

# Growing Up with Density: Childhood Exposure and Adult Neighborhood Choice

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## Abstract

Using address histories linked across generations, I show that the density of a person's childhood neighborhood predicts the density of the neighborhood they choose as an adult. The relationship holds even among individuals who move far from their childhood home, persists well into adulthood, and reflects a choice of urban form rather than a correlate of socioeconomic status. An age-at-move design shows that the adult choice of higher density grows with years of childhood experience in high-density neighborhoods, indicating that preference for density is affected by exposure. Because today's density shapes future preference for it, densification policies may have larger long-run effects than exogenous preferences imply.

**Keywords:** Childhood, Neighborhood, Density, Adult, Intergenerational Mobility, Urban, City center, Preference formation, Exposure, Experience

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# 1 Introduction

Population density brings substantial economic benefits. By facilitating interpersonal interaction and thickening labor markets, density raises productivity and income (Duranton and Puga, 2020). Denser neighborhoods also support a greater variety of consumption amenities and more efficient provision of public goods and housing (Glaeser et al., 2001; Couture and Handbury, 2020; Su, 2022; Miyauchi et al., 2025), and residents living with high density generate lower household carbon emissions (Glaeser and Kahn, 2010; Zheng et al., 2011; Bento et al., 2005; Brownstone and Golob, 2009; Ewing and Rong, 2008). However, most U.S. households live in single-family detached homes in low-density neighborhoods and are highly car-dependent (U.S. Department of Housing and Urban Development, 2020; U.S. Census Bureau, 2023; Federal Highway Administration, 2023). This dispersed pattern of residence has become an feature of American life despite the well-known benefits of density.

The prevalence of low-density living reflects both demand- and supply-side forces. On the demand side, a majority of Americans report preferring a larger house farther from schools, stores, and restaurants over a smaller house within walking distance of them, indicating strong taste for low-density living (Gómez, 2021). On the supply side, increased land-use regulations suppress the supply of high-density housing, further fueling the prevalence of low-density living (Gyourko and Molloy, 2015; Glaeser and Gyourko, 2018). Ultimately, these supply restrictions are themselves political manifestation of household preferences. Homeowners are shown to be willing to bear substantial costs to keep density out (Gyourko and McCulloch, 2024). Therefore, understanding the origins of density aversion is important for explaining both the demand for low density and the regulatory constraints that make high-density housing scarce.

Where might a taste for low density come from? A large body of evidence shows that early-life experiences can shape preferences and choices later in life.<sup>1</sup> Preferences for density may likewise not be exogenously given but formed by the density people experience early in life. If true, today’s settlement patterns may partly determine neighborhood demand in the next generation. Policies that enable more families to live in denser neighborhoods could then raise not only current density but also future generations’ demand for density and, through more permissive land-use regulation, its supply, indirectly amplifying their long-run effects.

In this paper, I show that the density of a person’s childhood neighborhood does shape the density of the neighborhood they choose in adulthood. My analysis is based on longitudinal address histories that follow individuals in their adulthood and link them to their parents, so that I observe both the neighborhoods parents chose while raising their children and, years later, the neighborhoods those children choose after leaving the parental home. The linked sample covers around 7 million individuals born between 1989 and 2006, observed as adults between ages 18 and 36, and the neighborhoods they live in defined as Census block groups.

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<sup>1</sup>Macroeconomic conditions experienced early in life shift attitudes toward risk and redistribution (Malmendier and Nagel, 2011; Giuliano and Spilimbergo, 2014); childhood environments leave lasting marks on adult economic outcomes (Chetty and Hendren, 2018a); and early-life experience shapes later brand choices and sensitivity to gasoline prices (Bronnenberg et al., 2012; Severen and van Benthem, 2022).

First, I show that childhood density strongly predicts adult density: the elasticity of adult neighborhood density with respect to childhood neighborhood density is 0.6. Much of this relationship reflects intergenerational geographic persistence. The median individual lives close to their childhood neighborhood as an adult, so the full-sample estimate largely captures people who never leave the orbit of their childhood environment.

If the association reflected only this tendency to settle nearby, in areas whose density resembles the childhood neighborhood's simply because density is spatially correlated, it should disappear once the density of the surrounding area is held fixed. I control for the average density of the areas surrounding the childhood neighborhood, measured over a series of concentric rings, in the sample of individuals who have left the Census block group in which they grew up. The relationship declines only modestly, with an elasticity of 0.5, still far above zero, which means holding the surrounding density profile constant, denser childhood neighborhoods still strongly predict denser adult neighborhood choices. The relationship survives also among individuals who relocate at least 500 miles from their childhood homes, with an elasticity of 0.08. Thus, the childhood–adult density association reflects more than the mechanical effect of staying near where one grew up.

One potential concern with interpreting this relationship is that density per se may not be what individuals perceive as children or choose as adults, but merely a *correlate* of the neighborhood features they do perceive or choose. For example, dense neighborhoods in the U.S. are, on average, poorer, and socioeconomic position persists across generations, so children raised at high density may settle in dense neighborhoods because that is what they can afford, not what they prefer. To assess this concern, I examine what else childhood density predicts. Holding other childhood neighborhood characteristics fixed, childhood density does not predict the income or college share of the adult neighborhood in ways that could generate a spurious density relationship. In contrast, childhood density does predict the adult neighborhood's other urban attributes: proximity to downtown, transit commuting, and multifamily housing. It shows that what individuals raised at density carry into adulthood is a taste for *urban form*, not a socioeconomic position.

The key challenge with interpreting the relationship between childhood density and adult density choice is that, the relationship itself does not establish a causal effect of growing up at high density on preferences for density in adulthood, because the relationship is subject to omitted variable bias. Preferences for density may be transmitted directly within families rather than being formed by the childhood environment. Parents who prefer dense, urban neighborhoods both choose such neighborhoods to raise their children in and may pass the preference directly rather than through the neighborhood environment itself, leading to a spurious relationship between childhood and adulthood density.

To isolate the causal effect of childhood exposure to density, I exploit the timing of parental moves in an age-at-move design in the spirit of Chetty and Hendren (2018a). Among children whose parents made a single move from a low-to-modest-density to a high-density neighborhood, the child's age at the move determines how many

childhood years were spent in the dense destination, while parental preferences for density are differenced out. If direct transmission were the only mechanism, the effect of a parental move on the child's adult density would not depend on when the move occurred. I find that children who moved to high density at the younger ages choose the denser neighborhoods in adulthood. The age gradient survives controlling for the interactions of age-at-move and the density of the areas surrounding the destination, so it does not merely reflect earlier movers settling near their parents' dense destination because of deeper local ties. Following a similar age-at-move design, I find that children who moved away from high density at older ages choose denser neighborhoods in adulthood. These findings imply that additional years of childhood high-density experience raise the demand for density in adulthood.

The transmission of childhood density exposure to adult density choice indicates that the effects of densification policies could extend beyond the present time. Because children raised at higher density grow up to demand more density themselves, policies that enable more families to live in dense neighborhoods today also raise the density that the next generation will choose. Moreover, to the extent that this demand reflects a genuine taste for urban form, it may reinforce densification over the long run by weakening the political foundation of local anti-density regulation. Evaluations that treat preferences as fixed would then understate the long-run effects of pro-density policies such as upzoning.

This paper contributes to several strands of literature. First, my results speak to how neighborhood preferences are formed. Gyourko and McCulloch (2024) present evidence showing a distaste for housing density with substantial heterogeneity with strong distaste more prevalent in low-density high-income suburbs. Such aversion supplies a political basis for density restrictions, which carry social costs including housing shortages and higher transportation expenditures. My results suggest where such preferences may come from. Policies that encourage families with children to live in denser neighborhoods may shift the preferences of the next generation. Closest to my finding is Feijten et al. (2008), who find in a Dutch survey of roughly 3,000 respondents that accumulated experience of urban, suburban, and rural environments correlates with later migration to similar environments. My study utilizes a substantially larger sample, direct measurement of childhood and adult neighborhood characteristics rather than survey recall, and an age-at-move design that isolates the effect of experience.

Beyond urban economics, the idea that childhood neighborhood experience can shape later neighborhood demand contributes to the broader literature on how early-life experiences affect preferences and behavior later in life. Such experience-based preference formation can have economically important consequences (Becker, 1996; Bisin and Verdier, 2001; Malmendier and Nagel, 2011; Bronnenberg et al., 2012; Lambert-Pandraud and Laurent, 2010; Anderson et al., 2015; Malmendier and Shen, 2018; Severen and van Benthem, 2022).

Furthermore, my work relates to the literature on intergenerational mobility that uses long-run longitudinal data. The connection runs along two dimensions. First, my empirical strategy borrows elements from Chetty et al. (2014, 2016); Chetty and Hendren (2018a,b) in measuring neighborhood characteristics for parents and children at the indi-

vidual level over time. Linking parents to their children lets me observe the neighborhoods parents choose and, years later, those their adult children choose. Second, this literature has focused mainly on socioeconomic outcomes such as income. I show that preferences for urban neighborhood characteristics also persist across generations through childhood neighborhood exposure. Therefore, difference in density preferences can propagate across generations, generating highly persistent demand for low-density living and the inequality of demand for density. The mechanism parallels the persistence of income inequality demonstrated in Fogli et al. (2026).

## 2 Data

My primary data source is the Data Axle consumer database, a file of U.S. household directory compiled for marketing purposes. It is assembled from county deed transfers and tax assessments, voter registration files, telephone directories, and bill processors, among other sources, and covers the large majority of U.S. adults and households. The records are regularly matched against the Postal Service’s National Change of Address (NCOALink) file to capture moves and update addresses. I use annual data from 2006 to 2025, each of which records the individuals residing at every address along with their ages. Each address is geocoded to a Census block group, to which I attach neighborhood characteristics from the 2010-2014 American Community Survey (ACS): population density, income, the share of college graduates, the share of commuters using transit, and the mix of housing types.

Two features of the data make it possible to study the effect of childhood neighborhood experience on adult neighborhood choice. First, individuals carry stable identifiers over time, so I can follow a person’s residential history. Second, addresses are recorded at the household level, so I can link adult children to their parents during the years in which they co-reside after the child turns 18. I then follow each generation separately: the parents backward, to recover the neighborhoods in which the child was raised, and the child forward, to the neighborhoods chosen after establishing an independent household.

### 2.1 Linkage Between Children and Parents

For privacy reasons, Data Axle does not disclose location records for individuals under age 18. Therefore, I reconstruct a best-estimate childhood residential history indirectly. I use observed episodes of co-residence between adult children and their presumed parents to construct parent–child links, and then use the residential histories of the linked parents to infer where the children lived before reaching adulthood.

