Racial Gaps in Labor Market Outcomes in the Last Four Decades and over the Business Cycle

Tomaz Cajner\textsuperscript{1}  Tyler Radler\textsuperscript{2}  David Ratner\textsuperscript{1}  Ivan Vidangos\textsuperscript{1}

\textsuperscript{1}Federal Reserve Board

\textsuperscript{2}University of Michigan

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Disclaimer: The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Federal Reserve Board.
Motivation

Unemployment Rate, Men

Unemployment Rate, Women

Labor Force Participation Rate, Men

Labor Force Participation Rate, Women
What we do

Examine racial/ethnic disparities in key labor market outcomes for men and women:

- non-Hispanic whites, non-Hispanic blacks, and Hispanics (all mutually exclusive)

Outcomes

- Unemployment Rate (UR)
- Labor Force Participation Rate (LFPR)
- Employment-to-Population Ratio (EPOP)
- Part-Time Employment for Economic Reasons (PTER)

Examine evolution of racial gaps over time (1976-2017) and over business cycle
Approach

- Explore how much of the racial gaps can be explained by observables (Oaxaca-Blinder decompositions)
- Analyze differences in labor force flows
- Study sensitivity of racial gaps to business cycle
- Investigate dynamic responses of gaps to aggregate shocks (VARs)
Outline

- Data
- Decomposing gaps in UR, LFPR, EPOP (Oaxaca-Blinder)
- Cyclicality of gaps
- Flows-based analysis of gaps
Data

- CPS microdata (1976-2017)
  - About 50 million individual-month observations (age 16+)
  - Flows: longitudinally match individuals to estimate month-to-month transitions across labor force states
Oaxaca-Blinder (OB) Decomposition

- How much of the racial gaps can be explained by differences in observables across groups?

- Given two groups, A and B, outcome $u$, and characteristics $X$, OB decomposes average difference in outcome as

$$
\bar{u}_A - \bar{u}_B = \underbrace{\beta_A \times (\bar{X}_A - \bar{X}_B)}_{"explained"} + \underbrace{(\alpha_A - \alpha_B) + \bar{X}_B \times (\beta_A - \beta_B)}_{"unexplained"}
$$
Unemployment Rate Gap: Hispanic-White Males

Hispanic-White Male Gap

Deviation from white men (p.p.)

-2
0
2
4
6
8
10
12
14

Unexplained
Age
Education
State
Marital Status
Total

Unemployment Rate Gaps

Hispanic-White Male Gap
Deviation from white men (p.p.)

Black-White Male Gap
Deviation from white men (p.p.)

Hispanic-White Female Gap
Deviation from white women (p.p.)

Black-White Female Gap
Deviation from white women (p.p.)
Labor Force Participation Rate Gaps

Hispanic-White Male Gap

Black-White Male Gap
Labor Force Participation Rate Gaps

Hispanic-White Male Gap

Hispanic-White Female Gap

Black-White Male Gap

Black-White Female Gap

Deviation from white men (p.p.)

Deviation from white women (p.p.)
Employment to Population Ratio Gaps

**Hispanic-White Male Gap**

- **Unexplained**
- **Age**
- **Education**
- **State**
- **Marital Status**
- **Total**

**Deviation from white men (p.p.)**

**Black-White Male Gap**

- **Unexplained**
- **Age**
- **Education**
- **State**
- **Marital Status**
- **Total**

**Deviation from white men (p.p.)**
Employment to Population Ratio Gaps

Hispanic-White Male Gap

Deviation from white men (p.p.)

Hispanic-White Female Gap

Deviation from white women (p.p.)

Black-White Male Gap

Deviation from white men (p.p.)

Black-White Female Gap

Deviation from white women (p.p.)

Unexplained
Age
Education
State
Marital Status
Total


-20
-15
-10
-5
0
5
10
15
-20
-15
-10
-5
0
5
10
15

15 / 29
Labor Force Flows

- Do UR gaps reflect differences in job-finding or job-losing rates?
  - Much of the discrimination literature that looks at employment focuses on differences in hiring

- Do LFPR gaps reflect differences in labor force entry or exit rates?
Labor Force Flows

Approach

- Let $E =$ employment, $U =$ unemployment, $N =$ nonparticipation.

- The UR can be expressed as a function of the flows $EU$, $UE$, $EN$, $NE$, $UN$, $NU$ (via steady-state approximation; e.g. Abraham & Shimer 2001).

- We can use this to decompose the UR gaps into parts that reflect differences (between groups) in each flow.
Flows Decompositions of Gaps

- Steady-state UR approximation:
  \[ u_t^* = \frac{E_N t N U_t + N E_t E U_t + N U_t E U_t}{E_N t N U_t + N E_t E U_t + N U_t E U_t + U N_t N E_t + N U_t U E_t + N E_t U E_t} \]

- For EU contribution, compute counterfactual:
  \[ u_{t,\text{counterfactual}}^{E U} = \frac{\hat{E} N_t \hat{N} U_t + \hat{N} E_t E U_t + \hat{N} U_t E U_t}{\hat{E} N_t \hat{N} U_t + \hat{N} E_t E U_t + \hat{N} U_t E U_t + \hat{U} N_t \hat{N} E_t + \hat{N} U_t U E_t + \hat{N} E_t U E_t} \]

