

## ONLINE APPENDICES

### A. Data Construction

This appendix provides further details on the methods we use to construct our analysis sample and assign individuals to Census blocks.

*Sample Construction.* We begin with the set of children born between 1978 and 1983, based on birth dates recorded in the Numident file (22.8 million children), which contains records on all persons in the U.S. who have ever had a Social Security Number (SSN). For each child, we define the parent(s) as the first person(s) who claim the child as a dependent on a 1040 tax form. If parents are married but filing separately, we assign the child to both parents. To eliminate dependent claiming by siblings or grandparents, in the case of a potential match to married parents or single mothers, we require that the mother be 15-50 at the birth of the child. In the case of children claimed by a single father, we require that he be between 15-50 at the birth of the child.<sup>42</sup> If no such eligible match occurs in 1994, the first year of the data in which we have dependent claiming information, we search subsequent years through 2015 until a valid match is found.

Once we match a child to parents, we hold this definition of parents fixed regardless of subsequent dependent claims or changes in marital status. For example, a child matched to married parents in 1996 who divorce in 1997 will always be matched to the two original parents. Conversely, a child matched to a single parent in 1996 who marries in 1997 will be considered matched to a single parent, though spouse income will be included in our definition of parent income because we measure parent income at the family level in our baseline analysis.

We exclude children whose mean real or nominal parent income is zero or negative (1.0% of children) because parents who file tax returns (as is required to link them to a child) reporting negative or zero income typically have large capital losses, which are a proxy for having significant wealth. We construct a strongly balanced sample of children by assigning incomes of zero to children who do not appear in the tax data (e.g., because they have died). We then assign children and parents income percentile ranks on the sample of children linked to parents with positive income, using the income definitions described in Section II.B. Finally, we restrict the sample to individuals who have non-missing race information to obtain our final analysis sample. Note that this ordering of operations implies that we rank children and parents relative to all individuals in the sample, not just those with non-missing race information.

*Assignment of Children to Census Tracts.* Addresses in the tax records are geocoded and assigned to standard Census geographic units (e.g. block, tract, and county) by Census staff in the Census Master Address File (MAF). The geocoding process involves cleaning address information so that it can be merged on to the MAF and assigned a MAFID, which is then associated with the geographic units that we use. Brummet (2014) describes this process in greater detail. Brummet also reports statistics on the match rate for addresses; for example, 92% of addresses in the 2009 American Housing Survey were successfully matched to the MAF.

We assign children to Census tracts (or other geographies) where they grew up based on the address from which their parents filed 1040 tax forms and claimed them as dependents. In particular, we identify all the Census tracts from which their parents filed tax returns (between 1989-2015)

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<sup>42</sup>Children can be claimed as a dependent only if they are aged less than 19 at the end of the year (less than 24 if enrolled as a student) or are disabled. A dependent child is a biological child, step child, adopted child, foster child, brother or sister, or a descendant of one of these (for example, a grandchild or nephew). Children must be claimed by their custodial parent, i.e. the parent with whom they live for over half the year. Furthermore, the custodial parent must provide more than 50% of the support to the child. Hence, working children who support themselves for more than 50% cannot be claimed as dependents. See IRS Publication 501 for further details.

during or before the year in which their child turned 23. Beginning in 2003, we use address data from information returns (e.g., W-2 forms) for non-filers. Since we search for address information in multiple years, we are able to assign 99.5% of children in our baseline sample to at least one non-missing tract during their childhood. We use an analogous process to assign children to geographies when they are adults in 2015, using their own 1040 form or, for non-filers, address data from information returns (e.g., W-2 forms).

## B. Comparison to Survey Datasets

In this appendix, we assess the representativeness of our analysis sample by comparing sample counts and descriptive statistics to corresponding measures from publicly available survey datasets. We conduct three sets of analyses.

First, we assess the coverage rate of our analysis sample by comparing the number of children in our analysis sample to the number of individuals in the ACS who were born in the U.S. or came to the U.S. before age 16. Appendix Table II shows that the total number of children whom we link to parents is comparable to the expected number of children based on the ACS (using the ACS sampling weights). On average over the 1978-83 birth cohorts, our sample count of children linked to parents with positive income is 99.6% as large as that in the ACS.<sup>43</sup> Information on race and ethnicity is available for 94.1% of children; we lose 6% of the sample because their records in the Census could not be assigned a PIK (i.e., linked to the Numident file) based on the information provided. The coverage rates are above 94% for all racial and ethnic subgroups except for Hispanics, for whom our sample count is 78.9% of that in the ACS. This is primarily because our sample includes only authorized immigrants, whereas the ACS covers all immigrants.<sup>44</sup> Lopez and Radford (2017) estimate that approximately 17.7% of immigrants in the United States in 1990 were unauthorized, suggesting that our sample covers approximately  $78.9/82.3 = 95.9\%$  of Hispanics who are authorized immigrants or citizens, similar to rates of coverage for other groups.

Next, in Appendix Table III, we examine whether the characteristics of individuals in our analysis sample are representative of the corresponding population in the ACS. We start from individuals in the 1978-83 birth cohorts who appear in the 2015 ACS and report their mean individual income ranks and other characteristics (based on the ACS data) for three samples: all individuals who appear in the ACS (Column 1), those who appear in both the ACS and our analysis sample (Column 2), and those who appear in the ACS but not our analysis sample (Column 3). Mean income ranks differ by 1 percentile or less between our analysis sample and the full ACS sample for all groups except Hispanics, for whom there is a larger discrepancy because our sample does not include unauthorized immigrants as noted above. Mean income ranks are slightly higher for those in our analysis sample than in the complement, which is because individuals who have particularly low incomes are less likely to appear in Census and tax data and hence are less likely to be in our linked data. We find similar results for other variables such as marriage rates and college attendance.

Finally, we assess whether the income measures and other statistics we construct from the linked Census-tax records are representative of corresponding measures in publicly available survey data. In Appendix Table IV, we report summary statistics on income distributions (Panel A) and

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<sup>43</sup>These comparisons are not exact because there are small differences between our sample definitions and the ACS. As discussed in Section III, our sample does not include unauthorized immigrants, whereas the ACS does, a factor that reduces our counts relative to the ACS. In the other direction, (1) we retain individuals who have died by 2015 whereas the ACS does not; (2) we retain individuals who were ever in the U.S. but left by 2015, whereas the ACS does not; and (3) some children may have immigrated to the U.S. after age 16 and still be claimed as dependents by parents.

<sup>44</sup>The ACS does not ask about immigration status, preventing us from comparing counts of authorized immigrants directly.

demographics (Panel B) for five different samples. The first two columns use the (publicly available) 2012-2016 Current Population Survey (CPS) and 2012-2016 ACS, focusing on individuals in the 1978-83 birth cohorts who were born in the U.S. or came to the U.S. before age 16. Column 3 uses data from the 2015 ACS who appear in our analysis sample, and measures their incomes and other characteristics in the ACS data. As shown in Appendix Table III, the individuals in the linked analysis sample have slightly higher incomes than those in the ACS in general, with a median income of \$33,860 vs. \$32,810 in the publicly available ACS and \$33,000 in the CPS.

Column 4 uses the same sample as Column 3, but reports income data from the tax records. Income distributions measured in the tax records are very well aligned with the ACS. For example, median income is \$33,340 when measured in the tax data and \$33,860 in the ACS data holding the sample of individuals fixed. Column 5 assesses the extent to which estimates of income in tax records are biased due to non-filing. It shows statistics on income and other characteristics using ACS data for individuals who appear in both the ACS and the analysis sample, but who have zero income in the tax data in 2015 (i.e., those who have no 1040 or W-2 forms in 2015). The median income of these individuals is \$5,000 in the ACS, showing that individuals we assign zero income based on tax records typically have very low incomes in survey data as well. Hence, the tax records do not miss substantial amounts of income for non-filers.

In sum, comparisons to nationally representative surveys show that our analysis sample provides an accurate representation of our target population in terms of overall coverage rates and sample characteristics and that the tax records provide valid measures of income.

### C. Construction of Tract-Level Covariates

This appendix provides definitions and sources for the covariates used in Section VII.B. Our source data are primarily at the tract level; all data obtained at other geographies were collapsed to the tract level (with the exception of measures of racial bias, which are only available at broader geographical levels). We use 2010 Census tract definitions throughout. For covariates defined using 2000 tract boundaries, we use the 2010 Census Tract Relationship Files from the [US Census Bureau](#) to crosswalk 2000 tracts to 2010 tracts, weighting the 2000 tract-level covariates by the fraction of the 2010 tract population that lives within the 2000 tract boundaries.

We organize the covariates using the categories used in Appendix Table X.

*Economy.* We calculate the share of individuals below the poverty line for all individuals and by race in each tract using tables NP087B and NP159B of the [National Historical Geographic Information System \(NHGIS\) database](#) (2000 Census long form SF3a). To estimate the mean household income for each tract, we use data on the distribution of households in 16 income bins from table NP052A of the [NHGIS database](#) (2000 Census long form SF3a). We assume that the mean household income in each bin equals the middle of the bin and impute a mean value of \$300,000 for the highest income bin (\$200,000 or more). We then calculate the mean household income for each tract using the distribution of households over income bins in the tract. We obtain employment rates by race and sex in each tract using table NP150E of the NHGIS database (2000 Census long form SF3a). We define the share working in manufacturing as the number of workers employed in the manufacturing industry over the total number of workers (in the sample of people who are 16 years and older). These data are from table NP049C of the [NHGIS database](#) (2000 Census long form SF3a).

*Schools.* Data for 3rd and 8th grade test scores are downloaded from the [Stanford Education Data Archive](#) (table MeanA\_V1.1) and measured at the district level. We create a crosswalk from districts to tracts by weighting by the proportion of land area that a given school district covers in a tract. Data on suspension rates are downloaded from the [Office for Civil Rights \(OCR\) Data](#)

**Collection** tool using the 2013 Discipline and Disability data tables at the school-level for all states. We restrict to high schools with at least 500 students. Where possible, schools are crosswalked to school catchment areas; then school catchment areas are crosswalked to tracts.

*Health.* The share without health insurance is constructed using tract-level data from table B27001 of the American Community Survey (2008-2012) using the [NHGIS database](#) by subtracting the number of people ages 18-64 with health insurance from the total tract-level population and then dividing this number by the total tract-level population.

*Family Structure.* We define the share of single parents in each tract as the number of households with female heads (and no husband present) or male heads (and no wife present) with own children under 18 years old present divided by the total number of households with own children present. The data come from tables NP018E and NP018G of the [NHGIS database](#) (2000 Census short form SF1a). We calculate the share married and share divorced in each tract using the number of people who are married or divorced (in the sample of people who are 15 years and older) using data from the [NHGIS database](#) in table NPCT007C (2000 Census long form SF3a). We estimate the share of children born to low-income parents growing up in a household with father present by race in each tract using our own Census microdata analysis sample. We first regress an indicator variable for whether a child was matched to a father (see Online Appendix A) on a child's parent income percentile for each tract and race using our analysis sample (children in the 1978-83 birth cohorts). We then use the predicted value at the 25th percentile of the parent income distribution as the estimate for each tract and race group. We estimate the share of children born to low-income parents growing up in a household with a mother present by race and tract analogously.

*Demographics.* The demographic variables are constructed from tract-level Census data using the [NHGIS database](#). The share of black residents is defined as the share of non-Hispanic black residents who listed "Black" as their only race or as one of multiple races in the 2010 Census (long form SF1, table H73). The share of the population younger than 18 is defined as the number of persons under 18 in the 2000 Census divided by the total tract-level population (long form SF1a, table NP012B). The share foreign born is defined as the number of foreign born residents in the 2000 Census divided by the sum of native and foreign born residents (long form SF3a, table NP021A).

*Education.* The education variables are constructed from tract-level 2000 Census data using the [NHGIS database](#) (long form SF3, table NP037C). The share that have less than a high school education is calculated by dividing the number of people over 25 who did not graduate from high school by the total number of people over 25 in a tract. The share of college educated is calculated by dividing the number of people over 25 who have a bachelor's degree, master's degree, professional school degree, or doctorate degree over the total number of people over 25 in a tract.

*Housing.* The housing variables are constructed from tract-level Census and ACS data using the [NHGIS database](#). Population density is calculated by dividing the total tract-level population in the 2000 Census by the land area of 2010 Census tract boundaries measured in square kilometers (long form SF1a, table NP001A). The share who own homes is calculated by dividing the number of housing units owned in the 2000 Census by the total number of housing units in a tract (long form SF1a, tables H1 and H4). The median two-bedroom rent variable is constructed from tract-level ACS data (2011-2015) and is defined as the median gross rent for renter-occupied housing units with two bedrooms that pay cash rent (table AD79). The black median home value variable is defined as the median value of owner-occupied housing units for black homeowners in the 2000 Census; white median home value is defined analogously for whites (long form SF3a, tables NHCT042A and NHCT042C).

*Racial Bias.* We construct racial bias measures using three data sources. Implicit Association Test (IAT) scores were obtained from the Race Implicit Association Database, available at [Journal of Open Psychology](#). The IAT score is a measure of racial bias that is constructed by measuring

the difference in a participant’s ability to match positive and negative words with black vs. white faces, where higher IAT scores represent more implicit bias toward black faces (Greenwald et al. 1998). We calculate mean IAT racial bias scores for white and black study participants at the county level, pooling data from 2003-2016.

The Racial Animus Index is obtained from Stephens-Davidowitz (2014), available at [racially charged searches](#). It is a measure of the frequency of racially charged Google searches at the media market level, which are aggregations of counties.

The interracial marriage attitude data are constructed by Mas and Moretti (2009) using publicly available data from the General Social Survey. They measure the fraction of white voters who support anti-interracial-marriage laws, tabulated by state.

## D. Evolution of Racial Disparities with Gender Heterogeneity

This appendix extends the model developed in Section II to show how racial disparities evolve when racial gaps in intergenerational mobility differ by gender.

For simplicity, we ignore marital patterns and assume that each family  $i$  consists of a man and a woman in each generation. We model the individual income of a person of gender  $g \in \{m, f\}$  in family  $i$  in generation  $t$  as

$$y_{it}^g = \alpha_r^g + \beta_m y_{i,t-1}^m + \beta_f y_{i,t-1}^f + \varepsilon_{igt}$$

where  $y_{i,t-1}^g$  denotes the individual income of a parent of gender  $g$ , and  $\varepsilon_{igt}$  denotes an idiosyncratic shock that is independent across generations and genders and has expectation  $E[\varepsilon_{igt}] = 0$ . Note that we assume that relative mobility  $(\beta_m, \beta_f)$  does not vary across races in this specification, consistent with our empirical findings.

In steady-state, the mean rank of each gender satisfies  $\bar{y}_{it}^g = \bar{y}_{i,t-1}^g$ . The steady state mean income rank for individuals of gender  $g$  and race  $r$  is given by:

$$\bar{y}_r^g = \frac{(1 - \beta_{-g})\alpha_r^g + \beta_{-g}\alpha_r^{-g}}{1 - \beta_r^m - \beta_r^f},$$

where  $-g$  denotes the other gender, i.e.,  $-g = m$  if  $g = f$ .

If  $\Delta\alpha^f = \alpha_w^f - \alpha_b^f = 0$ , as we find empirically, then the black-white gap for women in the steady state is directly proportional to the intergenerational black-white gap for men,  $\Delta\alpha^m$ :

$$\Delta\bar{y}^f = \frac{\beta_m}{1 - \beta_m - \beta_f} \Delta\alpha^m.$$

## E. Estimating Causal Effects of Neighborhoods: Methodology

In this appendix, we document the sample, variable construction, empirical specifications used in Section VII.C.

*Sample and Variable Construction.* Our core sample and data construction is the same as that described in Section III, but expands in two directions that increase our ability to observe moves at younger ages. First, we extend our analysis to include the 1978-1986 cohorts. Second, we include income ranks measured at age 30, in addition to ranks of pooled incomes over ages 31-37 in our analysis above.<sup>45</sup> Chetty et al. (2014) shows that although children’s incomes from different backgrounds are continuing to diverge in levels, changes in a child’s income rank after age 30 (relative to their cohort peers) are no longer significantly correlated with their parental

<sup>45</sup>Because we do not observe income at age 30 for the 1986 cohort, our income and marriage at age 30 analysis will use only the 1978-1985 sample. We include the 1986 cohort in our analysis of incarceration.

background. Lastly, we also consider specifications for household income ranks at age 24 pooling across genders and races, as in Chetty and Hendren (2018a). For this, we use an expanded sample of the 1978-1991 cohorts.

Using the location of each child’s parents in each year in our sample, we form a sample of 1-time movers. These are defined as children whose parents move across CZs exactly once when they are age 28 or below.<sup>46</sup> We define the year of the move as the tax year in which the parents report living in a different CZ relative to the previous year. In cases where we do not observe sequential years of location information (e.g. we do not observe 1990-93 and 1996-97), we assign the year of move as the midpoint between the two nearest years in which different addresses are reported (e.g. if we see a new location in 1994 relative to 1989, we assign the year of move to be 1992.5). In cases where this leads to a non-integer year of move, we randomly select the nearest year for the move. We then define the child’s age at the time of the move as the year of the move minus the child’s cohort.

Following Chetty and Hendren (2018a), we make three additional sample restrictions. First, we restrict to moves between destinations and origins that have at least 25 observations used to calculate  $\bar{y}_{pos}$  and  $\bar{y}_{pds}$ . As shown in Online Appendix A of Chetty and Hendren (2018a) imposing such sample restrictions limits the impact of attenuation bias from sampling error in the  $\bar{y}_{pcs}$  estimates.<sup>47</sup> Second, we require that we are able to observe the parents for at least two years after the move in order to enter the sample (e.g. for a child born in 1991 we only consider moves through 2013, since s/he is observed until 2015). Third, we require families to move at least 100 miles. This ensures that the children’s environments are actually changing and helps rule out cases where families move at short distances but happen to cross CZ boundaries. Appendix Table XIII presents summary statistics for the one-time movers sample and the complementary exposure-weighted sample. In the one-time movers sample, we have a total sample size of roughly 152,000 black male children and 887,000 white male children for whom we observe income at age 30.

For each subgroup of the analysis,  $g$  (e.g.  $g$  could represent black males, white females, etc), we use the remaining sample of children whose parents are observed in exactly one or 3+ CZs to provide an estimate of the average outcomes of children in group  $g$  who grew up in each CZ. Using this sample, we restrict to those in group  $g$  and construct exposure-weighted outcomes,  $\bar{y}_{pcs}$ , for each location  $c$ , race  $r$ , and parental income  $p$  using the procedure described in Section VII.B. We take children observed in each CZ in the subgroup and regress their outcomes on a linear term in parental income rank, weighting by the number of years below age 23 in which the parents are observed in the CZ. We let  $\bar{y}_{pcs}$  denote the predicted value from this regression for a child at parental income rank  $p$ .

*Empirical Specification.* Using the sample of 1-time movers, we consider the outcomes of child  $i$  with parental income rank  $p_i$  who moved at age  $m_i$  from origin CZ,  $o$ , to destination CZ,  $d$ . We regress the child’s outcome,  $y_i$  using a specification analogous to the approach in Chetty and Hendren (2018a). Let  $\bar{y}_{pcs}$  denote the exposure-weighted outcome of  $y_i$  for children who grew up in CZ  $c$  with parental income rank  $p = p_i$ . Let  $\Delta_{odps} = \bar{y}_{pds} - \bar{y}_{pos}$  denote the difference in the income rank of exposure-weighted residents in the destination versus origin for children in cohort  $s$  with parental income rank  $p$ . We run a regression of the form noted in the main text:

<sup>46</sup>When constructing the sample, we observe location up to age 30. But, as discussed below, we follow Chetty and Hendren (2018a) and require that we observe the parents in the destination for at least two years. Therefore, the oldest age of move for the parents is 28.

<sup>47</sup>Chetty and Hendren (2018) use population restrictions of 250,000 in the 2000 Census. We instead use count restrictions on  $\bar{y}_{pcs}$  because many of our specifications focus on subsamples of the data (e.g. black males).

$$\begin{aligned}
y_{i,c} = & \sum_{s=1978}^{1986} I(s_i = s)(\phi_s^1 + \phi_s^2 \bar{y}_{pos}) + \sum_{m=2}^{28} I(m_i = m)(\zeta_m^1 + \zeta_m^2 y_{i,p}) \\
& + \sum_{m=2}^{28} b_m I(m_i = m) \Delta_{odps} + \varepsilon_{1i}, \tag{8}
\end{aligned}$$

where  $\phi_s^1$  is a cohort-specific intercept,  $\phi_s^2 \bar{y}_{pos}$  is a control for the average exposure weighted outcome in the origin in which the coefficient is allowed to vary by cohort. These control for the selection of the origin in which children are coming from. Next,  $\zeta_m^1$  is an intercept and  $\zeta_m^2 y_{i,p}$  is an interaction with parental income rank that vary with the child's age at the time of the move,  $m$ . These control for heterogeneous disruption or selection effects that may occur with moves at different ages. Finally, the coefficients,  $b_m$ , provide an estimate the exposure effect. The exposure effect at age  $m$  is given by  $b_m - b_{m+1}$ . How the  $b_m$  coefficients vary with the child's age at the time of the move,  $m$ , capture the effect of moving at age  $m$  instead of  $m + 1$  to a CZ in which children have 1-unit higher outcomes.<sup>48</sup>

In addition to allowing the coefficients  $b_m$  to vary for each age,  $m$ , we also follow Chetty and Hendren (2018a) by estimating a linear parametrization of these coefficients over the age ranges above and below 23. This specification is given by:

$$\begin{aligned}
y_{i,c} = & \sum_{s=1978}^{1986} I(s_i = s)(\phi_s^1 + \phi_s^2 \bar{y}_{pcs} + \phi_s^3 \bar{y}_{pcs}^r) + \sum_{m=2}^{28} I(m_i = m)(\zeta_m^1 + \zeta_m^2 y_{i,p}) \\
& + 1 \{m_i \leq 23\} (\delta_{\leq 23} + m\gamma_{\leq 23}) \Delta_{odps} + 1 \{m_i > 23\} (\delta_{> 23} + m\gamma_{> 23}) \Delta_{odps} + \varepsilon_{2i}, \tag{9}
\end{aligned}$$

To test whether the race-specific differences in observed outcomes partially reflects the causal effect of childhood exposure, we add the outcomes of the other race to the regression in equation (9):

$$\begin{aligned}
y_{i,c} = & \sum_{s=1978}^{1986} I(s_i = s)(\phi_s^1 + \phi_s^2 \bar{y}_{pcs} + \phi_s^3 \bar{y}_{pcs}^r) + \sum_{m=2}^{28} I(m_i = m)(\zeta_m^1 + \zeta_m^2 y_{i,p}) \\
& + 1 \{m_i \leq 23\} (\delta_{\leq 23} + m\gamma_{\leq 23}) \Delta_{odps} + 1 \{m_i > 23\} (\delta_{> 23} + m\gamma_{> 23}) \Delta_{odps}, \\
& + 1 \{m_i \leq 23\} (\delta_{\leq 23}^r + m\gamma_{\leq 23}^r) \Delta_{odps}^r + 1 \{m_i > 23\} (\delta_{> 23}^r + m\gamma_{> 23}^r) \Delta_{odps}^r + \varepsilon_{3i}, \tag{10}
\end{aligned}$$

where  $\bar{y}_{pcs}^r$  and  $\Delta_{odps}^r$  are the outcomes of white (black) children when running a regression on the sample of black (white) children.

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<sup>48</sup>Equation (8) is identical to the baseline specification in equation (6) of Chetty and Hendren (2018), with the exception that we do not include a cohort-varying intercept term,  $\sum_{s=1980}^{1988} \kappa_s^d \Delta_{odps}$ . We make this modification because below we will apply the specification to the smaller subsample of black males. With few observations in some cohorts, including these terms introduces additional noise in the estimates. Chetty and Hendren (2018) verify that the exclusion of these interactions does not meaningfully affect their results.

Table I  
 Statistics on Income Disparities and Intergenerational Mobility by Racial Group

	White			Black			Asian			Hispanic			American Indian		
	Pooled (1)	Male (2)	Female (3)	Pooled (4)	Male (5)	Female (6)	Pooled (7)	Male (8)	Female (9)	Pooled (10)	Male (11)	Female (12)	Pooled (13)	Male (14)	Female (15)
<i>A. Individual Income</i>															
Median Income (\$)	33,620	40,710	26,580	19,550	18,220	20,400	43,690	45,550	41,730	27,140	32,250	22,930	16,610	19,030	14,870
Mean Percentile Rank	53.3	58.4	47.9	42.0	40.8	43.1	60.3	61.5	59.0	48.1	51.7	44.5	39.6	42.0	37.3
P(Child in Q1   Parent in Q1)	28.1%	26.0%	30.3%	28.7%	37.5%	20.5%	17.5%	17.0%	18.0%	23.2%	23.5%	22.8%	37.8%	39.0%	36.6%
P(Child in Q5   Parent in Q1)	11.1%	14.8%	7.2%	6.3%	7.4%	5.2%	26.8%	28.0%	25.6%	10.8%	14.8%	6.7%	5.3%	7.4%	3.3%
P(Child in Q1   Parent in Q5)	11.7%	8.7%	14.9%	13.8%	16.4%	11.0%	11.3%	10.8%	11.9%	13.3%	11.6%	15.1%	18.2%	16.2%	20.3%
P(Child in Q5   Parent in Q5)	36.9%	45.2%	28.2%	26.2%	27.0%	25.4%	49.9%	52.8%	46.9%	31.4%	37.5%	25.4%	24.1%	28.7%	19.1%
<i>B. Household Income</i>															
Median Income (\$)	53,730	51,960	55,740	20,650	17,730	22,690	63,720	56,580	71,880	35,180	35,280	35,080	22,260	20,890	23,450
Mean Percentile Rank	55.7	54.5	56.8	34.8	32.6	36.8	60.7	57.5	63.9	45.6	44.6	46.7	36.7	35.7	37.8
P(Child in Q1   Parent in Q1)	29.0%	31.3%	26.7%	37.3%	48.5%	26.8%	16.7%	19.9%	13.2%	24.8%	29.1%	20.4%	45.5%	49.3%	41.7%
P(Child in Q5   Parent in Q1)	10.6%	9.7%	11.5%	2.5%	2.5%	2.6%	25.5%	21.2%	30.1%	7.1%	6.6%	7.6%	3.3%	3.1%	3.5%
P(Child in Q1   Parent in Q5)	8.7%	10.0%	7.3%	16.7%	21.5%	11.8%	9.9%	11.9%	8.0%	12.0%	14.0%	10.0%	18.8%	20.9%	16.6%
P(Child in Q5   Parent in Q5)	41.1%	39.3%	43.0%	18.0%	17.4%	18.6%	48.9%	45.6%	52.2%	30.6%	28.8%	32.4%	23.0%	21.5%	24.6%
Median Parent Household Income	55,810			29,200			53,010			33,060			34,850		
Mean Parent Household Income Rank	57.9			32.7			49.2			36.2			36.8		
Steady-state Household Income Rank	54.4			35.2			62.9			48.7			36.5		
Number of obs (1000's)	13,490	6,891	6,599	2,750	1,348	1,402	685	350	335	2,615	1,312	1,303	165	84	82

*Notes:* This table describes individual and householding income and intergenerational mobility by race and gender for children in our sample. All racial groups except Hispanics exclude individuals of Hispanic ethnicity. Panel A presents descriptive statistics on individual income by race and gender. Panel B presents the same statistics for household income. All statistics are based on the primary analysis sample (children in the 1978-83 birth cohorts) and baseline income definitions for parents and children (see Section III). All values in this and all subsequent tables and figures have been rounded to four significant digits as part of the disclosure avoidance protocol. Counts are rounded in the following manner: numbers between 10,000 and 99,999 are rounded to the nearest 500; between 100,000 and 9,999,999 to the nearest 1,000 and above 10,000,000 to the nearest 10,000. Sources for this and all subsequent tables and figures: authors calculations based on Census 2000 and 2010, tax returns, and American Community Surveys 2005-2015.



Table II  
Association Between Black Father Presence and Black Boys' Outcomes: OLS Regression Estimates

Dependent Variable:	Baseline	Black and White Father Present	State FE	Father Absent	Two Parents	All Tracts	Black Fathers per Child	Gender Ratio	Current Tract FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Low-Income Black Father Presence	0.0492 (0.0062)	0.0450 (0.0068)	0.0501 (0.0066)	0.0279 (0.0108)	0.0461 (0.0128)	0.0806 (0.0036)			0.1052 (0.0079)
Low-Income White Father Presence		0.0077 (0.0076)							
Low-Income Black Father Presence in 2000							0.0382 (0.0043)	0.0387 (0.0043)	
Low-Income Black Male Filers Per Child								-0.0011 (0.0011)	
Low Poverty Tracts	X	X	X	X	X				
State FE's			X						
Current Tract FE's									X
R2	0.007	0.007	0.070	0.002	0.002	0.020	0.009	0.009	0.239
Number of Tracts	10,582	10,444	10,582	5,159	5,280	28,850	10,177	10,177	
Number of Observations									193,000

Notes: This table presents coefficients from a regression of the average income rank of black males who grow up in each census tract in below median income families (p25). Column 1 presents the baseline regression of these outcomes in each tract on the fraction of low-income black fathers present. Column 2 adds in a control for low-income white fathers presence. Column 3 adds state fixed effects. Column 4 replaces the dependent variable with the complementary subset of children in families with no father present. Column 5 replaces the dependent variable with one calculated using the subsample of children in households with married parents. Column 6 considers the baseline specification in column 1 but includes all available tracts instead of imposing a restriction to low-poverty census tracts. Column 7 replaces the independent variable with the number of low-income black fathers per child regardless of whether they are in the household, Column 8 adds an additional regressor as the number of low-income black filers per child. Column 9 is run at the individual level and adds fixed effects for the tract in which children currently reside when their adult incomes are measured to the specification in Column 6. See Appendix C for further details on variable constructions. Note that all observation counts shown are rounded as described in the notes to Table I.

Table III  
Association Between Racial Bias Among Whites and Black Children's Outcomes: OLS Regression Estimates

Sample:	Black Male	Black Male	Black Male	Black Male	Black Male	Black Female	White Male	Black Male	Black Male	Black Male	Black Female	White Male
Dependent Variable:	Individual Income	Individual Income	Individual Income	Employed	Incarcerated	Individual Income	Individual Income	Individual Income	Employed	Incarcerated	Individual Income	Individual Income
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Difference in IAT	-0.0081 (0.0024)		-0.0060 (0.0019)	-0.0052 (0.0022)	0.0039 (0.0032)	-0.0082 (0.0029)	-0.0097 (0.0025)					
IAT White		-0.0080 (0.0023)										
IAT Black		0.0047 (0.0023)										
Racial Animus								-0.0263 (0.0056)	-0.0138 (0.0057)	0.0278 (0.0092)	-0.0191 (0.0080)	-0.0203 (0.0042)
State FE's			X									
Geography of Analysis	Counties	Counties	Counties	Counties	Counties	Counties	Counties	Media Markets	Media Markets	Media Markets	Media Markets	Media Markets
R2	0.033	0.042	0.592	0.017	0.005	0.025	0.042	0.461	0.185	0.277	0.185	0.469
Number of Counties/Media Markets	340	340	340	340	312	325	340	28	28	26	27	28
Number of Observations	492,200	492,200	492,200	492,200	353,000	491,700	492,200	386,600	386,600	277,900	386,600	386,600

Notes: This table shows the relationship between measures of racial bias at the county/media market level and outcomes for children who grow up in those areas. All the measures of racial bias are standardized. See Appendix C for a precise definition and sources of the Implicit Association Bias (IAT) and Racial Animus. IAT measures are only available by county, so we aggregate the outcomes at p25 in each tract to the county or media market level using weighting by the number of children observed in each tract. We restrict to counties/media markets with poverty rates less than 10% obtained by aggregating the tract-level poverty rates up to the county level using population weights from the 2000 Census. Columns 1-7 present county-level regressions using the IAT measure. Column 1 regresses black male individual incomes for children in p25 families on the difference in the IAT for white versus black respondents. Column 2 includes separate regressors for black and white respondents. Column 3 adds state fixed effects to the specification in Column 1. Column 4 replaces the dependent variable with employment rates at p25, as opposed to individual income, and column 5 replaces the dependent variable with incarceration rates. Column 6 replaces the dependent variable with individual income for black females at p25. Column 7 replaces the dependent variable with individual income for white males. Columns 8-12 present media-market-level regressions using the Racial Animus measure. Column 8 presents the coefficient for individual income, column 9 replaces this with employment rates for black men in p25 families, column 10 replaces this with incarceration rates for black men in p25 families. Column 11 replaces the dependent variable with individual income for black females in p25 families, and column 12 replaces the dependent variable with individual income of white males in p25 families. Note that all observation counts shown are rounded as described in the notes to Table I.

Table IV  
 Quasi-Experimental Estimates of Neighborhood Causal Exposure Effects for Men

<i>Outcome:</i>	Exposure Effects Using Baseline Specification						Exposure Effects Using Other Race Placebos					
	Individual Income at		Incarcerated in 2010		Married at Age 30		Individual Income at		Incarcerated in 2010		Married at Age 30	
<i>Sample:</i>	Black Males	White Males	Black Males	White Males	Black Males	White Males	Black Males	White Males	Black Males	White Males	Black Males	White Males
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Own-Race Exposure Effect:	-0.027 (0.004)	-0.027 (0.002)	-0.034 (0.004)	-0.027 (0.003)	-0.023 (0.004)	-0.022 (0.001)	-0.029 (0.004)	-0.023 (0.002)	-0.032 (0.004)	-0.031 (0.004)	-0.017 (0.004)	-0.021 (0.002)
<i>Placebos:</i>												
Under-23 Other-Race Placebo							0.003 (0.004)	-0.004 (0.001)	-0.018 (0.014)	0.001 (0.001)	-0.015 (0.003)	-0.002 (0.002)
Over-23 Own-Race Placebo	0.008 (0.025)	-0.016 (0.011)	-0.030 (0.027)	-0.010 (0.023)	0.018 (0.029)	0.004 (0.010)	0.015 (0.029)	-0.025 (0.015)	-0.032 (0.030)	0.020 (0.033)	0.005 (0.030)	-0.005 (0.015)
Over-23 Other-Race Placebo							-0.013 (0.028)	0.005 (0.010)	0.012 (0.099)	0.004 (0.007)	0.034 (0.023)	-0.007 (0.011)
Num. of Obs.	150,000	884,000	123,000	712,000	150,000	884,000	150,000	668,000	122,000	460,000	150,000	666,000

*Notes:* This table presents estimates of annual childhood exposure effects for different outcome variables. Online Appendix E provides the precise sample and specification details. The estimates in the first row present the estimated effect of spending an additional year in a CZ where other children have one unit higher outcome ranks or probabilities. Columns 1 through 6 show the impact of an additional year in a CZ where children of the same race and gender have one unit higher outcome ranks or probabilities, separately for age ranges below 23 and above 23. Columns 7 through 12 add placebo forecasts of the outcomes of other races in addition to own-race forecasts. Note that all observation counts shown are rounded as described in the notes to Table I.

Appendix Table I  
Theories of Racial Disparities

Explanation	Selected References
<b>A. Family-Level Factors</b>	
Parental Income	Magnuson & Duncan 2006; Rothstein & Wozny 2012
Parental Human Capital & Wealth	Oliver & Shapiro 1995; Orr 2003; Conley 2010
Family Structure and Stability	McAdoo 2002; Burchinal et al. 2011
Ability at Birth	Murray & Hernstein 1994; Rushton & Jensen 2005; Fryer & Levitt 2006
<b>B. Structural Features of Environment</b>	
Segregation, Neighborhoods	Wilson 1987; Massey & Denton 1993; Sampson and Wilson 1995; Smith 2005
School Quality	Smith & Welch 1989; Card & Krueger 1992; Jencks & Phillips 1998; Dobbie & Fryer 2011
Discrimination in the Labor Market	Donohue & Heckman 1992; Heckman 1998; Pager 2003; Bertrand & Mullainathan 2004
Discrimination in Criminal Justice	Steffensmeier, Ulmer, Kramer 1998; Eberhardt et al. 2004; Alexander 2010
Social Alienation, Stereotype Threat	Steele & Aaronson 1995; Tatum 2004; Glover, Pallais, Pariente 2017
<b>C. Cultural Factors and Social Norms</b>	
Identity and Oppositional Norms	Fordham & Ogbu 1986; Noguera 2003; Carter 2005; Austen-Smith & Fryer 2005
Aspirations or Role Models	Mickelson 1990; Small, Harding, & Lamont 2010

*Notes:* In this table, we organize theories of racial disparities into three broad categories and provide selected references to prior work discussing each of these theories.

Appendix Table II  
Sample Sizes and Coverage Rates by Birth Cohort

*A. Coverage Rates by Child's Birth Cohort*

Cohort	2015 ACS: Born in U.S. or Arrived Before Age 16 (1,000s) (1)	Percent Matched to Parents with Positive Income (2)	And with Non- missing Race (3)	And at Least one Tract (4)	And Appear in ACS at Some Point between 2005-2015 (5)
1978	3,334	94.5%	88.6%	88.1%	12.3%
1979	3,594	92.9%	88.3%	87.8%	12.1%
1980	3,715	95.1%	90.9%	90.4%	12.2%
1981	3,580	105.7%	97.1%	96.6%	12.8%
1982	3,660	104.1%	98.5%	98.0%	12.7%
1983	3,678	104.9%	97.9%	97.4%	12.5%
Average: Cohorts 78-83	21,561	99.6%	93.6%	93.1%	12.4%

*B. Coverage Rates by Race and Ethnicity*

	Pooled (6)	White (7)	Black (8)	Asian (9)	Hispanic (10)	American Indian (11)
Count in 2015 ACS	21,560,000	13,890,000	2,927,000	678,000	3,341,000	151,000
Share of 2015 ACS Total in Analysis Sample	98.8%	97.1%	94.0%	101.0%	78.3%	109.3%

*Notes:* This table describes the coverage rates of our sample relative to the target population. Panel A presents statistics on coverage rates by birth cohort. Note that all observation counts shown are rounded as described in the notes to Table I. Column 1 presents estimates of the size of the target population (in 1,000's), based on the number of people who were born in the U.S. or who moved to the U.S. before age 16 in the 2015 American Community Survey. We use the ACS person weights to estimate total counts from the ACS sample. Column 2 shows the number of children in the tax data who are linked to parents with positive income, measured as a percentage relative to the totals in Column 1. Column 3 reports the number of children in our linked sample for whom we have information on race, again as a percentage of the counts in Column 1. In Column 4, we further require that children are assigned to at least one census tract prior to age 23. In Column 5, we report the fraction of the resulting children who we ever observe as ACS respondents. Panel B shows the coverage of each racial and ethnic group in our analysis sample relative to the counts of these groups in the 2015 ACS, pooling the 1978-83 birth cohorts. See Appendix B for further details.

Appendix Table III  
Characteristics of Matched vs. Unmatched Children

		2015 ACS (1978- 83 cohorts, born in US or came before 16)	In 2015 ACS and appears in our analysis sample	In 2015 ACS but does not appear in our analysis sample
		(1)	(2)	(3)
<i>A. Individual Income Ranks in ACS Data by Race and Ethnicity</i>				
Pooled	Rank	49.99	52.10	42.01
White	Rank	53.02	54.19	46.27
	% of Sample	64.4%	69.4%	45.6%
Black	Rank	41.36	43.09	36.60
	% of Sample	13.6%	12.6%	17.2%
Asian	Rank	60.02	62.63	52.72
	% of Sample	3.1%	2.9%	3.9%
Hispanic	Rank	43.54	47.69	37.12
	% of Sample	15.5%	12.3%	30.3%
American Indian	Rank	37.29	37.46	36.97
	% of Sample	0.7%	0.6%	1.2%
"Other"	Rank	49.67	51.61	43.44
	% of Sample	2.7%	2.6%	3.1%
<i>B. Other Outcomes</i>				
Marriage Rate		51.9%	54.1%	43.5%
College Attendance Rate		67.5%	71.2%	53.6%
Incarceration Rate		1.9%	1.1%	4.7%

*Notes:* This table compares the characteristics of children who appear in our linked analysis sample vs. those who do not appear in the sample using data from the 2015 ACS. Panel A presents mean individual income ranks and sample shares by race. Panel B presents statistics on other outcomes measured in the ACS, pooling across races. In Column 1 we present statistics using the 2015 ACS, restricting to those who were born in the years 1978-1983, were born in the US, or moved to the U.S. before age 16. We estimate the total counts and individual income ranks using the ACS person weights in this column. The income ranks are calculated using ACS income and are computed by ranking children within their birth cohort. In Column 2, we restrict the sample in 1 to children in our analysis sample i.e. those whom we can match to parents with positive income and for whom we have race information. In Column 3 we present statistics on those who appear in Column 1 but not in Column 2, i.e. children excluded from our analysis sample but part of the target sample. See Section III for definitions of the outcome variables.

Appendix Table IV  
Comparison of Tax Data Income Measures and Characteristics to CPS and ACS Data

	Analysis Sample in 2015 ACS				
	Publicly Available CPS 2012-2016 (1)	Publicly Available ACS 2012-2016 (2)	Characteristics in ACS (3)	Incomes in Tax Records (4)	Subsample with 0 Income in Tax Records: Chars. in ACS (5)
<b>A. Income Statistics</b>					
% Zero Income	8.1%	10.4%	9.5%	10.1%	37.5%
% Negative Income	0.1%	0.1%	0.1%	2.1%	0.1%
Mean	42,550	43,760	42,890	44,990	12,240
Standard Deviation	56,180	52,630	51,200	117,700	27,500
p10	160	0	300	0	0
p25	14,000	12,170	13,400	11,150	0
p50	33,000	32,810	34,000	33,370	5,000
p75	55,200	57,700	57,010	58,440	13,970
p90	85,250	91,140	89,000	92,330	34,000
p99	200,580	255,000	210,000	250,400	100,000
<b>B. Demographic Statistics</b>					
% Married	55.6%	55.6%	54.0%	-	28.0%
% Female	50.8%	49.9%	50.3%	-	48.2%
% Live in South	37.8%	38.1%	37.8%	-	44.5%
% White	66.2%	64.9%	67.3%	-	58.2%
% Black	13.0%	13.5%	12.7%	-	19.3%
% Asian	3.9%	3.6%	3.5%	-	2.2%
% Hispanic	14.4%	15.1%	13.2%	-	15.9%
% American Indian	0.8%	0.8%	0.6%	-	1.2%
% Attend College	67.4%	61.0%	70.2%	-	41.9%

*Notes:* This table presents summary statistics on income distributions (Panel A) and demographics (Panel B) for five different samples. The first two columns use the (publicly available) 2012-2016 Current Population Survey (CPS) and 2012-2016 ACS, focusing on individuals in the 1978-83 birth cohorts who were born in the U.S. or came to the U.S. before age 16. Column 3 uses data from the 2015 ACS who appear in our analysis sample, and measures their incomes and other characteristics in the ACS data. Column 4 uses the same sample as Column 3, but reports income data from the tax records. Column 5 shows statistics on income and other characteristics using ACS data for individuals who appear in both the ACS and the analysis sample, but who have zero income in the tax data in 2015 (i.e., those who have no 1040 or W-2 forms in 2015).

Appendix Table V  
Summary Statistics on Children's Outcomes by Race

Race	Pooled (1)	White (2)	Black (3)	Asian (4)	Hispanic (5)	American Indian (6)
<b>Household Income</b>						
Median (\$)	42,030	53,730	20,650	63,720	35,180	22,260
Mean (\$)	63,530	74,740	31,160	100,900	48,600	35,510
Mean Percentile Rank	50.00	55.65	34.76	60.65	45.65	36.73
<b>Individual Income</b>						
Median (\$)	29,210	33,620	19,550	43,690	27,140	16,610
Mean (\$)	40,700	45,340	27,450	63,620	34,590	25,780
Mean Percentile Rank	50.00	53.28	42.01	60.31	48.10	39.65
<b>Employment</b>						
Employed in Tax Data	85.3%	88.9%	80.7%	90.6%	84.9%	76.8%
Employed in ACS	84.7%	86.5%	74.9%	88.2%	81.5%	72.8%
Hours of Work per Week	31.82	32.96	25.99	34.12	29.72	24.38
<b>Wage Rate</b>						
Median (\$/hour)	18.11	18.79	14.67	23.94	16.19	13.76
Mean (\$/hour)	22.42	22.97	18.12	30.08	20.09	17.27
Mean Rank	50.00	51.32	40.98	61.17	45.48	38.83
<b>Other Outcomes</b>						
Marriage Rate	45.0%	54.7%	16.3%	50.0%	37.4%	30.9%
HS Dropout Rate	13.9%	11.4%	22.2%	8.6%	23.2%	23.2%
College Attendance Rate	63.6%	67.2%	50.1%	79.0%	50.5%	44.7%
Incarceration Rate	1.5%	0.9%	5.1%	0.3%	1.5%	2.9%
Sample Size	21,310,000	13,490,000	2,750,000	685,000	2,615,000	165,000
ACS Sample Size	4,169,000	2,986,000	456,000	131,000	464,000	40,000

*Notes:* This table presents summary statistics on children's incomes in adulthood and other outcomes by race using our primary analysis sample (children in the 1978-1983 birth cohorts). Column 1 shows statistics for all children we link to parents with positive income, including those with missing race information; this is the sample on which children are assigned income ranks. Columns 2-6 present statistics for children with non-missing race information, based on their race and ethnicity. See Section III.B for variable definitions and data sources. We report sample sizes both for variables measured in the full sample and those measured using 2005-2015 ACS data.



Appendix Table VI  
Summary Statistics on Children's Outcomes by Race for those with Mothers Born in the US

Race	Pooled (1)	White (2)	Black (3)	Asian (4)	Hispanic (5)	American Indian (6)
<b>Household Income</b>						
Median (\$)	48,070	56,390	21,670	57,540	36,740	23,350
Mean (\$)	68,240	76,020	32,030	84,980	53,520	36,240
Mean Percentile Rank	52.99	56.91	35.45	58.11	46.91	37.45
<b>Individual Income</b>						
Median (\$)	31,670	34,710	20,540	38,760	27,450	17,520
Mean (\$)	42,570	45,790	28,140	52,460	37,170	26,170
Mean Percentile Rank	51.81	54.10	42.77	57.40	48.49	40.30
<b>Employment</b>						
Employed in Tax Data	87.9%	90.0%	81.7%	90.5%	85.7%	78.0%
Employed in ACS	83.8%	85.5%	73.9%	85.0%	79.0%	71.7%
Hours of Work per Week	30.93	32.00	24.74	31.39	27.84	23.33
<b>Wage Rate</b>						
Median (\$/hour)	17.18	17.67	13.95	19.63	15.42	13.56
Mean (\$/hour)	21.05	21.56	17.37	24.78	19.16	16.86
Mean Rank	47.68	48.87	39.31	53.62	43.54	38.01
<b>Other Outcomes</b>						
Marriage Rate	50.3%	57.0%	17.2%	48.4%	39.3%	32.2%
HS Dropout Rate	15.8%	14.2%	23.7%	14.5%	22.0%	24.0%
College Attendance Rate	61.4%	64.2%	48.2%	68.9%	50.9%	42.9%
Incarceration Rate	1.2%	0.7%	4.6%	0.4%	1.5%	2.6%
Sample Size	4,783,000	3,716,000	499,000	28,500	270,000	47,000
ACS Sample Size	1,699,000	1,364,000	177,000	10,500	97,500	19,500

*Notes:* This table presents statistics that are analogous to those in Appendix Table V, but restricting to children whose mothers were born in the United States. We measure mother's place of birth in the ACS or 2000 Long Form. The sample sizes are smaller than those in Appendix Table V because we limit the sample to children whose mothers appear in the ACS or Long Form and also were born in the United States. See notes to Appendix Table V for further details.

Appendix Table VII  
Summary Statistics on Children's Outcomes by Race and Gender

	Pooled		White		Black		Asian		Hispanic		American Indian	
	Male (1)	Female (2)	Male (3)	Female (4)	Male (5)	Female (6)	Male (7)	Female (8)	Male (9)	Female (10)	Male (11)	Female (12)
<b>Household Income</b>												
Median (\$)	40,960	43,200	51,960	55,740	17,730	22,690	56,580	71,880	35,280	35,080	20,890	23,450
Mean (\$)	60,490	66,700	71,610	78,000	29,270	32,980	89,990	112,300	46,310	50,900	34,140	36,920
Mean Percentile Rank	48.67	51.39	54.54	56.80	32.60	36.83	57.50	63.94	44.64	46.66	35.69	37.82
<b>Individual Income</b>												
Median (\$)	34,910	24,170	40,710	26,580	18,220	20,400	45,550	41,730	32,250	22,930	19,030	14,870
Mean (\$)	46,970	34,170	53,700	36,610	27,650	27,260	68,230	58,820	39,410	29,750	29,140	22,300
Mean Percentile Rank	53.66	46.18	58.43	47.90	40.85	43.12	61.52	59.04	51.66	44.52	41.98	37.25
<b>Employment</b>												
Employed in Tax Data	83.7%	87.0%	88.4%	89.3%	74.1%	87.0%	89.2%	92.0%	83.2%	86.6%	74.7%	79.0%
Employed in ACS	88.5%	80.9%	91.5%	81.5%	70.0%	79.4%	90.5%	85.8%	85.5%	77.7%	75.7%	69.9%
Hours of Work per Week	35.71	28.02	37.66	28.29	24.87	27.01	36.31	31.92	33.05	26.56	26.25	22.51
<b>Wage Rate</b>												
Median (\$/hour)	19.18	17.18	19.63	17.67	14.72	14.46	23.53	24.38	16.84	15.69	14.46	13.12
Mean (\$/hour)	23.48	21.29	24.13	21.68	18.32	17.96	30.12	30.04	20.79	19.36	18.00	16.48
Mean Rank	52.10	47.76	53.63	48.75	41.35	40.69	60.63	61.74	46.97	43.93	40.65	36.88
<b>Other Outcomes</b>												
Marriage Rate	42.5%	47.7%	51.5%	58.1%	16.8%	15.8%	45.4%	54.7%	35.1%	39.7%	29.0%	32.9%
HS Dropout Rate	16.4%	11.5%	13.4%	9.3%	27.2%	17.6%	10.0%	7.2%	26.7%	19.8%	26.2%	20.2%
College Attendance Rate	57.8%	69.3%	61.6%	72.8%	41.5%	57.9%	75.7%	82.5%	44.5%	56.3%	38.1%	51.5%
Incarceration Rate	2.7%	0.3%	1.6%	0.2%	10.3%	0.6%	0.5%	0.0%	2.9%	0.2%	5.1%	0.8%
Sample Size	10,870,000	10,430,000	6,891,000	6,599,000	1,348,000	1,402,000	350,000	335,000	1,312,000	1,303,000	84,000	81,500
ACS Sample Size	2,075,000	2,095,000	1,495,000	1,490,000	218,000	238,000	66,000	64,500	230,000	234,000	20,000	20,000

Notes: This table presents statistics analogous to those in Appendix Table VI, but presents results separately for each gender within each race. For more detail on the analysis, see the notes to Appendix Table VI.

Appendix Table VIII  
Summary Statistics on Parents' Incomes and Characteristics by Race

	Pooled (1)	White (2)	Black (3)	Asian (4)	Hispanic (5)	American Indian (6)
<b>Household Income</b>						
25th percentile (\$)	27,010	39,830	16,070	23,650	17,920	17,940
Median (\$)	55,810	70,640	29,200	53,010	33,060	34,850
75th percentile (\$)	94,260	107,900	52,890	99,660	60,260	62,890
99th percentile (\$)	466,300	566,500	168,900	533,500	213,300	190,500
Mean (\$)	79,550	96,680	40,590	82,670	47,240	46,990
Mean Percentile Rank	50.00	57.86	32.72	49.20	36.17	36.76
<b>Family Structure</b>						
Two Parent	68.34%	79.35%	32.16%	80.44%	57.03%	57.94%
Father Present	78.86%	86.09%	49.54%	88.41%	73.82%	70.17%
Mother Present	89.48%	93.26%	82.62%	92.02%	83.21%	87.76%
<b>Education</b>						
Mom HS Dropout	12.32%	7.38%	17.07%	21.90%	37.44%	18.22%
Dad HS Dropout	13.65%	8.90%	20.18%	17.09%	41.38%	20.94%
Mom College	55.75%	59.35%	50.66%	59.15%	36.04%	49.29%
Dad College	56.92%	60.55%	46.73%	66.38%	35.75%	43.59%
<b>Wealth</b>						
Home Ownership Rate	75.58%	81.59%	56.79%	70.62%	62.41%	67.66%
Median Monthly Mortgage Payment (\$)	502	570	0	827	289	0
Mean Monthly Mortgage Payment (\$)	704	742	490	1067	633	319
Median Number of Cars	2	2	2	2	2	2
Mean Number of Cars	2.30	2.44	1.73	2.39	2.14	2.01
<b>Place of Birth</b>						
Foreign Born Mother	12.26%	4.41%	8.37%	81.76%	49.07%	3.80%
Foreign Born Father	12.85%	4.29%	10.82%	79.96%	54.08%	4.22%
<b>Tract-Level Characteristics</b>						
Mean Parent Income Rank	51.62	56.70	38.96	53.39	41.46	44.39
Single Parent Share (2000)	30.20%	23.06%	53.84%	29.23%	38.85%	32.17%
Own-Race Single Parent Share (2000)	30.12%	19.09%	66.70%	18.71%	41.05%	38.97%
Share White (2000)	66.84%	81.87%	32.78%	50.78%	37.21%	55.90%
Sample Size	21,310,000	13,490,000	2,750,000	685,000	2,615,000	165,000
ACS Sample Size	5,451,000	3,887,000	544,000	157,000	530,000	49,000

*Notes:* This table presents statistics on the characteristics of the parents of the children in our analysis sample (1978-83 birth cohorts). See Section III.B for variable definitions and data sources. Statistics on mother's and father's education and place of birth are reported only for the subset of children for whom the mother or father is present. Tract characteristics are calculated based on the first non-missing parental tract. Poverty rate and the share white are calculated using publicly available Census 2000 data at the tract level (see Online Appendix C). All other tract-level characteristics are calculated in the Census microdata. We report sample sizes both for variables measured in the full sample and those measured using 2005-2015 ACS data.

Appendix Table IX  
Relative Mobility by Race and Birth Cohort

Child Birth Cohort	White (1)	Black (2)	Asian (3)	Hispanic (4)	American Indian (5)
1978	0.322	0.254	0.198	0.249	0.289
1979	0.326	0.256	0.193	0.250	0.280
1980	0.327	0.255	0.189	0.247	0.291
1981	0.328	0.259	0.187	0.244	0.307
1982	0.328	0.254	0.180	0.240	0.303
1983	0.329	0.252	0.174	0.240	0.316

*Notes:* This table presents estimates of relative mobility ( $\beta_r$ ) by race, separately for each birth cohort of children in our primary analysis sample. We estimate these slopes using OLS regressions of children's household income ranks on their parents' household income ranks, separately by cohort-race cell, and report the coefficient on parent rank in each regression.

Appendix Table X  
Correlations between Individual Income of Black and White Males and Neighborhood Covariates by Parent Income

Covariate	Parents at 25th Percentile of National Distribution			Parents at 75th Percentile of National Distribution		
	White Male	Black Male	White - Black	White Male	Black Male	White - Black
<b>A. Measures of "Good" Neighborhoods</b>						
<b>Economy</b>						
Share in Poverty (2000)	-0.446 (0.004)	-0.375 (0.006)	-0.138 (0.006)	-0.313 (0.004)	-0.252 (0.006)	0.048 (0.006)
Mean Household Income (2000)	0.522 (0.004)	0.391 (0.006)	0.216 (0.006)	0.425 (0.004)	0.266 (0.006)	0.001 (0.006)
Employment Rate	0.145 (0.005)	0.219 (0.007)	0.029 (0.007)	0.119 (0.005)	0.122 (0.007)	-0.053 (0.007)
Share Working in Manufacturing (2010)	-0.170 (0.004)	-0.083 (0.006)	-0.115 (0.006)	-0.076 (0.004)	-0.055 (0.006)	-0.017 (0.006)
<b>Family Structure</b>						
Share Single Parents (2000)	-0.502 (0.004)	-0.400 (0.006)	-0.145 (0.006)	-0.436 (0.004)	-0.270 (0.006)	0.057 (0.006)
Share Married (2000)	0.304 (0.004)	0.368 (0.006)	0.044 (0.006)	0.242 (0.004)	0.251 (0.006)	-0.088 (0.006)
<b>School</b>						
3rd Grade Math Score (2013)	0.259 (0.004)	0.193 (0.006)	-0.009 (0.006)	0.299 (0.004)	0.178 (0.006)	-0.063 (0.006)
8th Grade Math Score (2013)	0.346 (0.004)	0.184 (0.006)	0.082 (0.007)	0.340 (0.004)	0.171 (0.006)	-0.026 (0.007)
HS Suspension Rate (2013)	-0.227 (0.004)	-0.078 (0.006)	-0.133 (0.007)	-0.170 (0.004)	-0.071 (0.006)	-0.001 (0.007)
Average ELA Score (2013)	0.290 (0.004)	0.213 (0.006)	0.014 (0.006)	0.327 (0.004)	0.178 (0.006)	-0.049 (0.006)
<b>Educational Attainment</b>						
Share Less Than HS Educated (2000)	-0.506 (0.004)	-0.332 (0.006)	-0.195 (0.006)	-0.347 (0.004)	-0.249 (0.006)	0.017 (0.006)
Share College Educated (2000)	0.482 (0.004)	0.315 (0.006)	0.238 (0.006)	0.371 (0.004)	0.251 (0.006)	0.012 (0.006)
<b>Housing</b>						
Share who Own Home (2010)	0.301 (0.004)	0.271 (0.006)	0.049 (0.006)	0.285 (0.004)	0.212 (0.006)	-0.064 (0.006)
Median 2 Bedroom Rent (2015)	0.353 (0.004)	0.246 (0.006)	0.198 (0.007)	0.236 (0.004)	0.114 (0.007)	0.039 (0.007)
<b>Healthcare Access</b>						
Share Adults Insured (2008-2012)	0.407 (0.004)	0.188 (0.006)	0.133 (0.006)	0.439 (0.004)	0.216 (0.006)	-0.016 (0.006)
<b>B. Race-Specific Measures</b>						
<b>Economy</b>						
Share Black in Poverty (2000)	-0.199 (0.005)	-0.321 (0.006)	-0.032 (0.006)	-0.106 (0.005)	-0.175 (0.006)	0.033 (0.006)
Share White in Poverty (2000)	-0.428 (0.004)	-0.202 (0.006)	-0.138 (0.006)	-0.304 (0.004)	-0.167 (0.006)	0.029 (0.006)
<b>Family Structure</b>						
Black Father Presence (p25)	0.032 (0.005)	0.193 (0.006)	-0.096 (0.006)	0.018 (0.005)	0.121 (0.006)	-0.078 (0.006)
White Father Presence (p25)	0.119 (0.004)	0.133 (0.006)	-0.064 (0.006)	0.152 (0.004)	0.084 (0.006)	-0.030 (0.006)
Black Mother Presence (p25)	-0.017 (0.005)	-0.031 (0.006)	-0.023 (0.006)	-0.035 (0.005)	-0.003 (0.006)	-0.022 (0.006)
White Mother Presence (p25)	0.132 (0.004)	0.081 (0.006)	0.067 (0.006)	0.084 (0.004)	0.063 (0.006)	-0.024 (0.006)
<b>Housing</b>						
Median Home Value Black (2000)	0.362 (0.004)	0.266 (0.006)	0.184 (0.006)	0.269 (0.005)	0.145 (0.006)	0.027 (0.007)
Median Home Value White (2000)	0.413 (0.004)	0.203 (0.006)	0.213 (0.006)	0.313 (0.004)	0.139 (0.006)	0.038 (0.006)
<b>Racial Bias</b>						
IAT Score for Black	0.074 (0.021)	0.062 (0.027)	0.120 (0.027)	0.078 (0.021)	-0.060 (0.027)	0.101 (0.027)
IAT Score for White	-0.105 (0.018)	-0.038 (0.027)	-0.164 (0.026)	-0.004 (0.018)	0.079 (0.027)	-0.149 (0.026)
IAT Score White - Black	-0.100 (0.021)	-0.073 (0.027)	-0.193 (0.026)	-0.075 (0.021)	0.094 (0.027)	-0.169 (0.026)
Interracial Marriage Attitudes	-0.612 (0.121)	-0.050 (0.154)	-0.673 (0.114)	-0.396 (0.140)	0.271 (0.149)	-0.643 (0.118)
Racial Animus Index	-0.352 (0.067)	-0.229 (0.074)	-0.105 (0.075)	-0.114 (0.072)	-0.102 (0.075)	-0.01 (0.076)
<b>Healthcare Access</b>						
Share Adults Insured Black (2008-2012)	0.123 (0.004)	0.143 (0.006)	0.060 (0.006)	0.109 (0.004)	0.135 (0.006)	-0.018 (0.006)
Share Adults Insured White (2008-2012)	0.442 (0.004)	0.131 (0.006)	0.179 (0.006)	0.456 (0.004)	0.129 (0.006)	0.014 (0.006)
<b>C. Other</b>						
Population Density (2000)	0.073 (0.004)	0.079 (0.006)	0.097 (0.006)	0.049 (0.004)	-0.064 (0.006)	0.074 (0.006)
Share Black (2010)	-0.265 (0.004)	-0.121 (0.006)	-0.216 (0.006)	-0.222 (0.004)	-0.120 (0.006)	0.016 (0.006)
Share of Population Younger than 18 (2000)	-0.002 (0.004)	-0.171 (0.006)	-0.091 (0.006)	0.043 (0.004)	-0.111 (0.006)	-0.021 (0.006)
Share Foreign Born (2000)	0.134 (0.004)	0.182 (0.006)	0.134 (0.006)	0.057 (0.004)	-0.016 (0.006)	0.064 (0.006)
Share Divorced (2000)	-0.450 (0.004)	-0.236 (0.006)	-0.089 (0.006)	-0.464 (0.004)	-0.174 (0.006)	0.014 (0.006)

Notes: This table presents a set of correlations between individual outcomes of black and white males and various neighborhood characteristics measured at tract-level. See section III for details on variable definitions. The variables are measured at the tract level aside from the racial bias measures which are at the county, state, and media market level. For all tract level covariates, we present signal correlations, which we calculate by dividing the correlation by the square root of the ratio of signal variance to total variance. For non-tract level covariates (e.g. racial bias), we present raw correlations. Standard errors are listed below each correlation in parentheses.

Appendix Table XI

Correlations between Individual Income of Black and White Males and Neighborhood Covariates by Parent Income, Among Low Poverty Areas

Covariate	Parents at 25th Percentile of National Distribution			Parents at 75th Percentile of National Distribution		
	White Male	Black Male	White - Black	White Male	Black Male	White - Black
<b>A. Measures of "Good" Neighborhoods</b>						
<b>Economy</b>						
Share in Poverty (2000)	-0.362 (0.005)	-0.216 (0.010)	-0.072 (0.010)	-0.324 (0.005)	-0.177 (0.010)	0.019 (0.010)
Mean Household Income (2000)	0.461 (0.005)	0.237 (0.010)	0.170 (0.010)	0.435 (0.005)	0.196 (0.010)	0.039 (0.010)
Employment Rate	0.026 (0.006)	0.008 (0.012)	-0.002 (0.012)	0.091 (0.006)	0.014 (0.012)	-0.022 (0.012)
Share Working in Manufacturing (2010)	-0.148 (0.005)	-0.172 (0.010)	-0.009 (0.010)	-0.066 (0.005)	-0.080 (0.010)	0.005 (0.010)
<b>Family Structure</b>						
Share Single Parents (2000)	-0.407 (0.005)	-0.156 (0.010)	-0.045 (0.010)	-0.439 (0.005)	-0.173 (0.010)	0.034 (0.010)
Share Married (2000)	0.123 (0.005)	0.090 (0.010)	-0.063 (0.010)	0.169 (0.005)	0.145 (0.010)	-0.084 (0.010)
<b>School</b>						
3rd Grade Math Score (2013)	0.219 (0.005)	0.087 (0.010)	-0.008 (0.010)	0.309 (0.005)	0.144 (0.010)	-0.049 (0.010)
8th Grade Math Score (2013)	0.300 (0.005)	0.104 (0.010)	0.072 (0.010)	0.352 (0.005)	0.141 (0.010)	-0.008 (0.010)
HS Suspension Rate (2013)	-0.188 (0.006)	-0.047 (0.010)	-0.099 (0.010)	-0.154 (0.006)	-0.082 (0.010)	0.016 (0.010)
Average ELA Score (2013)	0.246 (0.005)	0.120 (0.010)	0.010 (0.010)	0.344 (0.005)	0.145 (0.010)	-0.036 (0.010)
<b>Educational Attainment</b>						
Share Less Than HS Educated (2000)	-0.427 (0.005)	-0.173 (0.010)	-0.132 (0.010)	-0.312 (0.005)	-0.146 (0.010)	-0.008 (0.010)
Share College Educated (2000)	0.434 (0.005)	0.183 (0.010)	0.181 (0.010)	0.373 (0.005)	0.176 (0.010)	0.04 (0.010)
<b>Housing</b>						
Share who Own Home (2010)	0.166 (0.005)	0.039 (0.010)	0.025 (0.010)	0.239 (0.005)	0.094 (0.010)	-0.028 (0.010)
Median 2 Bedroom Rent (2015)	0.341 (0.006)	0.284 (0.011)	0.111 (0.011)	0.253 (0.006)	0.102 (0.011)	0.046 (0.011)
<b>Healthcare Access</b>						
Share Adults Insured (2008-2012)	0.368 (0.005)	0.104 (0.010)	0.110 (0.010)	0.465 (0.005)	0.178 (0.010)	-0.013 (0.010)
<b>B. Race-Specific</b>						
<b>Economy</b>						
Share White in Poverty (2000)	-0.314 (0.005)	-0.056 (0.010)	-0.117 (0.010)	-0.264 (0.005)	-0.074 (0.010)	-0.022 (0.010)
Share Black in Poverty (2000)	-0.075 (0.006)	-0.161 (0.010)	0.037 (0.010)	-0.051 (0.006)	-0.056 (0.010)	0.011 (0.010)
<b>Family Structure</b>						
Black Father Presence (p25)	-0.015 (0.008)	0.103 (0.010)	-0.134 (0.010)	-0.009 (0.008)	0.094 (0.010)	-0.087 (0.010)
White Father Presence (p25)	0.116 (0.005)	0.036 (0.010)	-0.082 (0.010)	0.151 (0.005)	0.041 (0.010)	-0.015 (0.010)
Black Mother Presence (p25)	-0.027 (0.008)	-0.003 (0.010)	-0.061 (0.010)	-0.040 (0.008)	-0.016 (0.010)	-0.019 (0.010)
White Mother Presence (p25)	0.102 (0.005)	0.045 (0.010)	-0.001 (0.010)	0.078 (0.005)	0.025 (0.010)	-0.021 (0.010)
<b>Housing</b>						
Median Home Value Black (2000)	0.323 (0.006)	0.175 (0.010)	0.133 (0.010)	0.270 (0.006)	0.120 (0.010)	0.035 (0.010)
Median Home Value White (2000)	0.379 (0.005)	0.140 (0.010)	0.165 (0.010)	0.327 (0.005)	0.118 (0.010)	0.054 (0.010)
<b>Racial Bias</b>						
IAT Score for Black	0.073 (0.039)	0.090 (0.054)	0.084 (0.054)	0.094 (0.039)	0.022 (0.054)	0.101 (0.054)
IAT Score for White	-0.092 (0.034)	-0.172 (0.054)	0.063 (0.054)	0.012 (0.034)	-0.134 (0.054)	0.071 (0.054)
IAT Score White - Black	-0.093 (0.039)	-0.181 (0.053)	-0.035 (0.054)	-0.084 (0.039)	-0.100 (0.054)	-0.045 (0.054)
Interracial Marriage Attitudes	-0.428 (0.251)	-0.329 (0.273)	0.214 (0.282)	-0.298 (0.265)	-0.472 (0.254)	0.353 (0.270)
Racial Animus Index	-0.718 (0.132)	-0.679 (0.144)	0.209 (0.192)	-0.469 (0.167)	-0.520 (0.167)	0.400 (0.180)
<b>Healthcare Access</b>						
Share Adults Insured Black (2008-2012)	0.088 (0.006)	0.125 (0.010)	0.013 (0.010)	0.093 (0.006)	0.113 (0.010)	-0.027 (0.010)
Share Adults Insured White (2008-2012)	0.410 (0.005)	0.116 (0.010)	0.130 (0.010)	0.486 (0.005)	0.130 (0.010)	0.019 (0.010)
<b>C. Other Variables</b>						
Population Density (2000)	0.169 (0.005)	0.131 (0.010)	0.106 (0.010)	0.095 (0.005)	-0.022 (0.010)	0.076 (0.010)
Share Black (2010)	-0.169 (0.005)	0.044 (0.010)	-0.151 (0.010)	-0.211 (0.005)	-0.107 (0.010)	0.065 (0.010)
Share of Population Younger than 18 (2000)	0.105 (0.005)	0.073 (0.010)	-0.096 (0.010)	0.073 (0.005)	0.023 (0.010)	-0.051 (0.010)
Share Foreign Born (2000)	0.239 (0.005)	0.236 (0.010)	0.099 (0.010)	0.141 (0.005)	0.032 (0.010)	0.067 (0.010)
Share Divorced (2000)	-0.392 (0.005)	-0.186 (0.010)	-0.027 (0.010)	-0.473 (0.005)	-0.187 (0.010)	0.020 (0.010)

Notes: This table presents analogous statistics to those presented in Table II, but restricts the sample to places with fewer than 10% of residents below the federal poverty line, as measured by the 2000 Census. For variables that are not constructed at the tract level (racial bias), we restrict to counties, states, or media markets with fewer than 10% of residents in poverty by aggregating up tract level shares using population weights.

Appendix Table XII  
Correlations between Individual Income of Black and White Females and Neighborhood Covariates by Parent Income

Covariate	Parents at 25th Percentile of National Distribution			Parents at 75th Percentile of National Distribution		
	White Female	Black Female	White - Black	White Female	Black Female	White - Black
<b>A. Measures of "Good" Neighborhoods</b>						
<b>Economy</b>						
Share in Poverty (2000)	-0.427 (0.004)	-0.377 (0.006)	-0.101 (0.006)	-0.321 (0.004)	-0.263 (0.006)	0.070 (0.006)
Mean Household Income (2000)	0.581 (0.003)	0.474 (0.005)	0.196 (0.006)	0.493 (0.004)	0.360 (0.006)	-0.051 (0.006)
Employment Rate	0.060 (0.005)	0.130 (0.007)	0.074 (0.007)	0.041 (0.005)	0.081 (0.007)	0.007 (0.007)
Share Working in Manufacturing (2010)	-0.242 (0.004)	-0.270 (0.006)	-0.089 (0.006)	-0.172 (0.004)	-0.210 (0.006)	0.059 (0.006)
<b>Family Structure</b>						
Share Single Parents (2000)	-0.326 (0.004)	-0.207 (0.006)	-0.116 (0.006)	-0.286 (0.004)	-0.218 (0.006)	0.070 (0.006)
Share Married (2000)	0.097 (0.004)	0.134 (0.006)	-0.004 (0.006)	0.063 (0.004)	0.158 (0.006)	-0.095 (0.006)
<b>School</b>						
3rd Grade Math Score (2013)	0.236 (0.004)	0.141 (0.006)	0.056 (0.006)	0.294 (0.004)	0.178 (0.006)	-0.051 (0.006)
8th Grade Math Score (2013)	0.324 (0.004)	0.170 (0.006)	0.110 (0.007)	0.333 (0.004)	0.185 (0.006)	-0.053 (0.007)
HS Suspension Rate (2013)	-0.189 (0.004)	-0.079 (0.006)	-0.129 (0.007)	-0.132 (0.004)	-0.069 (0.006)	-0.009 (0.007)
Average ELA Score (2013)	0.297 (0.004)	0.160 (0.006)	0.083 (0.006)	0.361 (0.004)	0.189 (0.006)	-0.042 (0.006)
<b>Educational Attainment</b>						
Share Less Than HS Educated (2000)	-0.510 (0.004)	-0.351 (0.006)	-0.155 (0.006)	-0.382 (0.004)	-0.269 (0.006)	0.053 (0.006)
Share College Educated (2000)	0.608 (0.003)	0.369 (0.006)	0.292 (0.006)	0.527 (0.003)	0.341 (0.006)	-0.004 (0.006)
<b>Housing</b>						
Share who Own Home (2010)	0.149 (0.004)	0.108 (0.006)	-0.016 (0.006)	0.168 (0.004)	0.164 (0.006)	-0.060 (0.006)
Median 2 Bedroom Rent (2015)	0.551 (0.004)	0.533 (0.006)	0.206 (0.007)	0.436 (0.004)	0.302 (0.006)	-0.006 (0.007)
<b>Healthcare Access</b>						
Share Adults Insured (2008-2012)	0.388 (0.004)	0.238 (0.006)	0.081 (0.006)	0.475 (0.004)	0.230 (0.006)	0.008 (0.006)
<b>B. Race-Specific Measures</b>						
<b>Economy</b>						
Share Black in Poverty (2000)	-0.222 (0.004)	-0.449 (0.006)	0.005 (0.006)	-0.143 (0.005)	-0.274 (0.006)	0.102 (0.006)
Share White in Poverty (2000)	-0.422 (0.004)	-0.128 (0.006)	-0.118 (0.006)	-0.352 (0.004)	-0.141 (0.006)	0.027 (0.006)
<b>Family Structure</b>						
Black Father Presence (p25)	-0.121 (0.005)	-0.190 (0.006)	-0.037 (0.006)	-0.072 (0.005)	-0.023 (0.006)	-0.024 (0.006)
White Father Presence (p25)	-0.129 (0.004)	-0.134 (0.006)	-0.105 (0.006)	-0.110 (0.004)	-0.007 (0.006)	-0.020 (0.006)
Black Mother Presence (p25)	0.028 (0.005)	0.126 (0.006)	-0.064 (0.006)	-0.015 (0.005)	0.025 (0.006)	-0.058 (0.006)
White Mother Presence (p25)	0.020 (0.004)	-0.010 (0.006)	0.026 (0.006)	-0.030 (0.004)	0.003 (0.006)	-0.026 (0.006)
<b>Housing</b>						
Median Home Value Black (2000)	0.456 (0.004)	0.481 (0.006)	0.186 (0.006)	0.350 (0.004)	0.320 (0.006)	-0.031 (0.007)
Median Home Value White (2000)	0.540 (0.003)	0.345 (0.006)	0.254 (0.006)	0.433 (0.004)	0.260 (0.006)	0.026 (0.006)
<b>Racial Bias</b>						
IAT Score for Black	0.061 (0.021)	0.223 (0.026)	0.174 (0.026)	0.060 (0.021)	0.101 (0.027)	0.119 (0.027)
IAT Score for White	-0.055 (0.018)	-0.283 (0.026)	-0.161 (0.026)	0.062 (0.018)	-0.203 (0.026)	-0.054 (0.027)
IAT Score White - Black	-0.074 (0.021)	-0.346 (0.025)	-0.235 (0.026)	-0.038 (0.021)	-0.202 (0.026)	-0.127 (0.027)
Interracial Marriage Attitudes	-0.604 (0.122)	-0.584 (0.125)	-0.577 (0.126)	-0.306 (0.145)	-0.366 (0.144)	-0.480 (0.135)
Racial Animus Index	-0.206 (0.070)	-0.373 (0.071)	-0.062 (0.076)	0.075 (0.072)	-0.367 (0.071)	0.181 (0.075)
<b>Healthcare Access</b>						
Share Adults Insured Black (2008-2012)	0.126 (0.004)	0.241 (0.006)	0.008 (0.006)	0.133 (0.004)	0.175 (0.006)	-0.031 (0.006)
Share Adults Insured White (2008-2012)	0.450 (0.004)	0.168 (0.006)	0.162 (0.006)	0.502 (0.004)	0.161 (0.006)	0.024 (0.006)
<b>C. Other</b>						
Population Density (2000)	0.231 (0.004)	0.301 (0.006)	0.158 (0.006)	0.160 (0.004)	0.070 (0.006)	0.065 (0.006)
Share Black (2010)	-0.185 (0.004)	-0.008 (0.006)	-0.242 (0.006)	-0.135 (0.004)	-0.047 (0.006)	-0.039 (0.006)
Share of Population Younger than 18 (2000)	-0.189 (0.004)	-0.119 (0.006)	-0.195 (0.006)	-0.263 (0.004)	-0.111 (0.006)	-0.120 (0.006)
Share Foreign Born (2000)	0.337 (0.004)	0.383 (0.006)	0.198 (0.006)	0.215 (0.004)	0.171 (0.006)	0.013 (0.006)
Share Divorced (2000)	-0.314 (0.004)	-0.187 (0.006)	-0.087 (0.006)	-0.326 (0.004)	-0.213 (0.006)	0.020 (0.006)

Notes: This table presents statistics analogous to the specifications in Appendix Table X, but correlating outcomes of females as opposed to males.

Appendix Table XIII  
Summary Statistics for CZ Movers Analysis Samples

Sample:		1-time Movers		Non 1-time Movers (0 & 2+ Movers)	
		Black Males (1)	White Males (2)	Black Males (3)	White Males (4)
Parent Family Income (\$)	Mean	40,040	101,400	37,000	93,050
	Median	27,540	68,470	26,400	66,950
	Std. Dev.	97,670	301,400	55,560	257,300
	Num. of Obs.	305,000	1,600,000	3,145,000	14,110,000
Child Individual Income at 24 (\$)	Mean	13,360	18,810	12,030	19,150
	Median	6,699	13,360	4,990	13,760
	Std. Dev.	89,010	62,460	331,500	83,890
	Num. of Obs.	305,000	1,600,000	3,145,000	14,110,000
Child Individual Income at 30 (\$)	Mean	24,870	41,240	23,130	41,690
	Median	15,310	32,850	13,930	34,450
	Std. Dev.	140,100	153,100	111,900	188,400
	Num. of Obs.	150,000	884,000	1,623,000	7,887,000
Child Incarcerated in 2010	Mean	0.10	0.02	0.09	0.01
	Median	0	0	0	0
	Std. Dev.	0.30	0.13	0.28	0.12
	Num. of Obs.	123,000	712,000	2,415,000	11,940,000
Child Married at 30	Mean	0.16	0.42	0.13	0.43
	Median	0	0	0	0
	Std. Dev.	0.36	0.49	0.34	0.49
	Num. of Obs.	150,000	884,000	1,623,000	7,887,000

*Notes:* This table presents summary statistics for the samples used in our analyses of CZ-level exposure effects. The full analysis sample extends the core sample described in Section III by including additional cohorts up until 1991 in order to observe moves at younger ages. Columns 1 and 2 report summary statistics for black and white males whose parents moved across CZs exactly once throughout our sample window (1989-2015), are observed in their destination for at least two years, and moved at least 100 miles (based on their ZIP codes). We require estimates of origin and destination quality to be based on at least 25 individuals. Columns 3 and 4 report summary statistics for black and white males whose parents do not move across CZs throughout our sample window and for black and white males whose parents move more than once across CZs. Parent family income is the average pre-tax household income from 1994-2000 measured as AGI. Child individual income is defined as the sum of individual W-2 wage earnings and half of household self-employment income. Incarceration is based on the individual's group home status in the 2010 US population census. Marital status is defined based on the marital status listed on 1040 forms for tax filers; non-filers are coded as single. All dollar values are reported in 2015 dollars, deflated using the CPI-U. See Section III for further details on variable and sample definitions.



Appendix Table XIV  
 Childhood Exposure Effects for Females

Outcome:	Exposure Effects Using Baseline Specification						Exposure Effects Using Other Race Placebos					
	Individual Income at 30		Incarcerated in 2010		Married at Age 30		Individual Income at 30		Incarcerated in 2010		Married at Age 30	
	Black Females	White Females	Black Females	White Females	Black Females	White Females	Black Females	White Females	Black Females	White Females	Black Females	White Females
Sample:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Own-Race Exposure Effect:	-0.009 (0.003)	-0.009 (0.001)	-0.019 (0.006)	-0.008 (0.004)	-0.019 (0.004)	-0.023 (0.002)	-0.006 (0.005)	-0.011 (0.002)	-0.018 (0.006)	-0.008 (0.006)	-0.015 (0.004)	-0.024 (0.002)
<i>Placebos:</i>												
Under-23 Other-Race Placebo							-0.002 (0.003)	0.003 (0.002)	-0.011 (0.012)	0.000 (0.002)	-0.018 (0.004)	-0.002 (0.002)
Over-23 Own-Race Placebo	0.033 (0.022)	0.007 (0.010)	-0.025 (0.039)	-0.034 (0.030)	-0.014 (0.029)	-0.016 (0.011)	0.070 (0.031)	0.001 (0.013)	-0.040 (0.041)	0.025 (0.048)	-0.011 (0.029)	-0.008 (0.016)
Over-23 Other-Race Placebo							-0.040 (0.023)	0.020 (0.011)	0.109 (0.087)	0.001 (0.011)	-0.019 (0.024)	-0.021 (0.011)
Num. of Obs.	153,000	842,000	131,000	677,000	153,000	842,000	153,000	634,000	129,000	375,000	153,000	632,000

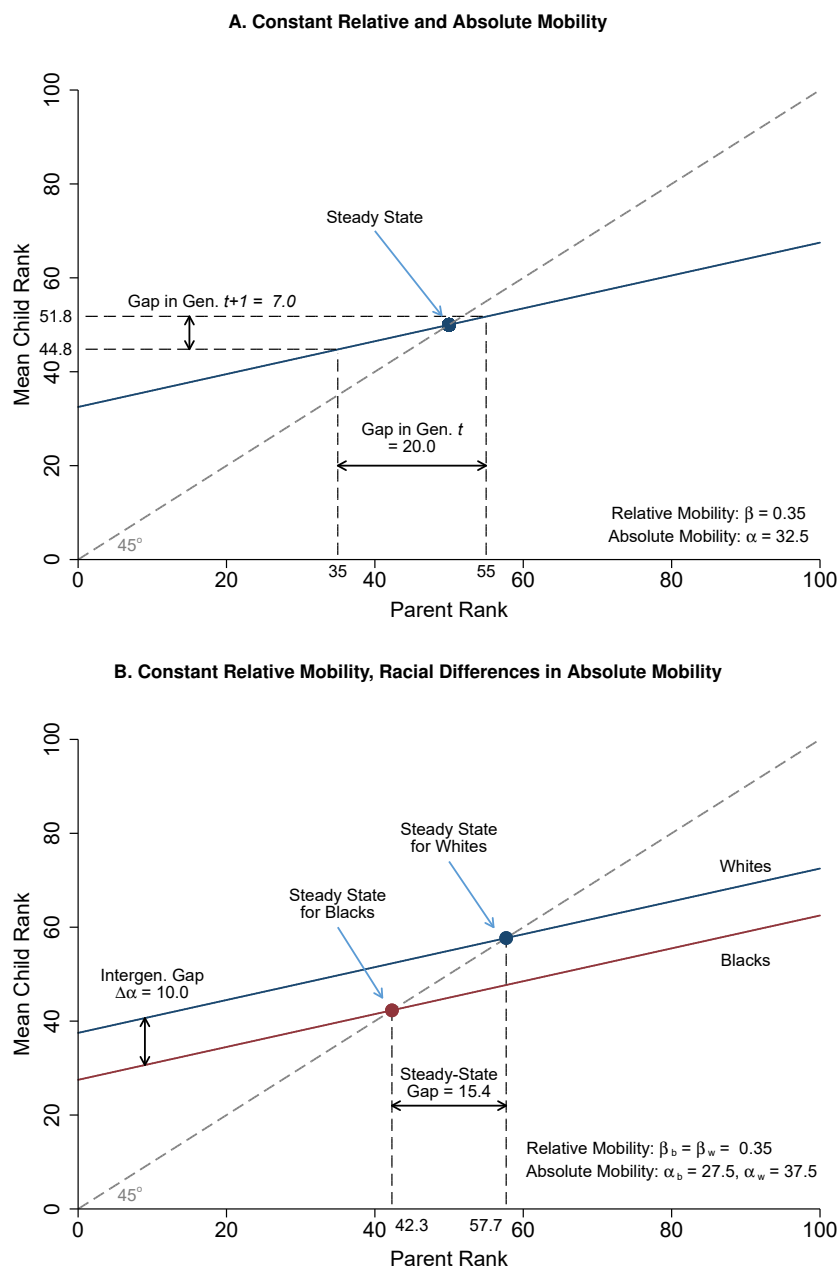
Notes: This table presents exposure effects analogous to those reported in Table IV, but for female children in our analysis sample. For more detail on the analysis, see the notes to Table IV.

Appendix Table XV  
Neighborhoods With Good Outcomes for Black Males by Parent Income

	Parents at p=25		Parents at p=75	
	CZ Name	Neighborhood Name	CZ Name	Neighborhood Name
<i>A. Best Places</i>				
	Washington DC	Downtown Silver Spring, Woodside Park, Woodside Forest	Baton Rouge	East Baton Rouge, East Baton Rouge County
	Washington DC	College Park, Prince Georges' County	New Orleans	Terrytown, Jefferson County
	Washington DC	New Carrollton, Prince Georges' County	New Orleans	Woodmere, Jefferson County
	Washington DC	Greenbelt, Prince Georges' County	Newport News	Richneck, Newport News County
	New York	Queens Village, Queens		
	New York	Laurelton, Queens		
	New York	Wakefield / Eastchester, Bronx		
<i>B. Average Places</i>				
	Houston	Ost-South Union, Harris County	Memphis	Hickory Ridge-South Riverdale, Shelby County
	Houston	Sunnyside, Harris County	Chicago	Harvey, Cook County
	Memphis	White Haven, Shelby County	Chicago	South Holland, Cook County
	Memphis	Coro Lake, Shelby County		
<i>C. Worst Places</i>				
	Chicago	Robert Taylor Homes/Fuller Park, Cook County	Detroit	Harper Woods, Wayne County
	Chicago	Bronzeville, Cook County	Detroit	Hamtramck, Wayne County
	Chicago	Garfield Park, Cook County	Chicago	Humboldt Park, Cook County
	Chicago	Englewood	Chicago	West Garfield Park, Cook County
	Detroit	Chandler Park, Wayne County		
	Cincinnati	South Fairmont, Hamilton County		
	Los Angeles	South Los Angeles/Watts, Los Angeles County		

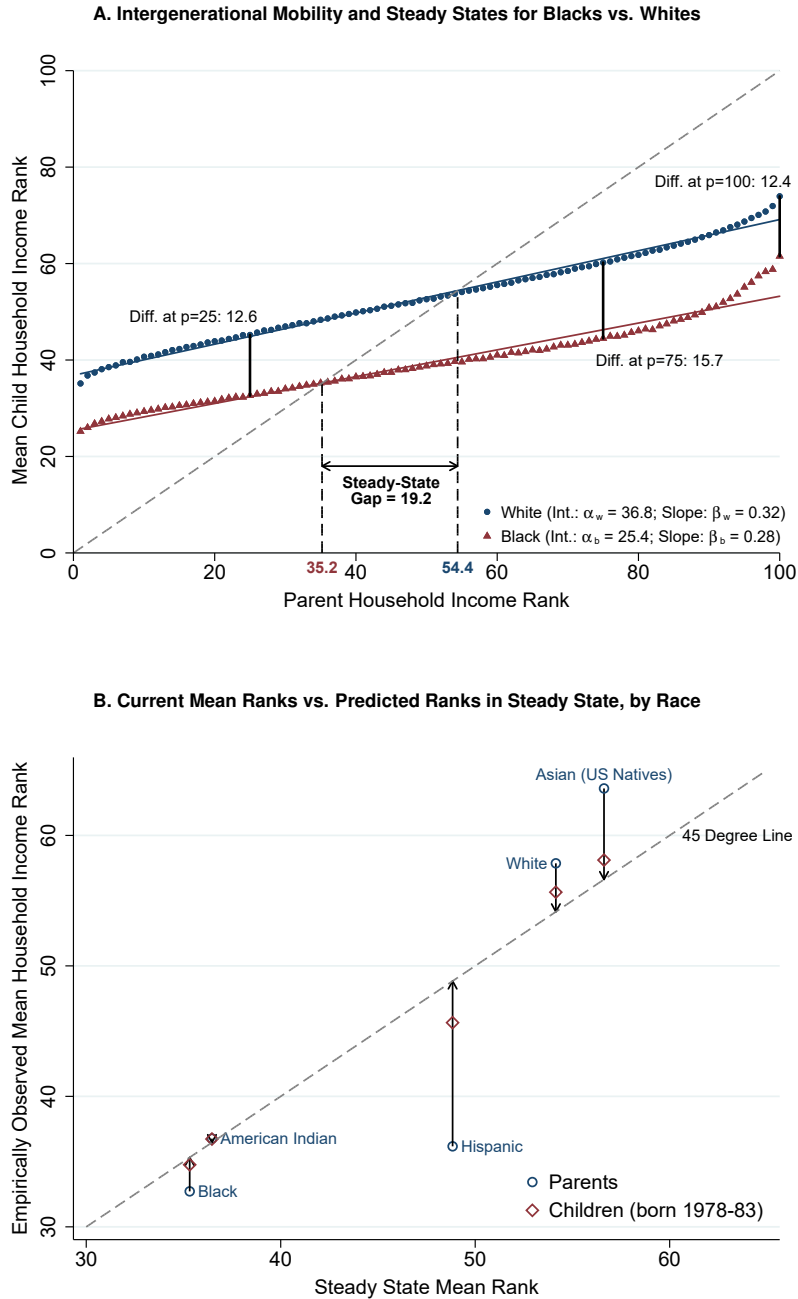
*Notes:* This table provides examples of good, average, and low outcome neighborhoods for black boys by parent income percentile. Neighborhoods are identified using percentile cutoffs in a tract-level dataset for individual income outcomes and father presence for black boys with parents at the 25th and 75th percentile of the national distribution of parent income. The "best" tracts are above the 95th percentile in outcomes for boys with parents at p25, and above the 90th percentile for boys with parents at p75. These tracts are below p75 in poverty share. They are also above the 75th percentile in terms of the number of black boys at that parent income with a father present, and there are at least 50 black boys in the tract below median income (p25) or above (p75). "Average" tracts are between p40 and p65 in individual income, father presence, and poverty rate. "Bad" tracts are those with outcomes in the 5th percentile, dad presence below the 75th percentile, and poor share above the 75th percentile. Neighborhoods names are assigned using a combination of the Zillow Neighborhood Name database as well as the maps provided by the American FactFinder tool.

FIGURE I: Intergenerational Mobility and the Evolution of Racial Disparities



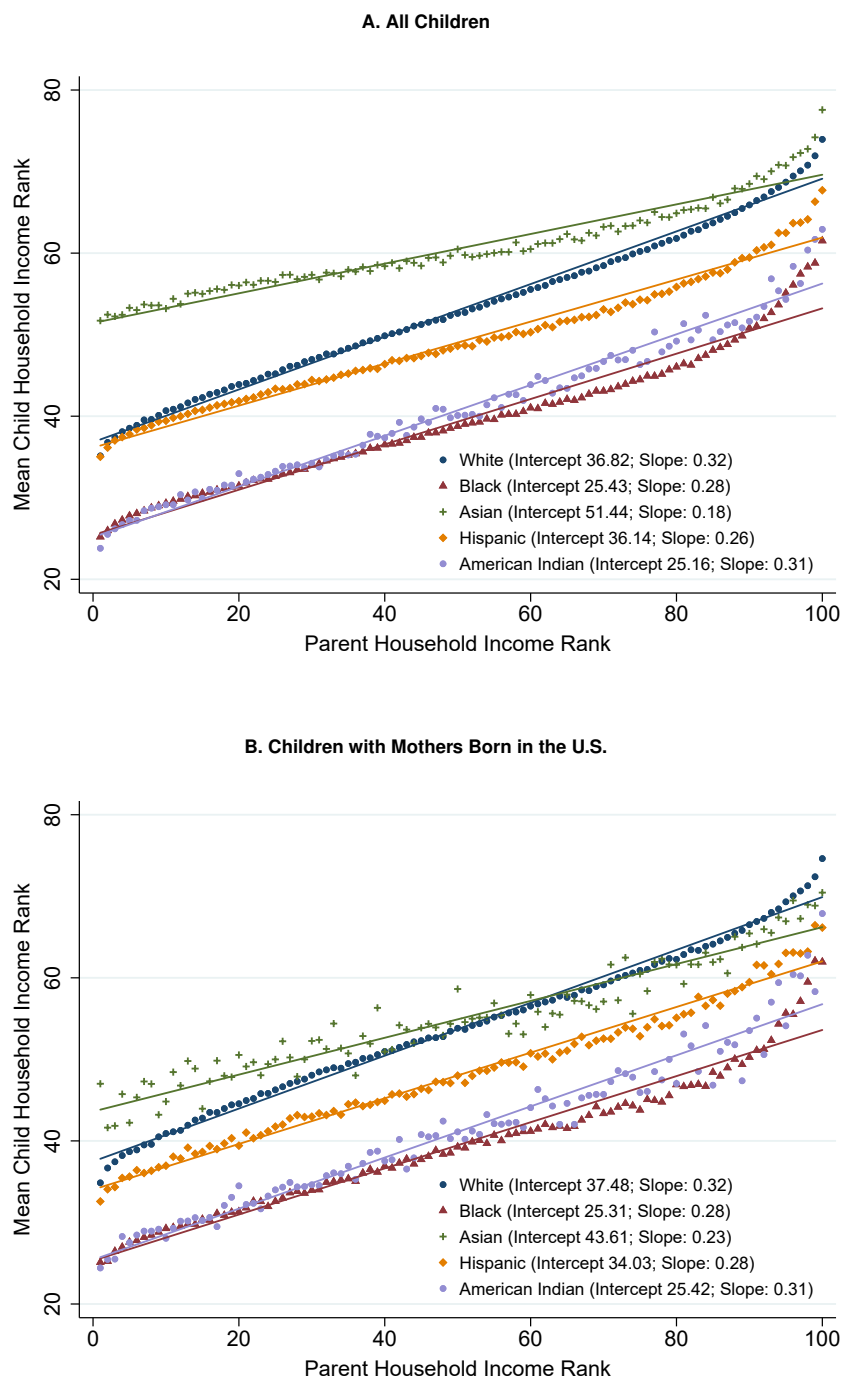
*Notes:* These figures show how rates of intergenerational mobility determine the evolution of racial disparities under the model in Section II. In Panel A, we assume that both black and white children have the same rates of relative and absolute intergenerational mobility. The solid line plots children’s expected ranks conditional on their parents’ ranks. We assume this line has a slope of 0.35, consistent with evidence from Chetty et al. (2014). Since mean ranks are 50 (by definition) for both parents and children, this line must pass through (50, 50). The steady-state mean income rank for both blacks and whites, depicted by the point where the solid line cross the dashed 45 degree line, is therefore 50. The figure illustrates convergence to this steady-state given mean ranks of 35 percentiles for black parents and 55 percentiles for white parents in the initial generation, depicted by the vertical lines. In this case, white children have a mean rank of 51.8 percentiles and black children have a mean rank of 44.8 percentiles in the next generation, depicted by the horizontal lines. The gap therefore falls from 20 percentiles to 7 percentiles in one generation. In Panel B, we assume that blacks and whites have the same rates of relative mobility ( $\beta = 0.35$ ), but absolute mobility is 10 percentiles lower for blacks than whites ( $\alpha_w - \alpha_b = 10$ ). Here, the steady-state for blacks is 42.3 percentiles, while the steady-state for whites is 57.7 percentiles; hence the intergenerational gap of  $\Delta\alpha = 10$  leads to a steady-state racial disparity of 15.4 percentiles.

FIGURE II: Empirical Estimates of Intergenerational Mobility and Racial Disparities



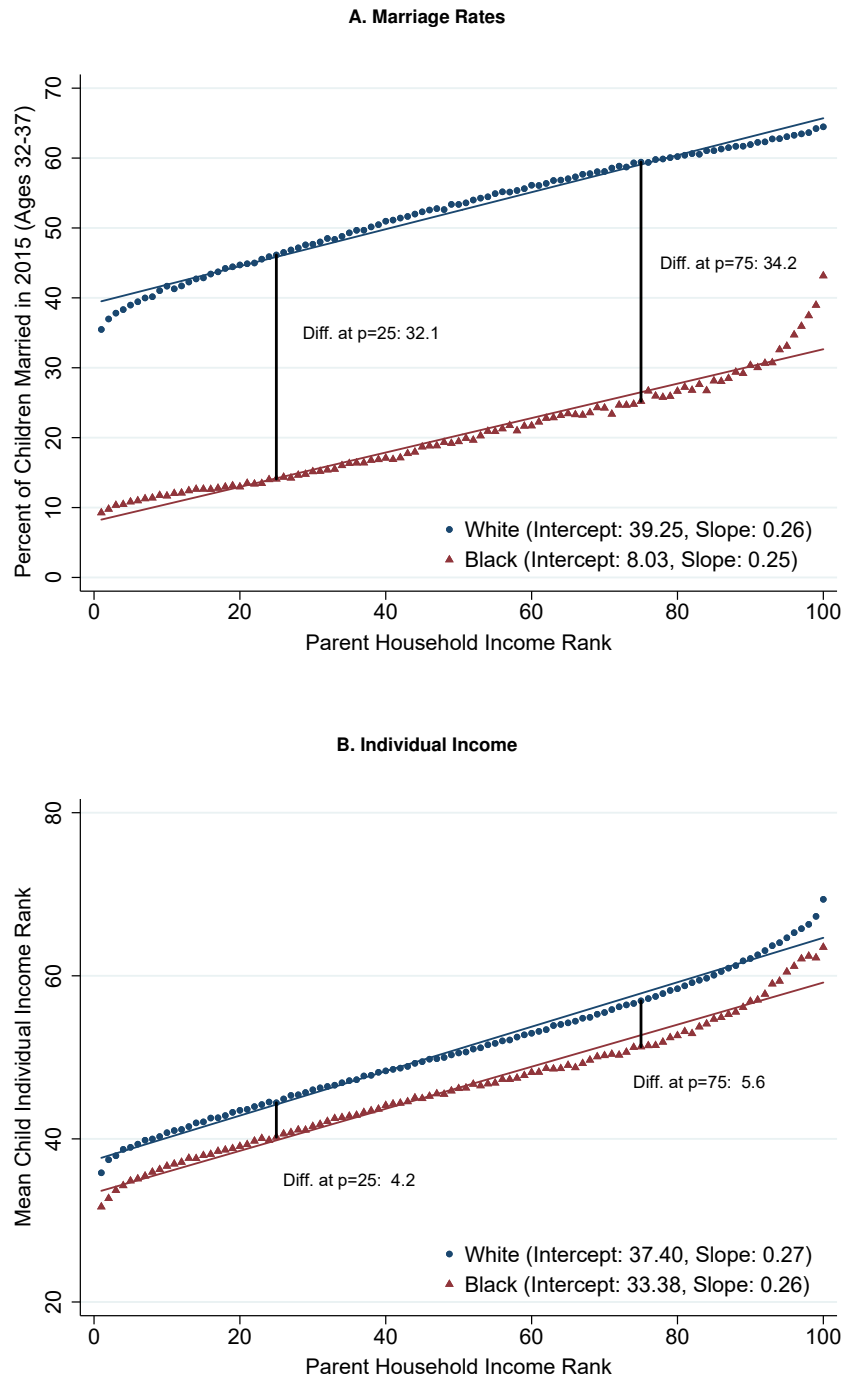
*Notes:* These figures show how empirical estimates of intergenerational mobility by race (Panel A) relate to the evolution of racial disparities (Panel B) using the model in Section II. These figures use the primary analysis sample (children in the 1978-83 birth cohorts). Child income is the mean of 2014-2015 household income (when the child is between 31-37 years old), while parent income is mean household income from 1994-1995 and 1998-2000. Children are assigned percentile ranks relative to all other children in their birth cohort, while parents are ranked relative to all parents with children in the same birth cohort. Panel A plots the mean household income rank of children by parent household income rank for black and white children. The best-fit lines are estimated using an OLS regression on the binned series; the slopes ( $\beta_r$ ) and intercepts ( $\alpha_r$ ) from these regressions are reported for each race. We also report white-black differences in mean child individual income rank at the 25th, 75th, and 100th percentiles of the parent income distribution. Plugging the estimates of  $\alpha_r$  and  $\beta_r$  into equation (3) from our model, the steady-state mean rank for blacks is  $\frac{\alpha_b}{1-\beta_b} = 35.2$  percentiles, while the steady-state for whites is  $\frac{\alpha_w}{1-\beta_w} = 54.4$  percentiles, resulting in a 19.2 percentile black-white gap in steady state. Panel B shows the empirically observed mean parent and child household ranks by race plotted against the predicted steady-state mean ranks for blacks, whites, and other racial groups. Estimates for Asians are based on the subsample of children whose mothers were born in the United States, as in Figure IIIb below. The circles show the unconditional mean income ranks for parents, while the diamonds show mean ranks for children in our analysis sample.

FIGURE III: Intergenerational Mobility by Race



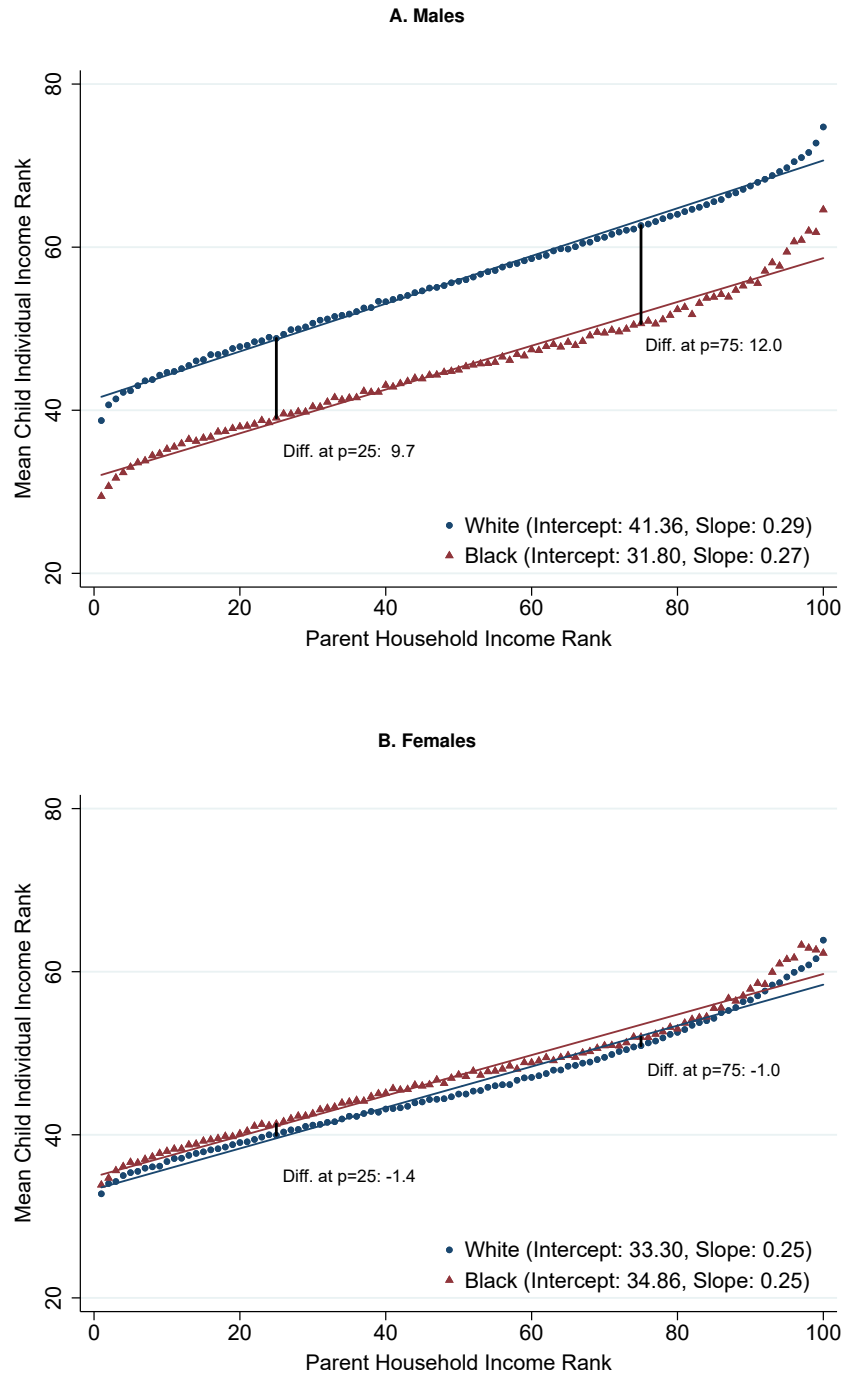
Notes: Panel A replicates Figure IIa, including series for Hispanics, Asians, and American Indians. Panel B replicates Panel A for children whose mothers were born in the U.S. Panel B is based on the subsample of children whose mothers appear in the 2000 Census long form or the 2005-2015 American Community Survey because information on parental birthplace is available only for those individuals. See notes to Figure II for further details.

FIGURE IV: Black-White Gaps in Marriage Rates and Individual Income



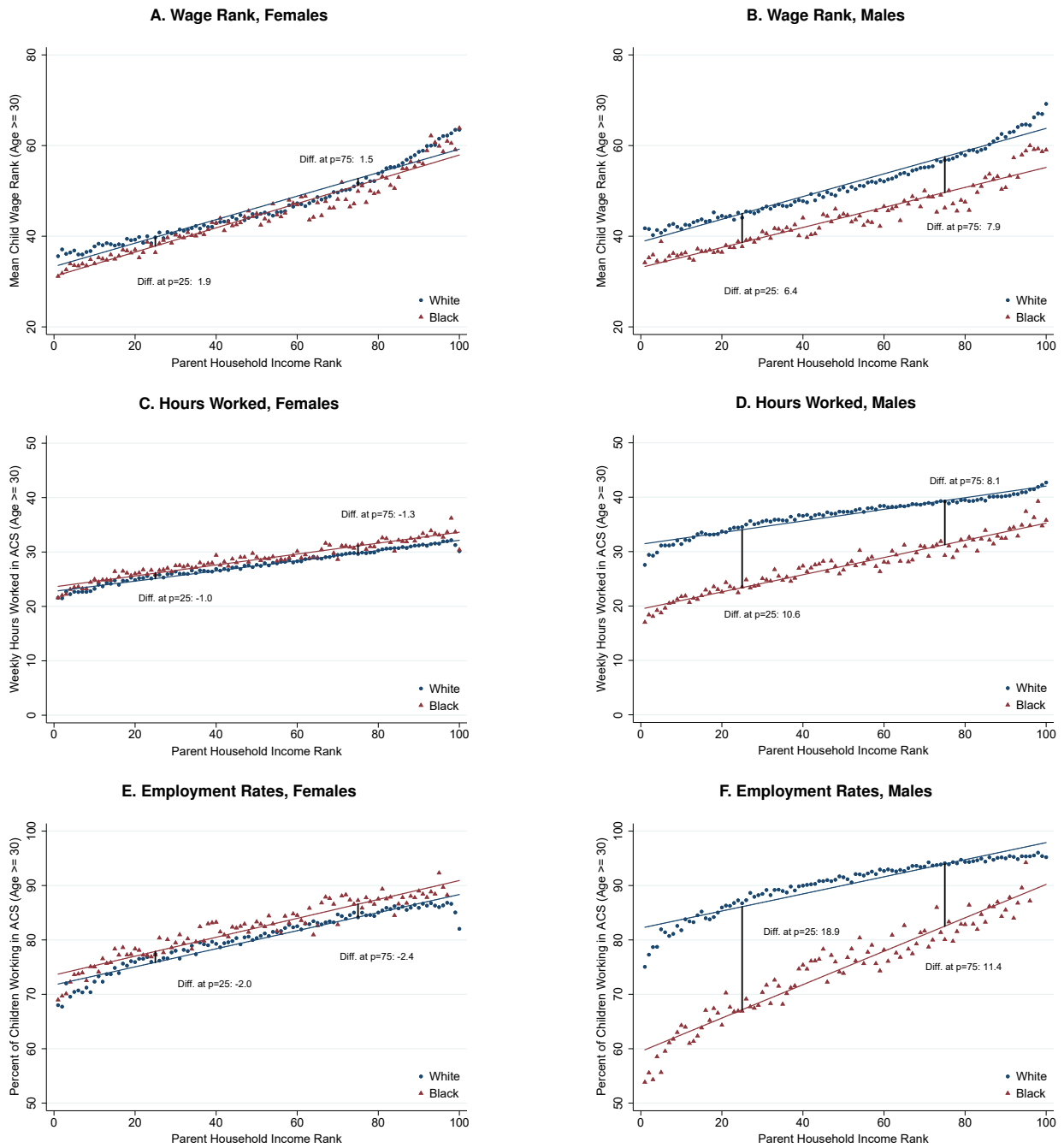
*Notes:* Panel A plots children’s marriage rates by parent income percentile for black and white children. A child’s marital status is defined based on the marital status used when filing his or her 2015 tax return. Children in our sample are between the ages of 32-37 at that point. Panel B plots the mean individual income rank of children vs. their parents’ household income rank for black and white children. Individual income is defined as own W-2 wage earnings plus self-employment and other non-wage income, which is Adjusted Gross Income minus total wages reported on form 1040 divided by the number of tax filers (thereby splitting non-wage income equally for joint filers). We measure children’s individual incomes as their mean annual incomes in 2014 and 2015. The intercepts, slopes, and best-fit lines are estimated using OLS regressions on the binned series. We also report the white-black differences in outcomes at the 25th and 75th parent income percentile. See notes to Figure II for further details on sample and variable definitions.

FIGURE V: Black-White Gaps in Individual Income, by Gender



Notes: These figures replicate Figure IVb separately for male children (Panel A) and female children (Panel B). Individual income ranks are computed within a child's cohort pooling across race and gender. See notes to Figure IV for further details.

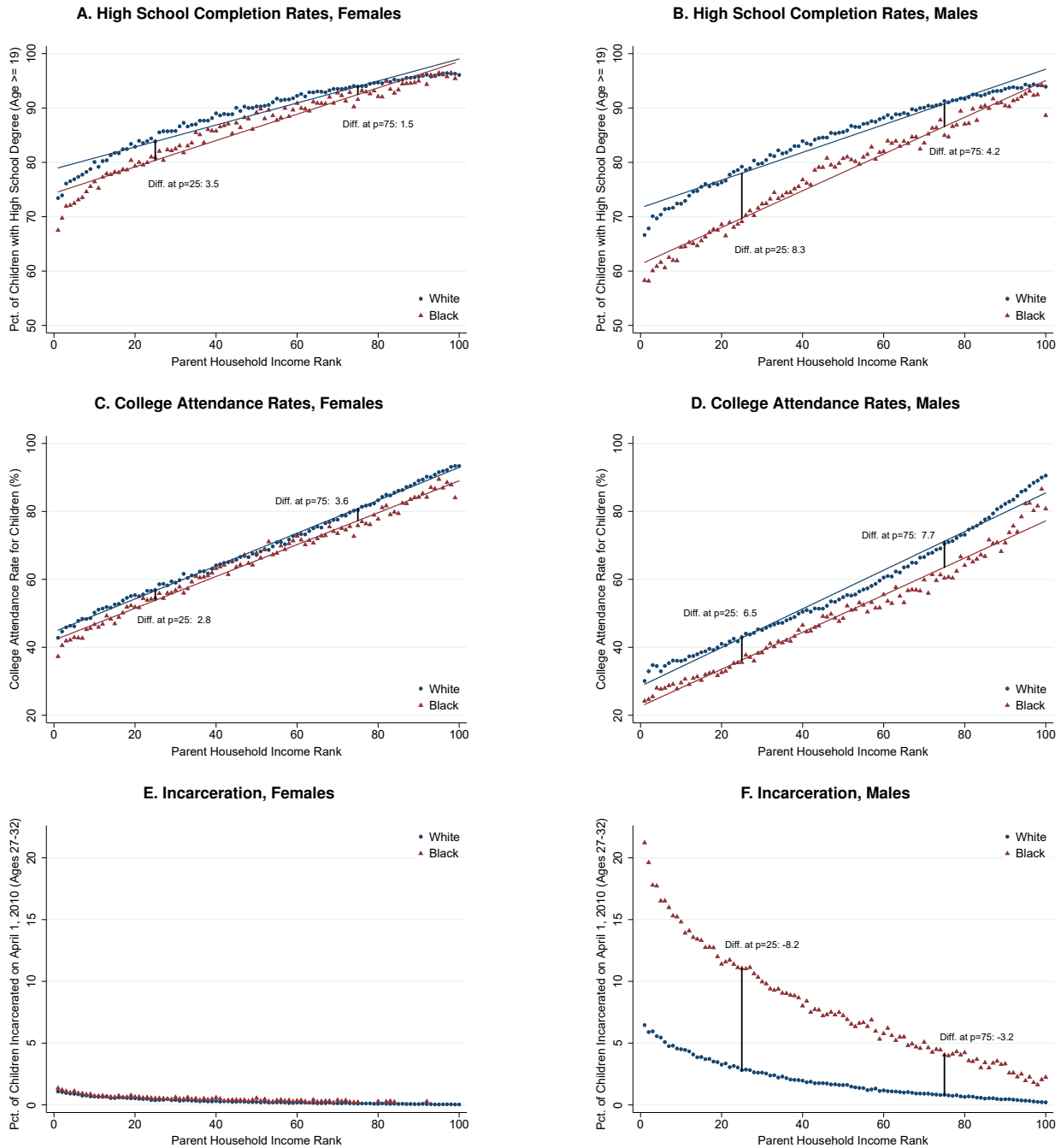
FIGURE VI: Black-White Gaps in Wage Rates, Hours, and Employment, by Gender



*Notes:* This figure shows the relationship between children’s employment outcomes and their parents’ household income, by race and gender. All children’s outcomes in this figure are obtained from the American Community Survey and all panels include only children observed in the 2005-15 ACS at age 30 or older. Panels A and B plot mean wage ranks vs. parental household income percentile, by race and gender. Panels C and D replicate A and B using mean weekly hours of work as the outcome, while Panels E and F use annual employment rates as the outcome. Wages are computed as self-reported annual earnings divided by total hours of work; they are missing for those who do not work. We convert wages to percentile ranks by ranking individuals relative to others in the same birth cohort who received the ACS survey in the same year. Hours of work are defined as total annual hours of work divided by 51 and are coded as zero for those who do not work. Employment is defined as having positive hours of work in the past 12 months. To protect confidentiality, bins in which there are fewer than 10 children who are employed or not employed are suppressed in Panels E and F. In each figure, the best-fit lines are estimated using OLS regressions on the binned series. We report white-black differences based on the best-fit lines at the 25th and 75th parent income percentiles.

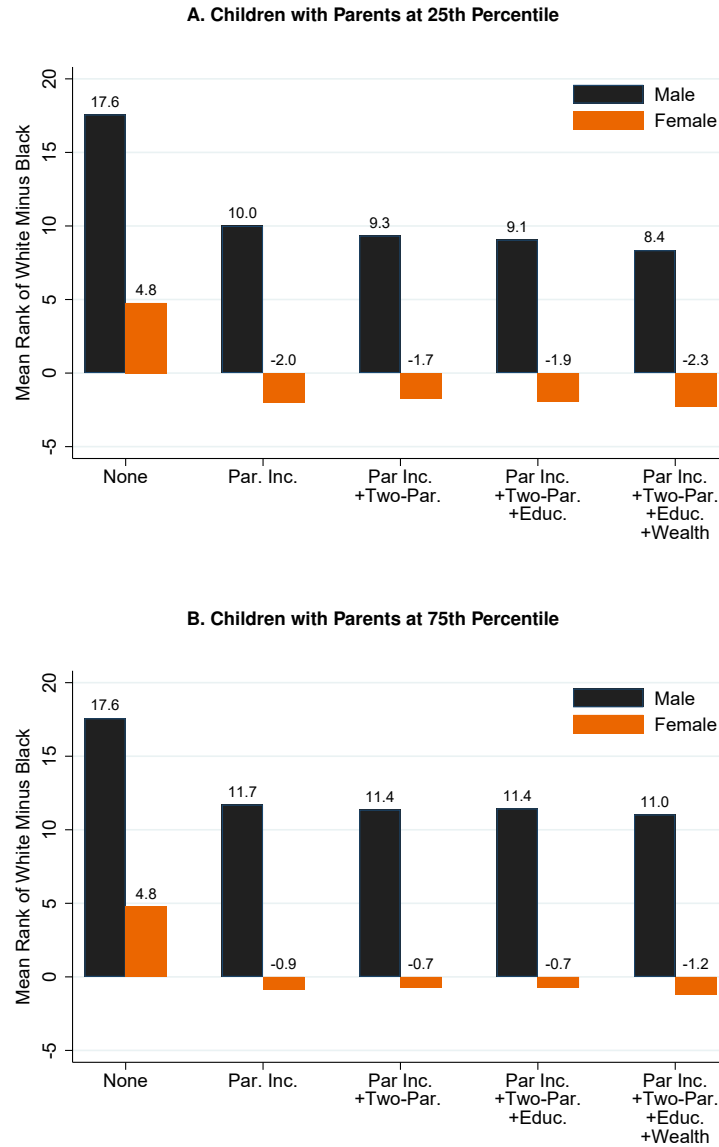


FIGURE VII: Black-White Gaps in Educational Attainment and Incarceration, by Gender



*Notes:* Panels A-D show the relationship between children’s educational attainment and their parents’ household income, by race and gender. Data on educational attainment is obtained from the American Community Survey. Panels A and B plot the fraction of children who complete high school by parental income percentile, by race and gender. Panels C and D replicate Panels A and B using college attendance as the outcome. Panels A-B include only children observed in the 2005-15 ACS at age 19 or older, while Panels C-D include those observed at age 20 or older. High school completion is defined as having a high school diploma or GED. College attendance is defined as having obtained “at least some college credit”. Panels E and F plot incarceration rates vs. parent income percentile, by race and gender. Incarceration is defined as being incarcerated on April 1, 2010 using data from the 2010 Census short form. The children in our sample are between the ages of 27-32 at that point. The best-fit lines in Panels A-D are estimated using OLS regressions on the binned series. We report white-black differences based on the best-fit lines (in Panels A-D) and based directly on the non-parametric estimates (in Panel F) at the 25th and 75th parent income percentiles. To protect confidentiality, bins in which there are fewer than 10 children who exhibit the outcome or who do not exhibit the outcome are suppressed.

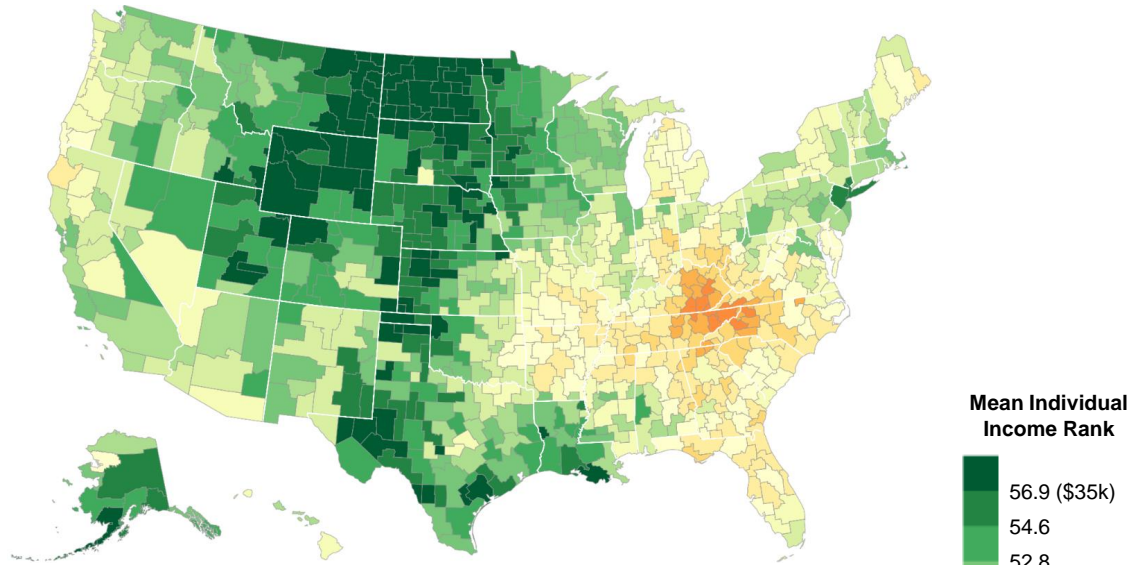
FIGURE VIII: Effects of Family-Level Factors on the Black-White Income Gap



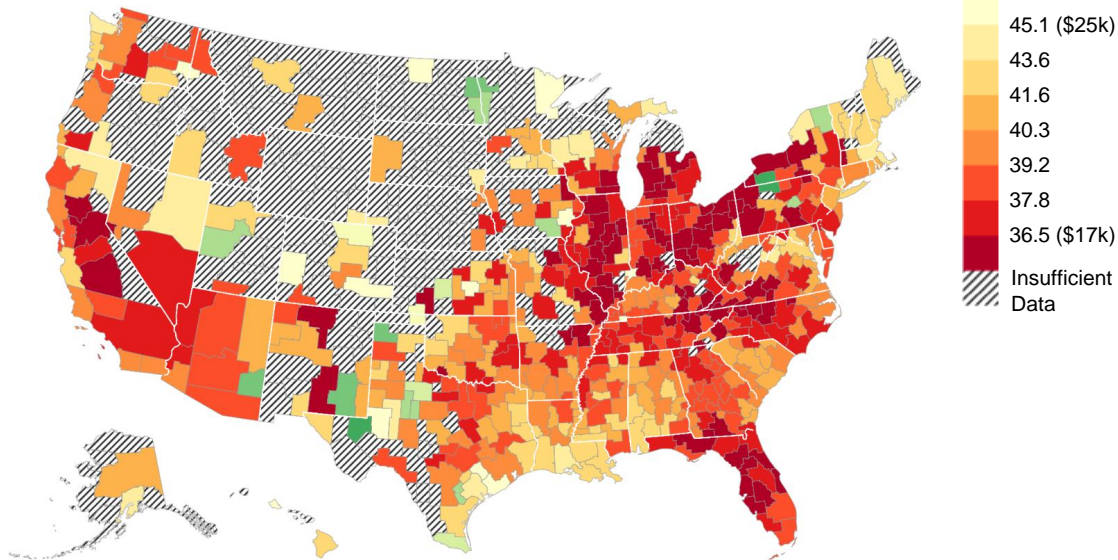
*Notes:* These figures show how the black-white gap in children’s individual income ranks changes as we control for family-level factors. The bars on the left in each pair report the black-white gap in individual income ranks for boys, while the bars on the right report the same statistics for girls. The first set of bars show the unconditional black-white gap in mean individual income ranks. The second set of bars report  $\Delta_{\bar{p}}$ , the intergenerational gap in mean income ranks at percentile  $\bar{p}$  of the parental income distribution, estimated by regressing children’s income ranks on their parents’ ranks, an indicator for being white, and the interaction of these two variables. Panel A reports estimates for  $\bar{p} = 25$ , while Panel B reports estimates for  $\bar{p} = 75$ . The remaining bars report estimates of  $\Delta_{\bar{p}}$  as we include additional controls in the regression: parental marital status, wealth, and education. Parental marital status is measured based on whether the primary tax filer who first claims the child as a dependent is married. We control for parental education using indicator variables for the highest level of education parents have completed using data from the ACS and the 2000 Census long form, prioritizing information from the ACS if both sources are available. We define seven categories of parental education: no school, less than high school, high school degree, college no degree, associate degree, bachelor degree and graduate degree. We use the mother’s education if available; if not, we use the father’s education. We control for parents’ wealth using indicators for home ownership and the number of vehicles owned and linear controls for monthly mortgage payments and home value. These variables are also obtained from the 2000 Census long form and ACS, again prioritizing the mother’s data. The estimates reported in the first three pairs of bars use the full analysis sample, while those in the fourth and fifth pairs of bars use the subsample for which the relevant controls are available from the 2000 Census and ACS.

FIGURE IX: The Geography of Upward Mobility in the United States, by Race

**A. White Males with Parents at 25th Percentile**

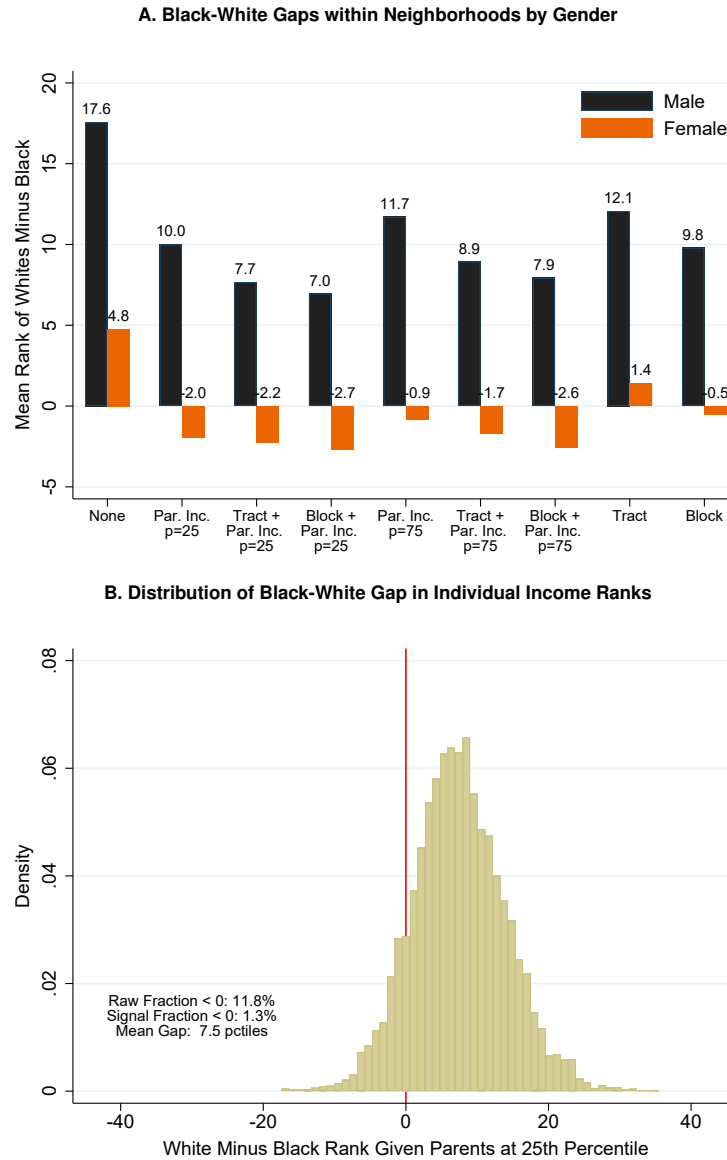


**B. Black Males with Parents at 25th Percentile**



*Notes:* These figures present maps of our baseline measure of intergenerational mobility by commuting zone (CZ). All figures are based on the same sample and income definitions as in Figure III. Children are assigned to commuting zones based on the first non-missing zip code of their parents (beginning when the child was claimed as a dependent), irrespective of where they live as adults. In each CZ, we regress children's individual income rank on a constant and parent income rank. Using the regression estimates, we define absolute upward mobility at the 25th percentile of the parent income distribution ( $r_{25}$ ) as the intercept +  $25 \times (\text{rank-rank slope})$ . This corresponds to the predicted individual income rank for children with parents at the 25th percentile in a given CZ. The maps are constructed by grouping CZ-by-race observations into fifteen quantiles and shading the areas so that greener colors correspond to higher absolute mobility. Areas with fewer than 20 children in the core sample, for which we have inadequate data to estimate mobility, or fewer than 500 residents of the children's racial group in the 2000 Census are shaded with the cross-hatch pattern. The dollar amounts equivalent to the income ranks at the cutoffs are rounded to the nearest thousand (in 2015 dollars). Panel A shows the predicted individual income rank for white male children and Panel B for black male children.

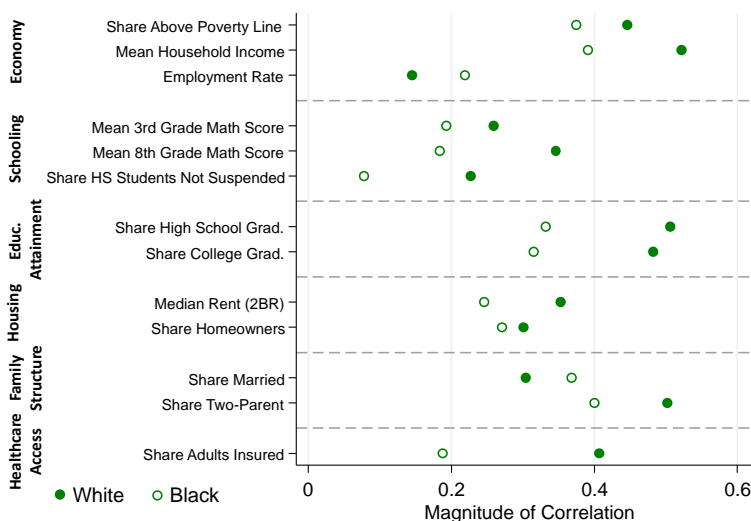
FIGURE X: Black-White Gaps within Neighborhoods



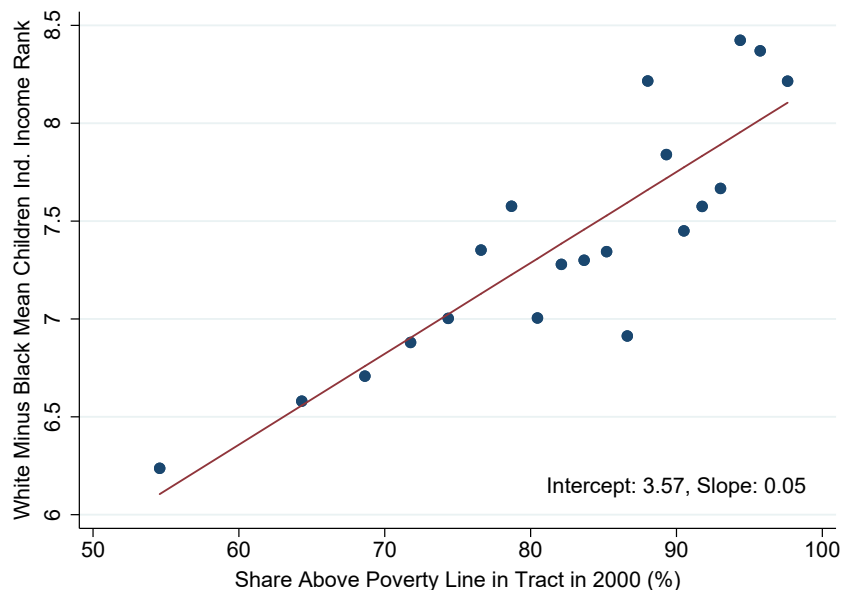
*Notes:* These figures show black-white gaps in individual income ranks controlling for parent income and childhood neighborhood, separately by child gender. The first set of bars in Panel A presents the raw, unconditional black-white gap. The second set of bars present the results from a regression in equation (5) in Section VI, plotting the coefficient of the indicator for the child race equal to white and its interaction with parent income, evaluated at  $\bar{p} = 25$ ,  $b_w + 0.25b_{wp}$ , separately for males and females. The third set of bars again plot  $b_w + 0.25b_{wp}$  from equation (5) but also includes Census tract fixed effects. The fourth set of bars are analogous to the third set of bars, replacing the Census tract fixed effects with Census block fixed effects. The fifth, sixth and seventh sets of bars replicate the second, third and fourth sets of bars, but for  $\bar{p} = 75$  instead of  $\bar{p} = 25$ . The eighth and ninth sets of bars plot the coefficient of an indicator for white children of a regression of child income rank on an indicator for white children and Census tract or Census block fixed effects. Panel B plots the distribution of the difference in the tract-level estimates of predicted individual income ranks for white vs. black male children with parents at the 25th percentile of the parental income distribution. Each observation is weighted by the number of black male children in the sample underlying the predicted rank estimates. We exclude Census tracts for which child income ranks were constructed with fewer than 50 black or white male children. We report the mean gap in predicted income ranks between white and black male children, and the raw and noise-corrected estimate of the fraction of black males growing up in Census tracts where the predicted income rank for black males is higher than for white males.

FIGURE XI: Outcomes for White vs. Black Males with Parents at 25th Percentile, by Tract

**A. Correlations between Tract-Level Covariates and Individual Income Rank for Black Males vs. White Males**

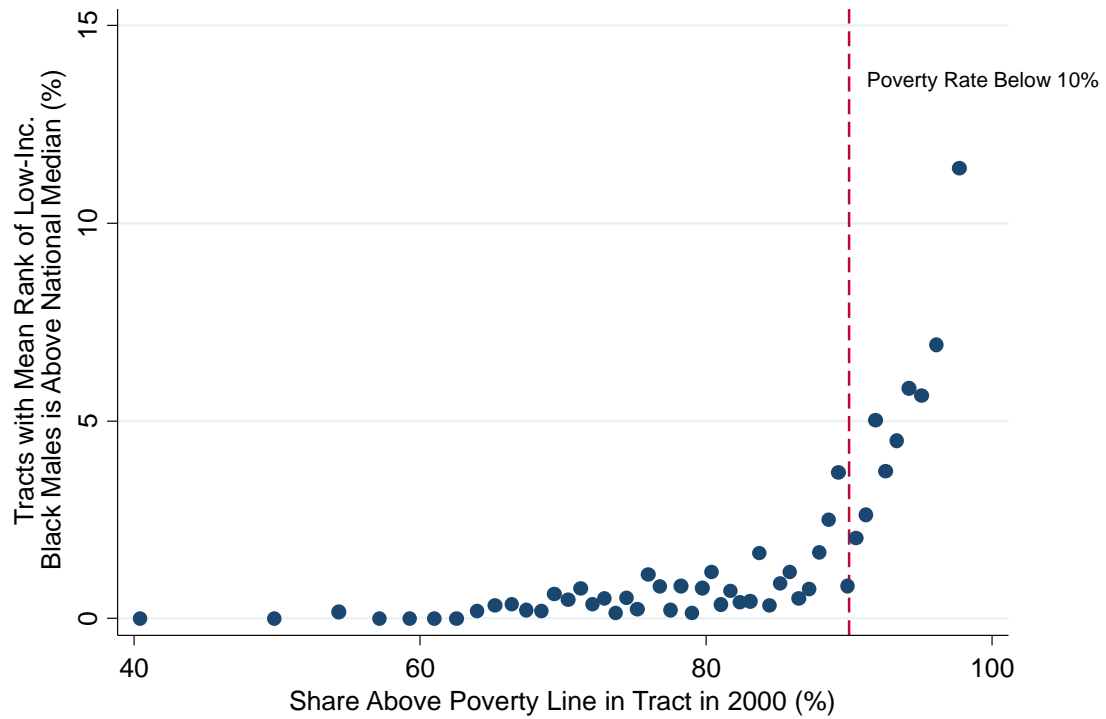


**B. Black-White Gap in Mean Individual Income Rank vs. Share Above Poverty Line**



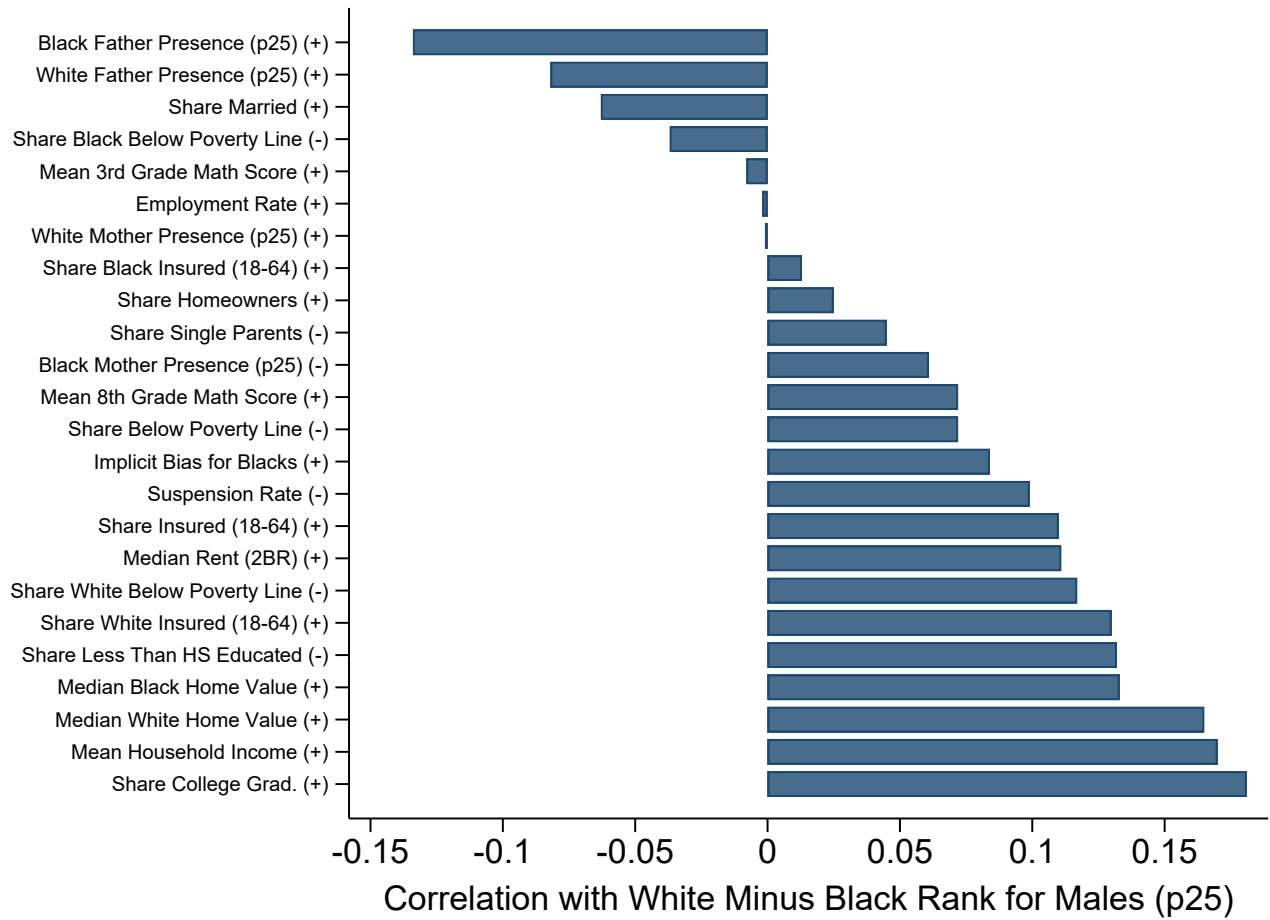
Notes: Panel A presents correlations of  $\alpha_r^c + 0.25\beta_r^c$  for individual incomes of black and white males across tracts with selected covariates. See Appendix C for variable sources and definitions. Hollow circles present the coefficients for black males and filled circles present correlations for white males. The coefficients are signal correlations adjusting for sampling error, and use precision weights. To calculate the signal correlations, the raw correlations are rescaled by the reliability ratio, the ratio of signal variance to total variance of the  $(\alpha_r^c + 0.25\beta_r^c)$  estimates. The correlations for black males are done on the set of tracts for which more than 20 black men are used to calculate  $(\alpha_r^c + 0.25\beta_r^c)$ , whereas the white male correlations are done on the set of tracts with at least 20 white males. Panel B presents a binned scatter of the mean black-white intergenerational gap at  $\bar{p} = 25$ ,  $\alpha_w^c + 0.25\beta_w^c - \alpha_b^c + 0.25\beta_b^c$ , in each tract as a function of the share above the poverty line. The sample contains all tracts with at least 20 white males and 20 black males in our sample, along with a non-missing share above the poverty line taken from the 2000 Census. Tracts are binned into ventiles, weighting each tract by the number of black men used in the calculation of the black-white intergenerational gap. The best fit line is calculated using an OLS regression on the binned tract values.

FIGURE XII: Fraction of Tracts in which Predicted Rank of Black Males is above National Median vs. Share above Poverty Line



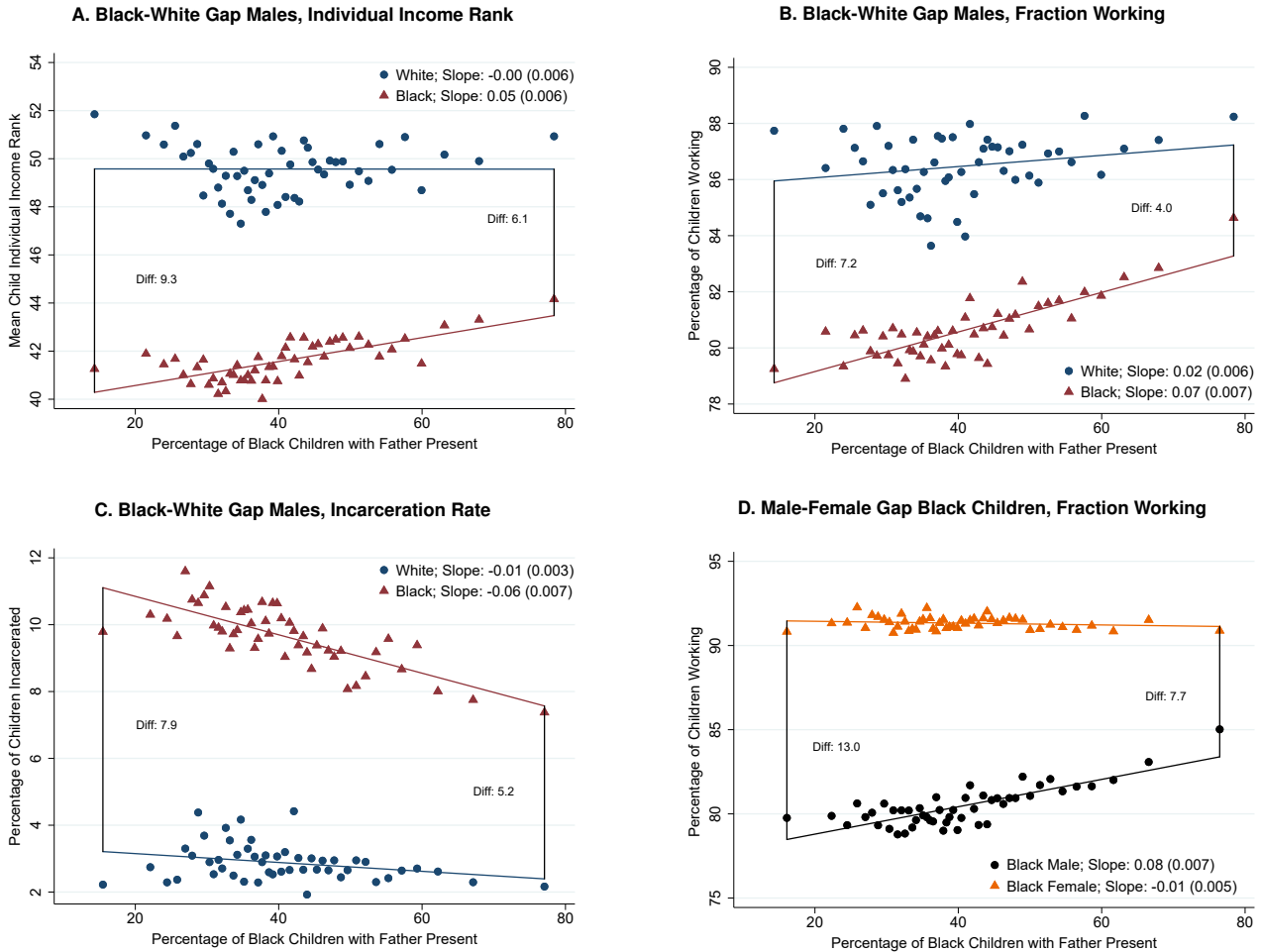
*Notes:* This figure presents a non-parametric binned scatter plot of the relationship between the fraction of Census tracts in which the predicted rank of black males is above the national median,  $1\{\alpha_b^c + 0.25\beta_b^c > 0.5\}$ , and the share of people above the poverty line in a given Census tract. The sample contains tracts with at least 50 black males and a non missing share above the poverty line. Tracts are grouped into 50 bins, weighting by the number of black males in the tract.

FIGURE XIII: Covariates Correlated with Black Male Income and Black-White Gap



*Notes:* This figure presents the relationship between a set of covariates and the black-white intergenerational gap for males with parents at  $\bar{p} = 25$ , as measured by  $\alpha_w^c + 0.25\beta_w^c - \alpha_b^c + 0.25\beta_b^c$ . The pluses and minuses next to each covariate name indicate the sign of the correlation between the covariate and black male individual income ranks with parents at  $\bar{p} = 25$ . We restrict to covariates with correlations of the same sign at both  $\bar{p} = 25$  and  $\bar{p} = 75$ . For covariates with negative correlations with black male individual income rank, the sign of the covariate is flipped so that an increase in the covariate correlates with an increase in incomes for black males across tracts. We then report the correlation of this rescaled covariate with the black-white gap at  $\bar{p} = 25$ . For both the correlations at  $\bar{p} = 25$  and  $\bar{p} = 75$  and the correlation with the intergenerational gap, we restrict to Census tracts with poverty rates below 10% from the 2000 Census publicly available tract level data. The full covariate list is provided in Appendix Table XI. All correlations are at the tract-level except for the implicit association test measures, which is at the county-level. For correlations at the tract-level, the coefficients are signal correlations adjusting for sampling error. We use precision weights. Bars less than zero correspond to smaller magnitudes of intergenerational gaps.

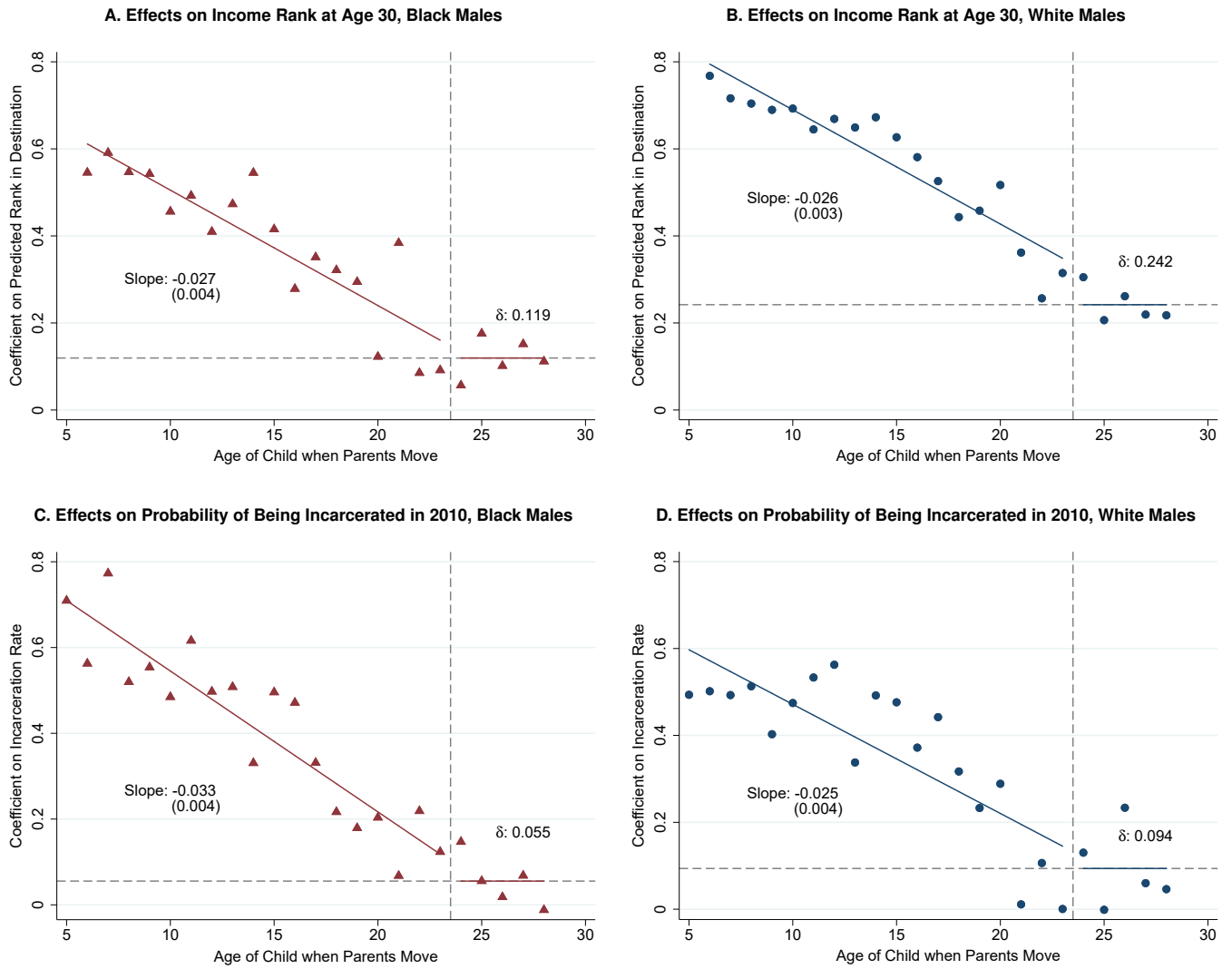
FIGURE XIV: Racial Disparities and Father Presence in Low Poverty Tracts, Children with Parents at 25th Percentile



*Notes:* These figures present binned scatter plots of the relationship between various child outcomes and the percentage of black children growing up in the presence of a father in low poverty Census tracts. We define low poverty tracts as those with a poverty rate of less than 10% from the 2000 Census publicly available tract level data. In each panel, the share of black males with parents at the 25th percentile of the national income distribution who have their father present in childhood is binned into 50 quantiles and plotted on the x-axis. Panel A plots the mean child individual income rank on the y-axis, Panels B and D plots the percentage of children working (were not working is defined as having zero individual income in 2014 and 2015), and Panel C shows the percentage of children incarcerated on April 1, 2010. We restrict to tracts with at least 20 observations for both white and black males in Panels A, B, and C, and 20 observations for both black males and females in Panel D. We estimate best fit lines on the binned points using OLS and report gaps on the predicted values at the 1st and 50th quantile. We also report the slope coefficients and standard errors (in parentheses).

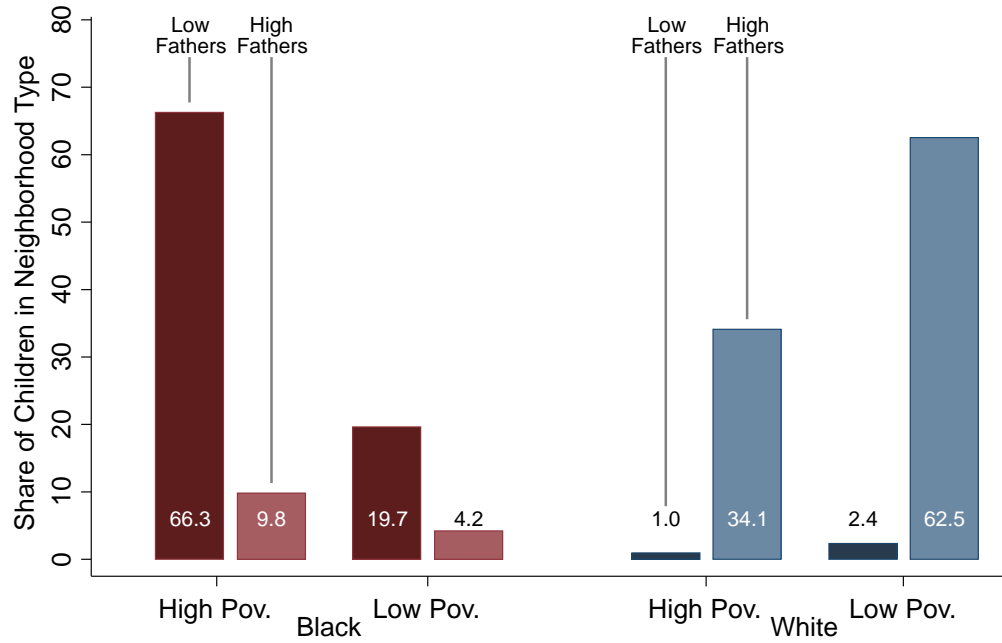


FIGURE XV: Effect of Childhood Exposure on Income and Incarceration in Adulthood



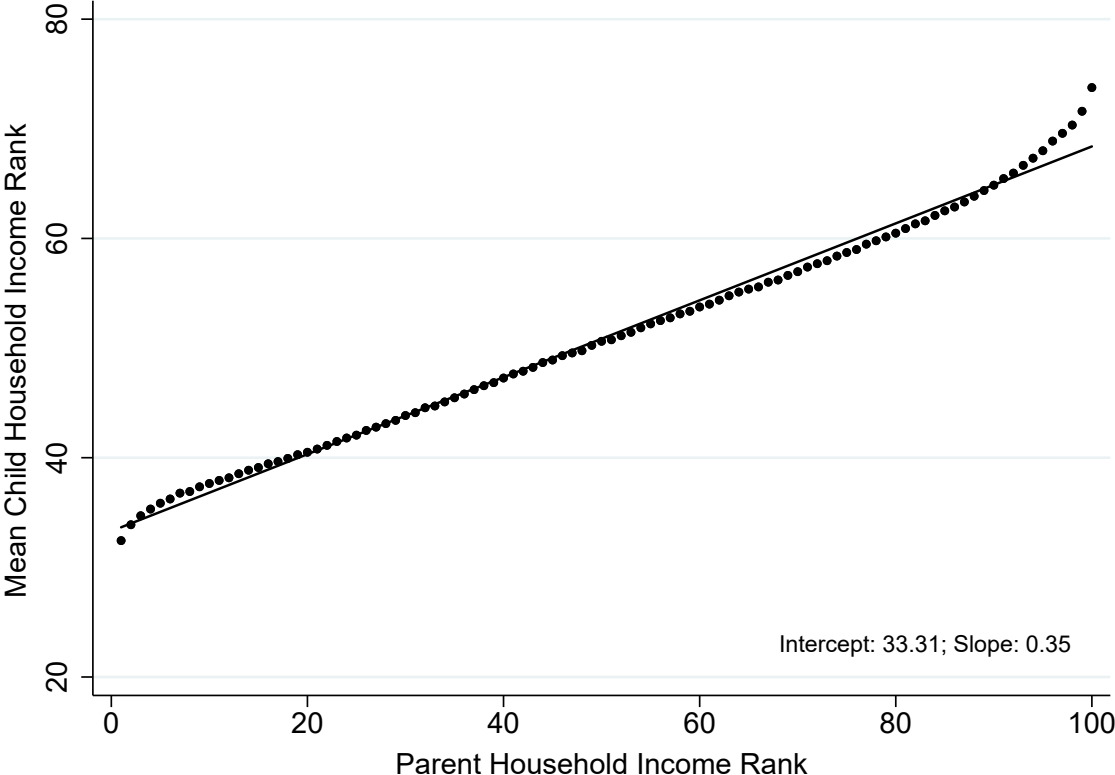
*Notes:* These figures show the effect of childhood exposure to different CZs on income and incarceration in adulthood. See Section VIIC for the exact regression specification. Each figure plots the coefficients,  $b_m$ , from equation (7) for each age of the child,  $m$ , at the time of the move. The sample consists of male children born between 1978–1986 who are identified as having moved once across CZs from their parents’ tax records. Panel A presents the results for individual income at age 30 for black males, Panel B analogously for white males. For those two panels, the sample is restricted to birth cohorts 1978–1985 for whom income at age 30 is observed. Panel C and D plot the coefficients for incarceration in 2010. We restrict this sample to those for whom we are able to observe incarceration in 2010 prior to age 23. Best fit lines are presented using regressions on the coefficients,  $b_m$ , separately for  $m \leq 23$  and  $m > 23$ . In some cases, the slopes reported differ from Table 4 slightly because they are estimated from a regression on the coefficients,  $b_m$ , as opposed to a linear parametrization on the individual level data.

FIGURE XVI: Father Presence and Poverty Rates by Tract



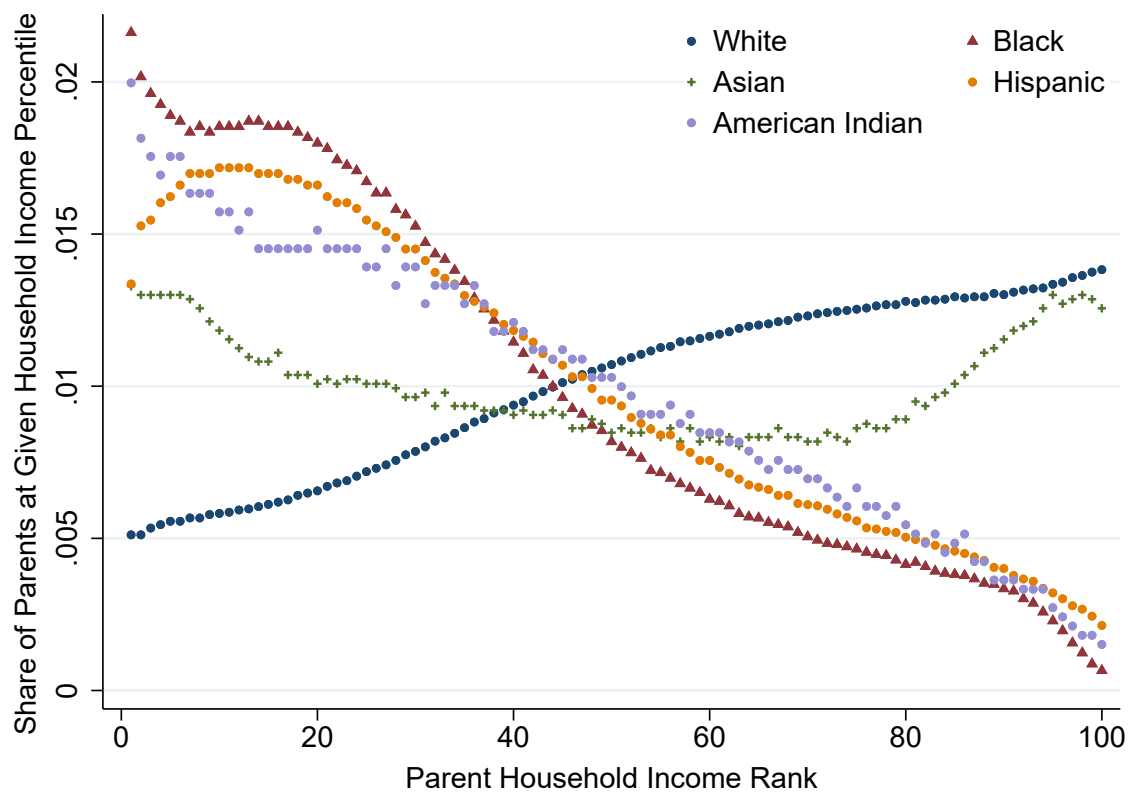
*Notes:* This figure presents the share of Census tracts by poverty share and father presence by race. We define Census tracts with “high father presence” as those with more than 50% of fathers present in families among children of the same race. Low-poverty tracts are those with a poverty rate of less than 10% from the 2000 decennial Census.

ONLINE APPENDIX FIGURE I: Intergenerational Mobility in the Full Population



*Notes:* This figure plots the mean household income rank of children vs. parent household income rank in the full population, pooling all races and genders. The best-fit lines are estimated using an OLS regression on the binned series. See notes to Figure II for details on variable and sample definitions.

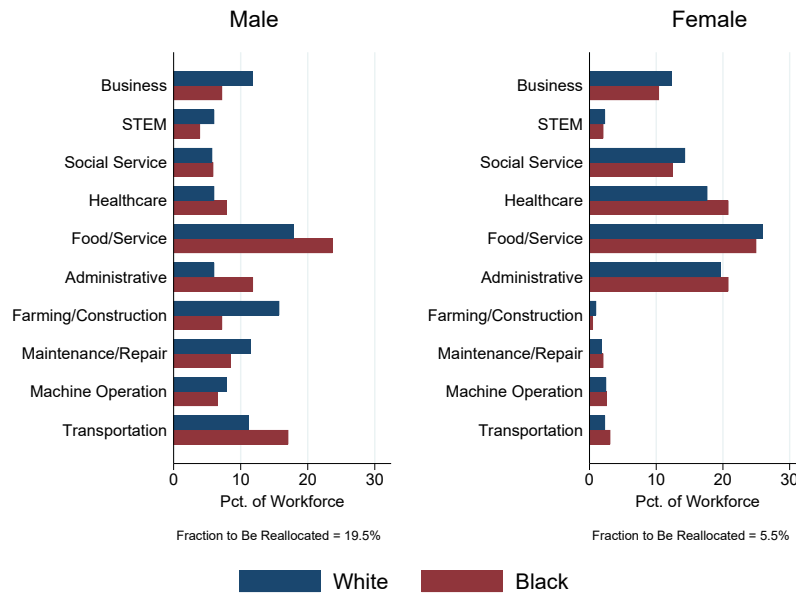
ONLINE APPENDIX FIGURE II: Density of Parent Household Income Ranks by Race



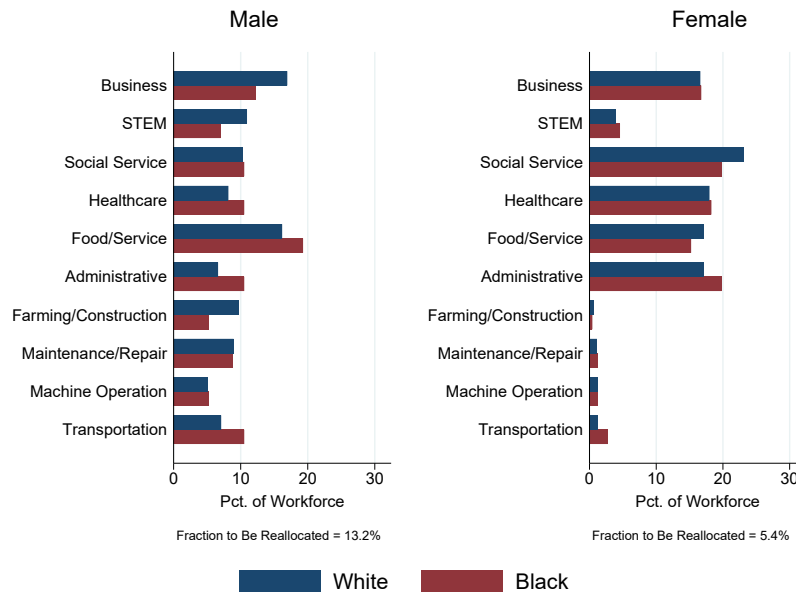
Notes: This figures plots the fraction of kids, by race, within each parent income rank using our baseline definition of parental household income.

# ONLINE APPENDIX FIGURE III: Occupational Distributions Conditional on Parent Income, by Race and Gender

## A. Parents in 3rd Income Decile

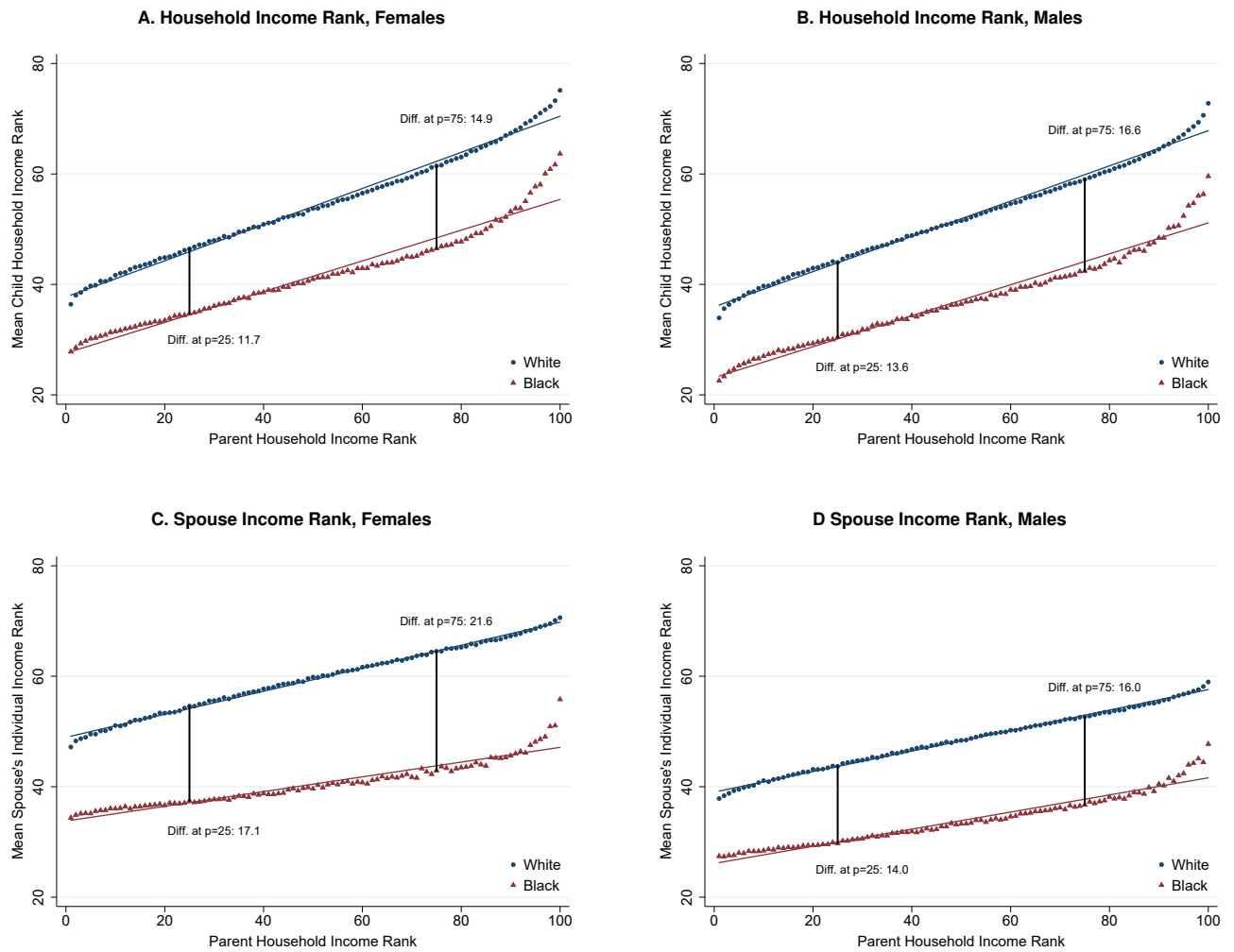


## B. Parents in 8th Income Decile



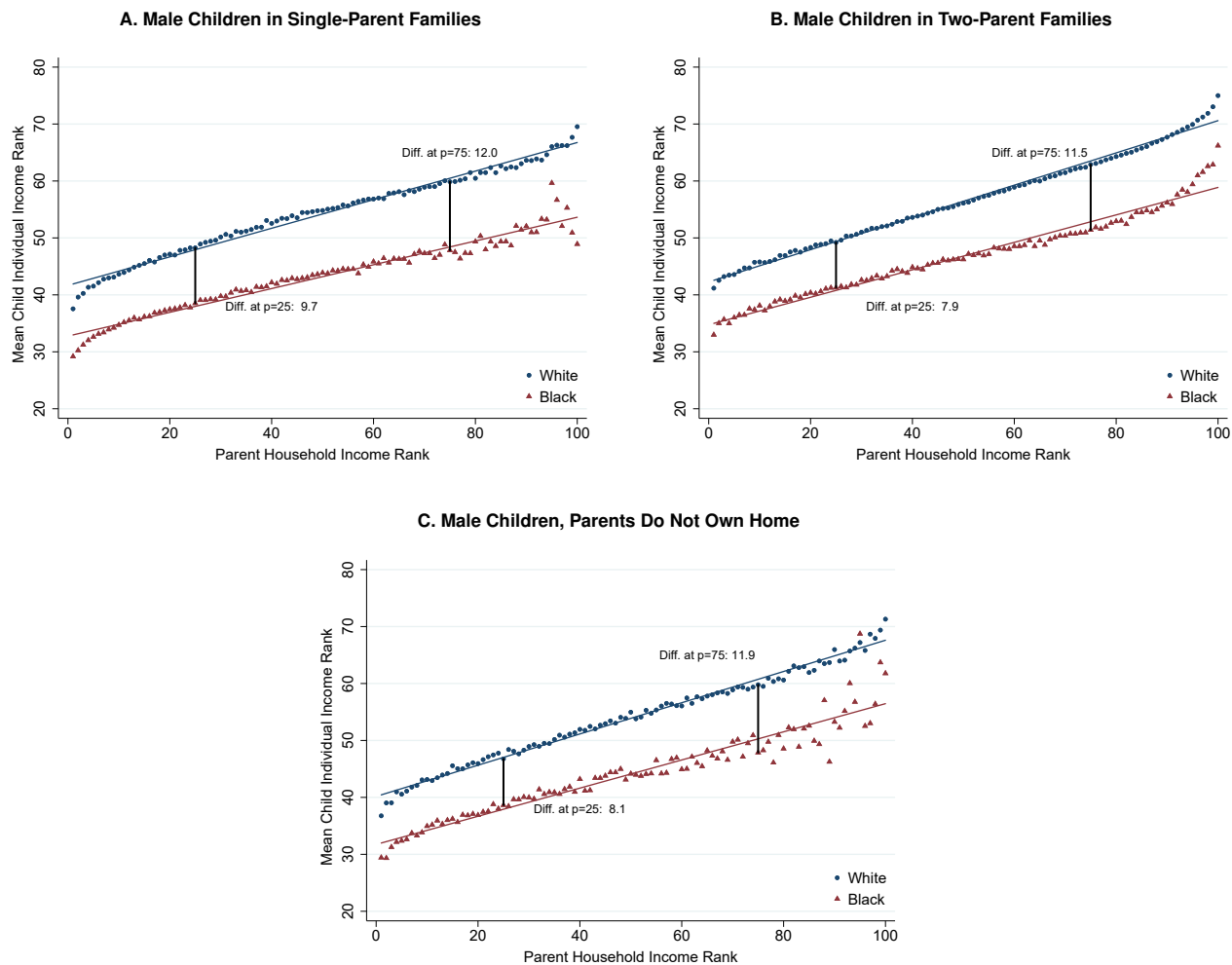
*Notes:* This figure plots the distribution of occupations by race and gender for black and white children. The sample consists of children whom we observe in the ACS at age 30 or older and who report working in the previous year in the ACS. Occupations are coded using the one-digit ACS occupation codes. In Panel A, we focus on children with parents in the third decile of the household income distribution; in Panel B, we focus on children with parents in the 8th decile. We use our baseline definition of parent household income ranks in this analysis. For each parent income decile and race, we also report the minimum fraction of people of black workers that would have to be reallocated in order to match the occupational distribution of white workers.

# ONLINE APPENDIX FIGURE IV: Intergenerational Gaps in Household and Spousal Income, by Gender



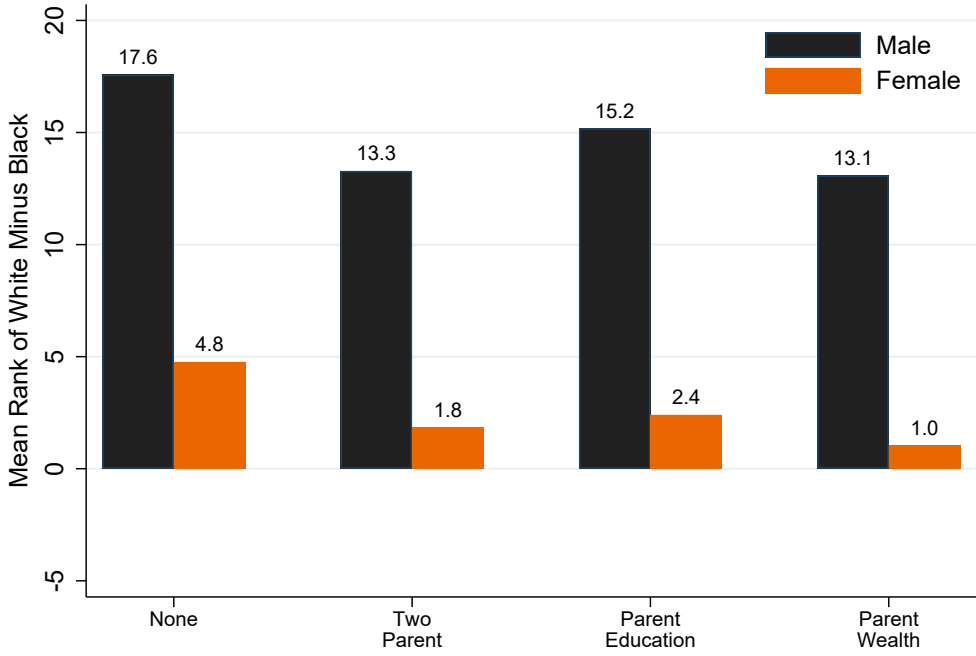
*Notes:* This figure replicates Figure V using children household income ranks (Panels A and B) and spousal income ranks (Panels C and D) instead of individual income ranks. Spousal income is defined as child household income minus child individual income; children who are not married are assigned spousal income of 0 and are included in the figures. See notes to Figure V for further details.

# ONLINE APPENDIX FIGURE V: Black-White Intergenerational Gaps, Controlling for Parental Marital Status and Wealth



*Notes:* These figures replicate Figure Va for male children in single-parent families (Panel A), two-parent families (Panel B), and among parents who do not own a home (Panel C). See notes to Figure Va for further details and Section III for definitions of parental marital status and home ownership. The best-fit lines are estimated using an OLS regression on the binned series.

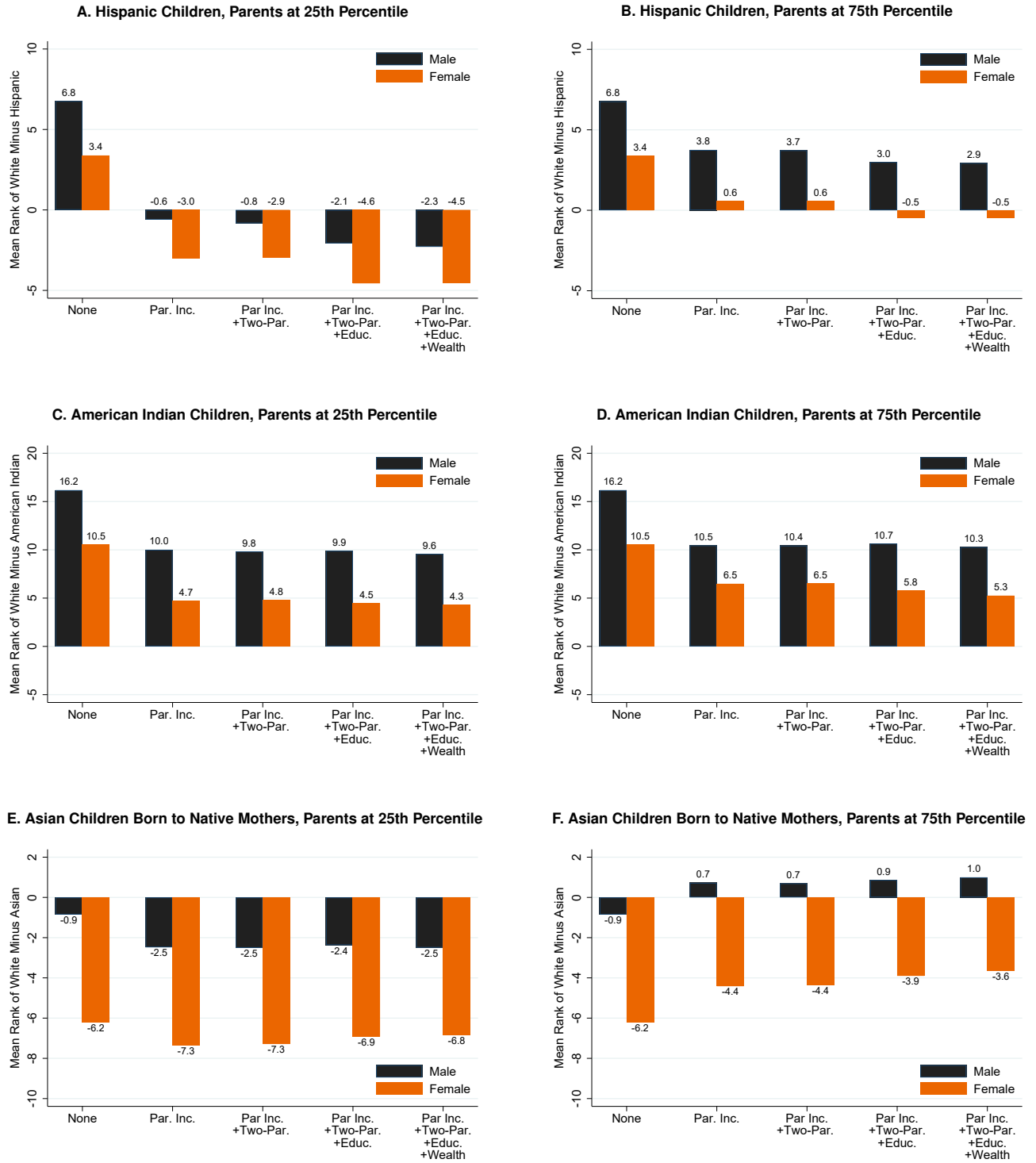
ONLINE APPENDIX FIGURE VI: Effects of Family-Level Factors on the Unconditional Black-White Gap



*Notes:* This figure shows how the black-white gap in children’s individual income ranks changes as we control for family-level factors, without conditioning on parental income. Each bar plots an estimate from an OLS regression of children’s individual income ranks on an indicator for being white and a single set of additional control variables. The first pair of bars show the unconditional black-white gap in mean individual income ranks for male and female children, respectively. The subsequent bars show how the coefficients on the white child indicator changes as additional controls are added. We use the same three groups of controls as in Figure VIII, but include only one group of controls in each regression (without controlling for parental income). See notes to Figure VIII for definitions of the control variables.

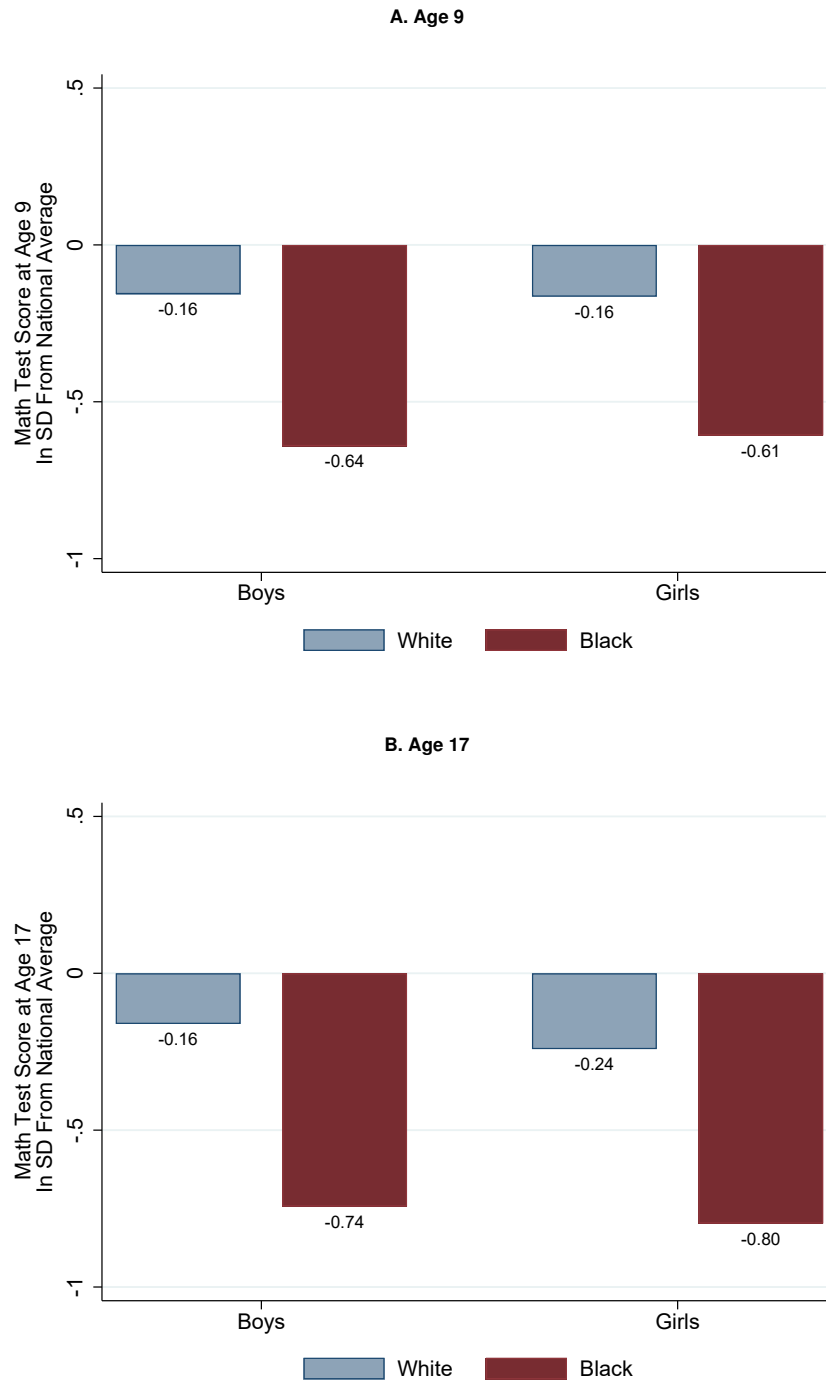


ONLINE APPENDIX FIGURE VII: Effects of Family-Level Factors on Intergenerational Gaps



Notes: These figures replicate Figure VIII for Hispanic children (Panels A-B), American Indian children (Panels C-D), and Asian children whose mothers were born in the U.S. (Panels E-F). All panels show gaps for the relevant group relative to whites. See notes to Figure VIII for further details.

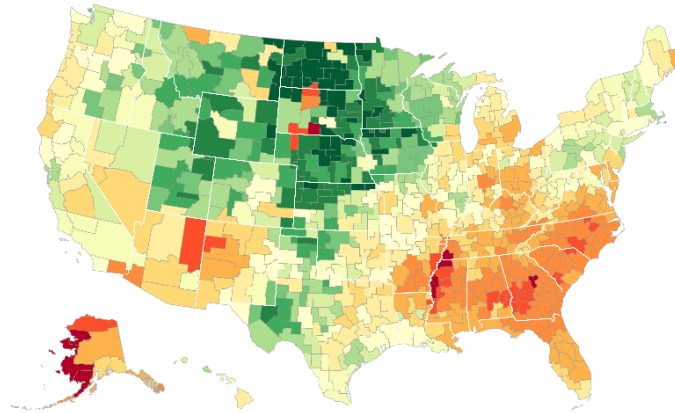
# ONLINE APPENDIX FIGURE VIII: Black-White Gaps in Test Scores for Low-Income Students, by Gender



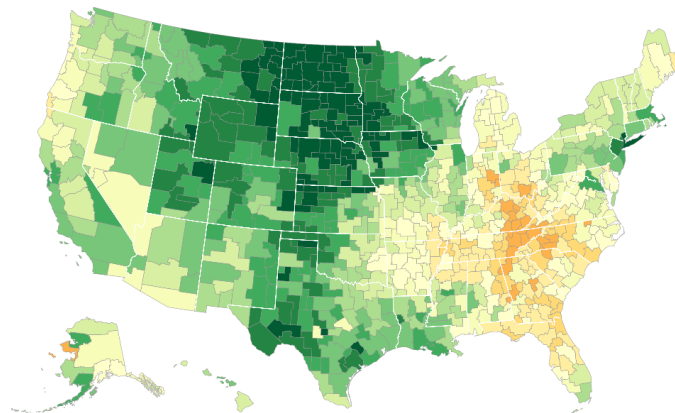
*Notes:* These figures plot mean math test scores from the National Assessment of Educational Progress for blacks and whites by gender in 2012. The sample consists of all children who are eligible for free or reduced price lunch programs. Panel A presents data for children at age 9, while Panel B presents data for children at age 17. The scores are scaled in standard deviations from the national mean among children in the same cohort. The data used to construct this figure are publicly available and can be downloaded from <https://nces.ed.gov/nationsreportcard/litdata/>.