I first select all annual records for individuals between ages 18 and 36. For each such reference individual, I identify all other adult household members who are between 18 and 45 years *older* than the reference individual and treat them as candidate parents, with whom the reference individual is assumed to have lived during childhood. This age window excludes cases in which a parent would have had the child before age 18 or after age 45.

If only one candidate parent is identified, or if all candidates share the same residential history, I assign that residential history for the years before the reference individual turned 18 to the reference individual. If multiple candidates are identified and their residential histories differ, I apply selection rules that necessarily involve some judgment. Female candidates take priority: when a male and a female candidate have different residential histories, I use the female candidate's. When several candidates of the same sex remain, I select one at random and use that candidate's residential history.

**Childhood Neighborhoods** I assign childhood neighborhoods using the residential locations of the linked parents. For every year before the individual turns 18, the parents' address in that year defines the individual's neighborhood, and the individual's age in that year follows from the birth year. This yields a neighborhood–age pair for each childhood year in which the parents' location is observed.

**Adult Neighborhood Choices** From age 18 onward, I observe the individual's own residential location directly. Because location is recorded at the household level, I also observe in each year whether the individual shares an address with at least one linked parent. I define an individual as independent from the first year in which they no longer co-reside with any linked parent. Independence does not require living alone: an individual who shares a residence with others, a spouse, roommates, or unrelated adults, counts as independent so long as no linked parent is present.

### 2.1.1 Validation Tests

I perform two validation tests to ensure that the dataset provides a realistic parent–child linkage. First, I show that the shares of children under 18 imputed from my linkage are highly correlated, at the county level, with the corresponding shares reported in the American Community Survey (ACS) across three distinct time periods. Second, I calculate the fraction of adult children co-residing with their linked parents at each age and show that it starts high at age 18 and declines with age, consistent with the typical pattern of children leaving the parental home.

Furthermore, to verify that Data Axle's address histories capture migration accurately, I compute county-level net migration rates over the same three periods and compare them with their ACS counterparts, and the two correlate closely.

Appendix A1 describes the above validation tests in detail and reports summary statistics for the linked children.

### 3 Empirical Analysis and Results

#### 3.1 Relationship Between Adult Neighborhoods and Childhood Neighborhoods

I first document how the density of the neighborhoods young adults choose relates to the density of the neighborhoods in which they grew up by estimating

$$\ln D_i^{Adult} = \beta_0 + \beta_{A,C} \ln D_i^{Child} + \theta' X_i + \varepsilon_i, \quad (1)$$

where  $i$  indexes individuals,  $\ln D_i^{Adult}$  is the log of the time-weighted average population density of the Census block groups in which person  $i$  resides in adulthood (ages 18 and above), and  $\ln D_i^{Child}$  is the corresponding measure for the block groups in which person  $i$  resided in childhood (ages 5 to 17).  $X_i$  is a vector of childhood neighborhood characteristics. The coefficient  $\beta_{A,C}$  is the descriptive elasticity of adult neighborhood density with respect to childhood neighborhood density.

Column 1 of Table 1, Panel A, reports the estimate of  $\beta_{A,C}$  for the full sample, controlling for the childhood neighborhood's log median income, share of college graduates, and distance to the city center. Childhood density is strongly associated with adult density, with an elasticity above 0.6.<sup>2</sup>

##### 3.1.1 Geographic Persistence vs. Persistent Demand for Density

Because a majority of people do not move far from their childhood neighborhoods and density is spatially correlated, much of this raw association mechanically reflects intergenerational geographic persistence. The spatial correlation is strong: regressing each Census block group's density on the average density of its surrounding areas, measured over concentric distance bands, shows that nearby density powerfully predicts a neighborhood's own density (Appendix Figure A4). Settling anywhere near one's childhood neighborhood may therefore reproduce its density mechanically.

To assess the extent to which the relationship is driven by geographic persistence, I control for the density profile around each childhood neighborhood, calculating the log average population density of the areas within rings of 0–1, 1–2, 2–5, 5–10, 10–20, and 20–50 miles and including these as controls. If individuals who grew up in dense neighborhoods choose dense neighborhoods simply because they settle nearby, the density of the surrounding rings should absorb the relationship. If, conditional on the density profile of the nearby rings, one's own childhood neighborhood density continues to predict adult density, the remaining association captures the portion not driven by geographic persistence. Columns 2 of Table 1, Panel A, show that, controlling for the density profile of nearby areas, the density of one's own childhood neighborhood continues to powerfully predict adult density choices, with the childhood–adult

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<sup>2</sup>Appendix Figure A5 presents binned scatterplots of adult neighborhood density against childhood neighborhood density, residualized on the same controls, measured in both logs and national ranks. The relationship is close to linear throughout the distribution and steepens slightly at the very top, in both logs and ranks.

elasticity declining only modestly, to 0.5.

Figure 1 shows how this relationship evolves with age. Panel (a) plots adult neighborhood density by age, from 18 to 34, separately for individuals raised at low, medium, and high density. The three groups start far apart at 18 but converge only partially. Panel (b) presents the conditional version, controlling for the surrounding ring densities, with children raised at low density as the comparison group. The conditional gaps narrow through the mid-twenties, as individuals disperse from their childhood areas, but then flatten, with sizable gaps remaining at age 34. The childhood–adult density relationship is thus not a transient feature of early adulthood.<sup>3</sup>

The childhood-adult density relationship also survives among individuals who leave their childhood environment entirely. Column 3 restricts the sample to individuals whose adult neighborhood lies at least 500 miles from their childhood neighborhood. The elasticity falls substantially but remains positive at 0.08. For these movers, little of the childhood environment or local ties travels with them, and yet the density of the neighborhood they grew up in still predicts the neighborhood density chosen in adulthood.

Interestingly, the decision to move far from the childhood home does not appear random. It is itself decreasing in childhood density. Figure 2a presents binned scatterplots of the share of individuals moving more than 1 or more than 5 miles from their childhood neighborhood against childhood density. More than half of individuals who grew up in low-density locations move away, whereas far less than half of those who grew up in the densest neighborhoods do. Figure 2b further shows that the geographic persistence of those raised in dense places is particularly pronounced in early adulthood. The differential staying pattern may reflect more than inertia. For individuals raised at high density, the childhood neighborhood already offers the density they would otherwise have to seek elsewhere, so remaining in place is itself a way of choosing density. Note that person-years in which individuals co-reside with their parents are excluded from the sample, so this result is not driven by adult children remaining in the parental home. Part of the geographic persistence of density across generations may thus reflect elevated demand for density, expressed through the decision to stay near the dense neighborhoods of childhood.<sup>4</sup>

### 3.1.2 Density Choice Within Metros

One concern with density relationship is that it may capture sorting effect across metropolitan areas rather than reflecting a correlation between the adult demand for density and childhood exposure to it. Tastes for residing metropolitan areas with similar density profiles are likely correlated. Someone raised in New York City may be drawn to Chicago because it offers a similar labor market, amenities, or culture, not necessarily because of its similar density profile. But metros that share these features tend to share density profiles as well: New York City and Chicago are a case in point.

<sup>3</sup>Appendix Figure A7 presents the age-specific estimates  $\beta_a$  in both log-log and rank-rank specifications. The patterns are consistent. The childhood–adult density relationship declines with age but never approaches zero.

<sup>4</sup>This selection also bears on the result in Column 3: if the dense-raised individuals who move far away are those who care least about density, the estimated elasticity of 0.08 likely understates what it would be were far movers' density preferences similar to stayers'.

A positive estimate of the density elasticity could then arise entirely from children of dense neighborhoods choosing metros that happen to also contain many dense neighborhoods, without any of them seeking out density within the metro they choose.

To isolate the within-metro density choice, I re-estimate equation (1) replacing the density measure with each neighborhood’s density percentile *within* its own MSA, for both childhood and adult neighborhoods. The coefficient then measures whether children from *relatively* dense neighborhoods within a metro settle in *relatively* dense neighborhoods of whichever metro they end up in, with the metro’s overall density profile netted out. Column 4 of Table 1, Panel A, reports this specification for the full sample under the baseline specification: the rank-rank slope is 0.52. The estimate falls to around 0.04 among individuals who settled at least 500 miles from their childhood neighborhood (Column 5). The within-metro estimates suggest the childhood–adult density relationship primarily reflects a relationship at the neighborhood level rather than cross-metro sorting.

## 3.2 Case Studies of New York City and Chicago

To drive home the intuition behind these estimates, I use New York City and Chicago as a case study. Figure 3 takes all individuals who grew up outside each metropolitan area and later moved into it, and asks where, within the destination, those raised in high-density neighborhoods (at least 5,000 people per km<sup>2</sup>), located outside the metro itself, settle relative to overall in-movers. For each block group, the excess share is the share of dense-raised in-movers settling there minus the share of all in-movers. Block groups are then binned by distance to the city center (Panels a and c) and by density (Panels b and d), so positive values mark the parts of the metro these movers favor, and the dots in each panel sum to zero by construction.

In both cities, in-movers raised at high density are strongly overrepresented in block groups within roughly ten miles of the center and in the densest parts of the density distribution, and underrepresented in the outer, low-density periphery. This illustrates a genuine relationship between childhood density and adult density choice even in the absence of local ties.

In Appendix section A2, we continue our case studies by exploring the density choices of people raised in New York and Chicago.

### 3.2.1 Ruling Out Correlated Neighborhood Attributes

Another interpretive concern with the childhood–adult density relationship is that density may *proxy* for other neighborhood characteristics that persist across generations on their own. Dense neighborhoods in the U.S. are, on average, poorer, and a child raised in a lower-socioeconomic neighborhood is less likely to afford a high-income neighborhood

as an adult.<sup>5</sup> Since low-income neighborhoods are also denser on average, childhood density would predict adult density even absent any differences in demand specifically for density. The childhood neighborhood controls in equation (1) absorb correlates of the childhood neighborhood, but they cannot reveal whether density is what *adult* children specifically choose or merely a feature correlated with what they actually choose. Thus, I examine which other adult neighborhood characteristics childhood density predicts.

Panel B of Table 1 regresses each adult neighborhood attribute, namely density, income, the college share, the transit share, and distance to downtown, on childhood density and the set of childhood neighborhood controls, based on the sample of individuals residing at least 500 miles from their childhood neighborhoods, so that geographic proximity does not mechanically drive the estimates. Holding other childhood neighborhood features constant, childhood density does not significantly predict the college share of the adult neighborhood, and its association with adult neighborhood income is small and, if anything, positive, the opposite of what the affordability story predicts, since income is negatively correlated with density. The relationship between childhood density and adult choice is thus unlikely to reflect correlated socioeconomic characteristics. Childhood density does predict the distinctly urban attributes of the adult neighborhood. Individuals raised at higher density settle closer to downtown, in neighborhoods with higher transit-commuting shares and larger shares of structures with five or more units. Adults raised at high density choose neighborhoods that are not of markedly different socioeconomic position but are substantially more urban.<sup>6</sup>

### 3.3 Causal Effect of Density Exposure vs. Unobserved Direct Preference Transmission

The correlation between childhood density and adult density choice is consistent with the hypothesis that childhood experience with density raises adult demand for density. However, it could also arise from direct transmission of preferences within families. Parents who prefer dense, urban neighborhoods both choose such neighborhoods to raise their children in and may pass the preference on directly, rather than through childhood experience itself.