- EU contribution is:
  \[ u_{t,\text{contribution}}^{E U} = u_{t,\text{counterfactual}}^{E U} - u_{t}^* \]
Flows Decomposition of Unemployment Rate Gaps

Hispanic-White Male Gap

Deviation from white men

NET

Cross Term

Total


-4 -2 0 2 4 6 8 10 12

Black-White Male Gap

Deviation from white men

NET

Cross Term

Total


-4 -2 0 2 4 6 8 10 12

Hispanic-White Female Gap

NET

Cross Term

Total


-4 -2 0 2 4 6 8 10 12

Deviation from white women

NET

Cross Term

Total


-4 -2 0 2 4 6 8 10 12
Decomposing the EU Gap

Hispanic-White Male EU Gap

Black-White Male EU Gap

Deviation from white men

Unexplained
Age
Education
State
Marital Status
Industry
Occupation
Total

Deviation from white men

Unexplained
Age
Education
State
Marital Status
Industry
Occupation
Total


-0.5 0.0 0.5 1.0 1.5 2.0

0.0 0.5 1.0 1.5 2.0

-0.5 0.0 0.5 1.0 1.5 2.0

-0.5 0.0 0.5 1.0 1.5 2.0
Flows Decomposition of Participation Rate Gaps

Hispanic-White Male Gap

Deviation from white men

Black-White Male Gap

Deviation from white men

Hispanic-White Female Gap

Deviation from white women

Hispanic-White Male Gap

Deviation from white women

Black-White Female Gap

Deviation from white men

Black-White Female Gap

Deviation from white women
Decomposing the EN Gap

Hispanic-White Male EN Gap

Black-White Male EN Gap
Discussion: What is in the unexplained component?

▶ Differences in (unobserved) skills?
  ▶ Neal & Johnson (’96): very important for wage gaps
  ▶ Fryer (’11): large cognitive skills differences start early in life
  ▶ Ritter & Taylor (’11): but less important for employment than wage

▶ Discrimination?
  ▶ Fryer (’11): discrimination relatively less important now
  ▶ Darity & Mason (’04), Bertrand & Mullainathan (’04): discrimination persists

▶ Incarceration?
  ▶ % adult men in prison in 2008: Whites 1%; Hispanic 3%; Black 8%
  ▶ Holzer et al (’05), Mueller-Smith (’15): incarceration reduces future employment

▶ Other omitted variables?
  ▶ Family background?
  ▶ School quality?
  ▶ Childhood neighborhood?
    ▶ Chetty et al (’18): neighborhoods with low poverty, low racial bias, high father presence lead to smaller black-white male income gaps
**Summary: Key Findings**

- Blacks have much higher and more cyclical URs than whites and observables explain very little of differential; gap mostly reflects higher risk of job loss.

- Hispanic-white UR gap is smaller and largely explained by lower educational attainment of (mostly foreign-born) Hispanics; "unexplained" gap has basically vanished.

- Remarkably low LFPR of black men is unexplained by observables; mostly reflects higher LF exit rates; little improved in last 40 years.

- Blacks and Hispanics more likely to be in PTER; education and occupation important factors, but unexplained gaps still large. Slow recovery for black men from GR reflects less stable movement from PT to FT work.

- Robust recovery of labor market in last few years has substantially reduced the large gaps that had soared with the GR. But, disparities remain large.
Supplemental Slides
Cyclicality of Racial Gaps

- All groups negatively affected by recessions; but blacks and Hispanics affected relatively more than whites on average.

- How different across groups is the sensitivity to the business cycle?

- Are there important differences in the dynamics of the UR and LFPR responses to changes in aggregate economic activity?

- Approaches:
  - Regressions of racial gaps on estimates of (aggregate) output gap
  - Reduced-form VARs to examine differences in persistence of aggregate shocks
Cyclicality of Unemployment Rate Gaps

<table>
<thead>
<tr>
<th>Male Black-White Gap</th>
<th>Female Black-White Gap</th>
<th>Male Hispanic-White Gap</th>
<th>Female Hispanic-White Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.65***</td>
<td>-0.38**</td>
<td>-0.31***</td>
<td>-0.21**</td>
</tr>
<tr>
<td>(0.11)</td>
<td>(0.15)</td>
<td>(0.10)</td>
<td>(0.09)</td>
</tr>
</tbody>
</table>

Panel A - Dependent Variable: Raw Unemployment Rate Gaps

Panel B - Dependent Variable: Unexplained Unemployment Rate Gaps

-0.44***  -0.29*  -0.07  -0.09
(0.09)  (0.15)  (0.07)  (0.08)

Reported coefficients are coefficients on the GDP gap. Standard errors are in parentheses.

* p<0.10, ** p<0.05, *** p<0.01
Cyclical Dynamics: VARs
Unemployment Rate Gaps

Hispanic-White Male Gap

Hispanic-White Female Gap

Black-White Male Gap

Black-White Female Gap
PTER Gaps

Hispanic-White Male Gap

Black-White Male Gap

Unexplained Industry Occupation Total

Education State

Deviation from white men


Unexplained Industry Occupation Total

Education State

Deviation from white men


Deviation from white women

Hispanic-White Female Gap

Unexplained Industry Occupation State

Research Status Total

Deviation from white men


Unexplained Industry Occupation State

Research Status Total

Deviation from white men


Deviation from white women