

Are Emily and Greg More Employable than Lakisha and Jamal?

Bertrand and Mullainathan

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Persistence racial difference in socioeconomic outcomes

- Large difference in outcomes between similarly defined blacks and whites
- Blacks on average have lower
 - Wages
 - Earnings
 - Employment rates
 - Wealth
 - Education, etc.

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Median Annual Earnings, 2013 Full time/full year workers

	Males	Females
Whites	\$51,296	\$39,051
Blacks	\$40,000	\$33,000
Ratio: Black/white	0.780	0.845

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Median Hourly Wage, 2013 Full time/full year workers

	Males	Females
Whites	\$23.08	\$18.26
Blacks	\$17.31	\$15.65
Ratio: Black/white	0.750	0.857

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Unemployment Rate, aged 20+ August 2014

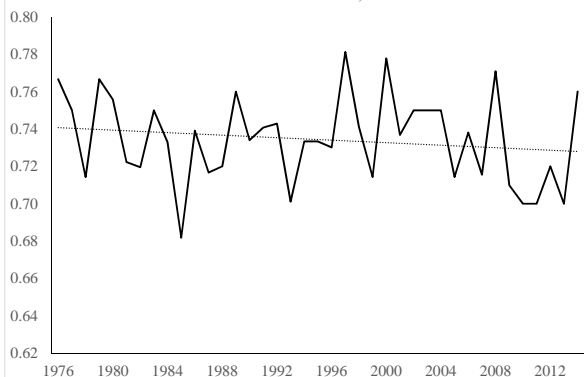
	Male	Females
Whites	5.8	5.9
Blacks	13.3	11.5
Ratio: Black/white	2.29	1.94

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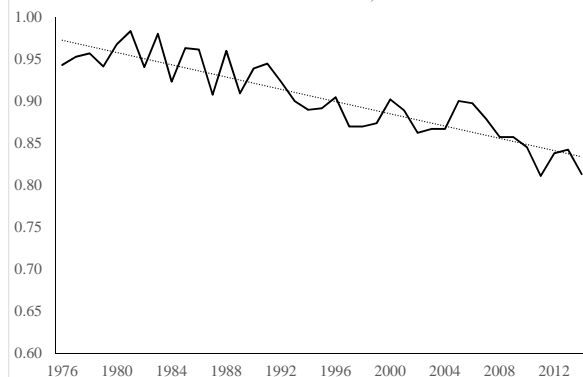
- Gap in median earnings by race over time
- Males and females, full time, full year workers
- March Current Population Surveys – which ask people about their earnings in the previous year

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Ratio Black/White Median Annual Earnings
Full Time/Full Year Males, 1976-2014



Ratio Black/White Median Annual Earnings
Full Time/Full Year Females, 1976-2014



Why the difference?

- Differences in skill level. Whites on average tend to have
 - More education
 - Higher job tenure
- Differences in types of jobs. Whites and blacks may be segregated in jobs that differ by
 - Occupation
 - Industry
 - Low vs. high wage sector
 - Low vs. high wage areas
 - Union status

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- Pre-market conditions. Blacks on average
 - Attend poorer quality schools
 - Have parents with fewer years of education
 - Have home lives (e.g., live with single mother, etc) that predict lower educational outcomes and lower human capital accumulation
- Discrimination

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How much of the gap is explained by observed characteristics?

- Construct sample of workers aged 18-64
- March Current Population Survey
 - Asks for data on earnings in previous year
 - Use years 2006-2009
- Keep people w/ 40+ weeks of work, 30+ hours/week
- Dependent variable $\ln(\text{hourly wage})$

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- 4 race groups
 - White non-Hispanic
 - Black non-Hispanic
 - Other race, non-Hispanic
 - Hispanic
- Use whites as reference group
- Add more variables and see what happens to coefficients on race dummy variables

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Coefficient on race variables Males, 2006-2009

	Black, non-Hisp.	Other, non-Hisp.	Hispanic
No controls	-0.261	-0.055	-0.411
Add age /educ.	-0.175	-0.086	-0.141
Add union	-0.174	-0.086	-0.141
Add industry	-0.151	-0.085	-0.117
Add occupation	-0.089	-0.052	-0.067

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Coefficient on race variables Females, 2006-2009

	Black, non-Hisp.	Other, non-Hisp.	Hispanic
No controls	-0.110	-0.002	-0.255
Add age /educ.	-0.041	-0.015	-0.067
Add union	-0.041	-0.014	-0.067
Add industry	-0.043	-0.023	-0.054
Add occupation	-0.003	-0.001	-0.019

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Is the residual difference discrimination?

- Many interpret this way
- Economists are uneasy – why might this be an omitted variables bias?
- Has lead to some experimental ways to test for discrimination

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Audit Studies

- Place comparable minority and white subjects in actual settings and observe outcome
- Example: bank lending
- Has benefits and shortcomings

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A real world experiment: orchestras

- Auditions are used to assign seats
- Used to be that judges knew identify of musicians
- Now – auditions are blind – performed behind a screen
- Women and Asians had a higher success rate after movement to blind auditions – indicating these groups were discriminated against

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This study

- Respond to help-wanted ads in Boston and Chicago papers with fictitious resumes
- Measure the number of callbacks each resume received
- Resumes are similar except names are randomly assigned
- Authors exploit the fact that some names are exclusively used by African Americans
- The name is a signal of race

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Girl names

- | | |
|---------------|---------------|
| • “Whitest” | • “Blackest” |
| • 1. Molly | • 1. Imani |
| • 2. Amy | • 2. Ebony |
| • 3. Claire | • 3. Shanice |
| • 4. Emily | • 4. Ailiya |
| • 5. Katie | • 5. Precious |
| • 6. Madeline | • 6. Nia |
| • 7. Katelyn | • 7. Deja |

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Boy names

- | | |
|-------------|--------------|
| • “Whitest” | • “Blackest” |
| • 1. Jake | • 1. DeShawn |
| • 2. Connor | • 2. DeAndre |
| • 3. Tanner | • 3. Marquis |
| • 4. Wyatt | • 4. Darnell |
| • 5. Cody | • 5. Terrell |
| • 6. Dustin | • 6. Malik |
| • 7. Luke | • 7. Trevon |

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Constructing a bank of resumes

- Pulled samples from web pages
- Restricted to
 - people from Boston or Chicago
 - People applying for 4 positions
 - Sales
 - Administration support
 - Clerical services
 - Customer service
- Change the name and contact information on the resume

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- Pick distinctly AA names using Massachusetts birth records.
- Assign resumes to race/sex/city/resume quality cell (16 cells)
- Set up generic vmail and email accounts for each 'cell'

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Responding to adds

- Responded to adds placed 7/1/2001 to 1/31/2002
- 4 resumes were sent
 - One high and low quality for each AA and white name
- Measure email and vmail contacts for interviews

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TABLE 1—MEAN CALLBACK RATES BY RACIAL SOUNDINGNESS OF NAMES

	Percent callback for White names	Percent callback for African-American names	Ratio	Percent difference (p-value)
Sample:				
All sent resumes	9.65 [2,435]	6.45 [2,435]	1.50	3.20 (0.0000)
Chicago	8.06 [1,352]	5.40 [1,352]	1.49	2.66 (0.0057)
Boston	11.63 [1,083]	7.76 [1,083]	1.50	4.05 (0.0023)
Females	9.89 [1,860]	6.63 [1,860]	1.49	3.26 (0.0003)
Females in administrative jobs	10.46 [1,358]	6.55 [1,359]	1.60	3.91 (0.0003)
Females in sales jobs	8.37 [502]	6.83 [522]	1.22	1.54 (0.3333)
Males	8.87 [575]	5.83 [549]	1.52	3.04 (0.0513)

Notes: The table reports, for the entire sample and different subsamples of sent resumes, the callback rates for applicants with a White-sounding name (column 1) an African-American-sounding name (column 2), as well as the ratio (column 3) and difference (column 4) of these callback rates. In brackets in each cell is the number of resumes sent in that cell. Column 4 also reports the p-value for a test of proportion testing the null hypothesis that the callback rates are equal across racial groups.