ONLINE APPENDIX FIGURE IX: Geography of Upward Mobility, Mean Household Income Rank for Children with Parents at 25th Percentile

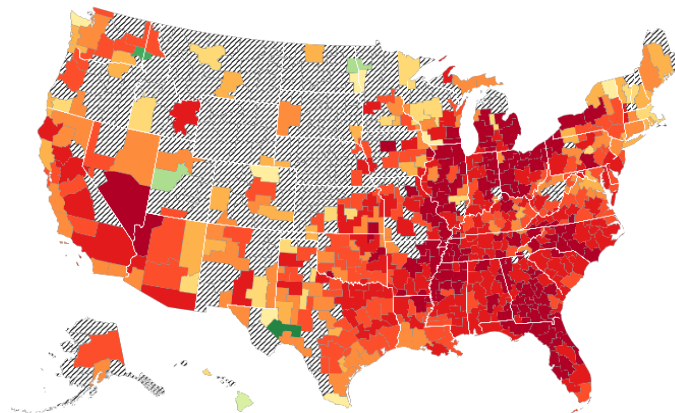
**A. Full Population**



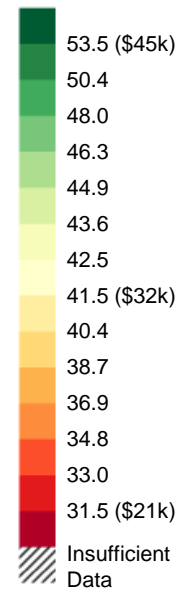
**B. Whites**



**C. Blacks**



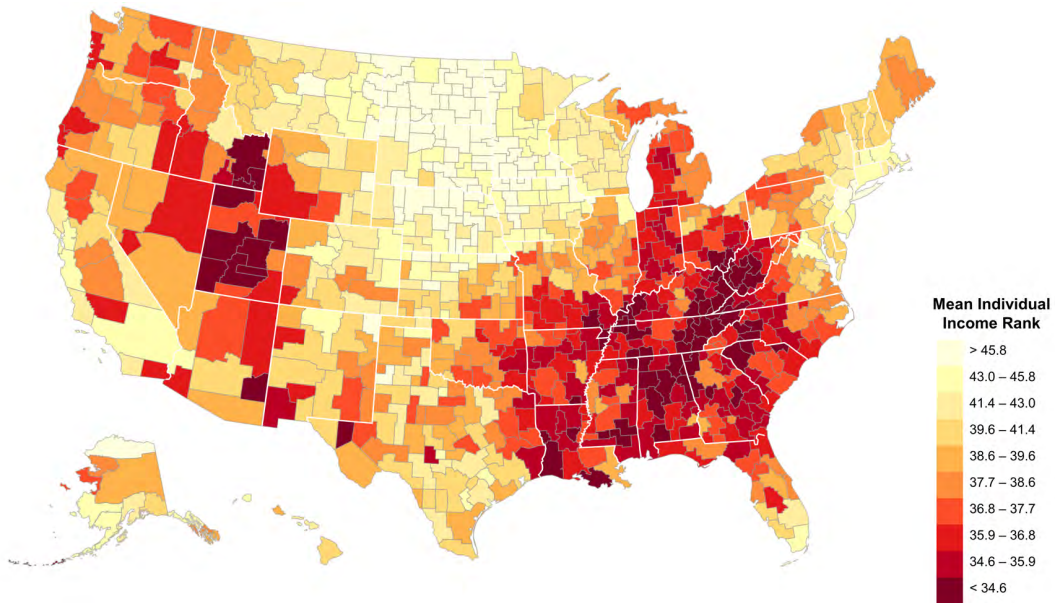
**Mean Household  
Income Rank**



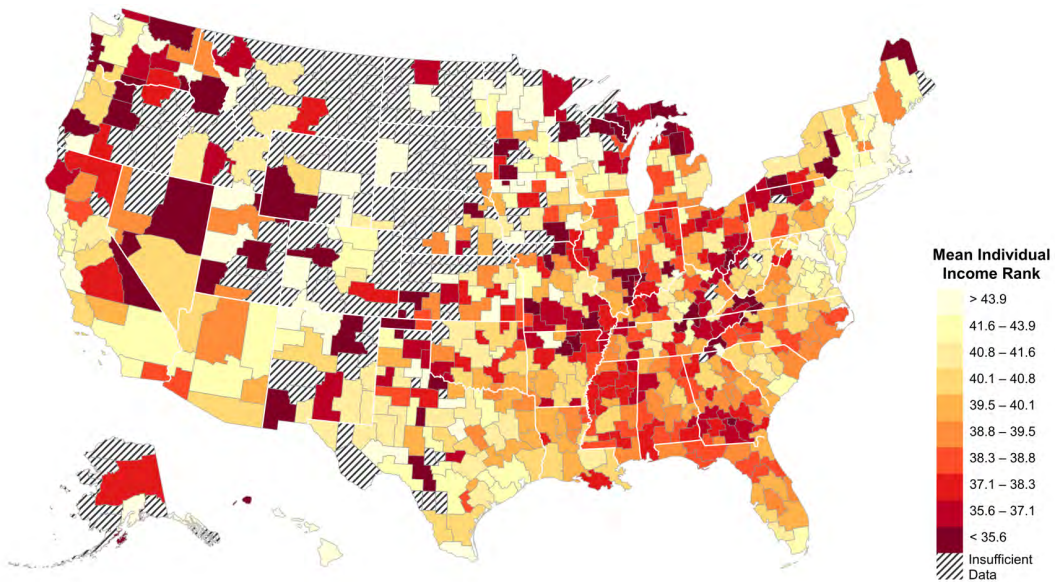
*Notes:* These figures replicate the results in Figure IX using mean child household income rank for children with parents at the 25th percentile. Panel A shows the predicted household income rank for children of all races, while Panel B and C show the same statistic for white (Panel B) and black children (Panel C). The dollar amounts equivalent to the income ranks at the cutoffs are rounded to the nearest thousand (in 2015 dollars). For further details regarding the construction of the maps, see notes to Figure IX.

# ONLINE APPENDIX FIGURE X: Geography of Upward Mobility - Females with Parents at 25th Percentile

## A. White Females with Parents at 25th Percentile

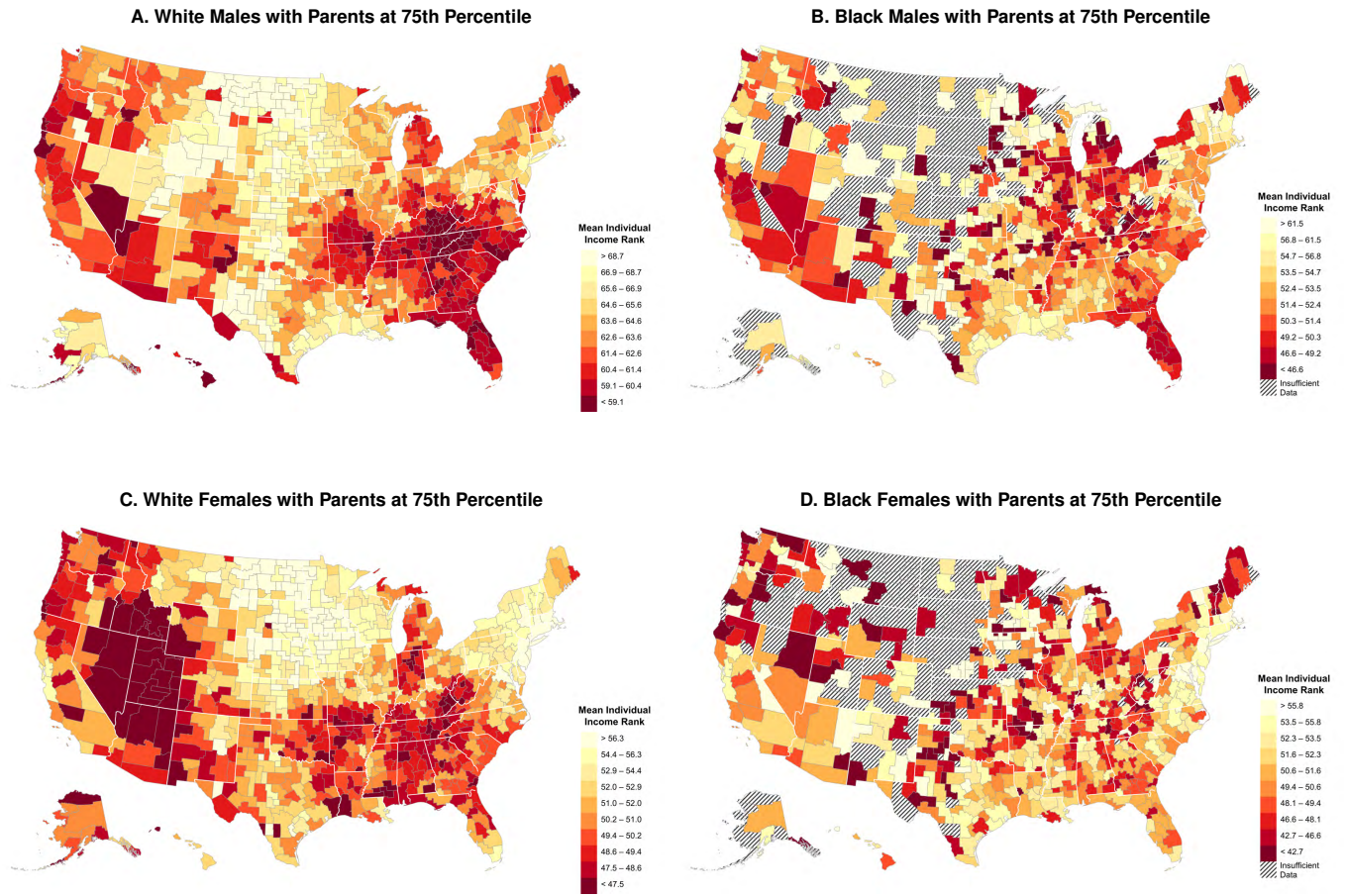


## B. Black Females with Parents at 25th Percentile



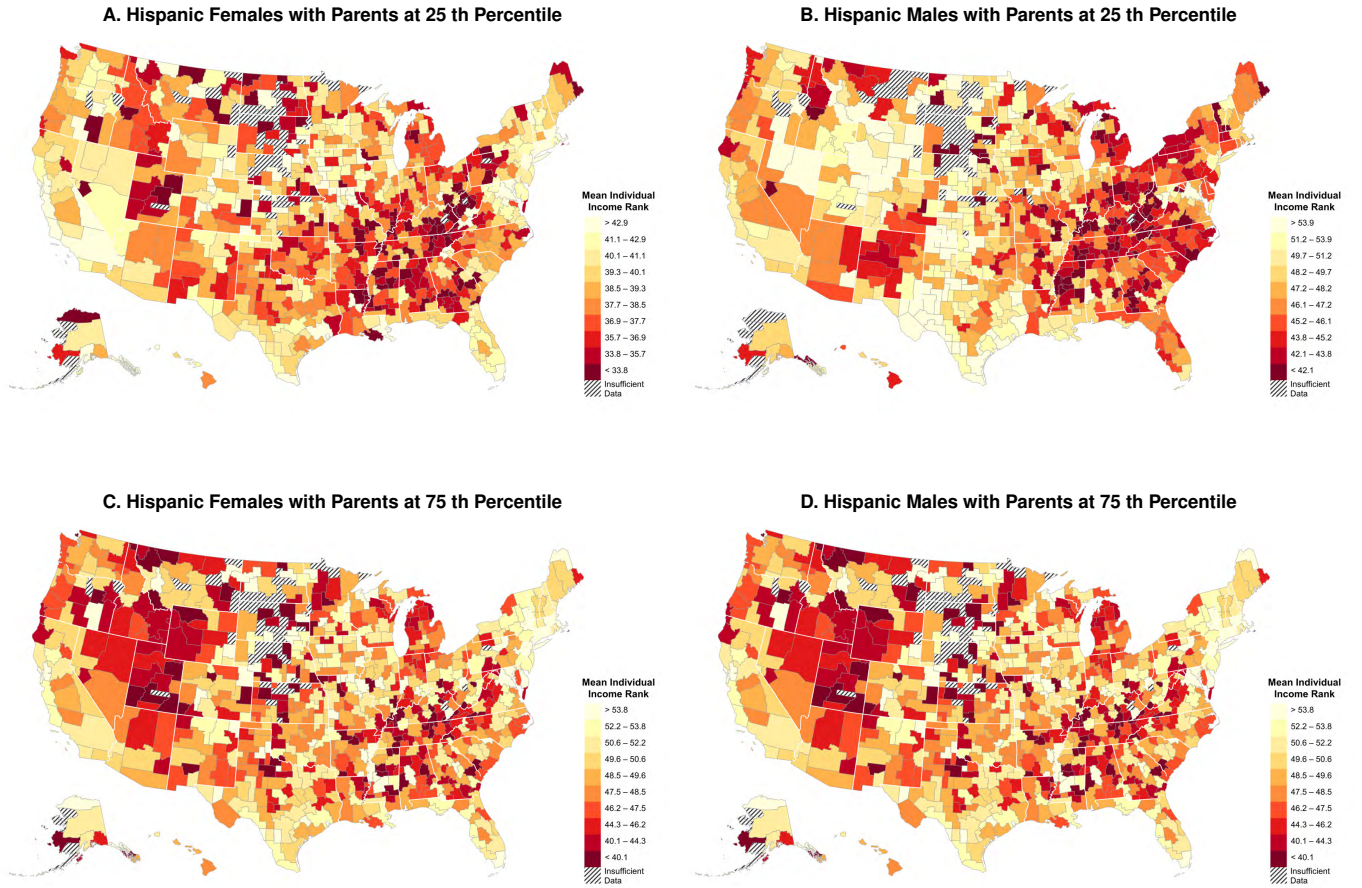
*Notes:* These figures replicate the results in Figure IX for females. In these figures, the maps are constructed by grouping CZ observations into ten deciles and shading the areas so that lighter colors correspond to higher absolute mobility. Areas with fewer than 20 children in the core sample, for which we have inadequate data to estimate mobility are shaded with the cross-hatch pattern. Panel A shows the mean child individual income rank for white female children, while Panels B shows the same statistic for black females. For further details regarding the construction of the maps, see notes to Figure IX.

ONLINE APPENDIX FIGURE XI: Geography of Upward Mobility - Blacks and Whites with Parents at 75th Percentile



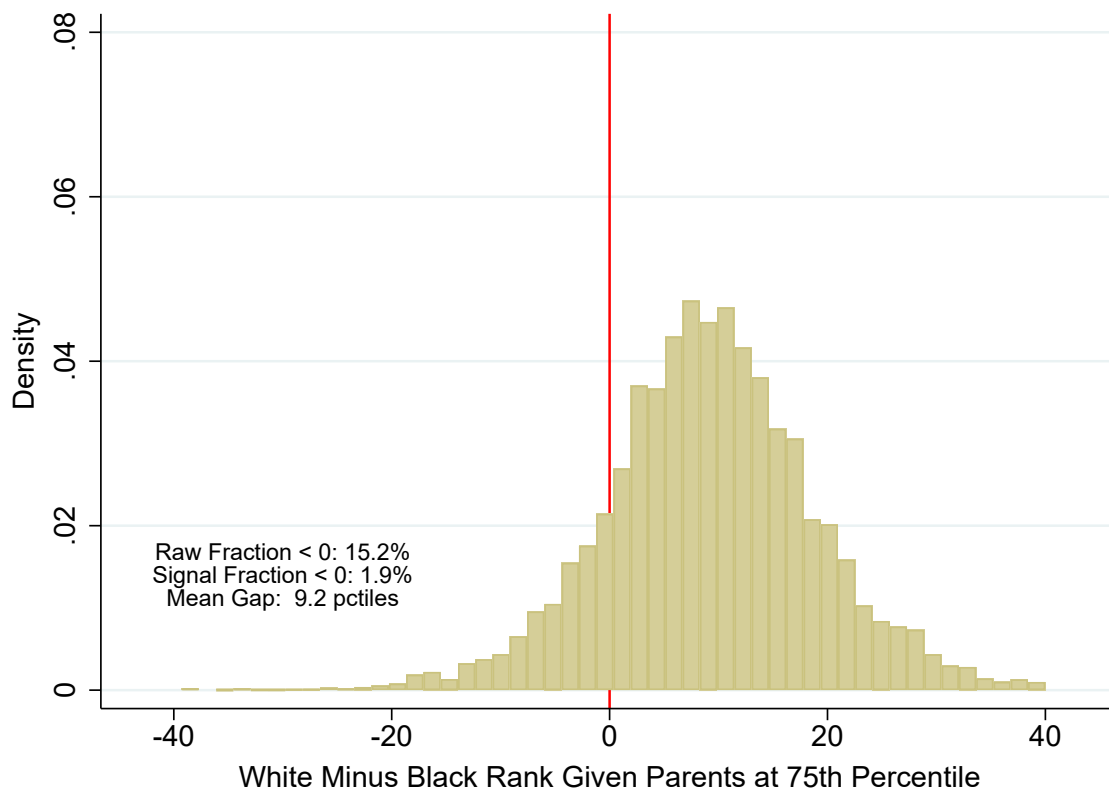
*Notes:* These figures replicate the results in Figure IX for black and white children with parents at the 75th percentile of the income distribution. In these figures, the maps are constructed by grouping CZ observations into ten deciles and shading the areas so that lighter colors correspond to higher absolute mobility. Areas with fewer than 20 children in the core sample, for which we have inadequate data to estimate mobility are shaded with the cross-hatch pattern. Panel A shows the mean child individual income rank for white male children, while Panels B, C, and D show the same statistic for black males, white females, and black females, respectively. For further details regarding the construction of the maps, see notes to Figure IX.

ONLINE APPENDIX FIGURE XII: Geography of Upward Mobility - Hispanic Children



*Notes:* These figures reproduce the results in Figure IX for Hispanic children with parents at the 25th and 75th percentile of the income distribution. In these figures, the maps are constructed by grouping CZ observations into ten deciles and shading the areas so that lighter colors correspond to higher absolute mobility. Areas with fewer than 20 children in the core sample, for which we have inadequate data to estimate mobility are shaded with the cross-hatch pattern. Panel A and B show the mean child individual income rank for Hispanic female and male children with parents at the 25th percentile, while Panels C and D show the same statistic for children with parents at the 75th percentile. For further details regarding the construction of the maps, see notes to Figure IX.

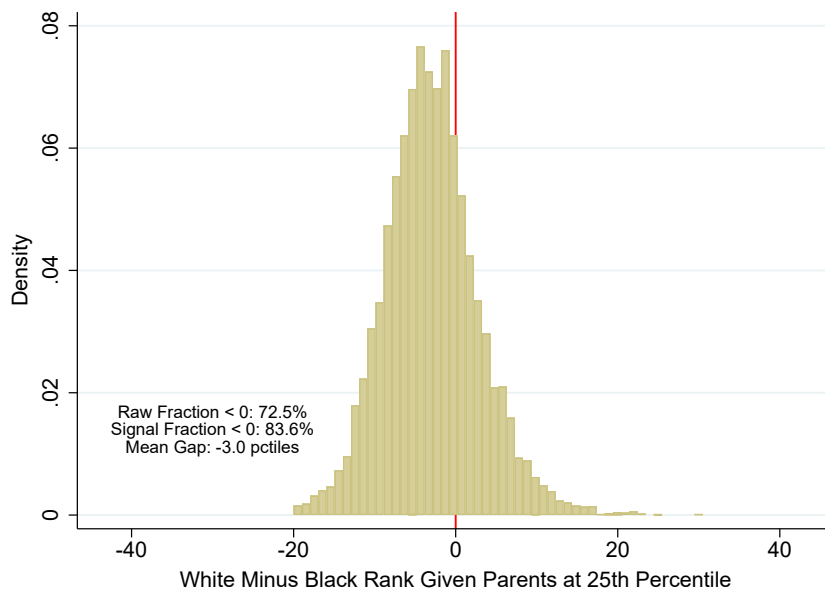
ONLINE APPENDIX FIGURE XIII: Distribution of Black-White Gap in Individual Income Ranks, Males with Parents at 75th Percentile



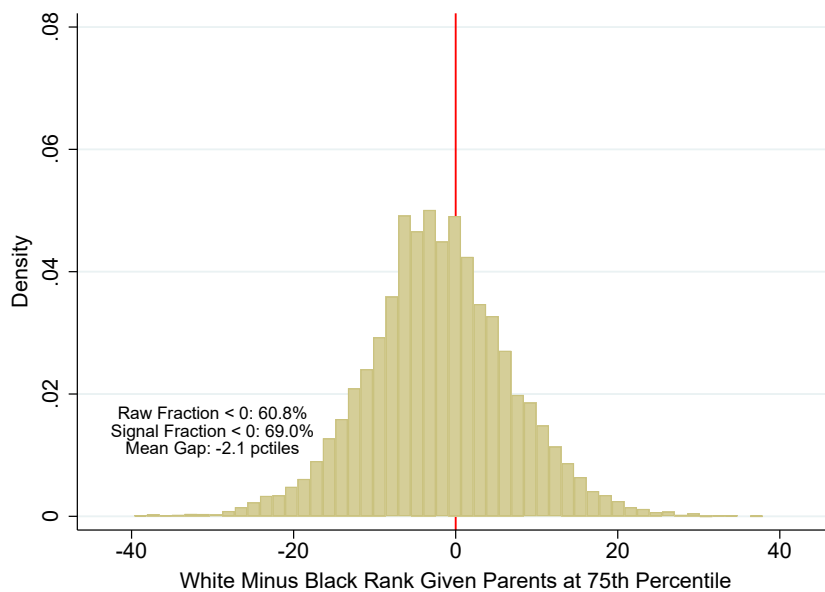
*Notes:* This figure replicates the results shown in Figure Xa for males with parents at the 75th percentile of the income distribution. For details, see notes to Figure Xa.

# ONLINE APPENDIX FIGURE XIV: Distribution of Black-White Gap in Individual Income Ranks, Females

## A. Distribution of Female Black-White Gap in Individual Income Ranks, Parents at 25th Percentile



## B. Distribution of Female Black-White Gap in Individual Income Ranks, Parents at 75th Percentile

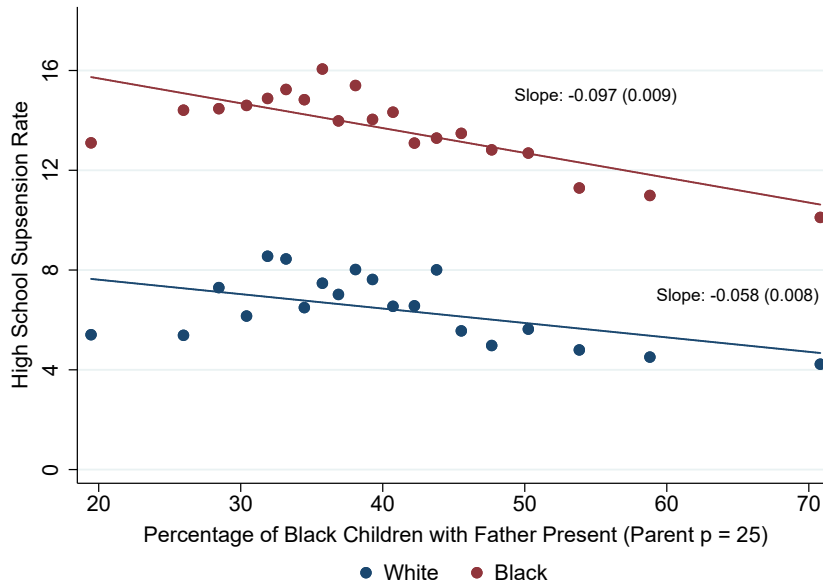


Notes: This figure replicates the results shown in Figure Xa for females with parents at the 25th (Panel A) and 75th (Panel B) percentile of the income distribution. For details, see notes to Figure Xa.

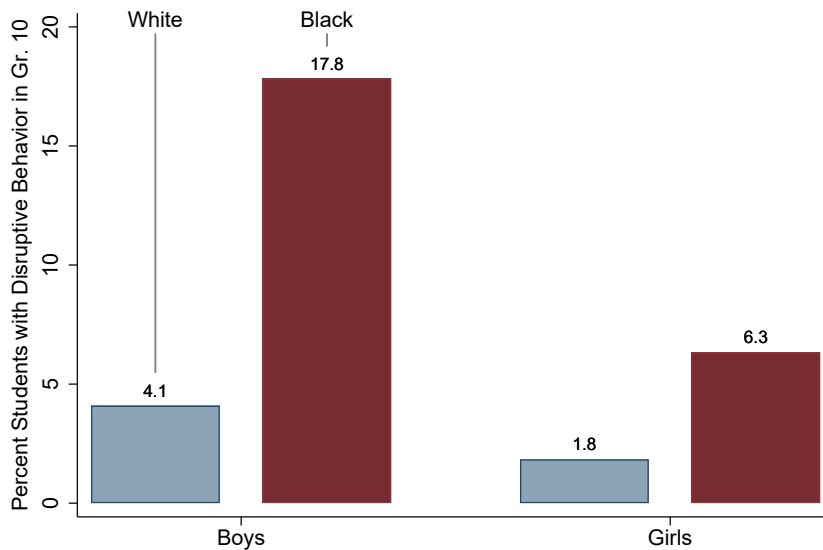


# ONLINE APPENDIX FIGURE XV: Suspension Rates and Disruptive Behavior, by Race and Gender

**A. High School Suspension Rate for Males vs. Fraction with Fathers in Low-Poverty Areas**



**B. Disruptive Behavior**



*Notes:* Panel A presents a binned scatter plot of the relationship between the high school suspension rate of black and white male students separately, and the predicted share of black children with parents at the 25th percentile who have a father present in childhood. The sample is restricted to tracts with a poverty rate of 10% or less according to the 2000 decennial Census. The data on suspension rate cover all states except for Indiana, Michigan and Tennessee and are publicly available from the Office of Civil Rights (<https://ocrdata.ed.gov/flex/Reports.aspx?type=school>). Suspension rates are calculated in 2013 and are defined as the number of black students without disabilities who receive at least one out of school suspension during the year, divided by the total number of black students in the school. The best fit line and slope are estimated on the tract level data. Panel B presents the share of low-income students reported as disruptive in class in Grade 10 by race and gender. The share of disruptive students is defined as the share of students described as disruptive in class most of the time or all of the time by their teachers in the first follow-up to the National Educational Longitudinal Study of 1988. NELS data is publicly available and can be downloaded from [https://nces.ed.gov/surveys/nels88/data\\_products.asp](https://nces.ed.gov/surveys/nels88/data_products.asp).