Employment and Racial Disparities in Maryland’s Workforce Pipeline

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Poverty is More Prevalent Among African American than White Marylanders

Poverty Rates by Race, 2016

- Baltimore City: 27% African American or Black, 12% White Non-Hispanic
- Baltimore County: 14% African American or Black, 8% White Non-Hispanic
- Maryland: 14% African American or Black, 7% White Non-Hispanic

Source: U.S. Census Bureau
African Americans Tend to Earn Less Than White Maryland Residents

Median Household Income by Race, 2016

- **Baltimore City**
  - African American or Black: $37,225
  - White Non-Hispanic: $72,540

- **Baltimore County**
  - African American or Black: $71,575
  - White Non-Hispanic: $74,757

- **Maryland**
  - African American or Black: $62,919
  - White Non-Hispanic: $88,633

Source: U.S. Census Bureau
1/3 of Baltimore City Households of Color Have Zero Net Worth

Source: Prosperity Now, David Schalliol
Red-Lining vs Persistent Segregation

Sources: University of Richmond, Virginia Commonwealth University
How We Measure Segregation Matters: What Baseline Do We Use?

ECONOMISTS: 70% Male
How We Measure Segregation Matters: What Baseline Do We Use?

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50% Male - 50/50 Split?
How We Measure Segregation Matters: What Baseline Do We Use?

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70% Male - Gender Split in Region?
How We Measure Segregation Matters: What Baseline Do We Use?

- 50% Male - 50/50 Split?
- 70% Male - Gender Split in Region?
- 60% Male - Gender Split with Needed Education?
When Measuring Segregation, We Need to Control for Education

• Education may vary between groups for a variety of reasons:
  • Self selection
  • Cultural norms
  • Implicit bias
  • Poverty

• Need to separate how much of an occupation’s segregation is due to education or other biases
Occupational Crowding

Percent of group in occupation

Percent of group with necessary education

• The resulting ratio tells you if a group is over- or under-represented in a given occupation
  • 1 indicates no crowding (proportional representation)
  • Scores above 1 indicate group members are being “crowded” by society into those occupations
How We Measure Segregation Matters: Aggregating Across an Economy

ECONOMISTS: 60% Male

DOCTORS: 25% Male

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How to Measure Segregation Across an Area: The Duncan Index of Dissimilarity

\[
\frac{1}{2} \sum \left| \frac{Men_i}{Men} - \frac{Women_i}{Women} \right|
\]

• Tells us the percentage of workers in a group that would have to switch jobs to “balance” the economy
The Duncan Index in Practice

ECONOMISTS:

60% Male

DOCTORS:

25% Male

\[ \frac{1}{2} \left[ \frac{6}{8} - \frac{4}{8} \right] + \frac{2}{8} - \frac{4}{8} \right] = 25\% \]
The Duncan Index in Practice

ECONOMISTS: [8 men, 50% male]

DOCTORS: [8 women, 50% male]

Moving 2 of the 8 men (25%) balanced out this economy
RESI’s Analysis of Segregation in Maryland

• Built on work by:
  • Michelle Holder (2015)
  • Hamilton, Austin, Darity (2011)
  • Gibson, Darity, Myers (1998)
  • Bergmann (1978)

• Used 5-year ACS data from IPUMS
  • 2009 – 2016
  • 2.3 million observations

• Computed Occupational Crowding statistics and Duncan Indices
Of 22 Major Occupation Categories, African Americans in Baltimore are “Crowded” Into 8
African-American Workers in Baltimore are More Likely to Work in Healthcare

Community and Social Service
Legal
Protective Service
Healthcare Support
Healthcare Practitioners and Technical
Office and Administrative Support
Transportation and Material Moving
Personal Care and Service

Sources: US Census ACS Data, RESI
African-American Workers in Baltimore are More Likely to be in Low-Paying Jobs

- Community and Social Service
- Legal
- Protective Service
- Healthcare Support
- Healthcare Practitioners and Technical
- Office and Administrative Support
- Transportation and Material Moving
- Personal Care and Service

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Sources: US Census ACS Data, RESI
However Similar Diversification Statewide did not Materialize
Of 22 Major Occupation Categories, African Americans in Baltimore are “Crowded” Out of 7

- Life, Physical, and Social Science
- Arts, Design, Entertainment, Sports, and Media
- Construction and Extraction
- Farming, Fishing, and Forestry
- Architecture and Engineering
- Management
- Installation, Maintenance, and Repair

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Sources: US Census ACS Data, RESI
...These Include 3 of the 5 Occupations with the Highest Wages

- Life, Physical, and Social Science
- Arts, Design, Entertainment, Sports, and Media
- Construction and Extraction
- Farming, Fishing, and Forestry
- Architecture and Engineering
- Management
- Installation, Maintenance, and Repair

Sources: US Census ACS Data, RESI
Post-Recession, African Americans in Baltimore Increased Employment in Architecture and Engineering

Sources: US Census ACS Data, RESI
...However Similar Diversification Statewide did not Materialize
Across all Occupations Statewide, African Americans are “Crowded” into Low Wage Jobs

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Sources: US Census ACS Data, Bureau of Labor Statistics, RESI
… And Statewide, African Americans are Crowded Out of Jobs Resistant to Automation
Generally, Segregation Has Increased in Baltimore City Post-Recession
...However, Regional Segregation has Remained Relatively Constant or Declined

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Sources: US Census ACS Data, RESI
Similarly, Segregation Statewide Remained Constant Post-Recession
More African Americans are Graduating From Maryland Colleges and Universities

Sources: National Center for Education Statistics, RESI
Though Segregation in College Majors Has Remained Relatively Constant Over Time
Top Eight Differences In Majors between African American and White Graduates

- Business: 4%
- Criminal Justice: 3%
- Engineering: 2%
- Health: 2%
- Education: 2%
- Visual and Performing Arts: 2%
- Public Administration: 1%
- Human Sciences: 1%

Sources: National Center for Education Statistics, RESI© Towson University, Division of Innovation and Applied Research
...Of These 5 Have Larger Shares of African Americans

Sources: National Center for Education Statistics, RESI© Towson University, Division of Innovation and Applied Research
Within Business Majors, African Americans Graduate With Less Specialized and More General Degrees

Finance: 13%
Marketing: 17%
Accounting: 18%
Business Administration: 25%
General: 36%
Human Resources: 35%

Sources: National Center for Education Statistics, RESI© Towson University, Division of Innovation and Applied Research
Within All Computer-Related Majors, African Americans are Under-Represented in Computer Science Majors

- Computer Science: 8%
- General: 15%
- IT Administration: 23%
- Information Science: 24%

Sources: National Center for Education Statistics, RESI
African Americans Constitute a Shrinking Proportion of Engineering Graduates Statewide

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Sources: National Center for Education Statistics, RESI
Correcting Segregation: Transportation

Sources: Envision Baltimore
Correcting Segregation: Public Schools

Source: Danni Williams, Facebook
QUESTIONS?

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