Supplemental Appendix

The Effects of Racial Segregation on Intergenerational Mobility: Evidence from Historical Railroad Placement

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A Balance Table Results

Ananat (2011) shows that the railroad division index (RDI) is not correlated with a number of 1910–1920 city characteristics when controlling for historical railroad track density. This appendix shows that results are similar when not including this control variable, as is done in the main specifications for this paper.

Columns 1–2 of Appendix Table 2 report our replication of Table 1 of Ananat (2011). With minor exceptions, we replicate her results exactly.[1] Only one of the coefficients on RDI is statistically significant at the 10% level. As discussed by Ananat (2011), these results support the assumption that RDI only affects contemporaneous outcomes via impacts on racial segregation. There are significant correlations with historical track density for four variables.

Column 3 shows that results are similar when excluding historical track density as a control variable. One difference is that column 3 displays a significant positive relationship between RDI and the Black population share in 1910 and 1920. A natural explanation is that places with a higher RDI were more connected to the South via railroads, which facilitated migration in the early twentieth century.[2] The coefficient for 1920 percent literate is significant at the 10% level and identical to the estimate from column 1. The coefficient for 1920 percent of employment in manufacturing is also significant at the 10% level, but very similar in magnitude to the estimate in column 1. Given the SD of the RDI (0.14) and the dependent variable means, the correlations for percent literate and percent of employment in manufacturing are relatively small in magnitude.

In sum, these results suggest that RDI is a useful IV for 1990 segregation even when excluding historical railroad track density as a control. Moreover, Appendix Tables 3 and 8 show that our IV estimates are similar when controlling for historical railroad track density (column 2) and when controlling for baseline city characteristics in various ways (columns 3 and 4).

B Details on Constructing Exposure Effect Estimates by Income Percentiles

This appendix describes how we construct exposure effect estimates at income percentiles 1, 25, 50, 75, and 100 using the publicly available data from Chetty and Hendren (2018).

The publicly available data accompanying Chetty and Hendren (2018) do not report impacts on income rank, but instead report the percentage gain in income from spending another year in each location for children with parents at income percentiles 25 and 75. Chetty and Hendren (2018) describe the steps used to scale impacts on rank into the percentage gain in income for the 25th

[1] The exceptions are for 1920 percent literate, labor force participation, and percent of employment in trade, manufacturing, and railroads. The differences between the results from our regressions and those reported by Ananat (2011) do not change any substantive conclusions.

[2] Even though migration flows of Black individuals out of the South were especially large between 1915 and 1970, there was migration before this period (e.g., Boustan, 2016).

percentile (see pages 1183–1184), but do not report the same scaling factors for the 75th percentile. However, their Table 3 reports location-specific impacts on rank for the 75th percentile, which means the scaling factor can be inferred. After the 75th percentile impact on rank is identified for each place, the linear structure assumed by Chetty and Hendren (2018) in their equation (4) allows us to construct impacts on rank for other percentiles. In particular, they specify that the impact on rank for location c and parental income rank p is $\nu_{p,c} = \nu_c^0 + \nu_c^1 p$. This implies that the slope can be computed as $\nu_c^1 = (\nu_{75,c} - \nu_{25,c})/0.5$, and the intercept can be computed as $\nu_c^0 = \nu_{25,c} - \nu_c^1 \times 0.25$. Given values for ν_c^0 and ν_c^1, we can construct $\nu_{p,c}$ for any value of p.

C Details on Racial and Political Attitudes Survey Questions

This appendix provides details on the survey-based measures of attitudes toward redistributive policy, race, and aggressive policing that appear in Tables 6 and 7.

Redistributive Policy Attitudes: To proxy broader attitudes toward redistributive policy, we use questions on state policy spending (Welfare, Health Care, Education) and minimum wage policy—questions asked in multiple waves of the CCES (Ansolabehere, 2012; Ansolabehere and Schaffner, 2013; Schaffner and Ansolabehere, 2015; Schaffner, Ansolabehere and Luks, 2019, 2021).[3] For state program spending (asked in 2014, 2016, 2018, and 2020), respondents were asked about five categories, of which we omit Transportation and Law Enforcement since the redistributive implications are more ambiguous. For the minimum wage questions, we use questions in three years (2016, 2018, and 2020) that are similar but about different possible amounts ($12 vs. $15) at different levels (state vs. federal) and by different political bodies (state vs. Congress).

- *State Legislature Spending*: "State legislatures must make choices when making spending decisions on important state programs. How would you like your legislature to spend money on each of the five areas below?"[4] (1: Greatly Increase, 2: Slightly Increase, 3: Maintain, 4: Slightly Decrease, 5: Greatly Decrease). These are in questions CC426 (2014), CC16_426 (2016), CC18_426 (2018), CC20_443 (2020), and the original value coding was maintained.
  - Welfare
  - Health Care
  - Education
- *Minimum Wage Increases*: These questions originally were coded as (1: For, 2: Against) and recoded to binary 0/1 with 1 corresponding to "Against":
  - 2016 (CC16_351K): "Congress considers many issues. If you were in Congress would you vote FOR or AGAINST each of the following?": "Raises the federal minimum wage to $12 an hour by 2020."
  - 2018 (CC18_414A): "If your state put the following questions for a vote on the ballot, would you vote FOR or AGAINST?": "Raise the state minimum wage to $12 an hour."

[3] YouGov conducts the CCES surveys over the Internet, drawing samples using a matched random sampling methodology that aims to create nationally representative samples.

[4] The second sentence was asked slightly differently only in 2016 as, "Would you like your legislature to increase or decrease spending on the five areas below?"

– 2020 (CC20_350B): "Over the past two years, Congress voted on many issues. Do you support each of the following proposals?": "Raise the minimum wage to $15 an hour."

For all questions in Table 6, we limit the sample to White respondents, giving us roughly 10,000 to 13,000 respondents in each survey wave in the Ananat (2011) sample of metros. Since legislature spending questions were asked across four survey waves, the total sample size is roughly 44,000 respondents, whereas for the minimum wage question asked in three waves, the total sample is roughly 36,000 respondents. For heterogeneity analysis in Table 7, the sample sizes per wave are roughly 1,000 Black respondents and 4,000 to 6,000 respondents for each of the above/below median income groups.

Racial Attitudes: As noted in the text, to gauge racial attitudes we use questions corresponding to the concept of "racial resentment," as well as policy positions that are racially-charged (affirmative action and school integration/busing policies).[5]

Racial resentment comes from a pair of questions asked in all of the primary (election year) waves of the CCES from 2010 to 2020 except for 2016, a year in which racial resentment was not included in the CCES common content. Specifically, we average responses to Questions A and B (after first reverse-scaling Question A so that higher values correspond to higher levels of resentment):

- *Racial Resentment A*: "The Irish, Italians, Jews and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors."
  (1: Strongly agree – 5: Strongly disagree.)

- *Racial Resentment B*: "Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class."
  (1: Strongly agree – 5: Strongly disagree.)

The CCES includes other questions relating to racial resentment in 2018 and 2020, but we limit the measure to the two questions that are consistent across years.

We also use opposition to affirmative action (asked in 2010, 2012, and 2014) as a relevant policy attitude across the CCES sample. The survey question is:

- *Affirmative Action*: "Affirmative action programs give preference to racial minorities in employment and college admissions in order to correct for past discrimination. Do you support or oppose affirmative action?"
  (1: Strongly Support – 4: Strongly Oppose)

[5]Racial resentment is a measure of "symbolic racism" (also referred to as "modern racism"), described by Henry and Sears (2002) as capturing the idea that "among whites, new forms of prejudice embody negative feelings toward blacks as a group combined with a sense that blacks violate cherished American values." This line of research argues that this new form of racism has overtaken the older belief system that "incorporated social distance between the races, beliefs in the biological inferiority of blacks, and support for formal discrimination and segregation." As noted by Cramer (2020), "the dominant measure of symbolic racism in political science has been the racial resentment scale, developed for the American National Election Study (ANES) in the mid-1980s by Kinder and Sanders (1996)."

Again, there are roughly 10,000 to 12,000 White respondents in each survey wave in the Ananat (2011) sample of metros, for a total of roughly 53,000 observations for the racial resentment questions (five waves) and 35,000 for the affirmative action question (three waves). We construct averages using 1990 county population weights.