#### 3.3.1 Age-at-Move Strategy—Timing of Parental Moves

To separate the causal effect of childhood exposure to density from direct parent-to-child transmission of density preferences, I extend the analysis by exploiting the timing of parental moves. I focus on the sample of children whose parents moved exactly once from a low-density origin neighborhood. Some of these families moved to a high-density destination ( $\delta_i = 1$ ) and form the treatment group. The rest moved to other destinations and serve as the comparison group ( $\delta_i = 0$ ). Comparing the two groups at each age at move nets out whatever accompanies a move at a given child

<sup>5</sup>Appendix Table A2 reports regressions of log population density at the block-group level on other neighborhood characteristics, individually and jointly.

<sup>6</sup>Appendix Table A3 reports the same regressions on the full sample, with the surrounding rings of each neighborhood feature included as controls to purge the mechanical proximity channel. The pattern is the same: childhood density strongly predicts the urban attributes of the adult neighborhood, while its associations with neighborhood income and the college share, though statistically significant at the full sample size, are economically small and signed opposite to what the affordability story predicts.

age, such as income shocks and family disruptions, common to all movers. Within the dense-destination group, the child's age at the move determines the dose of density exposure. Children who moved young spent most of childhood in the high-density destination, children who moved late spent most of it in the low-density origin, and for moves occurring after the child left home, none of childhood was spent at high density.

If exposure raises adult demand for density, the adult density gap between the treatment and comparison groups should decline with age at move during childhood. Thus, the extent to which this gap varies with the child's age at the move to density reflects, at least in part, a genuine effect of exposure to the childhood location rather than solely transmitted preferences. If exposure did not matter at all, the effect of a parental move should not depend on *when* it occurred.

To implement this design, I estimate the following specification:

$$\ln D_{it}^{Adult} = \alpha + \sum_{m=10}^{21} \gamma_m [\mathbf{1}\{M_i = m\} \times \delta_i] + \delta_i + \lambda_m + \psi_a + \tau_t + \theta' X_i + \varepsilon_{it}, \quad (2)$$

where  $\ln D_{it}^{Adult}$  denotes the log density of the neighborhood in which child  $i$  resides in adulthood in year  $t$ ;  $M_i$  denotes the child's age when the parents moved; and  $\delta_i$  equals one if the move was from a low-density neighborhood (population density below 2,000 people per sq. km) to a high-density neighborhood (above 5,000 people per sq. km), and zero if the family moved from a low-density origin to a destination that is not high-density.<sup>7</sup> The coefficients of interest are the  $\gamma_m$ , which trace how the effect of the move to high density varies with the child's age at the move. Age 22 is omitted, so each  $\gamma_m$  is estimated relative to moves occurring at 22. The specification includes age-at-move fixed effects  $\lambda_m$ , current-age fixed effects  $\psi_a$ , calendar-year fixed effects  $\tau_t$ , and controls  $X_i$ , including density, income, and college shares of the origin and destination. Standard errors are clustered at the child level.

This baseline specification leaves one remaining concern, which is the deepening of local ties with residential tenure. Children who move earlier may develop deeper ties to the destination and settle near it as adults. Because treated children's destinations are very dense, and density is spatially correlated, settling nearby raises adult density on its own. So early ages at moves would predict denser adult neighborhoods through proximity alone, even if the adult demand for density itself is not affected by exposure. To address this, similarly to earlier analysis, I control for the average density of the areas surrounding the origin and destination neighborhoods, measured 0-1 through 20-50 miles radii, each interacted with the age-at-move indicators. If earlier movers choose denser adult neighborhoods simply because they remain near dense destinations, these interactions absorb that channel. The  $\gamma_m$  profile is then identified from whether children with longer exposure choose neighborhoods denser than the average density their surroundings would predict. A gradient that survives this control reflects an effect on demand for density rather than proximity to

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<sup>7</sup>In Appendix Figures A9a and A9b, I present results using alternative thresholds for  $\delta_i$  and the results are largely comparable with my baseline estimates.

the destination.

**Identification Assumption and Potential Violations** Because the coefficients are normalized to zero at age 22,  $\gamma_m$  represents how much larger the gap between the two groups of children is when the move happened at age  $m$  during childhood than when it happened after childhood at age 22. The effect of selection into dense destinations, namely the fact that families who chose density differ from families who did not, is thus differenced out. What identification requires is that families that move to density when the child is younger be comparable, in unobserved characteristics that matter for the child’s adult density choices, to families that move to density when the child is older.

This assumption could fail if the families most committed to urban living move to density earlier in the child’s life, so that early moves bundle longer exposure with stronger transmitted preferences, generating a spurious exposure effect. One concrete example is that the timing of the move may respond to the child directly. Parents might delay a move downtown until a child finishes school, and those who move to density while their children are still at home may be precisely the ones who want their children comfortable with urban living. If so, the selection gap would be larger for children experiencing early moves.

To alleviate this concern, Appendix Figure A8 plots neighborhood characteristics before and after the move, by age at move, for treatment and control families. Control families’ characteristics change little. As expected, treatment families experience a large jump in density at every age at move, but the jump is, if anything, slightly *smaller* for families that moved when the child was younger. Their decline in neighborhood income is also smaller for earlier moves, and the change in college share is muted throughout. Families that moved early thus did not move to denser or more urban destinations than families that moved late, making it unlikely that families with the strongest taste for density systematically select into early moves. Any remaining selection would have to operate through characteristics invisible in the data.

**Results** Figure 4a presents the baseline estimates of  $\hat{\gamma}_m$  in equation (2) in blue. The coefficients are largest for moves at age 10, though estimated with relatively wide confidence intervals, and decline from age 10 to age 17, indicating that additional cumulative exposure to the high-density destination raises a person’s later choice of density.

For parental moves occurring after the child reaches age 18, the estimates decline sharply. This pattern is exactly what an exposure mechanism predicts: children’s exits from the parental home accelerate after age 18, so parental moves at these ages are progressively less likely to change the child’s own residential environment. The sharp post-18 decline thus indicates that the parent–child correlation in density is driven, at least in part, by genuine exposure to the neighborhoods parents choose rather than by direct transmission of preferences. Under pure transmission mechanism, a parental move to density at age 17 versus age 22 should make no difference to the child’s adult choices.

To ensure that the result is not driven by local tie formation, the red plot adds the density of the rings surrounding

the destination, interacted with age at move, as controls. These controls absorb any tendency of movers to settle near the destination and inherit the density of its vicinity, so the remaining estimates isolate the exposure effect on density choice itself. The exposure gradient through childhood survives, though somewhat tempered. In fact, the post-18 estimates change in quite an informative way: the sharp drop at 18 becomes considerably more muted. The reason is that children whose parents move to density at 17 or 18 are far more likely to settle near the destination than children whose parents move at 20 to 22. The ring controls absorb this proximity component.

One might also worry that longer exposure leads children simply to remain in the same Census block group they grew up in. The ring controls cannot fully address this, since they capture the density of nearby areas rather than of the childhood neighborhood itself, so a higher probability of staying put among the longer-exposed could mechanically raise the treated children's measured adult density choice compared to the control group children. To address this, Appendix Figure A9c re-estimates the effects dropping children who remain in their childhood block group as adults. The sample shrinks substantially and precision falls, but the downward age-at-move gradient remains clear.

Finally, I examine moves in the opposite direction. Using the same design, I estimate the age-at-move profile for children whose parents moved *out* of high-density neighborhoods, comparing families that left for low-density destinations against families that moved to other high-density destinations. Figure 4b shows an almost mirror image of the baseline pattern: children who left density at younger ages, and thus spent fewer years of their childhood at high density, choose substantially *lower*-density neighborhoods in adulthood than children who left when older. The effect again declines sharply for parental moves occurring after age 18, and this decline is again attenuated once the ring densities are controlled for, as in the baseline analysis. The almost symmetric result reinforces the earlier findings. A selection story would now have to hold that the unobserved characteristics producing a fondness for density also delay the family's departure from it. Appendix Figure A9d drops children who remain in their childhood block group, as in the earlier analysis. The upward gradient remains and is, if anything, stronger.

## 4 Conclusion

This paper tests whether the neighborhood density people experience growing up affects the neighborhood density they choose as adults. Using address histories that link parents and children across two generations, I document that neighborhood density persists strongly within families: a childhood spent in a denser neighborhood is associated with a denser adult neighborhood. Much of this persistence is geographic, as the majority of individuals settle within a few miles of where they grew up, and those raised at higher densities are even more likely to stay close. But the transmission of density does not operate through proximity alone. Controlling for the density of the surrounding areas, childhood neighborhood density still predicts adult density choice. Among individuals who settle far from their childhood neighborhoods, childhood density still predicts adult density, and it predicts the distinctly urban attributes of

the chosen neighborhood, proximity to downtown, transit use, and multifamily housing, rather than its socioeconomic position. Lastly, I exploit an age-at-move design to show that the effect of a parental move to a dense neighborhood increases with the number of years the child spends there, pointing to childhood exposure to density as a driving mechanism.

These findings imply that residential settlement patterns are self-perpetuating. People live at densities similar to those they grew up with, chiefly by staying close, but also because their adult neighborhood demand is shaped by childhood experience. The results carry implications for housing policy debates. If the taste for density is partly produced by high-density upbringings, then creating high-density living environments today raises the next generation's demand for density, and plausibly, as the taste for density rises, the permissiveness of future land-use regulation.

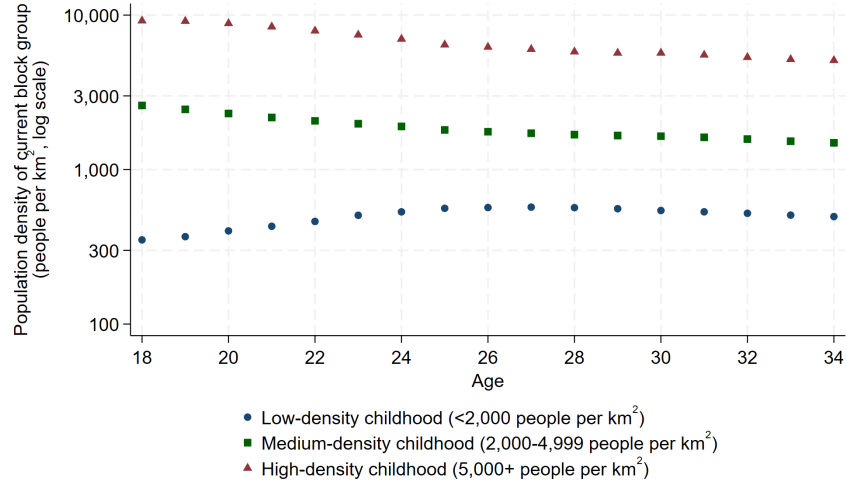
My study has important limitations. First, my cohorts are observed only into their mid-thirties. Whether these exposure effects persist through later life, and whether they pass to the next generation, cannot yet be studied. Second, density as I measure it encompasses the characteristics it tends to bundle with, such as urban amenities, walkability, and social dynamism. Parsing out how preferences form for each of these distinct features is a task for future work.

