Topic 10: Race, Kids, and Discrimination

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Fall 2018
This Lecture: Race, Kids, and Discrimination

• Large literature documenting persistent differences in outcomes by race

• Key theme in my opinion: Race gaps are endogenous.

• To what extent do these differences/gaps imply the existence of market failures?

• What does this mean for optimal government policy?
Median Household Income by Race and Ethnicity in 2016

White: $63,200
Black: $38,600
Asian: $80,700
Hispanic: $46,900
American Indian: $39,700

Note: We focus here and in subsequent analyses on four non-Hispanic single-race groups (white, black, Asian, American Indian and Alaska Native) and Hispanics. Source: American Community Survey 2016.
## Large Literature on Racial Disparities

<table>
<thead>
<tr>
<th>Family-Level Factors</th>
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<tbody>
<tr>
<td>Parental Income</td>
<td>Magnuson &amp; Duncan 2006;</td>
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<td>Rothstein &amp; Wozny 2012</td>
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<td>Parental Human Capital &amp; Wealth</td>
<td>Oliver &amp; Shapiro 1995;</td>
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<td>Orr 2003; Conley 2010</td>
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<td>Family Structure and Stability</td>
<td>McAdoo 2002; Burchinal et</td>
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<td>al. 2011</td>
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<td>Ability at Birth</td>
<td>Rushton &amp; Jensen 2005 vs.</td>
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<td>Fryer &amp; Levitt 2006</td>
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<tr>
<th>Structural Features of Environment</th>
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<tbody>
<tr>
<td>Segregation, Neighborhoods</td>
<td>Massey &amp; Denton 1993;</td>
</tr>
<tr>
<td></td>
<td>Wilson 1987; Sampson and</td>
</tr>
<tr>
<td></td>
<td>Wilson 1995; Smith 2005</td>
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<tr>
<td>School Quality</td>
<td>Card &amp; Krueger 1992;</td>
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<td>Jencks &amp; Phillips 1998;</td>
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<td></td>
<td>Dobbie &amp; Fryer 2011</td>
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<tr>
<td>Discrimination in the Labor Market</td>
<td>Donohue &amp; Heckman 1992;</td>
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<td>Heckman 1998; Pager 2003;</td>
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<td></td>
<td>Bertrand &amp; Mullainathan 2004</td>
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<tr>
<td>Discrimination in Criminal Justice</td>
<td>Steffensmeier, Ulmer, Kramer 1998; Eberhardt et al. 2004; Alexander 2010</td>
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<tr>
<td>Social Alienation, Stereotype Threat</td>
<td>Steele &amp; Aaronson 1995;</td>
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<td>Tatum 2004; Glover, Pallais, Pariente 2017</td>
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<thead>
<tr>
<th>Cultural Factors and Social Norms</th>
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<tbody>
<tr>
<td>Identity and Oppositional Norms</td>
<td>Fordham &amp; Ogbu 1986;</td>
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<td></td>
<td>Noguera 2003; Carter 2005;</td>
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<tr>
<td></td>
<td>Austen-Smith &amp; Fryer 2005</td>
</tr>
<tr>
<td>Aspirations or Role Models</td>
<td>Mickelson 1990; Small, Harding, &amp; Lamont 2010</td>
</tr>
</tbody>
</table>
Today, focus on four aspects of racial discrimination / endogeneity of race gaps:

1. Experimental evidence of racial bias
   - Hiring (e.g. Pager 2003; Bertrand and Mullainathan 2004)
   - Judges (Arnold, Dobbie, and Yang 2018)

2. Responses by minorities to discrimination (Glover, Pallais, Pariente 2017)

3. Persistence of racial discrimination across generations, impact of place, and relation to Becker HC model (Chetty, Hendren, Jones, Porter 2018)
   - Role of gender

4. Endogeneity of public policies to demographic changes (Derenoncourt 2018)

**DISCLAIMER:** It would be insane to try to cover this literature in 1 lecture…And there is amazing work being done in this space (resume audits, judicial bias, etc.)
1. Experimental Evidence of Racial Bias

- Here, discuss two pieces of evidence of racial bias

- Labor market: Audit studies in hiring

- Judicial system: random assignment to judges
Racial Bias in Hiring, Relation to Criminal Record

• Devah Pager (2003) randomly assigns auditors to 4 categories:

![Diagram showing racial bias in hiring](image)

150 audits
200 audits

Fig. 3.—Audit design: “C” refers to criminal record; “N” refers to no criminal record

Large Negative Impact of Race and Criminal Record on Call-Backs

FIG. 6.—The effect of a criminal record for black and white job applicants. The main effects of race and criminal record are statically significant ($P < .01$). The interaction between the two is not significant in the full sample. Black bars represent criminal record; striped bars represent no criminal record.