The final two measures of racial attitudes used in Table 6 regard attitudes toward government involvement in school racial integration and school busing. To do so, we use the ANES cumulative time series, which includes questions that have been asked in at least three waves of the biennial survey (American National Election Studies, 2021). Specifically, we use the following questions:

- *School Integration Policies*: "Some people say that the government in Washington should see to it that white and black (1962-1966: colored; 1968,1970: Negro) children go (1964-1970: are allowed to go) to the same schools. Others claim this is not the government's business. Have you been concerned enough about (1986,1990 AND LATER: interested enough in) this question to favor one side over the other?"
  (IF YES) "Do you think the government in Washington should —"
  VALUES:
  1. Yes, R has an opinion: "see to it that white and black children go (1964-1970: are allowed to go) to the same schools"
  2. Yes, R has an opinion: "stay out of this area (except 1962: as it is none of government's business)"
  9. No, no opinion; DK; depends; no interest/concern; other; both; pro-con

- *School Busing*: "There is much discussion about the best way to deal with racial problems. Some people think achieving racial integration of schools is so important that it justifies busing children to schools out of their own neighborhoods. Others think letting children go to their neighborhood schools is so important that they oppose busing. Where would you place yourself on this scale, or haven't you thought much about this?" (7-POINT SCALE SHOWN TO R)
  VALUES:
  1. Bus to achieve integration
  2 - 6
  7. Keep children in neighborhood schools
  9. DK; haven't thought much about it

We construct a 3-point "opposition to school integration policies" scale with the highest value (2) corresponding to survey response 2 ("stay out of this area"), an intermediate value (1) corresponding to response 9, and the lowest value (0) corresponding to survey response 1 ("see to it that white and black children go to the same schools"). For the school busing measure, we preserve the same 7-point scale for "opposition to school busing," but set survey response 9 to the midpoint of the scale (4). The school integration policies question is asked in 1962, 1964, 1966, 1968, 1970, 1972, 1976, 1978, 1986, 1990, 1992, 1994, and 2000. The school busing question is asked in 1972, 1974, 1976, 1980, and 1984. However, the geographic identifiers are not consistent across all waves. We therefore limit the sample to years in which the FIPS county code is recorded and provided to researchers (1970, 1978, 1986, 1992, and 1994 for school integration; 1980 and 1984 for school busing). Similar to our procedure with the CCES, we limit the sample to White respondents and

construct metro averages using 1990 county population weights. Because the ANES sample is much smaller than the CCES, we are left with just 53 metros that have responses for school integration policies and 47 metros with responses on school busing.[6] Since these ANES measures have much smaller sample sizes, we do not include them in the sub-group analyses presented in Table 7.

Aggressive Policing Attitudes: To measure attitudes toward aggressive policing, we use a subset of questions asked on a module newly-added to the CCES in the 2020 wave. Specifically, we use five of the eight questions in this module (CC20_334), omitting questions about spending (on increasing or decreasing the number of police and on sharing surplus military weapons and equipment from the Department of Defense). The additional questions that we omit are highly correlated with other measures in the module and would strengthen statistical significance; however, their implications for aggressiveness are somewhat ambiguous. For the questions that we use, each has the possible options of "Support" or "Oppose," which we code as binary with 1 corresponding to "Oppose":

- "Do you support or oppose each of the following proposals?"
  - "Eliminate mandatory minimum sentences for non-violent drug offenders." (CC20_334a)
  - "Require police officers to wear body cameras that record all of their activities while on duty." (CC20_334b)
  - "Ban the use of choke holds by police." (CC20_334e)
  - "Create a national registry of police who have been investigated for or disciplined for misconduct." (CC20_334f)
  - "Allow individuals or their families to sue a police officer for damages if the officer is found to have 'recklessly disregarded' the individual's rights." (CC20_334h)

As this module is present only in 2020, the sample size for this set of questions is roughly 12,000 respondents.

Family Income Heterogeneity Finally, in Table 7 we look at heterogeneity by income and race. For income, we use the questions on family income across all survey years. This question was worded as follows: "Thinking back over the last year, what was your family's annual income?" ("faminc" in 2010, 2012, 2014, and 2016; "faminc_new" in 2018 and 2020). Response options were "Less than $10,000," "$10,000-19,999,"...,"$70,000-79,999," "80,000-99,999," and so on (2010 was recoded to match the later years). For these results, we drop the roughly 10% of respondents who "Prefer not to say" for this income question.

D Details on Robustness Tests

This appendix reports additional results that support the robustness of our main findings for the impacts of racial segregation on economic mobility.

[6]The underlying counts of White survey respondents captured in these metro areas are as follows: School Integration Policies: 288 (1970), 793 (1978), 408 (1986), 312 (1990), 741 (1992), 579 (1994). School Busing: 498 (1980), 355 (1984).

Appendix Table 3 examines the robustness of our results to including different sets of control variables and changing the sample. Column 1 repeats our main specification, while column 2 shows that results are similar when controlling for the historical railroad track density as in Ananat (2011). Columns 3 and 4 show that results also are similar when controlling in different ways for the 1910–1920 city characteristics that Ananat (2011) uses for a balance test exercise. Column 5 shows that results are similar when including fixed effects for the Census Northeast and Midwest regions (the West region is the omitted category). Column 6 shows that the results are similar when controlling for the unemployment rate and manufacturing employment share in 1970 and 1990, which suggests that our findings are not driven by differential exposure to deindustrialization.[7] Column 7 shows that the results are nearly identical when controlling for income segregation using the dissimilarity index approach of Cutler and Glaeser (1997). Finally, column 8 shows that results are similar when dropping metro areas that are adjacent to one of the Great Lakes, which could have had different relationships between the RDI, industrial change, and segregation. These results reduce concerns about omitted variable bias.

Next, we address three concerns related to statistical inference, placebo analysis, and alternative measures of segregation. First, Appendix Table 4 shows that confidence intervals are similar when using approaches that are appropriate for addressing weak instrument concerns (Anderson and Rubin, 1949; Lee et al., 2021). Second, Appendix Table 5 reports results after we implement the specification check used by Ananat (2011), which relies on the argument that the RDI should only affect outcomes in cities that received a substantial Black migration. Ananat (2011) implements this test by dividing the sample based on whether a city is at least 400 miles away from the South, as cities that were further from the South received fewer migrants.[8] Our results show that the relationships between upward mobility and RDI in cities that are within 400 miles of the South are in line the results in Table 1, while coefficients are generally attenuated for cities more than 400 miles from the South. Third, Appendix Table 6 examines robustness to using other racial segregation measures. We focus on the dissimilarity index to maintain comparability to Ananat (2011); however, as with her results, ours are also not sensitive to using these other broad measures (isolation, clustering, concentration, and centralization).

We find that the effects of racial segregation are larger when we use a dissimilarity index from the 1940 Census.[9] Intuitively, these larger effects could arise because racial segregation is self-reinforcing or because the earlier segregation measure better captures changes to local areas that emerged in the middle of the 20th century. Note that our preferred approach uses the 1990 dissimilarity index because it is most closely tied to the cohorts for whom mobility data are available.

E Details on Constructing an Instrumental Variable for Black Population Share

This appendix describes how we construct an instrumental variable for the 1990 Black population share of a metropolitan area, as analyzed in Section 5.2.

[7] Controlling for the levels of these variables in 1970 and 1990 also implicitly controls for the change in these variables over this time period. The results are also robust to controlling for the additional 1990 city characteristics used in robustness exercises in Ananat (2011).

[8] Cities further than 400 miles from the South still saw significant increases in the size of the Black population, so we do not view this as a pure placebo test.

[9] We calculate the dissimilarity index for 1940 using enumeration districts (i.e., areas that were feasible to be covered by a single census surveyor). Using census tracts to calculate the dissimilarity index would limit the sample size to 23 metro areas because tracts were not used in most cities during this period (Cutler, Glaeser and Vigdor, 1999).

Formally, our instrument for the 1990 Black population share percentile, BlackSharePctile$_c$, is based on the predicted number of Black migrants to a metro area from 1910 to 1990, defined as follows:

$$\text{Predicted Black Migrants}_c^{1910-1990} = \sum_s \sum_{t=1910}^{1980} w_{s,c}^{1910} M_s^{t,t+10}, \tag{E1}$$

where $w_{s,c}^{1910}$ is the share of African American migrants born in Southern state s that lived in metropolitan area c in 1910, and $M_s^{t,t+10}$ is the net number of Black migrants that moved away from state s between years t and $t+10$.

We construct $w_{s,c}^{1910}$ using the complete count 1910 Census (Ruggles et al., 2021), which contains information on individuals' county of residence and state of birth. In particular, $w_{s,c}^{1910}$ is equal to the number of Black individuals who were born in Southern state s and resided in non-Southern county c divided by the total number of Black individuals who were born in Southern state s and resided outside the South.[10]

We construct $M_s^{t,t+10}$ using the forward survival method, as in other work (e.g., Gregory, 2005; Boustan, 2010; Fouka, Mazumder and Tabellini, 2020). In particular, we estimate net migration out of a state between years t and $t+10$ as

$$M_s^{t,t+10} = P_s^{t+10} - \sum_a g_a^t P_{s,a}^t - P_s^t b^t, \tag{E2}$$

where P_s^t is the total Black population in state s in year t, $P_{s,a}^t$ is the population in five-year age a, g_a^t is the nationwide survival rate, and b^t is the nationwide birth rate. We construct population from 1910–1940 using complete count Census data (Ruggles et al., 2021). For 1950–1990, we construct population using county-level tabulations from the Census (Manson et al., 2022). We estimate the survival rate g_a^t as the ratio of the weighted number of individuals in a five-year birth cohort observed in the Census in year $t+10$ to the weighted number of individuals in the same five-year cohort in year t. We estimate the birth rate as the ratio of the weighted number of individuals who were born between years t and $t+10$ to the weighted number of individuals observed in year t. We construct these population counts using complete count Census data for 1910–1940 and sample data for 1950–1990 (Ruggles et al., 2021, 2022).[11]

To construct our instrument, we divide Predicted Black Migrants$_c^{1910-1990}$ by the population of the metro area in 1910. Following Derenoncourt (2022), we use percentiles of this ratio as our instrumental variable to ensure that our results are not driven by outliers.

