-sounding names.

A.3. Self-reported outcomes

In the United States today, do you think that racial discrimination against blacks in the labor market is a serious problem?

A very serious problem

A serious problem

A problem

A small problem

Not a problem at all

Do you support or oppose government and private programs that give qualified black candidates preference over equally qualified white candidates in getting a job?

Strongly support

Support

Neither support nor oppose

Oppose

Strongly oppose

Do you support or oppose government and private programs that give qualified black candidates assistance in getting a job?

Strongly support

Support

Neither support nor oppose

Oppose

Strongly oppose

Name-blind recruitment has been suggested as a way to reduce racial discrimination in the labor market by hiding the names of the job applicants from their resumes. Do you support or oppose mandatory name-blind recruitment for hiring in public and private jobs?

Strongly support

- Support
- Neither support nor oppose
- Oppose
- Strongly oppose

A.4. Behavioral measure: Donation

In Washington, D.C., several civil rights organizations work to protect individuals from discrimination in society. One of these organizations, the *Lawyers' Committee for Civil Rights*, tries to help African Americans. One of the organization's key initiatives aims to reduce racial discrimination in the workplace by lobbying for political reforms.

Below, you are given the opportunity to financially support the *Lawyers' Committee for Civil Rights*.

Your decision

For each of the 6 choices below, you decide whether the *Lawyers' Committee for Civil Rights* should get money or whether *you* should get money (\$1 equals 1000 AmeriPoints).

We will randomly implement your decision for *one* of these choices, which involve real money, so please consider each choice carefully. Each decision has the same chance of being implemented.

- | | | | |
|--------------------------|-----------------------|-----------------------|------------|
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$0 for me |
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$1 for me |
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$2 for me |
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$3 for me |
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$4 for me |
| \$5 for the organization | <input type="radio"/> | <input type="radio"/> | \$5 for me |

Note: NORC is a non-partisan research organization and has no association with the *Lawyers' Committee for Civil Rights*. NORC and the AmeriSpeak Panel do not endorse political or charitable causes.

A.5. Belief extrapolation: Discrimination in the rental market

Researchers from Harvard Business School conducted an experiment to study racial discrimination in the rental market by sending out reservation requests from invented accounts to hosts on Airbnb, a website for private rental accommodations.

The requests were exactly the same except for one thing: the name of the person who sent the request. Half of the requests came from typically white-sounding names, while the other half came from typically black-sounding names. The idea was that the hosts would use the applicants' name to infer whether the reservation requests came from white or black requesters.

The researchers found that reservation requests from white-sounding names were accepted 49 percent of the time.

What do you think?

How many percent of the time do you think reservation requests from black-sounding names were accepted?

I think reservation requests from black-sounding names were accepted percent of the time.

If your answer is within 2 percentage points of what the researchers found, you will be rewarded a bonus of \$2 (2,000 AmeriPoints) in addition to your current incentive of 2,000 AmeriPoints.

A.6. Beliefs about strength of the evidence: Treatment group only

The researchers behind the study on labor market discrimination described earlier in this survey interpreted their findings as clear evidence of discrimination against blacks in the labor market.

To what extent do you agree or disagree with this interpretation of their findings?

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree