The Impact of Racial Segregation on College Attainment in Spatial Equilibrium

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Donald J. Trump

@realDonaldTrump

She’s projecting an Opportunity Economy, but I created Opportunity Zones, the Most Successful Economic Development Policy in years!

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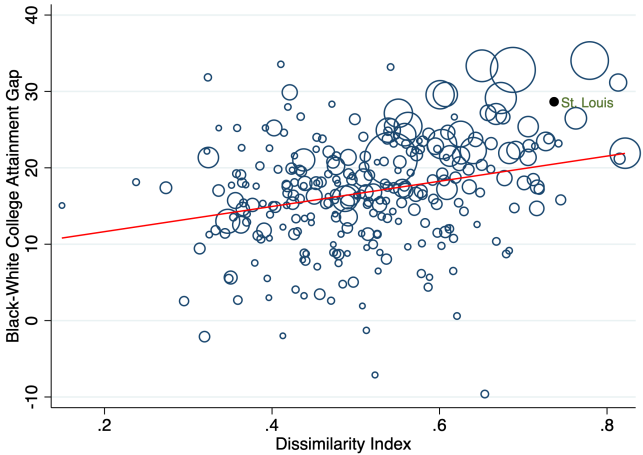
Black-White College Gap and Racial Segregation

- Large literature arguing that a child's neighborhood matters for their adult outcomes (Chetty and Hendren, 2018b; Chetty et al., 2018)
- Racial and economic segregation are predominant features of many American cities
- Racial inequality in exposure to "high-quality" neighborhoods (Bayer et al., 2021)

Do racial differences in exposure to high-quality neighborhoods explain the Black-White college gap?

Black-White College Gap and Segregation in the US



College graduation

	US	STL
White, %	44	47
Black, %	23	19
Gap, p.p.	21	28

corr(gap,dissimilarity) = 0.43

▷ College gap time series

▷ High Correlation between Race and College Enrollment

Spatial Equilibrium Model with Spillovers and Race

- Spatial equilibrium model of a city with spillovers and racial differences:

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  1. Black-White earnings gap: Gap in lifetime earnings between Black and White households

  2. Amenity externalities: Households care about the racial composition of neighbors
     Fear of discrimination in all White neighborhood, White flight, homophily

  3. Moving costs: Vary by race and neighborhood
     Differences in borrowing constraints, discrimination in housing markets, information frictions

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- General equilibrium neighborhood effects:
  - Rental markets
  - Human capital spillovers: Peer effects, networks, school quality
  - Racial composition: Matters due to amenity externalities

Overview of Results

1. Model explains 64% of Black-White college gap and the 70% of the segregation in St. Louis
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   - No earnings gap:
     - Raises parental investment and spillovers in Black neighborhood → lower college gap
     - But amenity externalities still discourage moving → little change in segregation
   - No amenity externalities:
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     - Households of both races exposed to similar spillovers → lower college gap

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3. Escaping segregation traps
   - Spillovers + amenity externalities $\Longrightarrow$ multiple equilibria
   - Evaluate policies that induce households to move to a more integrated equilibrium

Road Map

1. Model
2. Empirical results to quantify the model, calibration, and validation
3. Counterfactual analysis of racial differences
4. Multiple equilibrium

Model

Model

- Overlapping generations who each live 2 periods
- Households are of race r in $\{B, W\}$ which impacts:
  - Earnings: calibrated Black-White earnings gap
  - Amenity externalities: preferences over the racial composition of the neighborhood
  - Mobility cost: additional barriers to moving that depend on race and neighborhood

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  - Local spillover: X_n, college share
  - Racial composition: $S_{r,n}$, population share of each race

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  - Adults choose their neighborhood
  - They decide how much to consume and invest in skills of their child
  - The child is born, realization of education preference shock
  - Child chooses education level, e in $\{e^L, e^H\}$, with which they will enter adulthood

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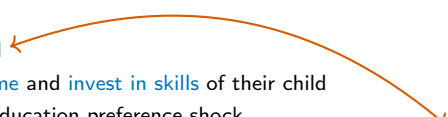

Adult Problem: Consumption, Investment, and Neighborhood Choices

$$V(r, s, e, n_0, n) = \max_{c,i} \log(c) + \log\left(A(n, r, S_{r,n})\right) + \beta \mathbb{E}\left[\mathcal{V}(r, s', e', n)\right]$$

subject to

$$c + i + p_n + m(r, n_0, n) = y(r, e, s)$$

$$\log s' = \theta_c + \underbrace{\theta_i \log(i)}_{\text{individual}} + \underbrace{\theta_X \log(X_n)}_{\text{neighborhood}} + \varepsilon_s \qquad \varepsilon_s \sim N(0, \sigma_s)$$

$$P(e' = e^H) = G^e(r, s', n)$$

- Amenity externalities: neighborhood valuation depends on racial composition, $S_{r,n}$
- Mobility cost: depends on race, initial neighborhood, neighborhood as adult
- Income: depends on race, education, and skills
- Local spillover: share of college-educated adults, X_n

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Neighborhood choice:

$$\mathcal{V}(r, s, e, n_0) = \mathbb{E}_\varepsilon \left[\max_n \{V(r, s, e, n_0, n) + \varepsilon^n\}\right].$$

ε^n: neighborhood preference shock drawn from a type 1 extreme value distribution

Child's Problem: Education Choice

$$e = \underset{\{e^L, e^H\}}{\text{argmax}} \{ \mathcal{V}\left(r, s, e^L, n\right) + \sigma^L, \mathcal{V}\left(r, s, e^H, n\right) - \underbrace{(\bar{c} - s)}_{\text{educ. cost}} + \sigma^H \}$$

- Skill affects: (i) income $y(r, e, s)$, and (ii) education cost

- σ^H, σ^L are preference shocks drawn from a type 1 extreme value distribution

Three General Equilibrium Forces

- Housing: elastically supplied, $S_n = \eta_n p_n^{\psi}$
- Local spillovers: X_n, share of adults with high education by neighborhood
- Amenity externalities: $S_{r,n}$, race shares by neighborhood

▷ Equilibrium Definition

Quantification

Calibration Strategy

Focus on St. Louis MSA

- **Empirical estimates:**
  1. Three neighborhoods
  2. Moving across neighborhoods
  3. Black-White earnings gap
  4. Amenity externalities
  5. Skills and spillovers

  } Sources of racial differences

- **Calibration:** some external and some internal, to match the data
- **Validation:** replicate causal effects from the literature

1. Three Neighborhoods

K-means clustering of Census tracts:

	All	Cluster A	Cluster B	Cluster C
Population Share	1.00	0.17	0.62	0.21
Black Share	0.20	0.78	0.09	0.07
College Share of Adults	0.28	0.15	0.23	0.53
Income ($)	57,835	33,273	55,405	84,749
Median House Price ($)	171,749	82,699	150,060	307,244

Notes: K-means clustering for St. Louis MSA. Data from 2000 Census and (Chetty et al., 2018)

▷ Map

2. Moving Across Neighborhoods

Additional mobility cost, m^B for Black households who move out of A (Box-Couillard Christensen 2024)

$$m(r, n_0, n) = \begin{cases} m^B & \text{if } r = B, n_0 = A, n \neq A \\ 0 & \text{o.w.} \end{cases}$$

Captures barriers to moving to a predominantly White area:

- Discrimination in housing markets
- Difficulties in obtaining credit

Target: Racial difference in probability of staying in A

- Probability of staying in A is 58% for Black children, while 12.5% for White children (NLSY data)

▷ Details

3. Black-White Earnings Gap

- Mincer regression in NLSY-97:

$$\log(\text{earnings}_i) = \alpha\ \text{race}_i + \beta\ \text{college}_i + \chi\ \log(\text{skill}_i) + \ \delta\ \text{gender}_i + \varepsilon_i$$

  where skill is measured with ASVAB.

- In the model:

$$y(r, e, s) = w(r, e)\ s^{\chi}$$

	White	Black
earnings, below college	1.00	0.92
earnings, college	1.71	1.58
Return to skill, χ	0.19	0.19

- Gaps consistent with the literature (Neal and Johnson, 1996; Heckman et al., 2006)

▷ Time series

4. Amenity Externalities

Why do amenities depend on racial composition?

- Homophily, discrimination (Becker and Murphy, 2000)

Functional Form:

- Penalty on exogenous amenities (Banzhaf and Walsh, 2013):

$$A(n, r, S_{r,n}) = A_n\left(1 - \varphi_r \left(S_{r,n} - \gamma_r\right)^2\right)$$

- Utility from exogenous amenities A_n decreases as racial composition differs from ideal
- $S_{r,n}$ is the share of population of race r in n
- γ_r is the "bliss point" for racial composition
- φ_r is a weight on the penalty

4. Calibration of Amenity Externalities $\varphi_r \left(S_{r,n} - \gamma_r\right)^2$

1. γ_r: Survey evidence: $\gamma_B = 0.5$, $\gamma_W = 0.9$ (Farley et al., 1997; Krysan and Farley, 2002) ▷ Details

2. φ_r: Causal effect of racial composition on neighborhood choice (Caetano and Maheshri, 2021)

   - If the Black share in a neighborhood rises by 10 p.p., the moving probability:
     - Increases by 3.5% for rich Black households
     - Decreases by 2.8% for rich white households
   - Larger responses to changes in race than in income
   - Similar findings in the literature Bayer et al. (2004); Bayer and McMillan (2005); Bayer et al. (2017); Boustan (2013); Card et al. (2008)

Skills:

$$\log s = \theta_c + \theta_i \log(i) + \theta_X \log(X_n) + \varepsilon_s$$

- Estimate same regression in the data and model ▷ Results
- Target the coefficients θ_i and θ_X
- Target the rank-rank correlation of income to discipline the variance of ε_s Chetty et al. (2014)

Calibration: Internal Parameters and Targeted Moments

Parameter	Description	Value	Moment	Data	Model
Neighborhoods					
A_A	Amenity in A	1.0000	Population neighborhood A	0.1700	0.1150
A_B	Amenity in B	1.1894	Population neighborhood B	0.6200	0.6676
A_C	Amenity in C	1.2752	Population neighborhood C	0.2100	0.2174
η_A	Housing supply in A	25.3023	Rent neighborhood A	0.1200	0.1017
η_B	Housing supply in B	22.6165	Rent neighborhood B	0.2178	0.2248
η_C	Housing supply in C	1.4118	Rent neighborhood C	0.4460	0.4526
κ	Shape parameter for location	0.1232	Neighborhood flows	0.4600	0.4200
m^B	Additional mobility cost	0.0200	Diff in moving prob for Black HHs	-0.4550	-0.4853
Amenities: Importance of bliss point					
φ_W	White	0.5492	Migration response to Black share, Black non-college	0.0241	0.0267
φ_B	Black	0.8740	Migration response to Black share, Black college	0.0345	0.0274
			Migration response to Black share, White non-college	-0.0225	-0.0280
			Migration response to Black share, White college	-0.0283	-0.0278
Skill production					
θ_c	Constant term	0.7884	Mean skills	1.0000	0.9669
θ_i	Investment	0.1579	Reg s on X_n and i	0.1510	0.1581
θ_X	Spillovers	0.3081	Reg s on X_n and i	0.2984	0.3052
σ_s	Std. skill shock	0.1916	Rank-rank correlation	0.4130	0.4127
Education					
$\bar{c}$	Education cost level	1.7879	Educational probability	0.4166	0.4624
σ	Shape parameter education	0.2572	R^2 education choice	0.1570	0.1690

▷ Details: flows ▷ Policy functions ▷ External parameters

Model Validation 1: Moving to Opportunity

Data: MTO

- Voucher program increased college attainment (Chetty et al., 2016)
- Small-scale RCT

Model:

- Subsidize rent differences across neighborhoods for households living in A
- Partial equilibrium exercise, following the small-scale RCT

	Data	Model
Takeup rate (%)	[46.0, 49.3]	52.2
College attainment, treatment-on-the-treated (%)	[2.9, 7.6]	15.4
College attainment, intent-to-treat (%)	[1.4, 3.7]	8.1

Model Validation 2: Causal effect of segregation

Data: (Ananat, 2011)

- Instrument: exogenous variation in segregation from the historical layout of train tracks
- Measure the causal impact of segregation on college attainment

Model:

- Eliminate amenity externality, evaluate the response in college attainment
- Compare general equilibrium

	Data	Model
Δ college attainment, White	[-0.290, 0.012]	0.200
Δ college attainment, Black	[-0.520, -0.078]	-0.211

Model: Segregation and College Gap

Model Explains Segregation and the College Gap

Model generates 64% of the college gap and 70% of the level of segregation

	Data	Model
College attainment		
All, %	0.42	0.46
White, %	0.47	0.50
Black, %	0.19	0.32
College gap, p.p.	0.28	0.18
Black share		
All	0.20	0.20
Neighborhood A	0.78	0.79
Neighborhood B	0.09	0.14
Neighborhood C	0.07	0.06
Dissimilarity Index	0.61	0.43

1. Earnings gap:
Higher earnings enable White HH to afford better neighborhoods, invest in kids (Couture et al., 2023)

2. Amenity externalities:
Drives White HHs to B and C and Black HHs to A
Segregation $\implies$ lower spillovers for Black $\implies$ college gap

3. Mobility cost differences:
Reinforces these outcomes

$\rightarrow$ Racial inequality in exposure to high-quality neighborhoods

▷ Dissimilarity index ▷ Neighborhood Heterogeneity

Sources of College Gap: Earnings Gap, Amenity Externality, Mobility Cost

No Earnings Gap Counterfactual, $w(B, e) = w(W, e)$

	College gap	Dissimilarity index
Benchmark	0.18	0.43
No Earnings Gap Counterfactual		
General equilibrium	0.10	0.36
Partial equilibrium	0.15	0.38

- Removing the Black-White earnings gap decreases college gap by 8 p.p. and segregation by 14%
- Direct effect: Black households use additional income on investment $\rightarrow$ Increase education
- GE effect: Spillovers in A goes up
- Segregation is not substantially reduced due to amenity externalities and barriers to moving

▷ Investment ▷ Neighborhood Characteristics Equalization

Race-Blind Counterfactual: No Amenity Externality, $\varphi_b = \varphi_w = 0$

	College gap	Dissimilarity index
Benchmark	0.18	0.43
Race-Blind Counterfactual		
General equilibrium	0.02	0.04
Partial equilibrium	0.02	0.05

- Removing amenity externality decreases college gap by 16 p.p. and segregation by 91%
- Households reallocate → lower racial inequality in exposure to high-quality neighborhoods
- White and Black households are exposed to similar spillovers → reduction of the college gap

▷ Investment ▷ Equal Mobility Cost

Multiple Equilibria

Spillovers + Amenity Externality $\Longrightarrow$ Multiple Equilibria

	Equilibrium 1	Equilibrium 2
Dissimilarity index	0.43	0.17
College gap	0.18	0.06
Education, neighborhood A	20.03	26.98
Education, neighborhood B	39.12	35.29
Education, neighborhood C	77.10	71.91
SSE	0.02	0.27

Equilibrium 1:

- Segregated equilibrium
- Matches the data

Equilibrium 2:

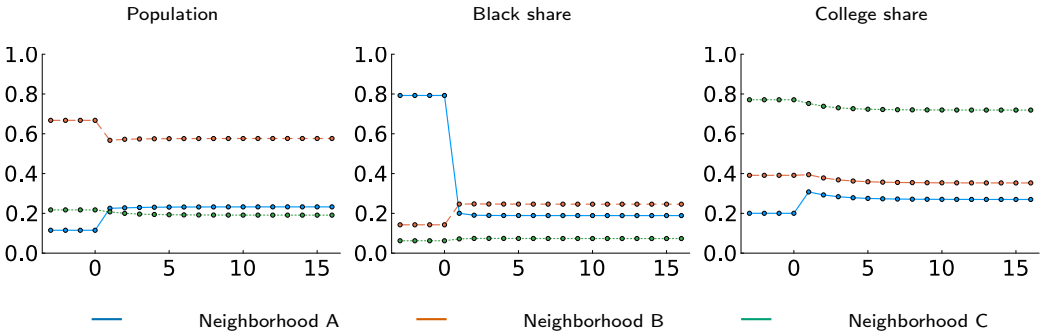
- Integrated equilibrium
- Lower college gap

Can the economy coordinate to move from the segregated to the integrated equilibrium?

Escaping the Segregation Trap

- Start in segregated equilibrium
- In $t = 0$ agents learn that in $t = \tau$ they will coordinate to be in integrated equilibrium
- What is the transition path?

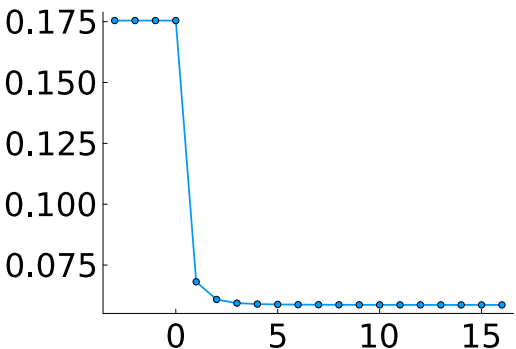
Escaping the Segregation Trap



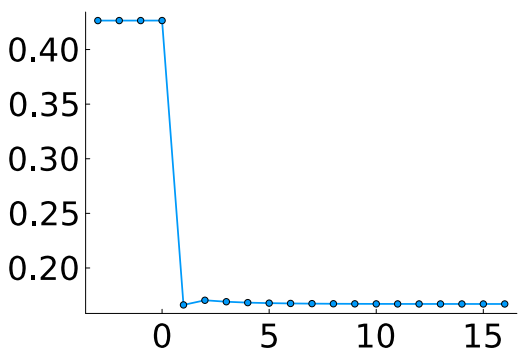
- Black households move from A to B, White households from B to A
- A gains population, B loses
- Neighborhood C about the same
- Increase in college share in A
- Can achieve fast coordination to equilibrium 2, robust for different values of τ

Escaping the Segregation Trap

College gap



Dissimilarity index



- Lower college gap and segregation
- Lower racial inequality in exposure to high-quality neighbrohoods

Place-Based Policies

Can government provide incentives to moving and destabilize the segregated equilibrium?
We consider 2 alternative policies:

1. Moving to Opportunity (MTO)
   - Same as before, but in GE
   - Fund vouchers with housing tax
2. Opportunity Zones (OZ)
   - Tax benefits to investors to spur growth in low-income neighborhoods
   - In STL: 71% of opportunity zones are in neighborhood A
   - **Model:** provide transfer to college households living in A, if college attainment in A $\leq$ 26%

Opposite incentives:

- MTO: incentives for low-education households to live in high-education areas
- OZ: incentives for high-educated households to live in low-educated areas

Place-Based Policies: Outcomes

OZ:

- With high enough transfer, the segregated equilibrium is no longer an equilibrium
- The transfer will never actually be paid, and only the integrated equilibrium remains

	Benchmark	**OZ**	**MTO**
Dissimilarity index	0.43	0.17	0.11
College gap	0.18	0.06	0.03
Welfare (C.E.), %			
Aggregate		1.63	1.28
Coefficient of variation		2.49	3.28
Black households		2.61	3.74
White households		1.38	0.66
Non-college households		1.93	1.81
College households		1.26	0.63
Fraction with welfare gains		0.69	0.80

- Welfare gains are larger and less dispersed in OZ than in MTO

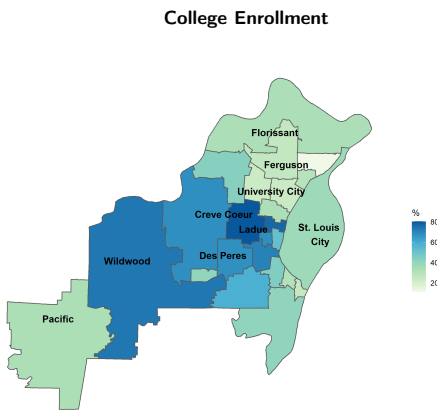
Conclusion

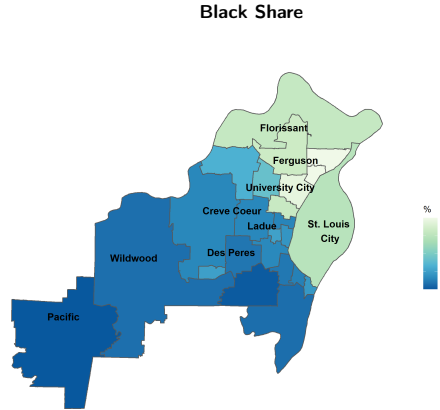
Conclusion

- Add race to a benchmark model of a city with neighborhood spillovers
- Model does a good job in replicating the Black-White college gap and segregation
- Racial segregation affects the exposure to high-quality neighborhoods and the college gap
- Closing earnings gap impacts college gap, but not segregation
- Amenity externalities have largest impacts on both
- There exists a second, more integrated equilibrium with a lower college gap, which can be reached with appropriate government policies

Appendices

St. Louis: High Correlation between Race and College Enrollment





Correlation(college enrollment,black share) = - 0.63

▷ Back

Related Literature

- **Empirical literature on racial differences and causes and consequences of segregation**
  - Neal and Johnson (1996); Cutler and Glaeser (1997); Cameron and Heckman (2001); Card and Rothstein (2007); Boustan (2013); Ananat (2011); Billings et al. (2013); Chetty et al. (2016); Jackson et al. (2016); Hyman (2017); Chetty and Hendren (2018a,b); Graham (2018); Monarrez and Schönholzer (nd); Biasi (2021); Derenoncourt (2022)
- **Spatial equilibrium models of racial segregation**
  - Schelling (1969, 1971)
  - Sethi and Somanathan (2004); Banzhaf and Walsh (2013); Bayer and McMillan (2005); Bayer et al. (2004); Caetano and Maheshri (2021); Christensen and Timmins (2023)

  Do not consider the impact on human capital accumulation
- **Neighborhood spillovers in human capital accumulation**
  - Fernandez and Rogerson (1996); Brock and Durlauf (1995); Benabou (1996)
  - Fogli et al. (2023); Zheng and Graham (2022); Eckert and Kleineberg (2019); Aliprantis and Carroll (2018); Chyn and Daruich (2022); Gilraine et al. (2023)

  Do not consider race
- **Our contribution:** Add race to a spatial model with education and neighborhood spillovers

Recursive Competitive Equilibrium

A *Recursive Competitive Equilibrium* is characterized by policy functions for the neighborhood choice $n(r, s, e, n_0)$, consumption $c(r, s, e, n_0, n)$, and investment $i(r, s, e, n_0, n)$ decisions of the parent, the education choice $e'(r, s, e, n)$ of the child, value functions $V(r, s, e, n_0, n)$, house prices $\{p_n\}_{n=1}^N$, local spillovers $\{X_n\}_{n=1}^N$, neighborhood racial shares $\{S_{r,n}\}_{n=1}^N \forall r \in \{B, W\}$, and an ergodic distribution $F(r, s, e, n_0, n)$ over race, skills, education, birth neighborhood, and adult neighborhood, which satisfy the following:

1. Household optimization: the policy functions n, e', c, i solve both the adult's and child's problem.
2. Housing market clearing:
$$\eta_n p_n^{\psi} = S_n = \int F(dr, ds, de, dn_0, n) \qquad \forall\, n = 1, \ldots, N$$
3. Spillover consistency:
$$X_n = \frac{\int F(dr, ds, e^H, dn_0, n)}{\int F(dr, ds, de, dn_0, n)} \qquad \forall\, n = 1, \ldots, N$$
4. Location consistency:
$$S_{r,n} = \frac{\int F(r, ds, de, dn_0, n)}{\int F(dr, ds, de, dn_0, n)} \qquad \forall\, n = 1, \ldots, N \text{ and } r = \{b, w\}.$$

▷ Back

Intergenerational Transmission

1. Parental investment: as transfers between parent and child

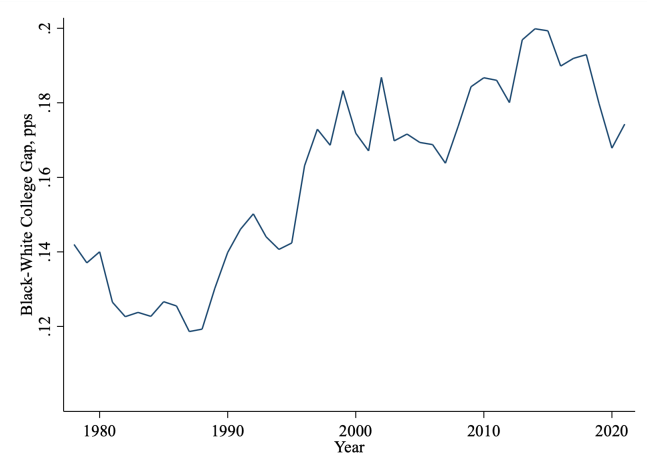
2. Neighborhood:

   - Spillovers: living in a high-quality neighborhood is a complementary way of investing in child's skills
   - Moving costs: persistence in neighborhood choice across generations

$\Longrightarrow$ still have intergenerational persistence in income + education, even without a wealth gap

Data

Black-White College Attainment Gap



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Survey Evidence

Survey evidence from (Farley et al., 1997; Krysan and Farley, 2002)

	Attractiveness Ratings of Neighborhoods by Racial Composition (Black Respondents)
All Black	20%
Majority Black	23%
50% Black	50%
Majority White	5%
All White	2%

	Reasons Blacks Find A Neighborhood Most Attractive
Because it is mixed	56%
Positive effects of integration	22%
Better neighborhood characteristics	7%
White hostility	4%
Other	11%

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Krysan and Farley (2002)

TABLE 1: Attractiveness Ratings of Neighborhoods by Racial Composition and Rank Order (Black Respondents)

	First Choice Percent	Second Choice Percent	Third Choice Percent	Fourth Choice Percent	Fifth Choice Percent
All black	20	7	24	32	16
10 black–4 white	23	58	13	6	1
7 black–7 white	50	22	26	1	< 1
2 black–12 white	5	12	34	49	1
All white	2	2	3	12	81
Total	100	100	100	100	100
Sample size	2001	1995	1989	1977	1975

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Black-White Earnings Gap Across Decades

	1980-1989	1990-1999	2000-2009	2010-2019
St. Louis, Below college				
White	1.000	1.000	1.000	1.000
Black	0.783	0.831	0.875	0.819
St. Louis, College or above				
White	1.281	1.567	1.632	1.817
Black	1.004	1.302	1.427	1.489
National, Below college				
White	1.000	1.000	1.000	1.000
Black	0.823	0.893	0.910	0.895
National, College or above				
White	1.446	1.704	1.802	1.988
Black	1.190	1.522	1.639	1.729

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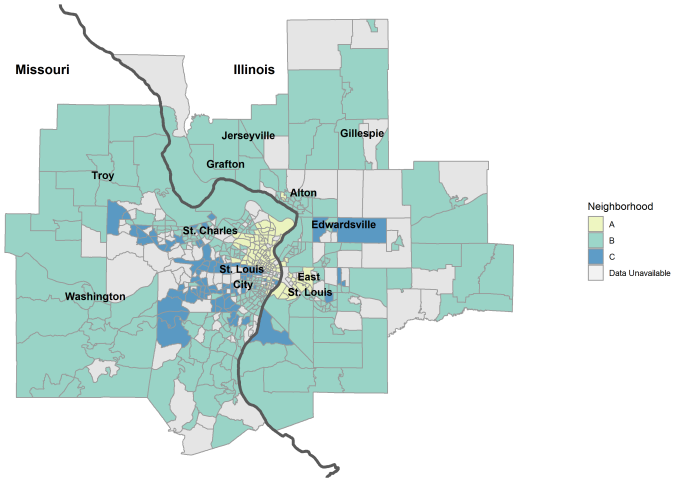
Neighborhood Segregation



Clusters:

A: Black & low-income

B: White & middle-income

C: White & high-income

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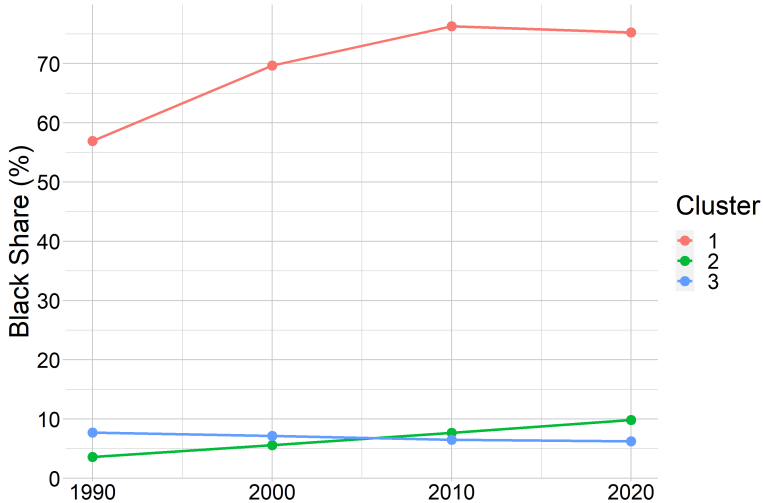
Black Share by Cluster Over Time



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Parent-Child Neighborhood Transition Matrices

		Adult Neighborhood		
		Cluster A	Cluster B	Cluster C
	Black			
Child Neighborhood	Cluster A	0.580	0.334	0.086
	Cluster B	0.384	0.508	0.108
	Cluster C	0.364	0.423	0.214
	White			
Child Neighborhood	Cluster A	0.125	0.596	0.278
	Cluster B	0.070	0.623	0.306
	Cluster C	0.052	0.452	0.496

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Neighborhood Flows

- Cluster Census tracts at the national level
  - K–means clustering algorithm on race share, income, housing prices, and college share
- NLSY: See county, race, education $\rightarrow$ estimate the probability of being in each cluster
- Compute the probability of moving between clusters between age 17 and 35.
- Conclusion: take a midpoint of 35% move across clusters

	Sample Restriction	
	50%	75%
Neighborhood flows	.461	.253
Observations	16,364	3,173

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Calibration: External Parameters

Parameter	Description	Value	Source
β	Discount factor	0.97^{40}	
γ_B	Bliss points for Black	0.50	Banzhaf and Walsh (2013)
γ_W	Bliss points for White	0.90	Banzhaf and Walsh (2013)
$w(B, L)$	Relative wage of Black, low education	0.92	Mincer regressions
$w(B, H)$	Relative wage of Black, high education	1.57	Mincer regressions
$w(W, H)$	Relative wage of White, high education	1.71	Mincer regressions
χ	Return to skill	0.18	Mincer regressions
ψ	Housing supply elasticity	2.36	Saiz (2010)

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Skill Formation Estimates

	log(ASVAB)
log(parental transfers)	0.151
	(0.0159)
log(county college share)	0.298
	(0.0381)
Constant	-1.951
	(0.185)
Observations	3,898
R^2	0.050

	Bachelor's Degree or More
log(skills)	0.1910
	(0.0059)
Constant	0.4200
	(0.0074)
Observations	4,997
R^2	0.1570

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Dissimilarity Index

- Use dissimilarity index as in Ananat (2011)
- Dissimilarity index is defined as:

$$\text{seg} = \frac{1}{2}\sum_{i}^{N}\left|\frac{Black_i}{Black_{total}} - \frac{White_i}{White_{total}}\right|$$

  where N is the number of neighborhoods

- Measures (Ananat, 2011):

  "What percent of Blacks (or non-Blacks) would have to move to a different census tract in order for the proportion of Black households in each neighborhood to equal the proportion Black in the city as a whole?"

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Neighborhood Heterogeneity Matters

- Three GE neighborhood variables: Spillovers (X_n), race shares ($S_{r,n}$), and rents (p_n)
- What would happen if these are determined at the city, instead of neighborhood, level?

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	College gap	Dissimilarity Index
Benchmark	0.18	0.43
Equal spillovers	0.03	0.40

- Equal spillovers $\Longrightarrow$ lower college gap, but still high segregation
  - Something else is determining neighborhood choice

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Equal race shares	0.02	0.04
Equal rents	0.00	0.15
All equal	0.00	0.02

- Equal spillovers $\implies$ lower college gap, but still high segregation
  - Something else is determining neighborhood choice
- Equal race shares or rents $\implies$ lower segregation $\implies$ lower college gap
  - With equal racial shares, more agreement on neighborhood ranking
  - With equal rents, Black households less likely to choose A

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- Neighborhood heterogeneities implies racial inequality in exposure to high-quality neighborhoods

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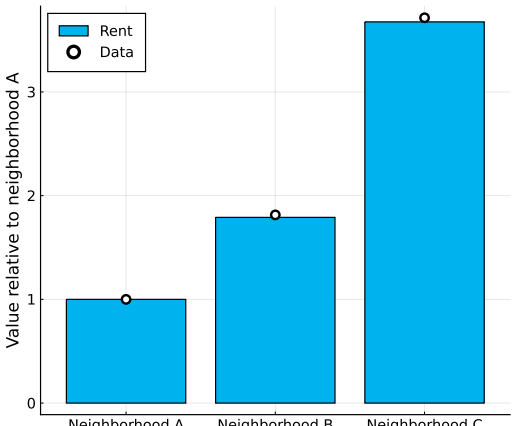
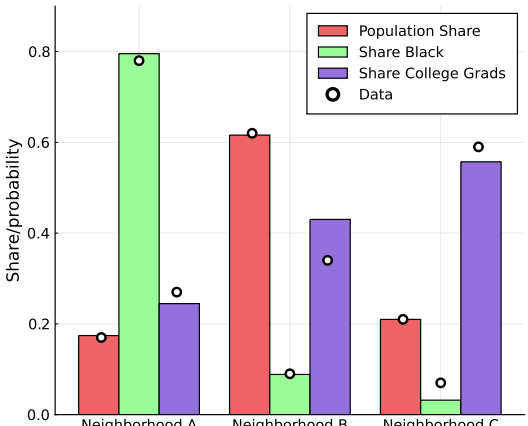
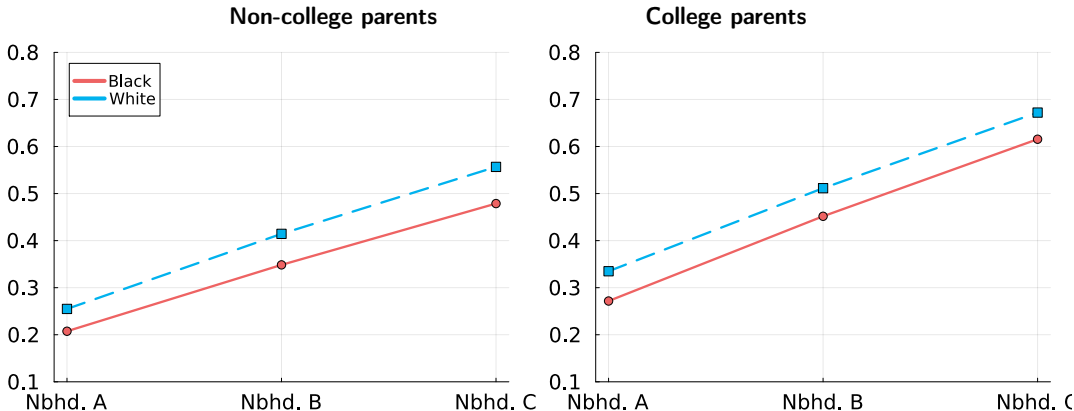
Quantitative Results

Baseline: Neighborhood Characteristics

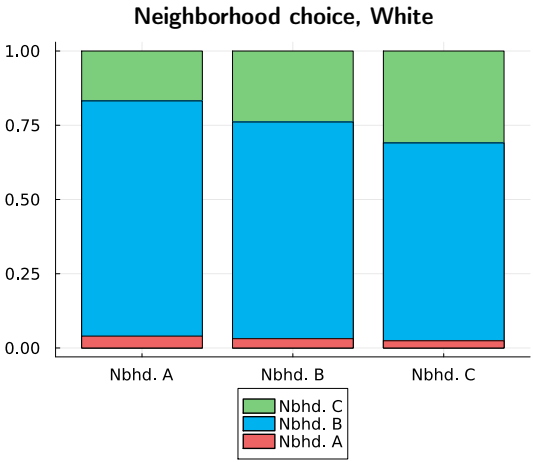


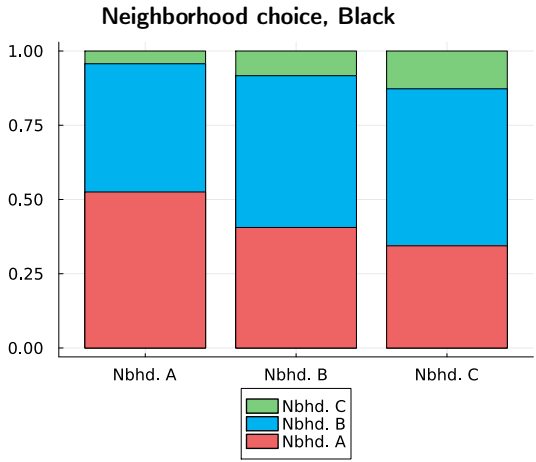


Benchmark: Probability of Going to College



Benchmark: Policy Rules, Neighborhood Choice





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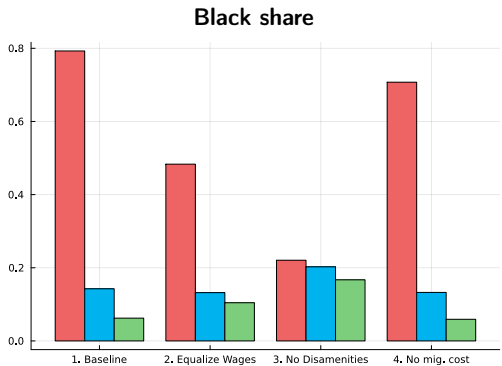
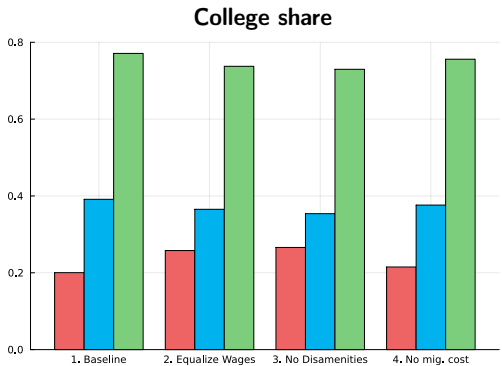
Neighborhood Characteristics Equalization





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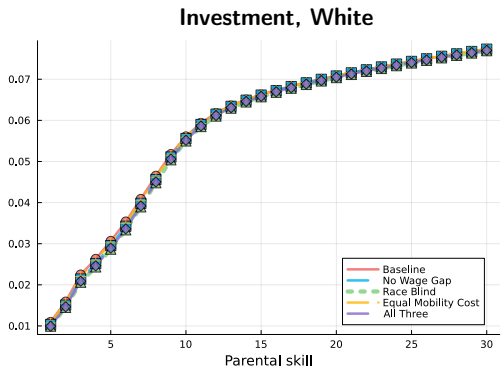
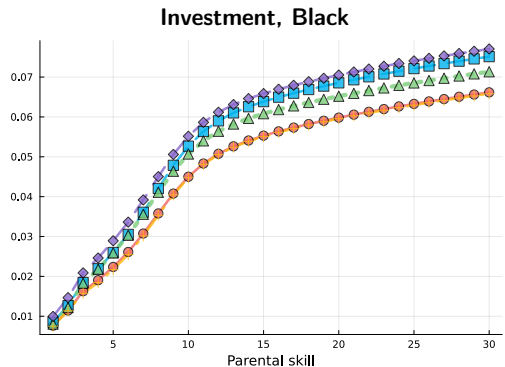
Equalizing Earnings: Investment is the Primary Driver of the Closing Education Gap





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Equal Mobility Cost

	College gap	Dissimilarity index
Benchmark	0.18	0.43
Equal Mobility Cost		
General equilibrium	0.17	0.46
Partial equilibrium	0.17	0.41

- Equalizing mobility costs increases segregation by 57% and decreases college gap by 1 p.p.
- If cost removed, Black households more likely to live in A
- Quantitatively minor impacts overall: few households move, leaving exposure to high-quality neighborhoods unchanged
- GE effects important for segregation index

▷ Investment

Intergenerational Mobility

	Education Probability			
	Benchmark	No Earnings gap	Race blind	Equal mobility cost
Non-college parent, White	0.43	0.38	0.36	0.41
Non-college parent, Black	0.27	0.30	0.34	0.26
Gap	0.15	0.08	0.01	0.15
College parent, White	0.57	0.53	0.51	0.56
College parent, Black	0.43	0.45	0.50	0.41
Gap	0.14	0.09	0.01	0.15

- Equalization in intergenerational mobility
- Driven by increases in college attainment for Black children, decreases for White children

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