

Segregation and Homeownership in the Early Twentieth Century

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Introduction

- Among the persistent black-white gaps, homeownership is one of the most substantial
- In 2016, the white homeownership rate was at 63.5 percent while the black homeownership rate was only 41.3 percent (CPS Housing Vacancy Survey)
- This translates into significant gaps in wealth between white and black households
- Compounding this are differences in the returns to housing wealth: for every \$1 in wealth accrued through homeownership for the median black household, the median white household accrues \$1.34 (Sullivan et al., 2015)

Introduction

- These gaps are a product of a long history of discriminatory policies in lending, institutional barriers to black homeownership, and the effects of residential sorting
- Our goal is to provide new evidence of the relationship between residential segregation and homeownership rates over the first half of the twentieth century
- Our main contribution is to introduce new panel of segregation data that lets us look at the relationship between segregation and homeownership outside of just the largest American cities

Introduction

- We construct new data on segregation from 1880 through 1940 and relate levels of segregation to levels of homeownership by race
- The segregation measure exploits the federal 100 percent samples of the census to identify the races of next-door neighbors
- We find a rise in segregation over time in both urban and rural areas that mirrors the rise in homeownership rates
- However, in the cross section, segregation and homeownership are negatively correlated for both white and black households
- Using the approach of Fetter (2013), we show that exogenous shocks to the ability to finance a mortgage had substantially lower impacts on homeownership in more segregated counties

Race and Homeownership over the 20th Century

- The 20th century saw the Great Migration of black households from the South to cities in the North coupled with suburbanization
- Boustan (2010) documents the impact of black arrivals on white flight to the suburbs in the mid-twentieth century, Shertzer and Walsh (2016) demonstrate white flight occurred in earlier decades as well
- As this residential sorting occurred, the nature of mortgages changed as well with the rise of longer loans with lower down payments, the Home Owner's Loan Corporation (HOLC), the Federal Housing Administration (FHA), and racial covenants (until 1948)
- These changes to the lending market were far from race neutral

Measuring Segregation

- We are not the first to look at segregation and homeownership during this period (see, for example, Collins and Margo, 2001 and 2011)
- However, prior studies have had to rely on traditional segregation measures like dissimilarity or isolation
- These measures fail to capture segregation within wards or outside of cities, limiting their scope
- With the release of digitized 100 percent samples of the federal census, it is possible to look at segregation at the household level

The 1880 Federal Census

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Supervisor's Dist. No. 1st

Enumeration Dist. No. 34th

Note A.—The Census Year begins June 1, 1879, and ends May 31, 1880.

Note B.—All persons will be included in the Enumeration who were living on the 1st day of June, 1880. No others will. Children BORN SINCE June 1, 1880, will be OMITTED. Members of Families who have DIED SINCE June 1, 1880, will be INCLUDED.

Note C.—Questions Nos. 13, 14, 22 and 23 are not to be asked in respect to persons under 10 years of age.

SCHEDULE 1.—Inhabitants in James City, in the County of James City, State of Virginia, enumerated by me on the 1st day of June, 1880.

Sydney Smith Jr.

[illegible]

The 1880 Federal Census

7		12 16	Jenkins, Prance,	B M 46		1		Farm laborer	
8		13 17	Abbott, James,	B M 49		1		Farm laborer	14
9			Wiley,	B F 40	Wife	1		Keeping house	
10			Harry,	L M 16	Son	1			
11		14 18	Bonner, Samuel,	B M 60		1		Baker	
12			Samuel,	B F 38	Wife	1		Keeping house	
13			Mary J.	B F 27	Daughter	1		Domestic servant	
14			Ellie,	B F 13	Daughter	1			
15			Mary E.	M F 11	Grand-daughter	1			
16			Roberson, Martha,	B F 6	Grand-daughter	1			
17		15 19	Lacy, Theodore S.	W M 36		1		Salesman	
18			Kate H.	W F 30	Wife	1		Keeping house	
19			Southall, Virginia A.	W F 27	Sister-in-law	1			
20			Virginia C.	W F 22		1			
21		16 20	Brown, James F.	W M 47		1		Carpenter	
22		17 21	Toussaint, Thomas,	B M 25		1		Laborer	8
23			Rachel,	B F 30	Wife	1		Servant	
24			Shepherd, Emma,	B F 15	Step-daughter	1		Servant	3
25			Boyl, George,	M M 12	Step-son	1			
26			Jeremiah,	M M 10	Step-son	1			

Prince George Street

State Virginia Incorporated place Williamsburg Ward of city _____ Unincorporated place _____
County James City Township or other division of county _____ Block Nos. _____ Institution _____
(Office of institutions and town on which marine are made)

[illegible]

Neighbor-based Segregation

The measure is based on how the number of black households living next to white neighbors compares to the expected number under random assignment and under perfect segregation:

$$\alpha = \frac{E(\overline{x_b}) - x_b}{E(\overline{x_b}) - E(\underline{x_b})}$$

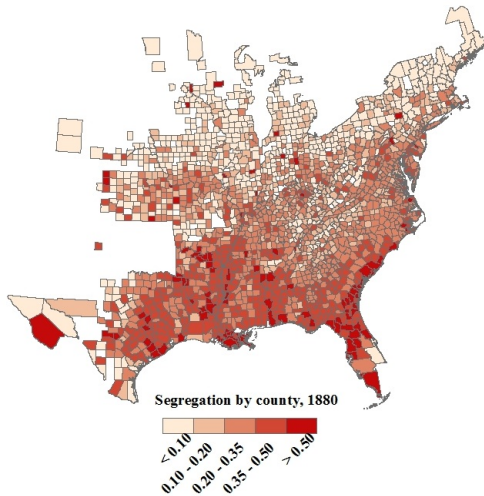
- x_b : number of black household heads living next to white neighbors
- $E(\overline{x_b})$: expected number under random assignment of households
- $E(\underline{x_b})$: expected number under complete segregation

Neighbor-based segregation

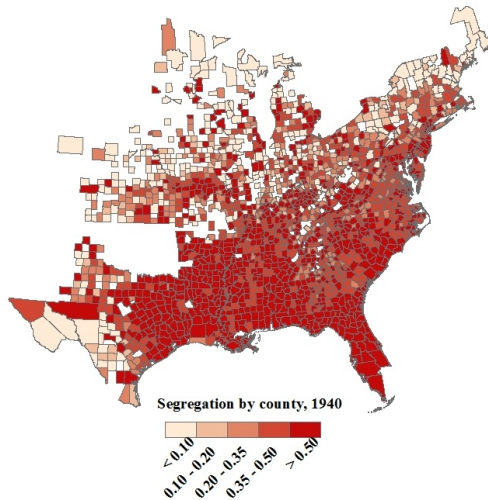
$$\alpha = \frac{E(\overline{x_b}) - x_b}{E(\overline{x_b}) - E(\underline{x_b})}$$

- Note that the measure goes to zero under random assignment (no segregation)
- As counties become more segregated, x_b decreases leading to a larger value for the statistic
- The measure goes to one under complete segregation

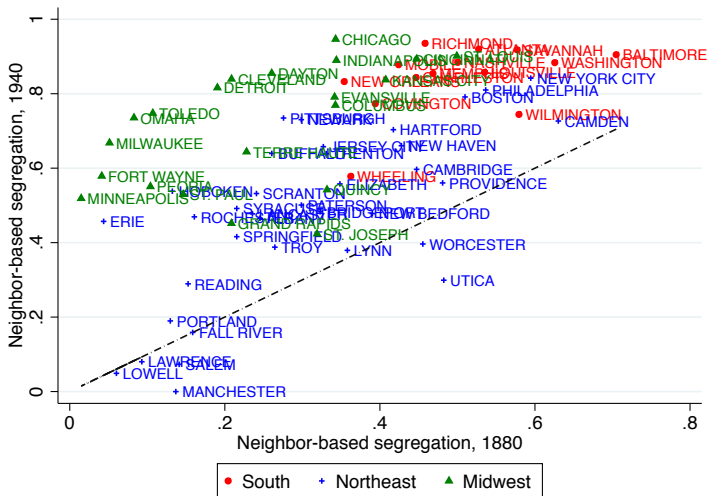
Segregation by County, 1880



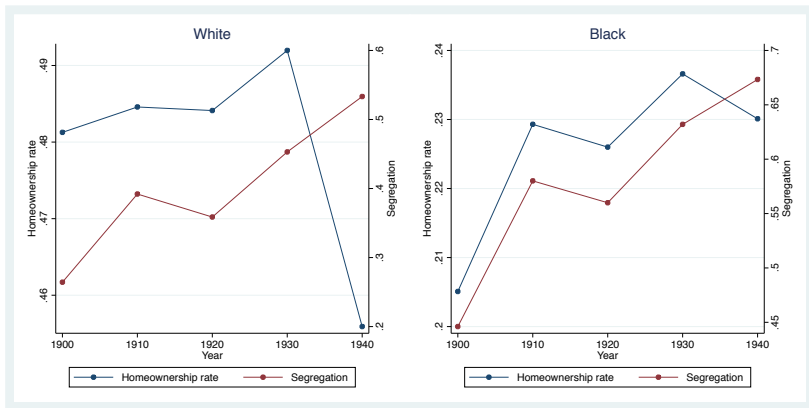
Segregation by County, 1940



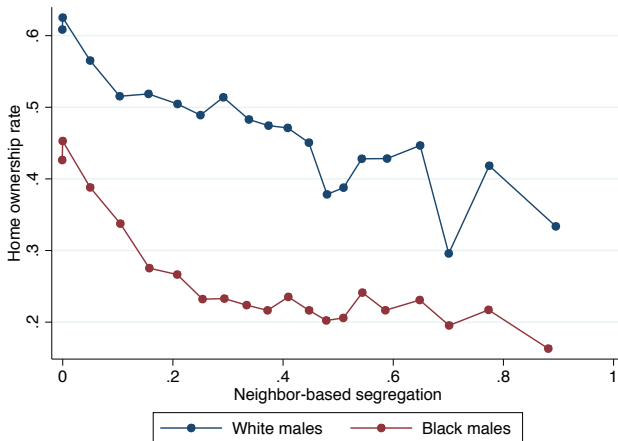
Segregation by City, 1880 to 1940



Segregation and Homeownership Over Time



Segregation and Homeownership Across Space



Segregation and the GI Bill

- While the rise in residential segregation was concurrent with increasing homeownership rates, more segregated counties in any particular decade had lower levels of homeownership
- These patterns hold for both white and black households and after controlling for urban/rural status and state fixed effects
- To dig a little deeper, we build off of Fetter (2013) and use the GI Bill as a shock to individuals' ability to purchase a home
- Fetter demonstrates that the GI Bill had significant impacts on homeownership rates of WWII and Korean vets
- We want to know whether those impacts differed by levels of segregation

Segregation and the GI Bill

- We adopt Fetter's approach of instrumenting for veteran status with an indicator for being born before the birth quarter cutoff for serving in the military
- Segregation is measured using the neighbor-based index for every county in 1940 (the most recent 100 percent sample available)
- We use the IPUMS 5 percent sample of the 1960 federal census to get homeownership, veteran status, age and race
- Interacting veteran status (based on quarter of birth) with segregation let's us look at how a shock to mortgage terms depends on local segregation levels

Segregation and the GI Bill

IV Estimates of the impact of segregation and veteran status on black homeownership, homeownership rate as the dependent variable.

	<u>Black males</u>			
	<u>World War II</u>		<u>Korean War</u>	
Veteran	-0.2300 (0.3627)	-0.2448 (0.3544)	0.1492 (0.2400)	0.0294 (0.0333)
Segregation	-0.3834* (0.2310)	-0.4353* (0.2585)	-0.1381* (0.0812)	-0.1760*** (0.0294)
Percent black		0.1660 (0.3170)		0.2219*** (0.0369)
Veteran x Segregation		0.2118 (0.4633)		-0.0284 (0.0416)
Veteran x Percent black		-0.2054 (0.5974)		-0.0383 (0.0519)
Observations	18,277	18,277	16,770	17,205

Segregation and the GI Bill

IV Estimates of the impact of segregation and veteran status on white homeownership, homeownership rate as the dependent variable.

	<u>White males</u>			
	<u>World War II</u>		<u>Korean War</u>	
Veteran	0.07890 (0.0550)	0.0676 (0.0545)	0.1202*** (0.0429)	0.1352*** (0.0440)
Segregation	-0.1864*** (0.0420)	-0.2813*** (0.0492)	-0.1149*** (0.0173)	-0.1372*** (0.0200)
Percent black		0.5733*** (0.1230)		0.1994*** (0.0554)
Veteran x Segregation	0.0085 (0.0557)	0.0653 (0.0655)	-0.1041*** (0.0339)	-0.1623*** (0.0396)
Veteran x Percent black		-0.2767* (0.1674)		0.3206*** (0.1139)
Observations	159,637	159,637	136,251	136,251

Segregation and the GI Bill

Percent of veterans who used a VA home loan for a home they purchased or built

		<u>Period of service</u>		
	Total	Vietnam only	Korean only	WW II only
Total	38.2	36.5	37.4	41.2
White	38.0	35.2	37.2	41.6
Black	42.8	58.4	38.7	37.8

Source: National Survey of Veterans, published 1980

Segregation and the GI Bill

Percent of veterans reporting attitude of real estate broker towards us of a VA loan

Salesman's attitude	<u>All periods</u>		<u>Vietnam only</u>		<u>WW II only</u>	
	White	Black	White	Black	White	Black
Encourage	7.8	14.4	9.5	21.7	6.5	9.5
Discourage	5.5	5.0	10.5	0.0	3.4	7.1
Neutral	11.7	16.9	20.2	27.0	8.1	5.6
Seller would not sell VA	7.9	8.8	13.4	27.0	5.6	3.2
VA loan not discussed	67.1	54.9	46.4	24.3	76.4	74.6

Source: National Survey of Veterans, published 1980

Housing Characteristics and Segregation

Correlations of segregation with individual and housing characteristics

	<u>White adult males</u>		<u>Black adult males</u>	
	Mean	Correlation with segregation index	Mean	Correlation with segregation index
Segregation index (in 1940)	0.592 (0.249)	1.000	0.750 (0.168)	1.000
Income	4805.13 (4027.08)	0.050	2389.79 (2036.49)	-0.051
House value (in 1960 \$)	12725.59 (7918.38)	0.066	7420.40 (5452.62)	-0.047
Never attended high school (1=never attended)	0.365	-0.013	0.598	0.030
High school graduate (1=graduate)	0.442	0.004	0.206	-0.026
Deteriorating or delapidated house (1=yes)	0.148	-0.060	0.453	-0.037
Lacks complete plumbing (1=yes)	0.103	-0.055	0.378	0.001
Lacks hot water (1=no hot water)	0.087	-0.045	0.357	0.005
Old house (1=house over 30 years old)	0.452	-0.038	0.563	0.066
Observations	1,396,551		147,357	

Moving Forward

- These new segregation estimates show that the rise in homeownership occurred alongside rising segregation in both urban and rural areas
- However, homeownership rates were lower in more segregated counties for both white and black households (even after controlling for urban/rural and state fixed effects)
- The GI Bill evidence suggests that segregation was a barrier to white homeownership in addition to black homeownership
- Up next is to explore the channels through which segregation influences homeownership both in and outside of cities