Interplay between Race / Statistical Discrimination and Info

• In response to these patterns, many states “Ban the Box”, preventing employers from asking about criminal histories

• But, evidence suggests negative impacts on labor markets:

• Doleac and Hansen (2018 JOLE) use difference and difference design of state policy changes
  • BTB causes decrease in employment of 3.4pp for young low-skilled black men

• Agan and Starr (2018 QJE) Audit study pre- and post-BTB in NY and NJ
  • Before BTB white applicants 7% more likely to be called back
  • After BTB white applicants 43% more likely to be called back
Racial Bias in Bail Decisions

• Arnold, Dobbie, and Yang (QJE, Forthcoming) study racial bias in bail decisions

• Key implication of Becker discrimination model: *marginal white defendants will have higher rates of misconduct than marginal black defendants if bail judges are racially biased*

• Test this using random assignment to judges
FIGURE I
First Stage and Reduced Form Results

Panel A: First Stage for All Defendants
Panel B: Reduced Form for All Defendants
Panel C: First Stage for White Defendants
Panel D: Reduced Form for White Defendants
Panel E: First Stage for Black Defendants
Panel F: Reduced Form for Black Defendants

Source: Arnold, Dobbie and Yang (2018)
Figure II
Marginal Treatment Effects

This figure reports the marginal treatment effects (MTEs) of pre-trial release on pre-trial rearrest separately by race. To estimate each MTE, we first estimate the predicted probability of release using only judge leniency. We then estimate the relationship between the predicted probability of release and rearrest prior to disposition using a local quadratic estimator (bandwidth = 0.030). Finally, we use the numerical derivative of the local quadratic estimator to calculate the MTE at each point in the distribution. Standard errors are computed using 500 bootstrap replications clustered at the judge-by-shift level. See the text for additional details.

Source: Arnold, Dobbie and Yang (2018)
Racial Bias in Bail Decisions

• Paper shows that the marginally-released white defendants are more likely to commit a crime

• Suggests racial bias in bail decisions

• Interestingly, pattern is present for both black and white judges

• Also, racial bias is larger for part-time and inexperienced judges
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   - Role of gender

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2. Identifying Theories of Discrimination
Glover, Pallais and Pariente (2017)

- Becker: “taste-based” discrimination

- Phelps (1972), Arrow (1973): imperfect information -> “statistical discrimination”

- Lundberg and Startz (1983), Coate and Loury (1993): Ex-ante investments may be lower in response to ex-post discrimination (long-run model)

- Steel and Aaronson (1995): stereotype threat -> preferences towards minority workers may inhibit work productivity
  - Reduce productivity not because of reduced investment but because of direct impact of the stereotype
Glover, Pallais and Pariente (QJE 2017)

• Evidence from 34 French grocery stores

• Workers assigned to managers

• Managers biases measured with Implicit Association Tests (IATs)
  • Speed of associating North African-sounding names with words associated with incompetence

• Workers randomly assigned to different managers on different days

• How do workers behave differently when assigned to more biased managers?
<table>
<thead>
<tr>
<th>Panel A: Dependent variable: absence indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minority worker × manager bias</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Manager bias</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Minority worker × minority manager</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Minority manager</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>Dependent variable mean</td>
</tr>
<tr>
<td>R-squared</td>
</tr>
</tbody>
</table>

Source: Glover, Pallais, and Pariente (2017)
Panel B: Dependent variable: minutes worked in excess of schedule

<table>
<thead>
<tr>
<th></th>
<th>Estimate 1</th>
<th>Estimate 2</th>
<th>Estimate 3</th>
<th>Estimate 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minority worker ×</td>
<td>-3.295**</td>
<td>-3.279**</td>
<td>-3.327*</td>
<td>-3.237*</td>
</tr>
<tr>
<td>manager bias</td>
<td>(1.550)</td>
<td>(1.588)</td>
<td>(1.687)</td>
<td>(1.678)</td>
</tr>
<tr>
<td>Manager bias</td>
<td>-0.002</td>
<td>-0.002</td>
<td>-0.005</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(1.141)</td>
<td>(1.167)</td>
<td>(0.969)</td>
<td>(1.009)</td>
</tr>
<tr>
<td>Minority worker ×</td>
<td></td>
<td></td>
<td>0.349</td>
<td></td>
</tr>
<tr>
<td>minority manager</td>
<td></td>
<td></td>
<td></td>
<td>(10.501)</td>
</tr>
<tr>
<td>Minority manager</td>
<td></td>
<td></td>
<td>-3.712</td>
<td>(4.592)</td>
</tr>
</tbody>
</table>

| Observations        | 4,163      | 4,163      | 4,163      | 4,163      |
| Dependent variable mean | -0.068    | -0.068    | -0.068    | -0.068    |
| R-squared           | 0.001      | 0.008      | 0.129      | 0.129      |
| Individual fixed effects | Yes       | Yes       | Yes       | Yes       |
| Day of the week fixed effects | No        | Yes       | No        | No        |
| Morning/evening fixed effects | No       | Yes       | Yes       | Yes       |
| Date fixed effects  | No         | No         | Yes        | Yes        |

Source: Glover, Pallais, and Pariente (2017)
Figure I
Manager Bias and Worker Performance

The size of each marker indicates the number of observations in the bin.

Source: Glover, Pallais, and Pariente (2017)
Evidence suggests endogenous responses to biased managers.

Does this suggest endogenous responses to discrimination?

What would be the ideal experiment?

- Analogy to “places matter” and looking at the correlates of the causal effect of place?
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3. Intergenerational Persistence of Race Gaps

- Racial gaps in economic outcomes have been quite persistent for a century
- Yet, Becker-Tomes model of intergenerational mobility predicts quick convergence
- Becker and Tomes (1979) considers evolution of race gaps over time
  - Let $i$ index families, $t$ index generations, and $r(i)$ denote race of family $i$
  - Model child’s income rank as a race-specific linear function of parent’s income rank:
    $$ y_{it} = \alpha_r + \beta_r y_{i,t-1} + \varepsilon_{it} $$
- Chetty, Friedman, Hendren, Jones, Porter (2018) estimate these using linked Census-Tax data [subsequent slides taken from CFHJP2018]
Intergenerational Mobility in the United States

Mean Child Household Income Rank vs. Parent Household Income Rank

Slope: 0.351 (0.003)
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Mean Black Parent Rank: 32.7
Mean White Parent Rank: 57.9
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Mean Black Parent Rank = 32.7
Mean White Parent Rank = 57.9
Gap = 25.2
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Mean Black Parent Rank: 32.7
Mean White Parent Rank: 57.9
Gap = 25.2

Mean Rank of Black Children: 44.8

Parent Household Income Rank

Mean Child Household Income Rank
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Mean Rank of White Children: 53.6
Mean Rank of Black Children: 44.8

Mean Black Parent Rank: 32.7
Mean White Parent Rank: 57.9
Gap = 25.2
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Current Gen. Gap = 25.2

Mean Black Parent Rank = 32.7
Mean White Parent Rank = 57.9

Pred. Gap in Next Gen. = 8.8

Mean Child Household Income Rank

Parent Household Income Rank
Convergence in Black-White Gap if Intergenerational Mobility is Race-Invariant

Next Gen. Gap = 8.8
If intergenerational mobility did not vary by race, racial disparities would shrink rapidly across generations.
Intergenerational Mobility for White vs. Black Children

White
Diff. at p=25: 12.6

Black
Diff. at p=75: 15.7
Diff. at p=100: 12.4
Income Mobility for Black vs. White Men Raised in High-Income Families

Source: Chetty, Hendren, Jones, Porter 2018; New York Times 2018

- Black men
- White men
Intergenerational Mobility for White vs. Black Children

The graph illustrates the mean income rank of children compared to their parents, categorized by race. The Steady State, marked at 54.4, represents a point where the income ranks of children and their parents converge. The blue dots and black dashed line represent the trend for White children, while the red triangles indicate the trend for Black children. The graph compares the mobility rates between White and Black households, with the x-axis representing the parent household income rank and the y-axis representing the mean child household income rank.
Intergenerational Mobility for White vs. Black Children

![Graph showing Intergenerational Mobility for White vs. Black Children. The graph plots Mean Child Household Income Rank against Parent Household Income Rank. The graph includes two steady state lines, one for Whites and one for Blacks. The steady state for Whites is at 54.4, and for Blacks is at 35.2.]
Intergenerational Mobility for White vs. Black Children

Steady-State Gap = 19.2
Intergenerational Mobility for White vs. Black Children

Intergenerational gaps → racial disparities persist in steady state

Current gap is close to steady state → intergenerational gaps (not transitory factors) drive most of the black-white gap today

Steady-State Gap = 19.2
Mean Child Income Rank vs. Parent Income Rank by Race and Ethnicity

- White
- Black
- American Indian
Mean Child Income Rank vs. Parent Income Rank by Race and Ethnicity

- White
- Black
- American Indian
- Hispanic
Mean Child Income Rank vs. Parent Income Rank by Race and Ethnicity
Children with Mothers born in the U.S.
Current Mean Ranks vs. Predicted Ranks in Steady State, by Race

Empirically Observed Mean Household Income Rank

Steady State Mean Rank

Parents

Children (born 1978-83)

Asian (US Natives)

White

Hispanic

American Indian

Black
Mechanical Effects of Household Size

- Well-known that black people marry at much lower rates than white people.

- Do differences in marriage rates create mechanical differences between the household incomes?
Marriage Rates vs. Parent Income, Black vs. White Children

Diff. at p=25: 32.1

Diff. at p=75: 34.2

Percent of Children Married in 2015 (Ages 32-37)
Black-White Gap in Child Individual Income Rank vs. Parent Income Rank

Diff. at p=25: 4.2

Diff. at p=75: 5.6

White

Black
Black-White Gap in Child Individual Income Rank vs. Parent Income Rank

Male Children

Mean Child Individual Income Rank

Parent Household Income Rank

White

Black

Diff. at p=25: 9.7

Diff. at p=75: 12.0
Black-White Gap in Child Individual Income Rank vs. Parent Income Rank

Female Children

Diff. at p=25: -1.4

Diff. at p=75: -1.0

White

Black

Mean Child Individual Income Rank

Parent Household Income Rank
Hourly Wage Rates vs. Parent Income
Female Children

Mean Child Wage Rank (Age ≥ 30)

Parent Household Income Rank

White
Black

Diff. at p=25: 1.9
Diff. at p=75: 1.5
Employment Rates vs. Parent Income Rank
Male Children

Percent of Children Working (Age >= 30)

Parent Household Income Rank

White Males
Black Males

Diff. at p=25: 18.9
Diff. at p=75: 11.4
Employment Rates vs. Parent Income Rank

- White Males
- Black Males
- White Females
- Black Females
Incarceration Rates vs. Parent Income Rank
Male Children

Pct. of Children Incarcerated on April 1, 2010 (Ages 27-32)

White
Black

Parent Household Income Rank

Diff. at p=25: -8.2
Diff. at p=75: -3.2
Incarceration Rates vs. Parent Income Rank

Female Children

- White
- Black
Do family-level factors (e.g., parental wealth) explain intergenerational gaps between black and white men?

Condition on family-level characteristics to answer this question
Effects of Family-Level Factors on the Black-White Income Gap
Children with Parents at 25th Percentile

<table>
<thead>
<tr>
<th>Controls</th>
<th>Mean Rank of White Minus Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>17.6</td>
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<tr>
<td>Par. Inc.</td>
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</tr>
<tr>
<td>Par Inc. +Two-Par.</td>
<td>9.3</td>
</tr>
<tr>
<td>Par Inc. +Two-Par. +Educ.</td>
<td>9.1</td>
</tr>
<tr>
<td>Par Inc. +Two-Par. +Educ. +Wealth</td>
<td>8.4</td>
</tr>
</tbody>
</table>
Effects of Family-Level Factors on the Black-White Income Gap
Children with Parents at 25th Percentile

Mean Rank of White Minus Black

Controls:
- None
- Par. Inc.
- Par Inc. +Two-Par.
- Par Inc. +Two-Par. +Educ.
- Par Inc. +Two-Par. +Educ. +Wealth

Male
Female

-2.0
-1.7
-1.9
-2.3
4.8
17.6
Explaining the Black-White Intergenerational Income Gap
Differences in Ability

- Ability hypothesis is inconsistent with gender heterogeneity in intergenerational gaps

  1. No ex-ante reason that racial differences in ability would produce differences in outcomes for boys but not girls

  2. Prior arguments for ability diffs. based on test score gaps, but black-white test score gaps do not vary by gender
Test Scores at Age 9 for Low-Income (Free-Lunch Eligible) Students

National Assessment of Educational Progress 2012

Math Test Score at Age 9 In SD From National Average

Boys
-0.16
-0.64

Girls
-0.16
-0.61

White
Black
Explaining the Black-White Intergenerational Income Gap
Differences in Ability

- Ability hypothesis is inconsistent with gender heterogeneity in intergenerational gaps

1. No ex-ante reason that racial differences in ability would produce differences in outcomes for boys but not girls

2. Prior arguments for ability diffs. based on test score gaps, but black-white test score gaps do not vary by gender
   - Test scores may not be an accurate measure of ability for black children, e.g. because of test bias or stereotype threat
     [Steele et al. 1995, Jencks et al. 1998]
Neighborhood Environments and the Black-White Gap

- Do blacks have worse outcomes than whites because they live in different neighborhoods?

- Begin by examining broad geographic variation across commuting zones
  - Assign children to locations in proportion to the fraction of their childhood that they spent in each CZ

- Estimate expected rank of children with parents at the 25th percentile of national income distribution using linear regression within each CZ
Mean Child Income Rank at Age 30 vs. Parent Income Rank
for Children Born in 1980 and Raised in Chicago

Predict outcome for child in CZ c using slope
+ intercept of rank-rank relationship

Source: Chetty, Hendren, Kline, Saez 2014
The Geography of Upward Mobility in the United States
Average Individual Income for Males with Parents Earning $25,000 (25th percentile)

Note: Green = More Upward Mobility, Red = Less Upward Mobility

- Salt Lake City: $31.2k
- Dubuque: $31.7k
- Cleveland: $24.6k
- Newark: $30.1k
- Washington DC: $27.8k
- Charlotte: $22.5k
- Atlanta: $23.1k
- Seattle: $27.6k
- San Francisco Bay Area: $28.8k
- Los Angeles: $27.6k

Note: Green = More Upward Mobility, Red = Less Upward Mobility
Two Americas: The Geography of Upward Mobility by Race
Average Individual Income for Boys with Parents Earning $25,000 (25th percentile)

Note: Green = More Upward Mobility, Red = Less Upward Mobility; Grey = Insufficient Data
Neighborhood Environments and the Black-White Gap

- Commuting-zone level variation illuminates broad regional patterns but does not directly test for “neighborhood” effects

- Black children live in different neighborhoods from white children within CZs

- Zoom in to examine variation across Census tracts in the rest of the talk
  - 70,000 Census tracts with about 4,250 people per tract in the U.S.
Variation in the Black-White Gap Across Tracts

- Four results:

  1. Black boys have lower earnings than white boys in 99% of Census tracts in America, controlling for parental income
Black-White Gaps within Neighborhoods by Gender
Children with Parents at 25th Percentile

Controls:
- None
- Par. Inc. p=25
- Same Tract + Par. Inc. p=25
- Same Block + Par. Inc. p=25

- Male
- Female

Mean Rank of Whites Minus Black Children

- None: 17.6
- Par. Inc. p=25: 10.0
- Same Tract + Par. Inc. p=25: 7.7
- Same Block + Par. Inc. p=25: 7.0
Distribution of Black – White Gap in Individual Ranks Across Tracts for Men

- Raw Fraction < 0: 11.8%
- Signal Fraction < 0: 1.3%
- Mean Gap: 7.5 pctiles

Density

White Minus Black Rank Given Parents at 25th Percentile
Variation in the Black-White Earnings Gap Across Tracts

- Four results:

1. Black boys have lower earnings than white boys in 99% of Census tracts in America, controlling for parental income

2. Both black and white boys have better outcomes in “good” (e.g., low-poverty, higher rent) neighborhoods, but the black-white gap is bigger in such areas
Correlations between Tract-Level Characteristics and Incomes of Black vs. White Men
Children with Parents at 25\textsuperscript{th} Percentile

<table>
<thead>
<tr>
<th>Economy</th>
<th>Share Above Poverty Line</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mean Household Income</td>
</tr>
<tr>
<td></td>
<td>Employment Rate</td>
</tr>
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<table>
<thead>
<tr>
<th>Schools</th>
<th>Mean 3rd Grade Math Score</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mean 8th Grade Math Score</td>
</tr>
<tr>
<td></td>
<td>Share HS Students Not Suspended</td>
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</tbody>
</table>

|                 | Share College Grad.     |

<table>
<thead>
<tr>
<th>Housing</th>
<th>Median Rent (2BR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share Homeowners</td>
</tr>
</tbody>
</table>

| Family Structure | Share Married |
|                 | Share Two-Parent |

| Healthcare Access | Share Adults Insured |

\begin{itemize}
\item White
\item Black
\end{itemize}

Magnitude of Correlation
Black – White Gap in Individual Income Ranks vs. Share Above Poverty Line

Males

Intercept: 3.57, Slope: 0.05
Variation in the Black-White Earnings Gap Across Tracts

- Four results:

1. Black boys have lower earnings than white boys in 99% of Census tracts in America, controlling for parental income

2. Both black and white boys have better outcomes in “good” (e.g., low-poverty, higher rent) neighborhoods, but the black-white gap is bigger in such areas

3. Within low-poverty areas, there are two factors associated with better outcomes for black boys and smaller gaps: greater father presence and less racial bias
Variation in the Black-White Earnings Gap Across Tracts

Four results:

1. Black boys have lower earnings than white boys in 99% of Census tracts in America, controlling for parental income.

2. Both black and white boys have better outcomes in “good” (e.g., low-poverty, higher rent) neighborhoods, but the black-white gap is bigger in such areas.

3. Within low-poverty areas, there are two factors associated with better outcomes for black boys and smaller gaps: greater father presence and less racial bias.

4. Neighborhoods have causal childhood exposure effects: black boys who move to good areas at a younger age do better.
Childhood Exposure Effects on Income Rank at Age 30

White Males

Slope: -0.026

\( \delta \): 0.242

Coefficient on Predicted Rank in Destination

Age of Child when Parents Move
Childhood Exposure Effects on Income Rank at Age 30

Black Males

Slope: -0.027 (0.004)

δ: 0.119
## Race-Specific Childhood Exposure Effects
### OLS Regression Estimates

<table>
<thead>
<tr>
<th></th>
<th>Whites</th>
<th>Blacks</th>
</tr>
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<tbody>
<tr>
<td>Prediction for Whites</td>
<td>-0.023</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>Prediction for Blacks</td>
<td>-0.004</td>
<td>-0.029</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.004)</td>
</tr>
</tbody>
</table>

Note: standard errors in parentheses
Comprehensive course could focus exclusively on this topic

- Today, focus on four aspects of racial discrimination / endogeneity of race gaps:

1. Experimental evidence of racial bias
   - Hiring (e.g. Pager 2003; Bertrand and Mullainathan 2004)
   - Judges (Arnold, Dobbie, and Yang 2018)

2. Responses by minorities to discrimination (Glover, Pallais, Pariente 2017)

3. Persistence of racial discrimination across generations, impact of place, and relation to Becker HC model (Chetty, Hendren, Jones, Porter 2018)
   - Role of gender

4. Endogeneity of public policies to demographic changes (Derenoncourt 2018)

- DISCLAIMER: It would be insane to try to cover this literature in 1 lecture…And there is amazing work being done in this space (resume audits, judicial bias, etc.)
4. Endogenous Place Effects on the Race Gap

- Results suggest places matter

- But can places change? Or are they immutable?

- Derenoncourt (2018): Local policies and mobility outcomes are endogenous to shifts in racial composition

- Exploits variation in the Great Migration
  - (And was kind enough to share her slides with me 😊)

Source: Derenoncourt (2018)
Geography of black upward mobility: 1940

Frac. of 14-17 yo black boys and girls from median educated families (5-8 yrs schl) who have 9-plus years of schooling.

Data from IPUMS, method via Card, Domnisoru, and Taylor (2018).

Source: Derenoncourt (2018)
Income rank of black men and women from 1978-1983 birth cohorts with low income parents, by childhood CZ.

Data from Chetty, Hendren, Jones, and Porter (2018).

Source: Derenoncourt (2018)
1940: A pivotal moment in Great Migration North

Data from US Census.

Source: Derenoncourt (2018)
Reactions in the North

Riot against integrated federal housing project in Detroit, '42.

Source: LOC.

Source: Derenoncourt (2018)
Question and empirical strategy

**Context:** Magnitude of post-1940 black inflows transformed northern cities, plausibly altering upward mobility\(^\dagger\) in the long run.

**Question:** Did the Great Migration reduce northern cities’ ability to promote black intergenerational progress?

**Empirical strategy:** Use within-North variation in Great Migration. Shift-share based instrument for 1940-1970 black population changes in urban northern commuting zones:

- Pre-1940 black southern migrant location choices
- Predicted county out-migration using Post-LASSO method

\(^\dagger\)Adult outcomes of children conditional on parent economic status.

Source: Derenoncourt (2018)
Black pop ↑ from 1940-1970 and upward mobility in 2012

Source: Derenoncourt (2018)
Heuristic definition of Great Migration shift-share instrument

Boustan (2010) adapted shift-share instrument (Altonji and Card, 1991; Card 2001) to Great Migration context:

\[
\text{Pred Black Pop} \uparrow = \underbrace{\text{Historical settlement}}_{\text{"Shares"}} \times \underbrace{\text{Predicted migration}}_{\text{"Shifters"}}
\]

Instrument intuitively combines

1. Distinctive southern migrant composition in northern cities
2. Variation in southern state net-migration flows

Source: Derenoncourt (2018)
Reduced upward mobility in Great Migration destinations

Source: Derenoncourt (2018)
Results on upward mobility

1. Did the Great Migration reduce upward mobility in the North?
   • RF: 1 s.d. ↑ lowered income rank of individuals from low income families by 1 percentile (\(\sim 3.14\% \downarrow\) income)

2. Is the channel selection (\(\Delta\) average child) or changes in locations (e.g., local public goods and neighborhood quality)?
   • **Race-specific results**
   • Childhood exposure effects

Source: Derenoncourt (2018)
Whose upward mobility was affected by Great Migration?

Units of shock are 30 percentiles. Baseline controls included. Observations are northern commuting zones. Data source: Chetty-Hendren et al. (2018); IPUMS 1940 Census; City and County Data Books, 1944-1977; and Boustan (2016).
Whose upward mobility was affected by Great Migration?

Units of shock are 30 percentiles. Baseline controls included. Observations are northern commuting zones. *Data source:* Chetty-Hendren et al. (2018); IPUMS 1940 Census; City and County Data Books, 1944-1977; and Boustan (2016).  

Source: Derenoncourt (2018)
Great Migration and racial gap in upward mobility in 2015

Observations are northern commuting zones. Data: Chetty, Hendren, Jones, and Porter (2018); IPUMS 1940 Census; CCDB; and Boustan (2016).

Source: Derenoncourt (2018)
Contribution of Great Migration to racial gap among men

Question: What would the racial gap in men’s upward mobility in North be without changes induced by Great Migration?

Compare average racial gap across northern CZs to counterfactual racial gap with no GM (each CZ receives 1 pctile of shock):

<table>
<thead>
<tr>
<th>With GM</th>
<th>Lower Parent Income</th>
<th>Higher Parent Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF w/o GM (se)</td>
<td>10.46</td>
<td>11.03</td>
</tr>
<tr>
<td></td>
<td>6.9 (.16)</td>
<td>5.0 (.24)</td>
</tr>
<tr>
<td>Pct Change</td>
<td>-34%</td>
<td>-55%</td>
</tr>
</tbody>
</table>

- Great Migration explains 43% of gap between black and white men from median income families.

Source: Derenoncourt (2018)
Results on upward mobility

1. Did the Great Migration reduce upward mobility in the North?
   - IV: 1 s.d. ↑ lowered income rank of individuals from low income families by 3 percentiles (≈ 9% ↓ income)

2. Is the channel selection (Δ average child) or changes in locations (e.g., local public goods and neighborhood quality)?
   - Race-specific results: GM reduced income of black men

Source: Derenoncourt (2018)
Results on upward mobility

1. Did the Great Migration reduce upward mobility in the North?
   - IV: 1 s.d. ↑ lowered income rank of individuals from low income families by 3 percentiles (\( \sim 9\% \downarrow \) income)

2. Is the channel selection (\( \Delta \) average child) or changes in locations (e.g., local public goods and neighborhood quality)?
   - Race-specific results: GM reduced income of black men
   - **Childhood exposure effects**

Source: Derenoncourt (2018)
Reduced childhood exposure effects in Great Migration CZs

Source: Derenoncourt (2018)
Contribution of selection vs. location-based channels

Comparing GM impact (IV) on individuals from low income parents using exposure effects vs. observed upward mobility, assuming full childhood exposure.

<table>
<thead>
<tr>
<th>Multiplier</th>
<th>CZ exposure effects</th>
<th>Avg adult inc rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>-3.6</td>
<td>-3</td>
</tr>
<tr>
<td>15.52</td>
<td>-2.8</td>
<td>-3</td>
</tr>
</tbody>
</table>

- No evidence that selection drives effect of Great Migration.
- 15.52: takes into account smaller effect of place in early years (Chetty et al., 2018)

-3.6 percentile points \(\sim\) 11.34% drop in income.

Source: Derenoncourt (2018)
Local mechanisms

• Question: How did the northern urban environment change as a result of the Great Migration?

Source: Derenoncourt (2018)
Impact of Great Migration on local mechanisms

Coefficient on Great Migration in regressions of Migration shock on average expenditure by government category (1972-2002), murder per 100k (1977-2002), incarcerated 15-64 y.o. per 100k (1983-2000), and white private school rates (1970-2000). Units of shock are 30 pctl (1 sd). Baseline 1940 controls included.

Source: Derenoncourt (2018)
Great Migration impact on private school enrollment

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year. Units of shock are 30 percentiles. *Data Source:* PF-NBHDS database for CZs, 1920-2015.

Source: Derenoncourt (2018)
Great Migration impact on urban white share

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year. Units of shock are 30 percentiles. Controls included for total 1940 CZ population. *Data Source:* City and County Data Books.

Source: Derenoncourt (2018)
Great Migration impact on police expenditures

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year.


Source: Derenoncourt (2018)
Great Migration impact on incarceration rates

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year.

Units of shock are 30 percentiles. Data Source: PF-NBHDS, 1920-2015.

Source: Derenoncourt (2018)
Great Migration impact on murder rates

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year.


Source: Derenoncourt (2018)
Great Migration impact on education expenditures

Reduced form coefficients of mechanism on Great Migration shock, estimated separately each year.

Units of shock are 30 percentiles. Data Source: PF-NBHDS, 1920-2015.

Source: Derenoncourt (2018)
Markets have imperfect information

Evidence of racial bias in hiring and judicial system

Racial gaps are endogenous

- Gaps in performance are endogenous to managers (Glover, Pallais, Pariente 2017)
- Adult earnings/incarceration gaps are endogenous to childhood neighborhood (Chetty, Hendren, Jones, Porter 2018)

And, the impact of places on race gaps are endogenous

Nathan’s read of the evidence: race gaps are not immutable, but are the result of policy and endogenous responses to discrimination