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- * replicate results in line 1, table 1
- * results for full sample
- reg callback white_name

- * replicate results line 4, table 1
- * results for females
- reg callback white_name if male==0

- * replicate results line 5, table 1
- * results for females in admin jobs
- reg callback white_name if jobtype==1

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- * replicate results line 6, table 1
- * results for females in sales jobs
- reg callback white_name if jobtype==2

- * replicate results line 7, table 1
- * results for males
- reg callback white_name if male==1

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* replicate results in line 1, table 1
* results for full sample
reg callback white_name

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Source	SS	df	MS				
Model	1.24928131	1	1.24928131	Number of obs =	4870		
Residual	359.197536	4868	.073787497	F(1, 4868) =	16.93		
Total	360.446817	4869	.074028921	Prob > F =	0.0000		
				R-squared =	0.0035		
				Adj R-squared =	0.0033		
				Root MSE =	.27164		

callback	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
white_name	.0320329	.007785	4.11	0.000	.0167708	.0472949
_cons	.0644764	.0055048	11.71	0.000	.0536845	.0752683

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* replicate results line 6, table 1
* results for females in sales jobs
reg callback white_name if jobtype==2

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Source	SS	df	MS				
Model	.060610816	1	.060610816	Number of obs =	1029		
Residual	72.0268527	1027	.070133255	F(1, 1027) =	0.86		
Total	72.0874636	1028	.070123992	Prob > F =	0.3528		
				R-squared =	0.0008		
				Adj R-squared =	-0.0001		
				Root MSE =	.26483		

callback	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
white_name	.0153541	.0165163	0.93	0.353	-.0170554	.0477637
_cons	.0683112	.011536	5.92	0.000	.0456743	.0909481

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* replicate results line 7, table 1
* results for males
reg callback white_name if male=1

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Source	SS	df	MS	
Model	.259684174	1	.259684174	Number of obs = 1124
Residual	76.6113123	1122	.068281027	F(1, 1122) = 3.80
Total	76.8709964	1123	.068451466	Prob > F = 0.0514

callback	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
white_name	.0304079	.0155924	1.95	0.051	-.0001857 .0610014
_cons	.0582878	.0111523	5.23	0.000	.0364061 .0801695

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What would Levitt/Dubner argue is the problem with the experimental design?

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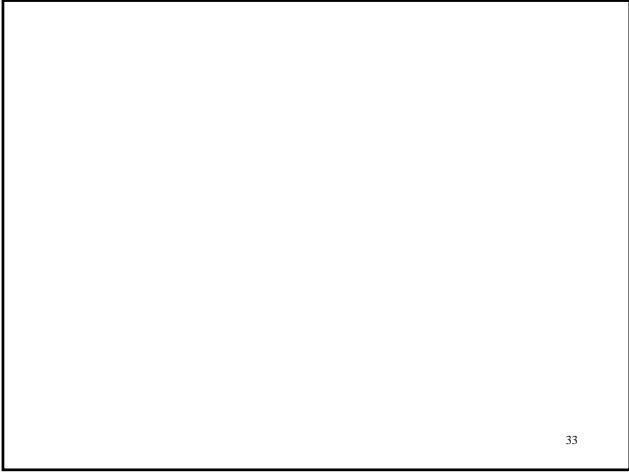
TABLE 8—CALLBACK RATE AND MOTHER'S EDUCATION BY FIRST NAME

Name	White female		African-American female		
	Percent callback	Mother education	Name	Percent callback	Mother education
Emily	7.9	96.6	Aisha	2.2	77.2
Anne	8.3	93.1	Keisha	3.8	68.8
Jill	8.4	92.3	Tamika	5.5	61.5
Allison	9.5	95.7	Lakisha	5.5	55.6
Laurie	9.7	93.4	Tanisha	5.8	64.0
Sarah	9.8	97.9	Latoya	8.4	55.5
Meredith	10.2	81.8	Kenya	8.7	70.2
Carrie	13.1	80.7	Latonya	9.1	31.3
Kristen	13.1	93.4	Ebony	9.6	65.6
Average		91.7	Average		61.0
Overall		83.9	Overall		70.2
Correlation	-0.318	(<i>p</i> = 0.404)	Correlation	-0.383	(<i>p</i> = 0.309)

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Weaknesses of study

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