[10] For the purpose of constructing this instrument, we follow Derenoncourt (2022) in defining the South to consist of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. We aggregate counties to 1990 metropolitan area definitions, as is done in our main analysis.

[11] We use Black individuals born in the United States for calculating survival and birth rates.

Appendix Table 1: Overview of Key Variables, Samples, and Data

Variables	**Years Measured**	**Sample**	**Source**
Dissimilarity Index	1990	121 non-Southern metropolitan Areas	Cutler, Glaeser, and Vigdor (1999)
Railroad Division Index	Late 19th century	121 non-Southern metropolitan Areas	Ananat (2011)
Income mobility, incarceration, and teenage pregnancy for children with parents at the 1st, 25th, 50th, 75th, and 99th percentiles of the national income distribution	Children's income (2010 and 2014–2015); Parents' income (1994, 1995, 1998–2000)	Children born from 1978-1983	Chetty et al. (2020)
Estimated exposure effect (the causal effect of spending one additional year of childhood in a given CZ)	1996–2012	Children born from 1980-1988 who moved once across commuting zones between 1997 and 2010	Chetty and Hendren (2018b)
Average math and reading test scores on standardized exams	2008–2009 to 2017–2018 school years	Children enrolled in grades 3–8 in these years (likely born in the 1999-2009 cohorts)	Reardon (2021)
Local government expenditures: Total, education, public safety, welfare and health, infrastructure, other	1987 and 1992	Local government units	Census of Governments
Redistributive policy attitudes	Attitudes toward state legislature spending (2014, 2016, 2018, 2020) and minimum wage policies (2016, 2018, 2020)	CCES respondents	Cooperative Congressional Election Study (CCES)
Racial attitudes (except for school integration and busing) and aggressive policing attitudes	Racial resentment (2010, 2012, 2014, 2018, 2020); Affirmative action in 2010, 2012, 2014); Policing policies (2020)	CCES respondents	Cooperative Congressional Election Study (CCES)
Racial attitudes on school integration and school busing	School integration policy (1970, 1978, 1986, 1992, 1994); school busing policy (1980, 1984)	ANES respondents	American National Election Studies (ANES)

Notes: This table provides further details on the key variables used in our analysis, the samples on which each measure is based, and the data sources. We construct averages using weights based on the 1990 county population for the Opportunity Atlas and political measures, and the number of students for the school outcomes. We do not weight sums (e.g., government expenditures). Further details on the CCES and ANES measures can be found in Appendix C.

Appendix Table 2: Robustness of Balance Table Results to Excluding Historical Track Density Control

	Model with track density		Model without		
Dependent variable	RDI (1)	Track length per square km (2)	RDI (3)	Dep var mean (4)	N (5)
Land area (1000s of sq. miles)	-3.993	-574.401	-5.036	14.626	58
	(11.986)	(553.669)	(11.830)		
1910 population (1000s)	0.666	75.553	0.838	1.527	121
	(1.363)	(134.815)	(1.349)		
1910 ethnic dissimilarity index	0.076	15.343	0.119	0.311	49
	(0.185)	(53.249)	(0.162)		
1910 ethnic isolation index	0.027	-12.439	-0.008	0.055	49
	(0.070)	(17.288)	(0.066)		
1910 percent Black	-0.001	9.236***	0.020*	0.014	121
	(0.010)	(0.650)	(0.011)		
1915 street cars per capita (1000s)	-0.132	3.361	-0.121	0.179	13
	(0.183)	(20.507)	(0.150)		
1920 percent Black	0.013	9.119***	0.034***	0.016	121
	(0.009)	(0.615)	(0.011)		
1920 percent literate	0.053*	0.180	0.053*	0.959	121
	(0.030)	(0.880)	(0.030)		
1920 labor force participation	0.028	-3.427**	0.021	0.419	121
	(0.024)	(1.500)	(0.024)		
1920 percent of empl. in trade	-0.080	-0.152	-0.081	0.058	121
	(0.094)	(2.910)	(0.092)		
1920 percent of empl. in manufacturing	0.191	18.400*	0.233*	0.462	121
	(0.137)	(10.911)	(0.137)		
1920 percent of empl. in railroads	-0.074	1.592	-0.070	0.003	121
	(0.068)	(2.428)	(0.065)		
1990 income segregation	0.014	-1.917	0.010	0.276	121
	(0.033)	(2.292)	(0.033)		

Notes: This table reports results from models in which the dependent variable is a city characteristic and the key independent variable is the railroad division index (RDI). Columns 1–2 report point estimates and heteroskedasticity robust standard errors (in parentheses) from a single model that regresses the indicated dependent variable on the railroad division index (RDI) and historical track density (i.e., railroad track length per square kilometer). Column 3 reports results from models that only include the RDI. Columns 1 and 2 are analogous to Table 1 of Ananat (2011). There are minor unexplained differences between these results and those in her table for 1920 percent literate, labor force participation, and percent of employment variables. We depart from Ananat (2011) by constructing an income segregation measure using the approach of Cutler and Glaeser (1997) from the underlying tract-level data because this variable is missing for 52 metro areas in the Ananat (2011) data. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.
Source: Authors' calculations using data from Ananat (2011), Cutler, Glaeser and Vigdor (1999), and Manson et al. (2022).

Appendix Table 3: Effects of Racial Segregation on Upward Mobility, Robustness to Controlling for Observed Variables

	2SLS Coefficient on 1990 Dissimilarity Index							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Black Mobility								
1st percentile	-0.322***	-0.331***	-0.425***	-0.328***	-0.455**	-0.428**	-0.323***	-0.308***
	(0.090)	(0.103)	(0.147)	(0.087)	(0.184)	(0.168)	(0.090)	(0.081)
25th percentile	-0.283***	-0.291***	-0.383***	-0.313***	-0.379***	-0.390***	-0.284***	-0.273***
	(0.070)	(0.081)	(0.121)	(0.082)	(0.137)	(0.138)	(0.071)	(0.073)
50th percentile	-0.250***	-0.258***	-0.348***	-0.301***	-0.315***	-0.358***	-0.250***	-0.244***
	(0.063)	(0.072)	(0.110)	(0.086)	(0.112)	(0.124)	(0.062)	(0.075)
75th percentile	-0.217***	-0.224***	-0.313***	-0.288***	-0.251**	-0.326***	-0.216***	-0.215***
	(0.066)	(0.075)	(0.113)	(0.098)	(0.110)	(0.123)	(0.065)	(0.082)
100th percentile	-0.128	-0.134	-0.218	-0.254*	-0.078	-0.240	-0.126	-0.136
	(0.112)	(0.125)	(0.172)	(0.151)	(0.199)	(0.180)	(0.110)	(0.124)
Panel B. White Mobility								
1st percentile	-0.243***	-0.263***	-0.340***	-0.305***	-0.236**	-0.348***	-0.248***	-0.252***
	(0.063)	(0.075)	(0.098)	(0.078)	(0.107)	(0.125)	(0.063)	(0.078)
25th percentile	-0.161***	-0.177***	-0.241***	-0.211***	-0.180**	-0.260***	-0.164***	-0.154***
	(0.048)	(0.057)	(0.075)	(0.056)	(0.083)	(0.097)	(0.049)	(0.058)
50th percentile	-0.096**	-0.109**	-0.163***	-0.137***	-0.136**	-0.191**	-0.098**	-0.077*
	(0.038)	(0.046)	(0.060)	(0.043)	(0.066)	(0.077)	(0.039)	(0.044)
75th percentile	-0.028	-0.037	-0.082	-0.060	-0.090*	-0.118*	-0.028	0.005
	(0.033)	(0.038)	(0.052)	(0.038)	(0.053)	(0.061)	(0.033)	(0.035)
100th percentile	0.084**	0.081*	0.054	0.068	-0.014	0.002	0.086**	0.139***
	(0.039)	(0.043)	(0.059)	(0.053)	(0.052)	(0.056)	(0.038)	(0.042)
First stage F statistic	21.871	16.882	11.336	17.144	9.682	8.739	21.418	19.972
Controls								
Historical railroad track density		✓						
Unbalanced 1910–1920 city characteristics			✓					
All 1910–1920 city characteristics				✓				
Region fixed effects					✓			
1970 & 1990 unemp. rate & manufacturing emp. share						✓		
Income segregation							✓	
Exclude Great Lakes metros								✓

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the racial dissimilarity index in 1990. In all regressions the dissimilarity index is instrumented by the railroad division index (RDI). Column 1 repeats the baseline results from column 2 of Table 1. The results in column 2 come from specifications that control for historical railroad track length per square kilometer. The results in column 3 come from specifications that control for the four variables that are significantly correlated with the railroad division index, as measured in column 3 of Appendix Table 2. The results in column 4 come from specifications that control for population and the Black population share in 1910, as well as the following characteristics in 1920: Black population share, literacy rate, labor force participation rate, share of employment in trade, share of employment in manufacturing, and share of employment in railroads. Column 5 controls for Census region fixed effects, column 6 controls for the unemployment rate and manufacturing employment share in 1970 and 1990, column 7 controls for income segregation using the dissimilarity index approach in Cutler and Glaeser (1997), and column 8 excludes 12 metro areas that lie along a Great Lake (Akron, OH; Benton Harbor, MI; Buffalo, NY; Detroit, MI; Duluth, MN; Erie, PA; Lorain, OH; Muskegon, MI; Niagara, NY; Rochester, NY; Saginaw, MI; Toledo, OH). See notes to Table 1 for additional details on sample. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Source: Authors' calculations using data from Ananat (2011), Chetty et al. (2020), and Manson et al. (2022).

Appendix Table 4: Effects of Racial Segregation on Upward Mobility, Robustness to Alternative Confidence Interval Estimates

		Confidence interval		
	Point estimate	Asymptotic	Anderson-Rubin	tF
	(1)	(2)	(3)	(4)
Panel A. Black Mobility				
1st percentile	-0.322	[-0.498, -0.147]	[-0.567, -0.170]	[-0.549, -0.096]
25th percentile	-0.283	[-0.421, -0.145]	[-0.481, -0.169]	[-0.461, -0.105]
50th percentile	-0.250	[-0.373, -0.127]	[-0.426, -0.148]	[-0.408, -0.092]
75th percentile	-0.217	[-0.346, -0.088]	[-0.397, -0.105]	[-0.383, -0.051]
100th percentile	-0.128	[-0.347, 0.091]	[-0.389, 0.089]	[-0.410, 0.154]
Panel B. White Mobility				
1st percentile	-0.243	[-0.367, -0.118]	[-0.416, -0.135]	[-0.403, -0.082]
25th percentile	-0.161	[-0.255, -0.067]	[-0.292, -0.079]	[-0.282, -0.039]
50th percentile	-0.096	[-0.171, -0.021]	[-0.197, -0.031]	[-0.193, 0.001]
75th percentile	-0.028	[-0.092, 0.036]	[-0.110, 0.030]	[-0.111, 0.055]
100th percentile	0.084	[0.007, 0.161]	[0.002, 0.170]	[-0.015, 0.183]

Notes: This table reports point estimates and confidence intervals from models in which the key independent variable is the racial dissimilarity index in 1990. In all regressions the dissimilarity index is instrumented by the railroad division index (RDI). Column 1 repeats the point estimate ($\hat{\beta}$) from column 2 of Table 1. Column 2 reports the 95-percent confidence interval based on the conventional asymptotic approximation, which is $\hat{\beta} \pm 1.965\hat{se}$, where $\hat{se}$ is the heteroskedasticity robust standard error reported in Table 1. Column 3 reports the Anderson and Rubin (1949) confidence interval, and column 4 reports the Lee et al. (2021) tF confidence interval. See notes to Table 1 for additional details on sample, specification, and data.

Appendix Table 5: Relationship Between RDI and Upward Mobility by Distance from the South

	All metros		Within 400 miles from South		At least 400 miles from South		
	Railroad Division Index (1)	Effect of 1 SD increase (2)	Railroad Division Index (3)	Effect of 1 SD increase (4)	Railroad Division Index (5)	Effect of 1 SD increase (6)	Mean of Dep. Var (7)
Panel A. Black Mobility							
1st percentile	-0.132***	-0.019	-0.150***	-0.021	-0.064	-0.009	0.270
	(0.023)		(0.030)		(0.048)		
25th percentile	-0.116***	-0.016	-0.140***	-0.020	-0.058**	-0.008	0.339
	(0.017)		(0.023)		(0.027)		
50th percentile	-0.102***	-0.014	-0.132***	-0.019	-0.053***	-0.007	0.397
	(0.018)		(0.023)		(0.020)		
75th percentile	-0.089***	-0.013	-0.124***	-0.017	-0.048	-0.007	0.455
	(0.024)		(0.027)		(0.031)		
100th percentile	-0.052	-0.007	-0.101**	-0.014	-0.034	-0.005	0.611
	(0.047)		(0.049)		(0.082)		
Panel B. White Mobility							
1st percentile	-0.099***	-0.014	-0.108***	-0.015	-0.052	-0.007	0.357
	(0.022)		(0.028)		(0.038)		
25th percentile	-0.066***	-0.009	-0.075***	-0.011	-0.047*	-0.007	0.450
	(0.016)		(0.021)		(0.025)		
50th percentile	-0.039***	-0.006	-0.049***	-0.007	-0.043**	-0.006	0.524
	(0.013)		(0.017)		(0.018)		
75th percentile	-0.011	-0.002	-0.021	-0.003	-0.039**	-0.006	0.601
	(0.012)		(0.016)		(0.018)		
100th percentile	0.034*	0.005	0.025	0.003	-0.032	-0.005	0.728
	(0.019)		(0.020)		(0.033)		

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the railroad division index (RDI). Columns 1–2 report results for all 121 metros in our analysis sample. Columns 3–4 report results for 92 metros that are less than 400 miles from the South, and columns 5–6 report results for 29 metros that are at least 400 miles away from the South. Summary statistics (mean and standard deviation) are calculated for the pooled sample of 121 metros. See notes to Table 1 for additional details on sources. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix Table 6: Effects of Racial Segregation on Upward Mobility, Robustness to Alternative Segregation Measures

Segregation measure:	1990 Dissimilarity		1990 Isolation		1990 Clustering		1990 Concentration		1990 Centralization		1940 Dissimilarity	
	IV estimate (1)	1 SD effect (2)	IV estimate (3)	1 SD effect (4)	IV estimate (5)	1 SD effect (6)	IV estimate (7)	1 SD effect (8)	IV estimate (9)	1 SD effect (10)	IV estimate (11)	1 SD effect (12)
Panel A. Mobility Estimates												
Black, 25th percentile	-0.283***	-0.039	-0.201***	-0.038	-0.181***	-0.041	-0.229***	-0.054	-0.431*	-0.089	-0.563**	-0.049
	(0.070)		(0.041)		(0.041)		(0.079)		(0.243)		(0.264)	
Black, 75th percentile	-0.217***	-0.030	-0.154***	-0.029	-0.139***	-0.031	-0.176***	-0.042	-0.330*	-0.069	-0.415*	-0.036
	(0.066)		(0.041)		(0.038)		(0.059)		(0.187)		(0.230)	
White, 25th percentile	-0.161***	-0.022	-0.114***	-0.022	-0.103***	-0.023	-0.130**	-0.031	-0.245*	-0.051	-0.478**	-0.041
	(0.048)		(0.033)		(0.032)		(0.054)		(0.141)		(0.229)	
White, 75th percentile	-0.028	-0.004	-0.020	-0.004	-0.018	-0.004	-0.023	-0.005	-0.043	-0.009	-0.110	-0.009
	(0.033)		(0.022)		(0.020)		(0.029)		(0.055)		(0.125)	
Panel B. Summary Statistics												
SD of segregation measure	0.136		0.189		0.227		0.238		0.207		0.087	
Correlation with 1990 dissimilarity index	1.000		0.850		0.761		0.514		0.158		0.571	
F-statistic	21.870		32.100		24.720		7.460		3.160		5.520	

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from regression models in which the key independent variable is the racial segregation measure indicated in the top row. Each combination of cells reports results from models where the dependent variable is upward mobility for different groups of children (e.g., the first row reports effects on upward mobility for Black children whose parents' income is in the 25th percentile of the nationwide income distribution). Odd-numbered columns present estimates in which the segregation measure is instrumented by the railroad division index (RDI). Even-numbered columns scale the coefficients reported in the preceding column by one standard deviation of the segregation measure, which is indicated in Panel B. For columns 1–10, sample contains 121 non-Southern metro areas for which the RDI variable is available. For columns 11–12, we limit the sample to the 69 metro areas where the 1940 Black population share is at least 1 percent to ensure that the 1940 segregation measure is meaningful. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.
Source: Authors' calculations using data from Ananat (2011), Cutler, Glaeser and Vigdor (1999), and Chetty et al. (2020).

Appendix Table 7: Effects of Racial Segregation on Measures of Household and Parental Income

	OLS	2SLS		
	1990 Dissimilarity Index (1)	1990 Dissimilarity Index (2)	Effect of 1 SD increase (3)	Mean of Dep. Var. (4)
Panel A: Outcomes from 1990 Census				
Share of Black individuals living in household with income below poverty line	0.197***	0.291***	0.040	0.213
	(0.038)	(0.083)		
Share of Black children living in household with income below poverty line	0.447***	0.713***	0.097	0.379
	(0.069)	(0.183)		
Share of White individuals living in household with income below poverty line	-0.063***	-0.068	-0.009	0.074
	(0.019)	(0.044)		
Share of White children living in household with income below poverty line	-0.062*	-0.052	-0.007	0.116
	(0.035)	(0.080)		
Panel B: Outcomes from Opportunity Atlas				
Share of Black children with parents below median income	0.196***	0.402***	0.055	0.631
	(0.056)	(0.131)		
Mean household income rank of parents of Black children	-0.130***	-0.252***	-0.034	0.417
	(0.036)	(0.082)		
Share of White children with parents below median income	-0.066	0.044	0.006	0.303
	(0.053)	(0.115)		
Mean household income rank of parents of White children	0.026	-0.088	-0.012	0.626
	(0.040)	(0.094)		

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from regressions in which the key independent variable is the racial dissimilarity index in 1990. The outcome variables in Panel A are the share of individuals or children in the metro area who are in a household below the poverty line. The outcome variables in Panel B are the share of children whose parents have income below the nationwide median and the mean household income rank of parents. See notes to Table 1 for additional details on specification, sample, and sources. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix Table 8: Effects of Racial Segregation on Incarceration, Teenage Births, and Grade 3–8 Test Scores, Robustness to Controlling for Observed Variables

	2SLS Coefficient on 1990 Dissimilarity Index							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Black Male Incarceration								
1st percentile	0.492***	0.495***	0.632***	0.571***	0.670**	0.632**	0.492***	0.618***
	(0.161)	(0.179)	(0.229)	(0.206)	(0.295)	(0.271)	(0.161)	(0.209)
25th percentile	0.243***	0.237***	0.303***	0.279***	0.331**	0.299***	0.244***	0.310***
	(0.072)	(0.079)	(0.089)	(0.082)	(0.132)	(0.115)	(0.072)	(0.093)
50th percentile	0.131***	0.121**	0.154**	0.148**	0.179**	0.149*	0.133***	0.171***
	(0.049)	(0.055)	(0.061)	(0.060)	(0.089)	(0.079)	(0.049)	(0.062)
75th percentile	0.054	0.042	0.053	0.058	0.075	0.046	0.056	0.075
	(0.054)	(0.061)	(0.080)	(0.078)	(0.096)	(0.094)	(0.052)	(0.068)
100th percentile	-0.014	-0.029	-0.038	-0.022	-0.018	-0.046	-0.012	-0.009
	(0.070)	(0.080)	(0.113)	(0.107)	(0.126)	(0.126)	(0.068)	(0.089)
Panel B. White Male Incarceration								
1st percentile	0.100**	0.106**	0.130**	0.104**	0.146**	0.181**	0.100**	0.114**
	(0.042)	(0.049)	(0.057)	(0.045)	(0.070)	(0.073)	(0.043)	(0.053)
25th percentile	0.042**	0.045**	0.056**	0.045**	0.066**	0.078**	0.042**	0.048**
	(0.018)	(0.021)	(0.024)	(0.019)	(0.030)	(0.032)	(0.018)	(0.023)
50th percentile	0.017**	0.019*	0.025**	0.020**	0.032**	0.034**	0.018**	0.020**
	(0.008)	(0.010)	(0.011)	(0.009)	(0.013)	(0.014)	(0.008)	(0.010)
75th percentile	0.004	0.005	0.008	0.006	0.014**	0.010*	0.004	0.004
	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.004)	(0.005)
100th percentile	-0.006	-0.006	-0.006	-0.004	-0.001	-0.008	-0.006	-0.008
	(0.004)	(0.005)	(0.006)	(0.006)	(0.007)	(0.006)	(0.004)	(0.005)
Panel C. Black Female Teenage Birth								
1st percentile	0.776***	0.787***	0.899***	0.922***	0.590**	0.910***	0.774***	0.903***
	(0.188)	(0.211)	(0.273)	(0.253)	(0.272)	(0.322)	(0.187)	(0.235)
25th percentile	0.688***	0.697***	0.806***	0.804***	0.561***	0.827***	0.687***	0.776***
	(0.138)	(0.154)	(0.196)	(0.182)	(0.192)	(0.244)	(0.138)	(0.173)
50th percentile	0.589***	0.596***	0.699***	0.671***	0.528***	0.733***	0.588***	0.633***
	(0.101)	(0.112)	(0.141)	(0.128)	(0.155)	(0.190)	(0.100)	(0.123)
75th percentile	0.510***	0.516***	0.615***	0.567***	0.502***	0.660***	0.511***	0.520***
	(0.101)	(0.114)	(0.149)	(0.128)	(0.187)	(0.195)	(0.100)	(0.118)
100th percentile	0.367**	0.371**	0.462*	0.376*	0.456	0.525*	0.369**	0.315*
	(0.162)	(0.184)	(0.252)	(0.218)	(0.322)	(0.294)	(0.161)	(0.190)
Panel D. White Female Teenage Birth								
1st percentile	0.464***	0.527***	0.627***	0.558***	0.427*	0.754***	0.470***	0.523***
	(0.150)	(0.175)	(0.206)	(0.167)	(0.231)	(0.287)	(0.150)	(0.188)
25th percentile	0.333***	0.380***	0.455***	0.405***	0.320*	0.556***	0.337***	0.372***
	(0.109)	(0.128)	(0.151)	(0.121)	(0.170)	(0.211)	(0.110)	(0.137)
50th percentile	0.213***	0.245***	0.297***	0.264***	0.222*	0.375***	0.216***	0.234**
	(0.073)	(0.086)	(0.102)	(0.080)	(0.115)	(0.142)	(0.074)	(0.091)
75th percentile	0.105**	0.124**	0.155***	0.138***	0.134**	0.212***	0.106**	0.110**
	(0.041)	(0.049)	(0.059)	(0.046)	(0.067)	(0.081)	(0.042)	(0.051)
100th percentile	-0.017	-0.013	-0.006	-0.004	0.034	0.028	-0.017	-0.029
	(0.017)	(0.020)	(0.028)	(0.024)	(0.031)	(0.031)	(0.017)	(0.020)
Panel E. Test Scores in Grades 3–8								
Black test scores	-0.977***	-1.041***	-1.370***	-1.407***	-0.960*	-1.805***	-0.973***	-0.959**
	(0.315)	(0.352)	(0.520)	(0.496)	(0.502)	(0.570)	(0.314)	(0.393)
White test scores	-0.502	-0.585*	-1.108***	-1.107***	-0.891*	-1.498***	-0.539*	-0.500
	(0.313)	(0.350)	(0.377)	(0.337)	(0.537)	(0.560)	(0.292)	(0.396)
Controls								
Historical railroad track density		✓						
Unbalanced 1910–1920 city characteristics			✓					
All 1910–1920 city characteristics				✓				
Region fixed effects					✓			
1970 & 1990 unemp. rate & manufacturing emp. share						✓		
Income segregation							✓	
Exclude Great Lakes metros								✓

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the racial dissimilarity index in 1990. In all regressions the dissimilarity index is instrumented by the railroad division index (RDI). See notes to Table 3 and Appendix Table 3 for additional details on specifications. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix Table 9: Effects of Racial Segregation on White, Below Median Income Residents' Attitudes

	OLS	2SLS		
Dependent variable	1990 Dissimilarity Index (1)	1990 Dissimilarity Index (2)	Effect of 1 SD increase (3)	SD of Dep. Var (4)
Panel A: Redistributive Policy Attitudes				
Redistributive Policy Attitudes Index	2.196***	3.216**	0.438	0.885
	(0.537)	(1.416)		
Index Components				
Decrease State Legislature Spending on Welfare	2.256***	2.077	0.283	1.027
	(0.587)	(1.676)		
Decrease State Legislature Spending on Health	2.614***	4.076**	0.555	1.130
	(0.762)	(1.610)		
Decrease State Legislature Spending on Education	2.257***	1.181	0.161	1.080
	(0.685)	(1.627)		
Oppose Minimum Wage Increase	1.657**	5.531***	0.753	1.115
	(0.702)	(2.064)		
Panel B: Racial Attitudes				
(3-Item) Racial Attitudes Index	2.655***	5.128***	0.698	0.968
	(0.629)	(1.666)		
Index Components				
Racial Resentment A	2.802***	4.085***	0.556	1.009
	(0.677)	(1.547)		
Racial Resentment B	2.893***	5.471***	0.745	1.032
	(0.638)	(1.801)		
Oppose Affirmative Action	2.268***	5.827***	0.793	1.081
	(0.691)	(1.883)		
Panel C: Aggressive Policing Attitudes				
Aggressive Policing Attitudes Index	1.392**	2.864*	0.390	0.799
	(0.560)	(1.506)		
Index Components				
Oppose Ending Mandatory Minimum Laws	1.969***	0.280	0.038	1.179
	(0.754)	(1.556)		
Oppose Body Cams	-0.282	2.906	0.395	1.414
	(1.031)	(2.401)		
Oppose Choke Hold Bans	1.352	4.353*	0.592	1.225
	(0.904)	(2.278)		
Oppose Bad Cop Registry	1.750**	2.586	0.352	1.295
	(0.865)	(2.399)		
Oppose Allowing Individuals to Sue Police	2.172***	4.194**	0.571	1.166
	(0.760)	(1.861)		

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the racial dissimilarity index in 1990. All measures are constructed using responses to the CCES, as detailed in Appendix C. Racial Resentment A reflects agreement with the statement "The Irish, Italian, Jews and many other minorities overcame prejudice and worked their way up. Blacks should do the same." Racial Resentment B reflects disagreement with "Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class." Index components are z-scores, and the summary indices are equal to the average of their respective components. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix Table 10: Effects of Racial Segregation on White, Above Median Income Residents' Attitudes

	OLS	2SLS		
Dependent variable	1990 Dissimilarity Index (1)	1990 Dissimilarity Index (2)	Effect of 1 SD increase (3)	SD of Dep. Var (4)
Panel A: Redistributive Policy Attitudes				
Redistributive Policy Attitudes Index	0.000	1.959	0.267	1.304
	(0.877)	(2.118)		
Index Components				
Decrease State Legislature Spending on Welfare	0.747	2.511	0.342	1.486
	(0.989)	(2.435)		
Decrease State Legislature Spending on Health	-0.679	0.372	0.051	1.523
	(1.027)	(2.298)		
Decrease State Legislature Spending on Education	-0.265	0.748	0.102	1.571
	(1.093)	(2.265)		
Oppose Minimum Wage Increase	0.197	4.205	0.572	1.395
	(0.914)	(2.634)		
Panel B: Racial Attitudes				
(3-Item) Racial Attitudes Index	1.639**	3.105*	0.423	1.140
	(0.776)	(1.698)		
Index Components				
Racial Resentment A	1.992**	3.164*	0.431	1.157
	(0.795)	(1.775)		
Racial Resentment B	1.451	3.693*	0.502	1.253
	(0.883)	(1.930)		
Oppose Affirmative Action	1.473*	2.459	0.335	1.271
	(0.840)	(1.769)		
Panel C: Aggressive Policing Attitudes				
Aggressive Policing Attitudes Index	-0.321	0.970	0.132	1.320
	(0.881)	(1.576)		
Index Components				
Oppose Ending Mandatory Minimum Laws	-0.117	0.581	0.079	1.497
	(1.028)	(1.925)		
Oppose Body Cams	-1.126	-1.678	-0.228	1.816
	(1.200)	(3.168)		
Oppose Choke Hold Bans	-1.699	-0.537	-0.073	1.816
	(1.179)	(2.265)		
Oppose Bad Cop Registry	0.501	3.823*	0.520	1.736
	(1.125)	(2.075)		
Oppose Allowing Individuals to Sue Police	0.836	2.661	0.362	1.812
	(1.188)	(2.315)		

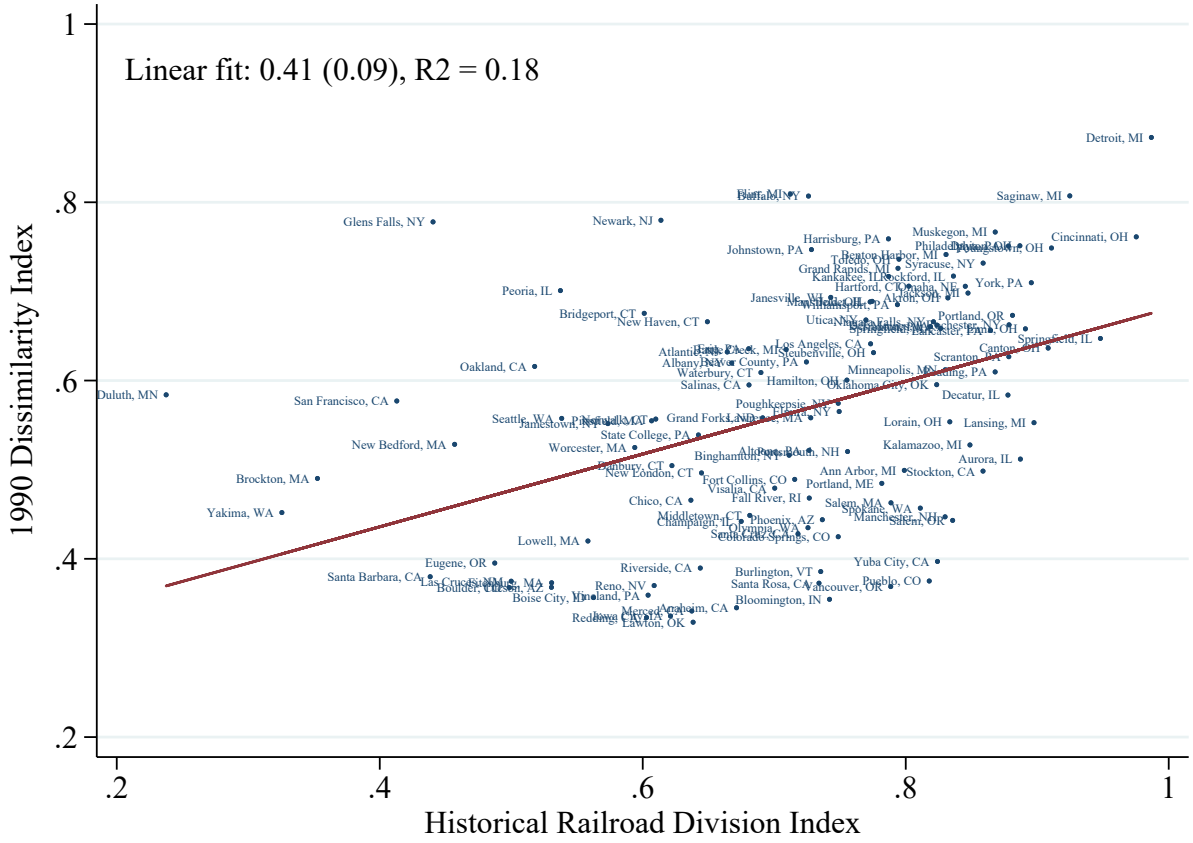
Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the racial dissimilarity index in 1990. All measures are constructed using responses to the CCES, as detailed in Appendix C. Racial Resentment A reflects agreement with the statement "The Irish, Italian, Jews and many other minorities overcame prejudice and worked their way up. Blacks should do the same." Racial Resentment B reflects disagreement with "Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class." Index components are z-scores, and the summary indices are equal to the average of their respective components. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix Table 11: Effects of Racial Segregation on Black Residents' Attitudes

	OLS	2SLS		
Dependent variable	1990 Dissimilarity Index (1)	1990 Dissimilarity Index (2)	Effect of 1 SD increase (3)	SD of Dep. Var (4)
Panel A: Redistributive Policy Attitudes				
Redistributive Policy Attitudes Index	-1.232	-2.868	-0.390	1.661
	(1.264)	(2.471)		
Index Components				
Decrease State Legislature Spending on Welfare	0.133	0.604	0.082	2.145
	(1.577)	(3.311)		
Decrease State Legislature Spending on Health	0.362	-3.780	-0.514	2.837
	(1.777)	(3.959)		
Decrease State Legislature Spending on Education	-3.884*	-3.640	-0.495	2.547
	(1.992)	(3.439)		
Oppose Minimum Wage Increase	-1.366	-3.706	-0.504	1.778
	(1.335)	(3.840)		
Panel B: Racial Attitudes				
Racial Attitudes Index	-2.985**	-4.724**	-0.643	1.549
	(1.372)	(2.330)		
Index Components				
Racial Resentment A	-2.278	-7.178**	-0.977	1.827
	(1.425)	(3.553)		
Racial Resentment B	-3.700**	-2.955	-0.402	1.813
	(1.550)	(3.026)		
Oppose Affirmative Action	-2.977	-4.039	-0.550	2.184
	(1.833)	(2.984)		
Panel C: Aggressive Policing Attitudes				
Aggressive Policing Attitudes Index	-0.185	-0.206	-0.028	1.979
	(1.042)	(1.975)		
Index Components				
Oppose Ending Mandatory Minimum Laws	1.233	1.838	0.250	2.780
	(1.553)	(2.938)		
Oppose Body Cams	1.456	-0.341	-0.046	3.041
	(1.631)	(3.003)		
Oppose Choke Hold Bans	-2.476	0.013	0.002	3.296
	(1.832)	(2.869)		
Oppose Bad Cop Registry	0.488	-2.185	-0.297	2.734
	(1.659)	(3.236)		
Oppose Allowing Individuals to Sue Police	-1.628	-0.356	-0.048	2.912
	(1.611)	(2.432)		

Notes: This table reports point estimates and heteroskedasticity robust standard errors (in parentheses) from models in which the key independent variable is the racial dissimilarity index in 1990. All measures are constructed using responses to the CCES, as detailed in Appendix C. Racial Resentment A reflects agreement with the statement "The Irish, Italian, Jews and many other minorities overcame prejudice and worked their way up. Blacks should do the same." Racial Resentment B reflects disagreement with "Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class." Index components are z-scores, and the summary indices are equal to the average of their respective components. Statistical significance is denoted by: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

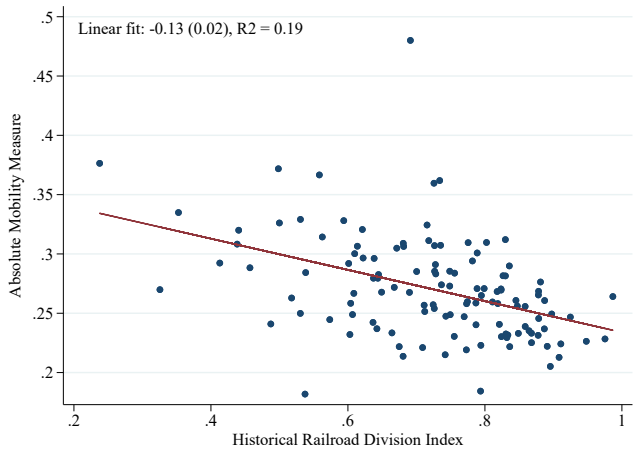
Appendix Figure 1: First-Stage Relationship Between 1990 Dissimilarity Index and Historical Railroad Division Index



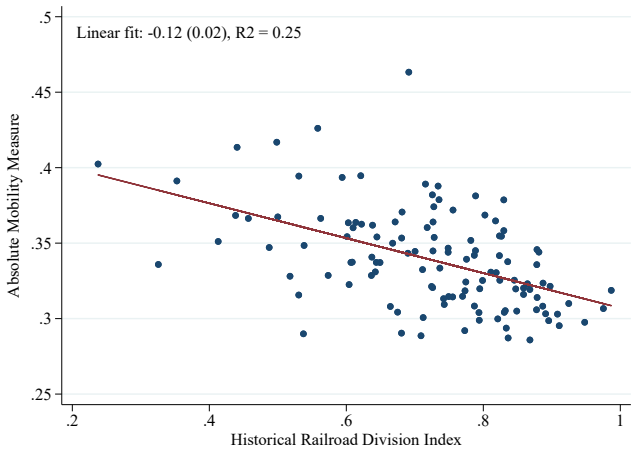
Notes: Figure displays the relationship between the racial dissimilarity index in 1990 and the railroad division index (RDI). Sample contains 121 non-Southern cities.
Source: Authors' calculations using data from Ananat (2011).

Appendix Figure 2: Bivariate Relationship Between Upward Mobility Measures of Black Children and Historical Railroad Division Index

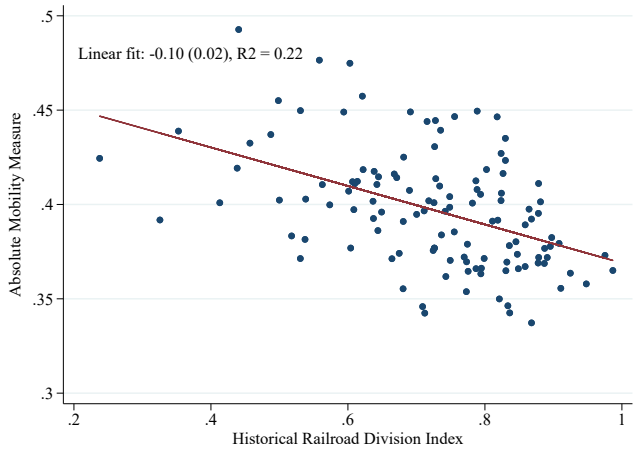
(a) 1st Percentile



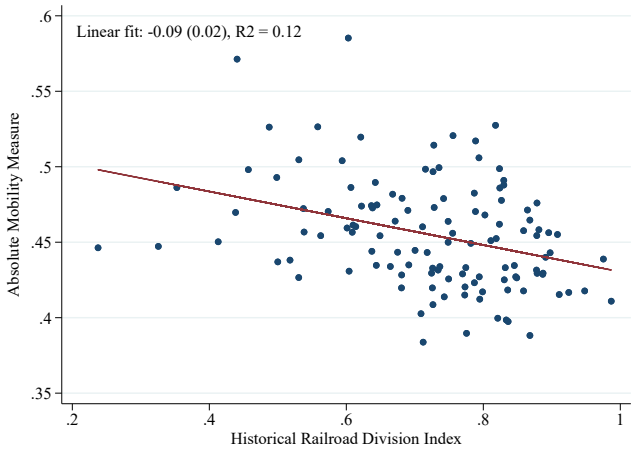
(b) 25th Percentile



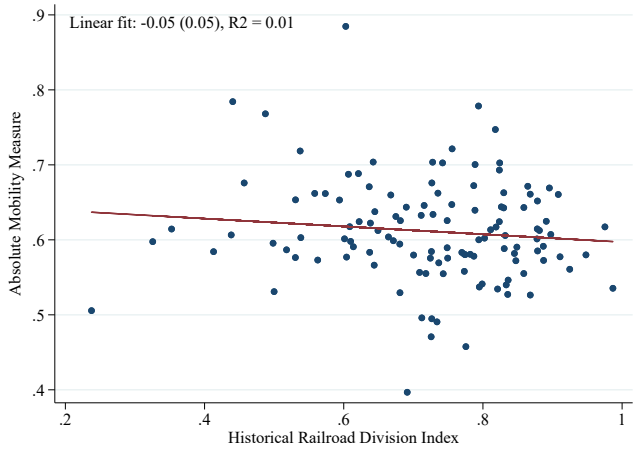
(c) 50th Percentile



(d) 75th Percentile



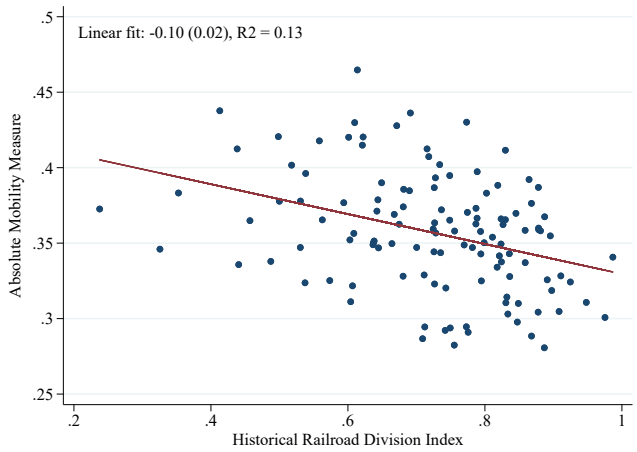
(e) 100th Percentile



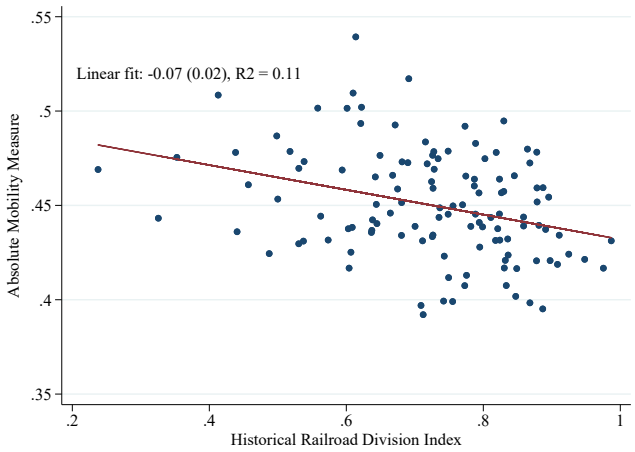
Notes: Figure displays the relationship between absolute mobility of Black children whose parents have income at the percentile indicated in the panel title and the railroad division index (RDI). Sample contains 121 non-Southern cities.
Source: Authors' calculations using data from Ananat (2011) and Chetty et al. (2020).

Appendix Figure 3: Bivariate Relationship Between Upward Mobility Measures of White Children and Historical Railroad Division Index

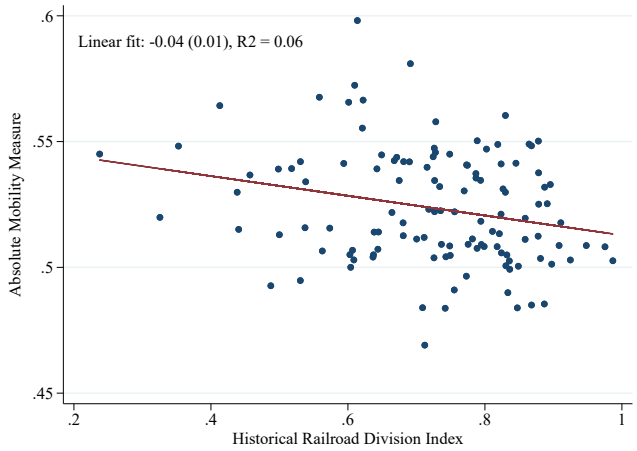
(a) 1st Percentile



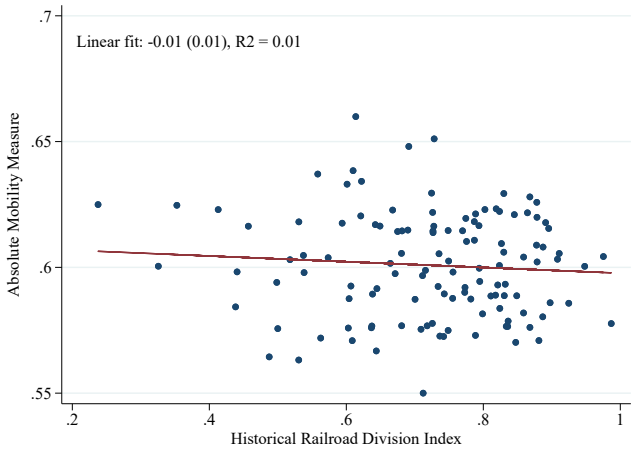
(b) 25th Percentile



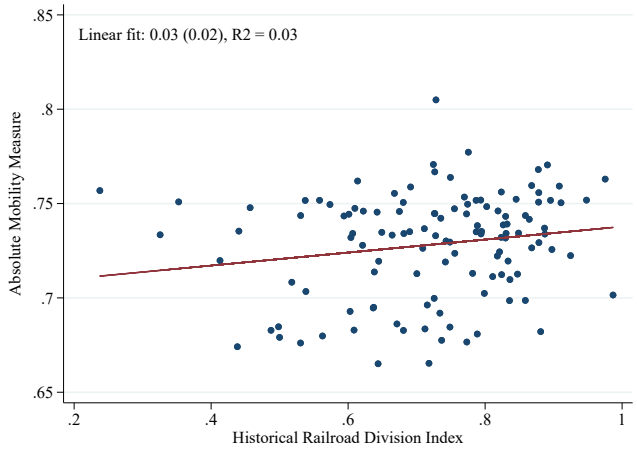
(c) 50th Percentile



(d) 75th Percentile



(e) 100th Percentile



Notes: Figure displays the relationship between absolute mobility of White children whose parents have income at the percentile indicated in the panel title and the railroad division index (RDI). Sample contains 121 non-Southern cities.
Source: Authors' calculations using data from Ananat (2011) and Chetty et al. (2020).

References

American National Election Studies. 2021. "ANES Time Series Cumulative Data File [dataset and documentation]." November 18, 2021 version. www.electionstudies.org.

Ananat, Elizabeth Oltmans. 2011. "The Wrong Side(s) of the Tracks: The Causal Effects of Racial Segregation on Urban Poverty and Inequality." *American Economic Journal: Applied Economics*, 3(2): 34–66.

Ananat, Elizabeth Oltmans. 2019. "Replication data for: The Wrong Side(s) of the Tracks: The Causal Effects of Racial Segregation on Urban Poverty and Inequality." Nashville, TN: American Economic Association [publisher], 2011. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2019-10-12.. https://doi.org/10.3886/E113786V1.

Anderson, T. W., and Herman Rubin. 1949. "Estimation of the Parameters of a Single Equation in a Complete System of Stochastic Equations." *Annals of Mathematical Statistics*, 20(1): 46–63.

Ansolabehere, Stephen. 2012. "CCES Common Content, 2010." https://doi.org/10.7910/DVN/VKKRWA, V3, Harvard Dataverse.

Ansolabehere, Stephen, and Brian Schaffner. 2013. "CCES Common Content, 2012." https://doi.org/10.7910/DVN/HQEVPK, V9, Harvard Dataverse.

Boustan, Leah Platt. 2010. "Was Postwar Suburbanization 'White Flight'? Evidence from the Black Migration." *Quarterly Journal of Economics*, 125(1): 417–443.

Boustan, Leah Platt. 2016. *Competition in the Promised Land.* Princeton University Press.

Chetty, Raj, and Nathaniel Hendren. 2018. "The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates." *Quarterly Journal of Economics*, 133(3): 1163–1228.

Chetty, Raj, John Friedman, Nathaniel Hendren, Maggie Jones, and Sonya Porter. 2020. "The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility." *National Bureau of Economic Research Working Paper 25147*.

Chetty, Raj, Nathaniel Hendren. 2022. "Replication Data for: The Impacts of Neighbor-hoods on Intergenerational Mobility: (I) Childhood Exposure Effects, and (II) County-Level Estimates." Harvard Dataverse V1. https://doi.org/10.7910/DVN/EI4WE2.

Cramer, Katherine. 2020. "Understanding the Role of Racism in Contemporary US Public Opinion." *Annual Review of Political Science*, 23: 153–169.

Cutler, David M., and Edward L. Glaeser. 1997. "Are Ghettos Good or Bad?" *Quarterly Journal of Economics*, 112(3): 827–872.

Cutler, David M., Edward L. Glaeser, and Jacob L. Vigdor. 1999. "The Rise and Decline of the American Ghetto." *Journal of Political Economy*, 107(3): 455–506.

Cutler, David M., Edward L. Glaeser, and Jacob L. Vigdor. 2010. "Segregation Data, United States, 1890-2000."

Derenoncourt, Ellora. 2022. "Can You Move to Opportunity? Evidence from the Great Migration." *American Economic Review*, 112(2): 369–408.

Eckert, Fabian, Andrés Gvirtz, Jack Liang, and Michael Peters. 2020. "A method to construct geographical crosswalks with an application to us counties since 1790." National Bureau of Economic Research.

Fouka, Vasiliki, Soumyajit Mazumder, and Marco Tabellini. 2020. "From Immigrants to Americans: Race and Assimilation during the Great Migration." Working Paper.

Gregory, James N. 2005. *The Southern Diaspora: How the Great Migrations of Black and White*

Southerners Transformed America. Chapel Hill: University of North Carolina Press.

Henry, P. J., and David O. Sears. 2002. "The Symbolic Racism 2000 Scale." *Political Psychology*, 23(2): 253–283.

Kinder, Donald R., and Lynn M. Sanders. 1996. *Divided by Color: Racial Politics and Democratic Ideals.* Vol. 112, Chicago: University of Chicago Press.

Lee, David S., Justin McCrary, Marcelo J. Moreira, and Jack R. Porter. 2021. "Valid t-ratio Inference for IV." *National Bureau of Economic Research Working Paper 29124*.

Manson, Steven, Jonathan Schroeder, David Van Riper, Tracy Kugler, and Steven Ruggles. 2022. "IPUMS National Historical Geographic Information System: Version 17.0 [dataset]." Minneapolis, MN: IPUMS. http://doi.org/10.18128/D050.V17.0.

Missouri Census Data Center. 2021. "Geocorr 1990 [dataset application]." https://mcdc.missouri.edu/applications/geocorr1990.html.

Ruggles, Steven, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Matt A. Nelson, Evan Roberts, Megan Schouweiler, and Matthew Sobek. 2021. "IPUMS Ancestry Full Count Data: Version 3.0 [dataset]." Minneapolis, MN: IPUMS. http://doi.org/10.18128/D014.V3.0.

Ruggles, Steven, Sarah Flood, Ronald Goeken, Megan Schouweiler, and Matthew Sobek. 2022. "IPUMS USA: Version 12.0 [dataset]." Minneapolis, MN: IPUMS. https://doi.org/10.18128/D010.V12.0.

Schaffner, Brian, and Stephen Ansolabehere. 2015. "CCES Common Content, 2014." https://doi.org/10.7910/DVN/XFXJVY, V5, Harvard Dataverse.

Schaffner, Brian, Stephen Ansolabehere, and Sam Luks. 2019. "CCES Common Content, 2018." https://doi.org/10.7910/DVN/ZSBZ7K, V6, Harvard Dataverse.

Schaffner, Brian, Stephen Ansolabehere, and Sam Luks. 2021. "Cooperative Election Study Common Content, 2020." https://doi.org/10.7910/DVN/E9N6PH, V4, Harvard Dataverse.