## References

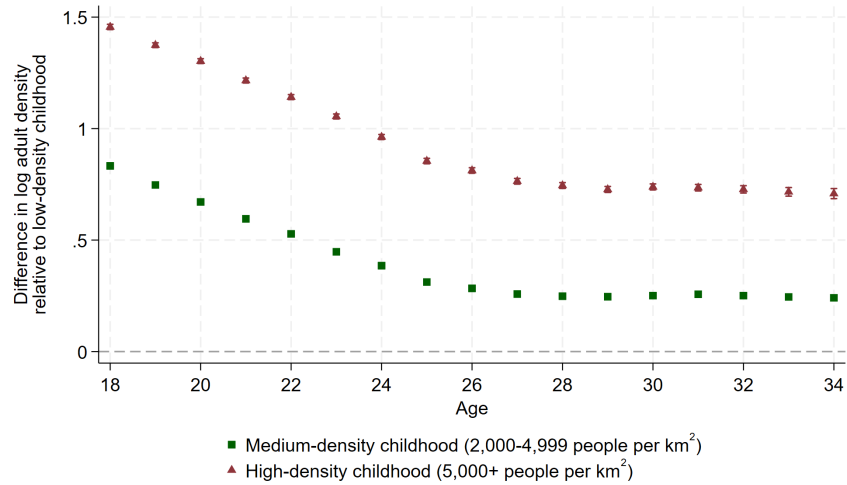
- Anderson, S. T., Kellogg, R., Langer, A., and Sallee, J. M. (2015). The Intergenerational Transmission of Automobile Brand Preferences. *The Journal of Industrial Economics*, 63(4):763–793.
- Becker, G. S. (1996). *Accounting for Tastes*. Harvard University Press, Cambridge, MA.
- Bento, A. M., Cropper, M. L., Mobarak, A. M., and Vinha, K. (2005). The Effects of Urban Spatial Structure on Travel Demand in the United States. *Review of Economics and Statistics*, 87(3):466–478.
- Bisin, A. and Verdier, T. (2001). The Economics of Cultural Transmission and the Dynamics of Preferences. *Journal of Economic Theory*, 97(2):298–319.
- Bronnenberg, B. J., Dubé, J.-P. H., and Gentzkow, M. (2012). The Evolution of Brand Preferences: Evidence from Consumer Migration. *American Economic Review*, 102(6):2472–2508.
- Brownstone, D. and Golob, T. F. (2009). The Impact of Residential Density on Vehicle Usage and Energy Consumption. *Journal of Urban Economics*, 65(1):91–98.
- Chetty, R. and Hendren, N. (2018a). The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects. *The Quarterly Journal of Economics*, 133(3):1107–1162.
- Chetty, R. and Hendren, N. (2018b). The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates. *The Quarterly Journal of Economics*, 133(3):1163–1228.
- Chetty, R., Hendren, N., and Katz, L. F. (2016). The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment. *American Economic Review*, 106(4):855–902.
- Chetty, R., Hendren, N., Kline, P., and Saez, E. (2014). Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States. *The Quarterly Journal of Economics*, 129(4):1553–1623.
- Couture, V. and Handbury, J. (2020). Urban Revival in America. *Journal of Urban Economics*, 119:103267.
- Duranton, G. and Puga, D. (2020). The Economics of Urban Density. *Journal of Economic Perspectives*, 34(3):3–26.
- Ewing, R. and Rong, F. (2008). The Impact of Urban Form on U.S. Residential Energy Use. *Housing Policy Debate*, 19(1):1–30.
- Federal Highway Administration (2023). Summary of travel trends: 2022 national household travel survey. Technical report, U.S. Department of Transportation.
- Feijten, P., Hooimeijer, P., and Mulder, C. H. (2008). Residential Experience and Residential Environment Choice over the Life-course. *Urban Studies*, 45(1):141–162.
- Fogli, A., Guerrieri, V., Ponder, M., and Prato, M. (2026). The End of the American Dream? Inequality and Segregation in US Cities. *Journal of Political Economy*, 134(4):1110–1158.
- Giuliano, P. and Spilimbergo, A. (2014). Growing Up in a Recession. *Review of Economic Studies*, 81(2):787–817.
- Glaeser, E. L. and Gyourko, J. (2018). The Economic Implications of Housing Supply. *Journal of Economic Perspectives*, 32(1):3–30.
- Glaeser, E. L. and Kahn, M. E. (2010). The Greenness of Cities: Carbon Dioxide Emissions and Urban Development. *Journal of Urban Economics*, 67(3):404–418.
- Glaeser, E. L., Kolko, J., and Saiz, A. (2001). Consumer City. *Journal of Economic Geography*, 1(1):27–50.
- Gómez, V. (2021). More americans now say they prefer a community with big houses, even if local amenities are farther away. Pew Research Center. Survey conducted July 8–18, 2021.
- Gyourko, J. and McCulloch, S. E. (2024). The Distaste for Housing Density. NBER Working Paper 33078, National Bureau of Economic Research.

- Gyourko, J. and Molloy, R. (2015). Regulation and housing supply. In Duranton, G., Henderson, J. V., and Strange, W. C., editors, *Handbook of Regional and Urban Economics*, volume 5, pages 1289–1337. Elsevier, Amsterdam.
- Holian, M. J. and Kahn, M. E. (2015). Household Carbon Emissions from Driving and Center City Quality of Life. *Ecological Economics*, 116:362–368.
- Lambert-Pandraud, R. and Laurent, G. (2010). Why Do Older Consumers Buy Older Brands? The Role of Attachment and Declining Innovativeness. *Journal of Marketing*, 74(5):104–121.
- Malmendier, U. and Nagel, S. (2011). Depression Babies: Do Macroeconomic Experiences Affect Risk Taking? *The Quarterly Journal of Economics*, 126(1):373–416.
- Malmendier, U. and Shen, L. S. (2018). Scarred Consumption. NBER Working Paper 24696, National Bureau of Economic Research.
- Miyauchi, Y., Nakajima, K., and Redding, S. J. (2025). The economics of spatial mobility: Theory and evidence using smartphone data. *Quarterly Journal of Economics*, 140(4):2507–2570.
- Phillips, D. C. (2020). Measuring housing stability with consumer reference data. *Demography*, 57(4):1323–1344.
- Ramiller, A., Song, T., Parker, M., and Chapple, K. (2024). Residential mobility and big data: Assessing the validity of consumer reference datasets. *Cityscape*, 26(3):227–240.
- Severen, C. and van Benthem, A. A. (2022). Formative Experiences and the Price of Gasoline. *American Economic Journal: Applied Economics*, 14(2):256–284.
- Simonsohn, U. (2006). New Yorkers Commute More Everywhere: Contrast Effects in the Field. *Review of Economics and Statistics*, 88(1):1–9.
- Su, Y. (2022). Measuring the value of urban consumption amenities: A time-use approach. *Journal of Urban Economics*, 132:103495.
- U.S. Census Bureau (2023). Selected housing characteristics, american community survey table DP04. 1-unit detached share of occupied housing units.
- U.S. Department of Housing and Urban Development (2020). The 2017 AHS neighborhood description study. HUD Office of Policy Development and Research.
- Zheng, S., Wang, R., Glaeser, E. L., and Kahn, M. E. (2011). The Greenness of China: Household Carbon Dioxide Emissions and Urban Development. *Journal of Economic Geography*, 11(5):761–792.

Figure 1: Adult Population Density by Age and Childhood Density



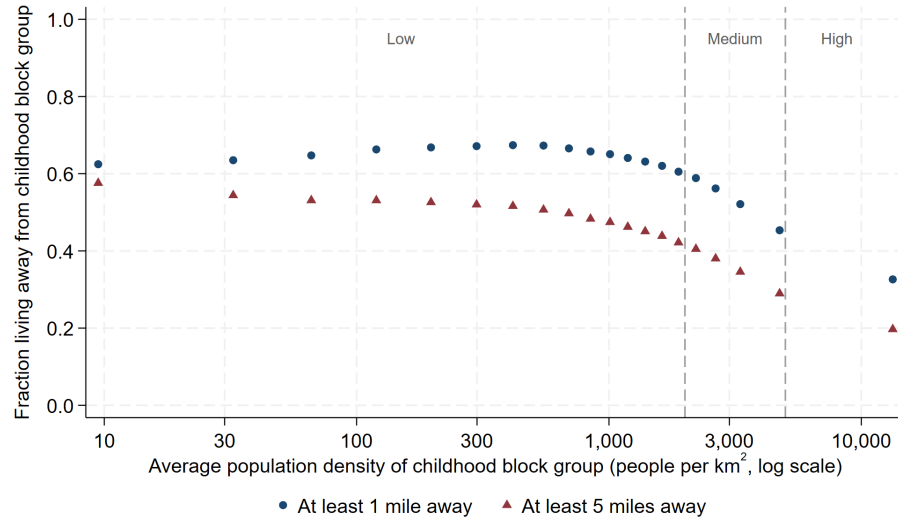
(a) Raw age profiles



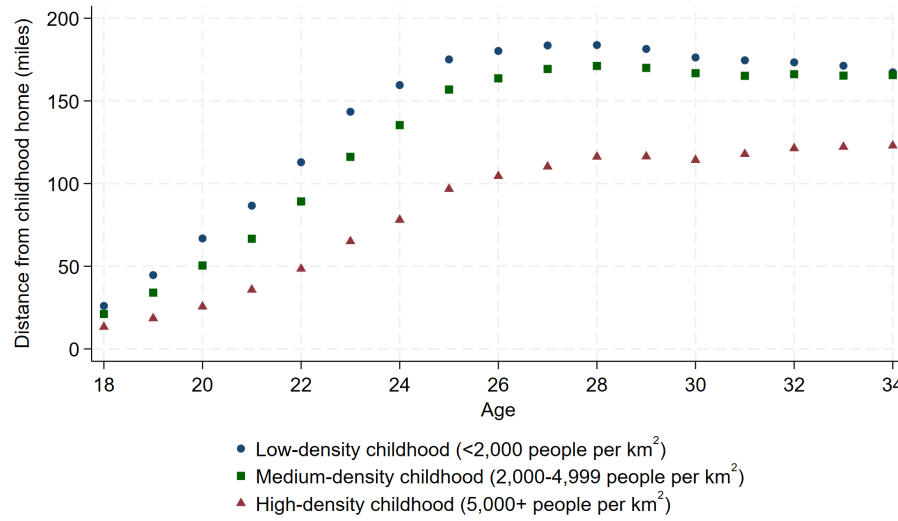
(b) Controlling for ring densities

*Notes:* Childhood density is the average population density of an individual's childhood block group. Individuals are grouped into low-density (below 2,000 people per km<sup>2</sup>), medium-density (2,000 to 4,999 people per km<sup>2</sup>), and high-density (5,000 or more people per km<sup>2</sup>) childhoods. Panel (a) is a binned scatter plot of the population density of the individual's current block group by age, from 18 to 34, separately for each group. The vertical axis is on a log scale. Panel (b) plots coefficients from a regression of log population density of the current block group on age fixed effects, childhood density group indicators, and their interactions, controlling for the log average population density of rings 0–1, 1–2, 2–5, 5–10, 10–20, and 20–50 miles around the childhood block group, with separate ring coefficients for each age. Each point is the implied difference in log adult density between the children grown up in medium density (squares) or high density (triangles) and children grown up in low density at that age, holding ring densities constant. Bars show 95% confidence intervals based on standard errors clustered by individual.

Figure 2: Childhood Population Density and Distance from Childhood Neighborhood



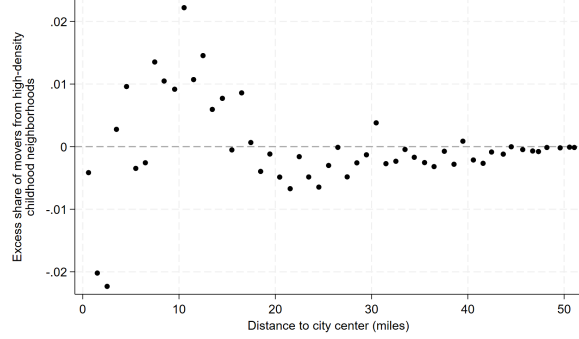
(a) Fraction living away from childhood block group, by childhood density



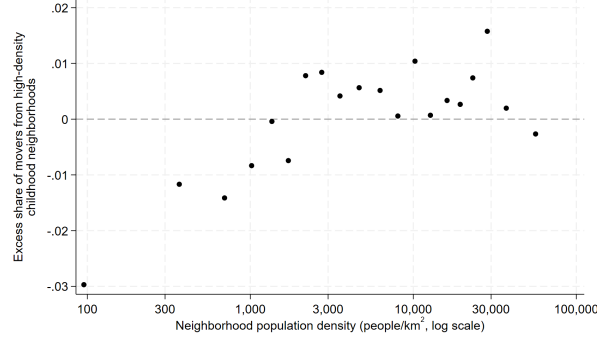
(b) Distance from childhood block group, by age and childhood density

*Notes:* Both panels are binned scatter plots. Childhood density is the average population density of an individual's childhood block group. Panel (a) plots the fraction of individuals whose average distance from their childhood block group is at least 1 mile (circles) or at least 5 miles (triangles) against childhood density, with linear fits. The horizontal axis is on a log scale. Panel (b) plots the average distance in miles from the childhood block group by age, from 18 to 34, separately for individuals who grew up in low-density block groups (below 2,000 people per km<sup>2</sup>, circles), medium-density block groups (2,001–4,999 people per km<sup>2</sup>) and high-density block groups (5,000 or more people per km<sup>2</sup>, triangles).

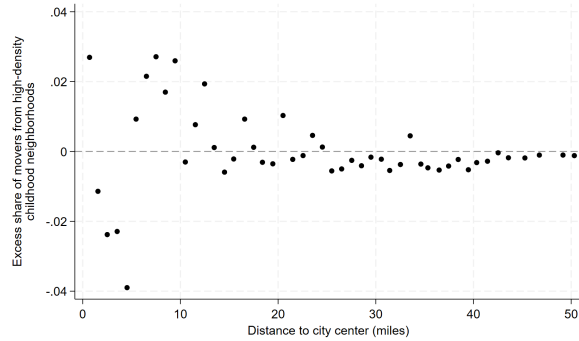
Figure 3: Excess Share of Movers Brought Up in High-Density Childhood Neighborhoods



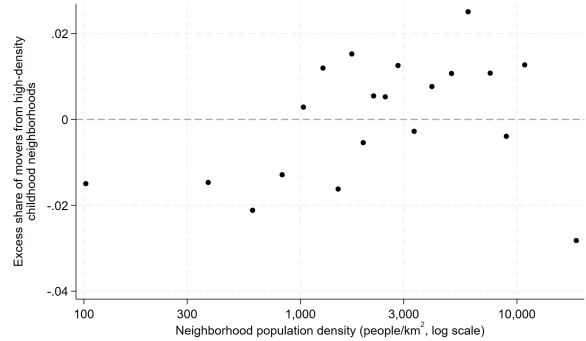
(a) New York - Distance to City Center



(b) New York - Population Density



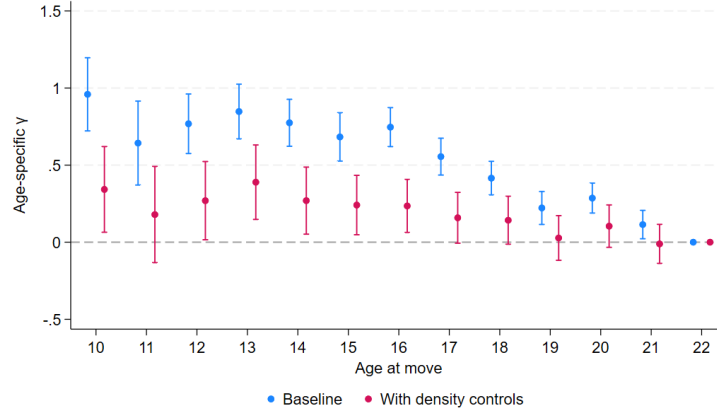
(c) Chicago - Distance to City Center



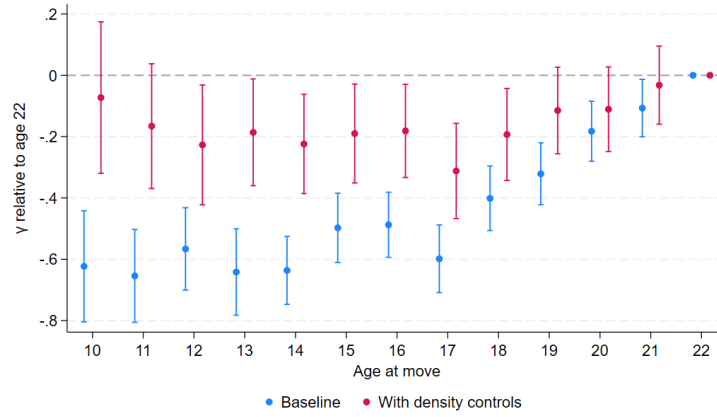
(d) Chicago - Population Density

*Notes:* These figures show where movers from high-density childhood neighborhoods settle within the New York (Panels a and b) and Chicago (Panels c and d) metropolitan areas relative to all movers who grow up outside the respective metropolitan area. For each census block group, the excess share is the share of the metropolitan area's movers from high-density childhood neighborhoods (population density of at least 5,000 people per km<sup>2</sup>) who settle in that block group, minus the share of all movers into the metropolitan area who settle in that block group. Block-group-level excess shares are summed within bins, so each dot is the difference between a bin's share of movers from high-density childhood neighborhoods and its share of all movers. A value of 0.01 means the bin receives one percentage point more of these movers than of movers overall. By construction, the dots in each panel sum to zero. In Panels a and c, block groups are grouped into one-mile bins of distance from the city center, and each dot is plotted at the mean distance of the block groups in the bin. In Panels b and d, block groups are grouped into bins ordered by population density, and each dot is plotted at the mean log density of the block groups in the bin.

Figure 4: Childhood Age-At-Move Effects on Adulthood Density



(a) Moves into High-Density Neighborhoods



(b) Moves out of High-Density Neighborhoods

*Notes:* The figure plots the age-at-move coefficients  $\hat{\gamma}_m$  from equation (2) for children whose parents moved exactly once. In Panel (a), the estimation sample consists of children whose families moved from a low-density origin neighborhood (population density below 2,000 people per sq. km), and the coefficients measure, at each age at move, the difference in adult log neighborhood density between children whose families moved to a high-density destination (above 5,000 people per sq. km) and children whose families moved elsewhere. In Panel (b), the estimation sample consists of children whose families moved from a high-density origin neighborhood (above 5,000 people per sq. km), and the coefficients measure the difference in adult log neighborhood density between children whose families moved to a low density destination (2,000 people per sq. km or below) and children whose families moved to another high-density neighborhood. Estimates are normalized to zero at age 22, so each coefficient is measured relative to moves occurring after childhood. Outcomes are person-years in which the individual is aged 23 or older. Blue series report the baseline specification, which includes age-at-move, current-age, and calendar-year fixed effects and origin and destination neighborhood characteristics. Red series add the average density of the areas surrounding both the origin and the destination neighborhoods (measured within rings of 0–1, 1–2, 2–5, 5–10, 10–20, and 20–50 miles), interacted with the age-at-move indicators. Vertical bars are 95% confidence intervals based on standard errors clustered at the child level.

Table 1: Childhood Neighborhood Density Predicts Adult Density Choices

|                                                                                | Levels                   |                          |                          | Within-MSA Percentiles   |                          |
|--------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                                                                | Ln Pop Density           |                          |                          | Pop Density Pctile       |                          |
|                                                                                | (1)                      | (2)                      | (3)                      | (4)                      | (5)                      |
| <i>Panel A — Dependent variable: Adult population density</i>                  |                          |                          |                          |                          |                          |
| <i>Mean childhood neighborhood characteristics:</i>                            |                          |                          |                          |                          |                          |
| Ln Population Density                                                          | 0.6341***<br>(0.0004)    | 0.4987***<br>(0.0010)    | 0.0825***<br>(0.0014)    | 0.5230***<br>(0.0004)    | 0.0421***<br>(0.0017)    |
| Ln Neighborhood Income                                                         | 0.0941***<br>(0.0014)    | −0.1195***<br>(0.0017)   | −0.0969***<br>(0.0066)   | −0.0063***<br>(0.0005)   | −0.0069***<br>(0.0021)   |
| Share College Graduates                                                        | 0.2564***<br>(0.0037)    | 0.3855***<br>(0.0043)    | 1.2265***<br>(0.0155)    | 0.0230***<br>(0.0004)    | 0.0533***<br>(0.0019)    |
| Distance to City Center                                                        | −0.00242***<br>(0.00004) | −0.00029***<br>(0.00006) | −0.00252***<br>(0.00014) | −0.0731***<br>(0.0004)   | −0.0388***<br>(0.0016)   |
| Ring Density Controls                                                          | No                       | Yes                      | No                       | No                       | No                       |
| >500 Miles From Child Neighborhood Only                                        | No                       | No                       | Yes                      | No                       | Yes                      |
| Observations                                                                   | 6,854,399                | 4,009,669                | 566,415                  | 6,855,235                | 566,640                  |
| $R^2$                                                                          | 0.4434                   | 0.4133                   | 0.0330                   | 0.3063                   | 0.0061                   |
| <i>Panel B: — Dependent variable: Other adult neighborhood characteristics</i> |                          |                          |                          |                          |                          |
| <i>(Individuals &gt;500 miles from childhood neighborhood)</i>                 |                          |                          |                          |                          |                          |
| Dependent variable:                                                            | Ln Income                | College Share            | Distance to City Center  | Transit Share            | 5+ Unit Share            |
| <i>Mean childhood neighborhood characteristics:</i>                            |                          |                          |                          |                          |                          |
| Ln Population Density                                                          | 0.0020***<br>(0.0004)    | −0.00002<br>(0.00016)    | −0.2476***<br>(0.0167)   | 0.0033***<br>(0.0001)    | 0.0058***<br>(0.0003)    |
| Ln Neighborhood Income                                                         | 0.0827***<br>(0.0019)    | 0.0180***<br>(0.0008)    | 0.2856***<br>(0.0718)    | −0.0095***<br>(0.0005)   | −0.0068***<br>(0.0013)   |
| Share College Graduates                                                        | 0.2341***<br>(0.0045)    | 0.2928***<br>(0.0019)    | −7.5992***<br>(0.1671)   | 0.1108***<br>(0.0013)    | 0.2130***<br>(0.0030)    |
| Distance to City Center                                                        | 0.00013***<br>(0.00004)  | −0.00010***<br>(0.00002) | 0.06870***<br>(0.00199)  | −0.00009***<br>(0.00001) | −0.00034***<br>(0.00002) |
| Observations                                                                   | 565,794                  | 566,395                  | 566,213                  | 566,336                  | 566,042                  |
| $R^2$                                                                          | 0.0331                   | 0.1103                   | 0.0160                   | 0.0305                   | 0.0230                   |

*Notes:* Panel A reports regressions of adult neighborhood density on childhood neighborhood characteristics, where childhood characteristics are year-weighted averages over ages 5–17. In columns (1)–(3), adult density, childhood density, and childhood neighborhood income enter in logs, the share of college graduates enters in levels, and distance to the city center is measured in miles. Column (2) additionally controls for the log average population density of rings 0–1, 1–2, 2–5, 5–10, 10–20, and 20–50 miles around the childhood neighborhood. Columns (3) and (5) restrict the sample to individuals residing more than 500 miles from their childhood neighborhood. In columns (4) and (5), the outcome and all regressors are expressed as percentiles within the MSA. Panel B reports five separate regressions, one per outcome variable, estimated on the sample of individuals residing more than 500 miles from their childhood neighborhood. Outcomes are listed in the panel heading. Distance to the city center is measured in miles. Standard errors are clustered at the child's level. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

## Online Appendix

### A1 Data Validation Details and Summary Statistics

#### A1.1 Validation Tests for Parent–Child Linkage

Because the parent–child linkage constructed from Data Axle is central to my analysis, I validate it against external benchmarks to confirm that matched pairs capture true parent–child relationships rather than unrelated co-residents.

First, I compare the geography of my linkage against official statistics. For each county, I compute the share of the population in my data accounted for by children under 18—the number of children imputed from the linkage, divided by the sum of imputed children and observed adults—and compare it with the corresponding share reported in the American Community Survey, pooling over the five-year periods 2006–2010, 2011–2015, and 2016–2020. Figure A1 shows the two are strongly correlated across counties in every period. The Data Axle imputed shares lie below the ACS benchmark by construction: a child enters my data only if she is later observed co-residing with her parents as an adult, a subset of all children, and this subset shrinks mechanically in later periods, in which fewer children have yet reached adulthood within the sample window. The strength of this relationship indicates that the cross-county variation in my imputed child counts tracks the cross-county variation in the age composition of the population, which would be unlikely if the linkage captured mainly unrelated co-residents.<sup>8</sup>

To further establish that the linkages capture genuine parent–child relationships, I compute the share of matched children who co-reside with at least one matched parent at each age from 18 onward, shown in Figure A2. The share is 65% at age 18 and declines steadily with age, reaching 30% by age 35. This profile matches the pattern of children leaving the parental home. Unrelated co-residents would produce no particular tie to age 18 and dissolve at rates unrelated to the child’s age.

#### A1.2 Validation Tests for Data Axle’s Migration Patterns

To assess whether Data Axle’s address histories capture migration patterns, I compute county-level net domestic migration rates from the address changes in Data Axle and compare them with rates constructed analogously from the ACS county-to-county flow files, for the periods 2006–2010, 2011–2015, and 2016–2020. Figure A3 shows that the two measures are strongly correlated across counties in every period: counties that gain population in the ACS gain population in Data Axle, and vice versa.

The magnitudes in Data Axle are, however, considerably smaller than in the ACS. This is a known limitation of

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<sup>8</sup>Although erroneous links cannot be ruled out entirely, they work against finding an effect: random misattribution of parents to children attenuates estimates toward zero. A statistically significant positive estimate is therefore unlikely to be an artifact of mislinkage; if anything, the true coefficient would be larger in magnitude.

consumer reference data. Address records update with a lag, and coverage is weakest for renters and young adults, the most mobile groups, so annual migration flows are understated (Phillips, 2020; Ramiller et al., 2024). This attenuation matters little for the purpose of this paper. The analysis studies where individuals ultimately live relative to where they grew up, measured over many years of adulthood, rather than focusing on the timing or volume of year-to-year flows. What the cross-validation shows is that the cross-county pattern of migration in Data Axle aligns with official statistics in *direction* and *relative* magnitude.

### A1.3 Summary Statistics

Table A1 reports summary statistics for the linked sample. It comprises roughly 7 million children born between 1989 and 2006, observed as adults between ages 18 and 36 for a total of 23.7 million person-year observations. The typical observation is at age 26. The median child lives 5.3 miles from their childhood neighborhood as an adult, while the mean of 144 miles reflects a long tail of long-distance movers. Neighborhood density is similarly right-skewed, with a mean more than twice the median in both childhood and adulthood. Adult neighborhoods are on average slightly denser, closer to downtown, and lower-income than childhood neighborhoods, consistent with young adults locating in central areas early in their careers.

## A2 Case Studies of New York and Chicago: Additional Analysis

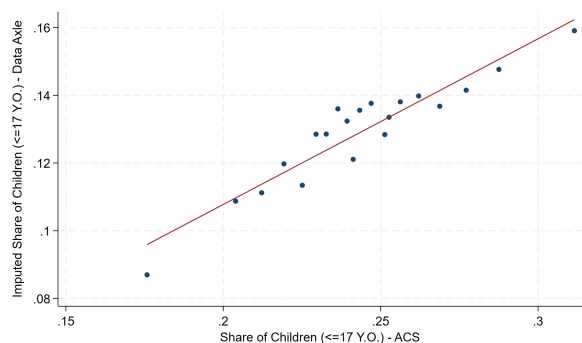
To further build intuition for the size of these relationships, I focus on individuals whose childhood neighborhoods lie in well-known high-density areas—the four urban boroughs of New York City (Manhattan, Brooklyn, Queens, and the Bronx) or urban Chicago (Census block groups within five miles of downtown Chicago). In two separate specifications, I replace the regressor  $\ln D_i^{Child}$  in equation (1) with an indicator for growing up in urban New York City and an indicator for growing up in urban Chicago, controlling for the childhood neighborhood’s log median income, college share, and distance to downtown. Each coefficient measures how much denser a neighborhood these children choose in adulthood, relative to children raised elsewhere. The blue and red curves in Figure A6 plot these estimates as I progressively restrict the sample to individuals who moved farther from their childhood neighborhood. Consistent with the regression results, growing up in these well-known high-density areas predicts adult density up to 2.5 log points higher. Even among individuals who have left their childhood housing market entirely, moving more than 500 miles away, a childhood in urban New York City or Chicago still predicts adult density 0.5 log points higher. This persistence among movers echoes Simonsohn (2006), who shows that people who move away from New York City continue to choose longer commutes than their new neighbors do.

This pattern is not specific to New York City or Chicago. If I instead define the indicator as growing up in any Census block group with at least 5,000 people per square kilometer, adult density is about 2 log points higher, and the

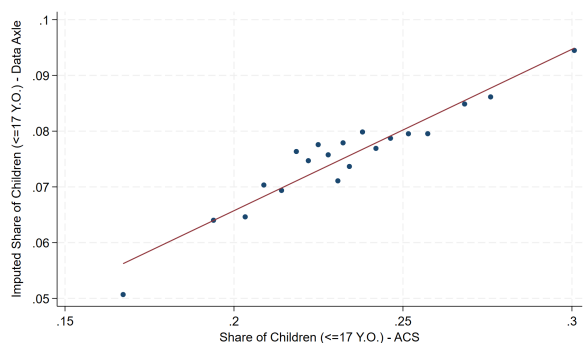
estimate again declines with the distance cutoff before converging to a decidedly positive value, still 0.1 log points at the 500-mile cutoff. The green dashed curve plots the  $\beta_{A,C}$  estimates from equation (1) across the same sequence of cutoffs. They follow a comparable pattern.

## A3 Appendix Figures and Tables

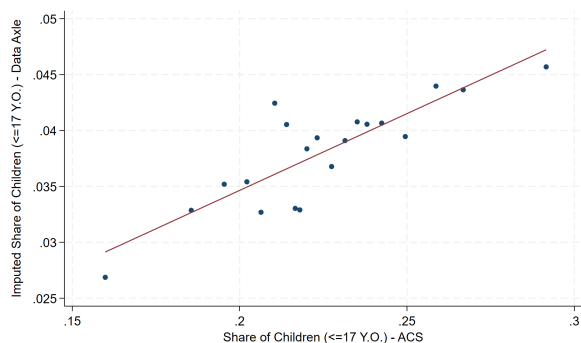
Figure A1: Validation Test: Imputed Share of Children in Local Population - Data Axle vs. ACS



(a) 2006-2010



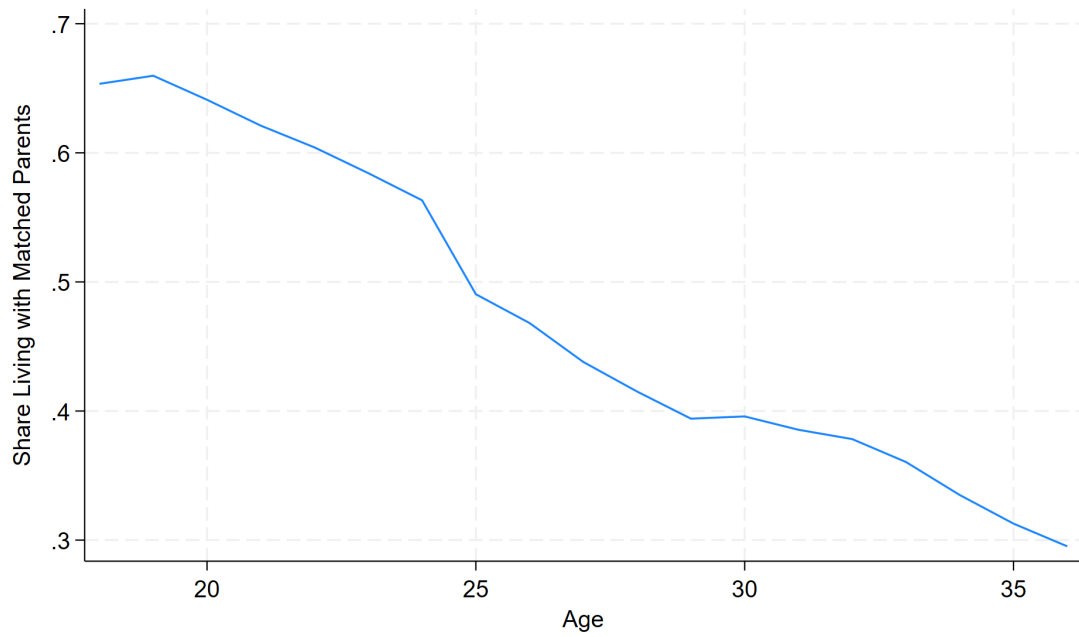
(b) 2011-2015



(c) 2016-2020

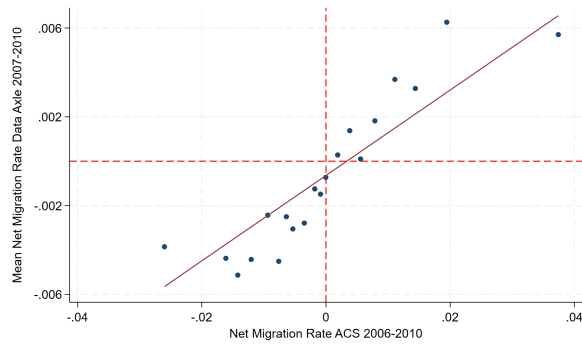
*Notes:* The figures present binned scatterplots of the county-level share of children imputed from Data Axle against the share reported in the ACS. Children are defined as individuals age 17 or younger. The Data Axle share is constructed by counting the unique minor children assigned to parents in each county and dividing by the number of observed individuals in the county. Figure A1a uses the 2006–2010 sample, Figure A1b the 2011–2015 sample, and Figure A1c the 2016–2020 sample; within each figure, the Data Axle and ACS samples cover the same years. All binned scatterplots are weighted by county population.

Figure A2: Validation Test: Share of Children Living with Matched Parents

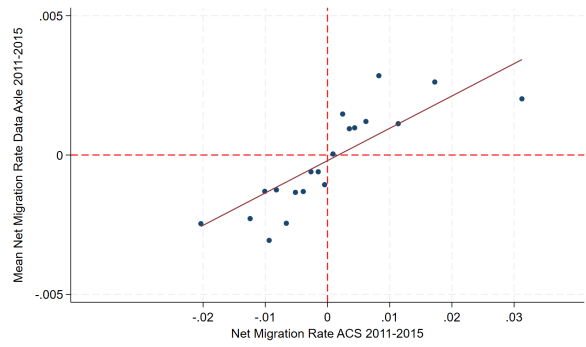


*Notes:* The figure plots the share of adult children who co-reside with a matched parent, by age. The sample consists of all individuals in Data Axle observed between ages 18 and 36 in the years 2006 to 2025. An individual is coded as co-residing with matched parents if they are matched to at least one parent and share an address with at least one matched parent in the current year.

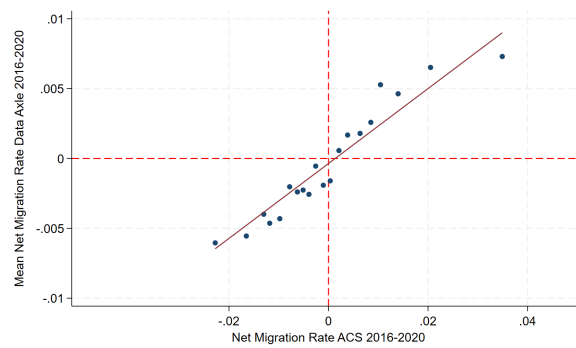
Figure A3: Validation Test: County-Level Migration Rates from Data Axle vs. ACS



(a) 2006-2010



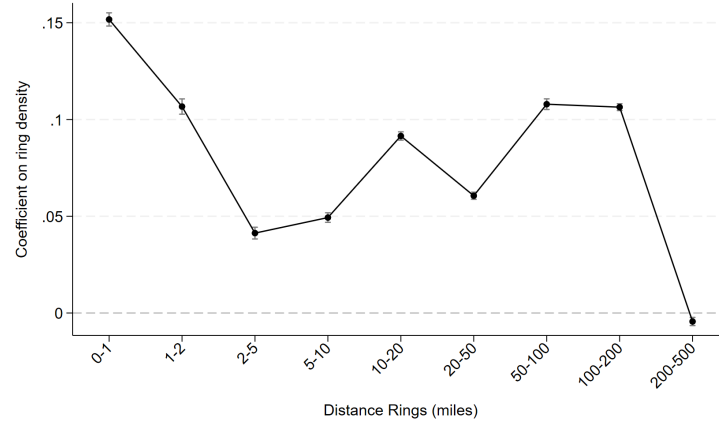
(b) 2011-2015



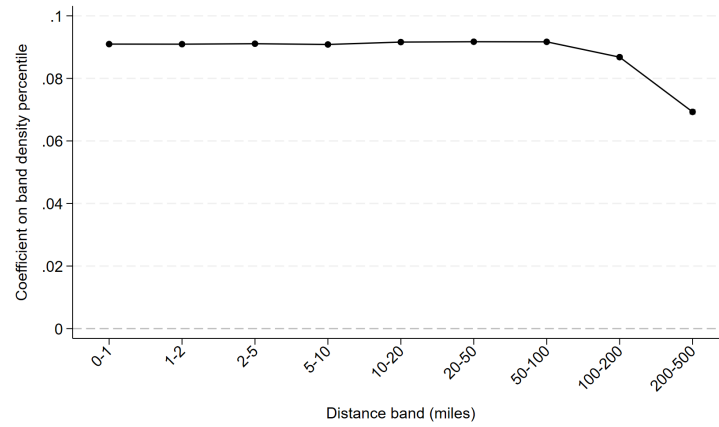
(c) 2016-2020

*Notes:* Each subfigure plots county-level net domestic migration rates computed from Data Axle against the corresponding rates computed from the ACS county-to-county migration flows, for the periods (a) 2006–2010, (b) 2011–2015, and (c) 2016–2020, respectively. Each point is a county. In Data Axle, the net migration rate in a given year is the net inflow of domestic migrants relative to the previous year, divided by the total number of observed individuals in the county in the previous year. Annual rates are averaged over each period. The ACS rate is constructed analogously from the county-to-county flow files, which pool one-year migration flows across the five survey years of each period. Migration is domestic only: the rates exclude international migration, births, and deaths.

Figure A4: Regressing Census Block-Group Density on Density of Surrounding Rings



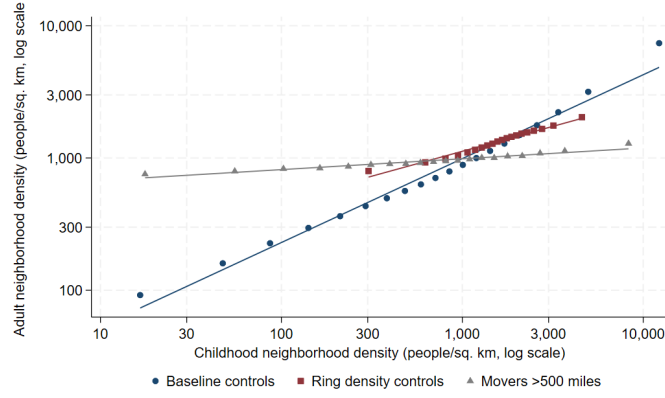
(a) Log-Log



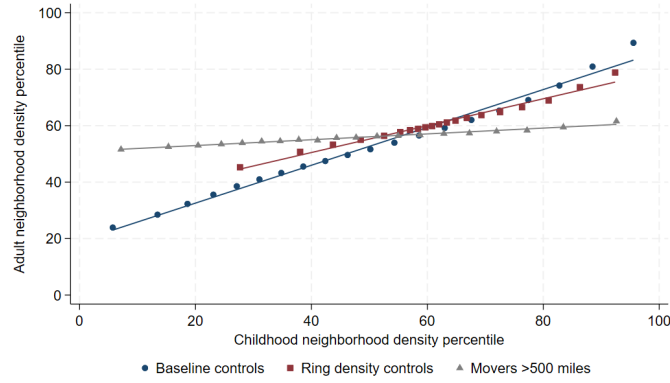
(b) Rank-Rank

*Notes:* Each subfigure reports coefficients from a single regression of Census block-group density on the average density of the surrounding areas, measured within rings of 0–1, 1–2, 2–5, 5–10, 10–20, 20–50, 50–100, 100–200, and 200–500 miles of the block group. Panel (a) measures all variables in logs; Panel (b) measures all variables as percentiles of the national block-group density distribution. Each point is the coefficient of one ring, conditional on all other rings. Observations are Census block groups, weighted by population. Vertical bars are 95% confidence intervals based on robust standard errors. Density is measured from the 2010–2014 American Community Survey.

Figure A5: Childhood Density vs. Adult Neighborhood Density



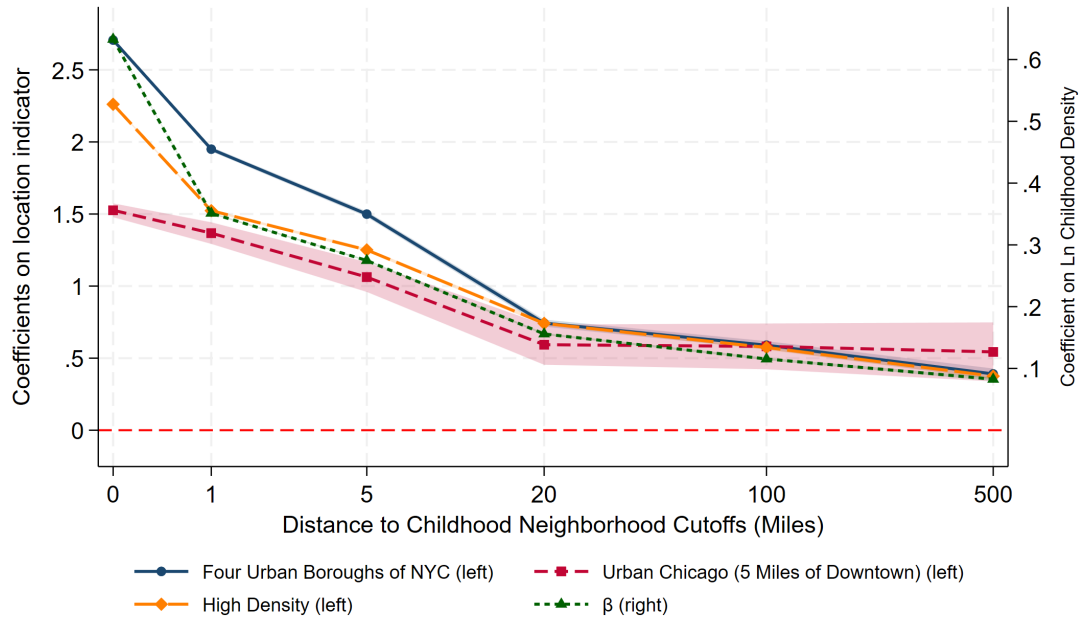
(a) Log-Log



(b) Rank-Rank

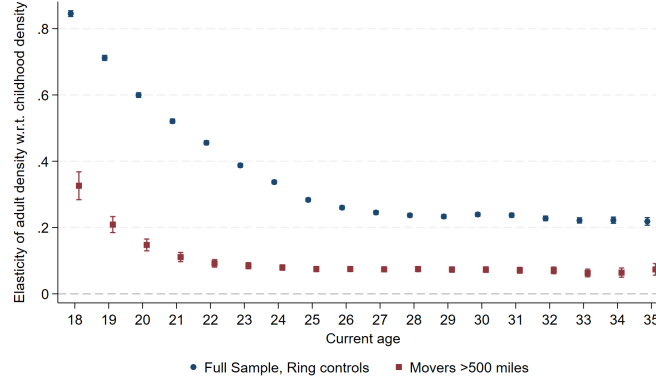
*Notes:* The figures present binned scatterplots of adult neighborhood density against childhood neighborhood density, measured in logs (Panel (a)), axes labeled in levels on a log scale, people per sq. km) and in percentiles (Panel (b)). Childhood density is the year-weighted average over ages 5–17. Adult density is measured at the person level, averaged over observed density at 18 and above. The baseline series controls for childhood neighborhood income and college share (in logs and shares in Panel (a), in percentiles in Panel (b)). The ring-controls series adds the average density of areas surrounding the childhood neighborhood, measured within radii of 0-1, 1-2, 2-5, 5-10, 10-20, 20-50 miles. The movers series applies the baseline controls to the subsample of individuals residing more than 500 miles from their childhood neighborhood. Neighborhood characteristics are measured at the Census block-group level.

Figure A6: Childhood Density Continues to Predict Adulthood Density Among Long-Distance Movers

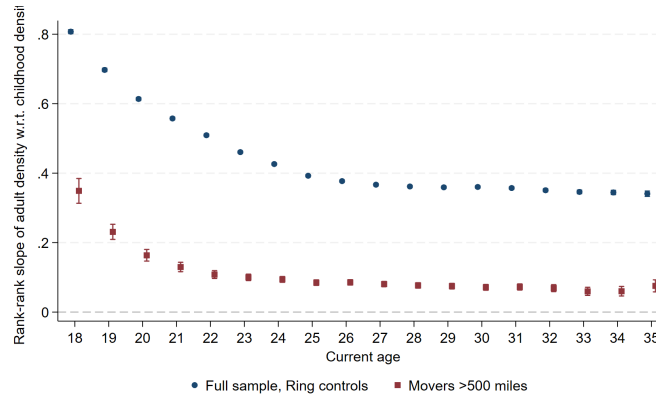


*Notes:* The figure plots regression coefficients  $\beta_j$  from separate regressions in which the minimum distance between the adult residence and the childhood neighborhood is progressively increased from 0 to 500 miles. The blue curve plots coefficients on the indicator for an urban NYC childhood, equal to one if the childhood census block group ever lies within the four urban boroughs of New York City (Manhattan, Brooklyn, Queens, and the Bronx). The red curve plots coefficients on the indicator for urban Chicago, equal to one if the childhood block group ever lies within five miles of downtown Chicago. The orange curve plots coefficients on the indicator of a high-density childhood (average density greater than 5,000 people/km<sup>2</sup>). The green dashed curve plots coefficients on  $\ln D_j$ , the log of average childhood neighborhood density. Shaded areas are 95% confidence intervals. The left axis scales the urban NYC and urban Chicago estimates; the right axis scales the  $\ln D_j$  estimates.

Figure A7: The Adult-Childhood Density Relationship by Age



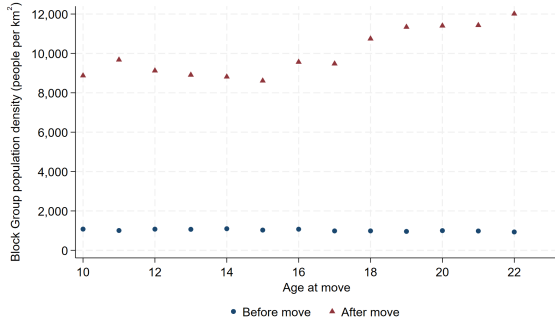
(a) Log-Log



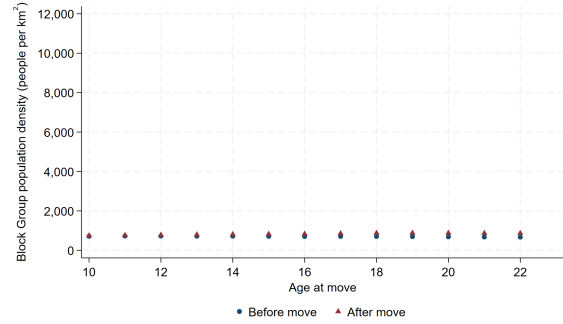
(b) Rank-Rank

*Notes:* The figure plots age-specific estimates of the relationship between childhood and adult neighborhood density, from regressions of adult density on childhood density interacted with current-age indicators. Panel (a) measures both variables in logs, so each point is the elasticity of adult neighborhood density with respect to childhood density at that age; Panel (b) measures both in percentiles, so each point is the rank–rank slope. Childhood density is the year-weighted average over ages 5–17. Outcomes are person-years at ages 18 to 35. The full-sample series conditions on childhood neighborhood income and college share and on the average density of areas surrounding the childhood neighborhood, measured within annuli of 0–1, 1–2, 2–5, 5–10, 10–20, 20–50 miles, all interacted with current age. The movers series applies the income and college-share controls to the subsample of individuals residing more than 500 miles from their childhood neighborhood. Vertical bars are 95% confidence intervals based on standard errors clustered at the individual child level.

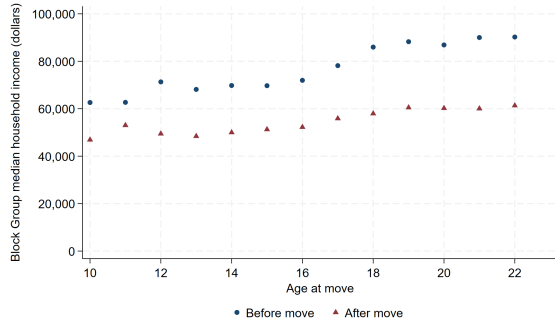
Figure A8: Neighborhood Characteristics Before and After the Move, by Age at Move



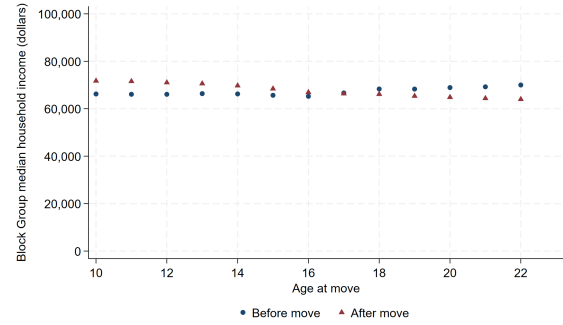
(a) Population density: treatment



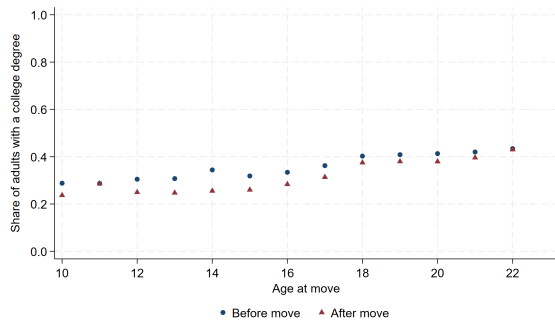
(b) Population density: control



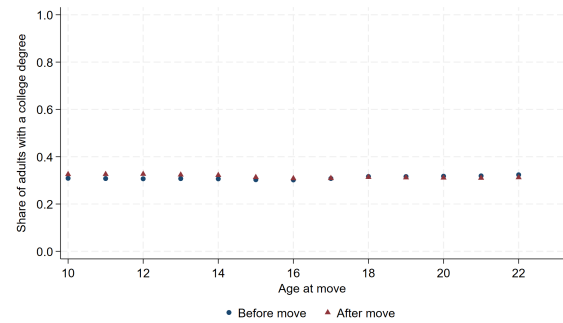
(c) Median income: treatment



(d) Median income: control



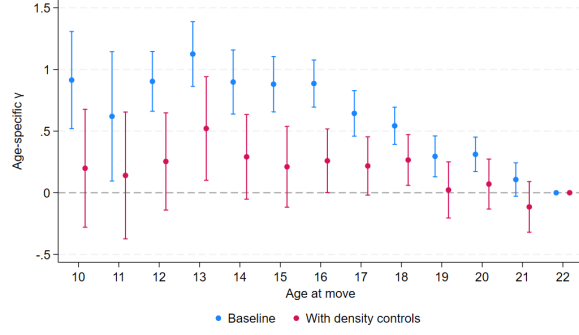
(e) College share: treatment



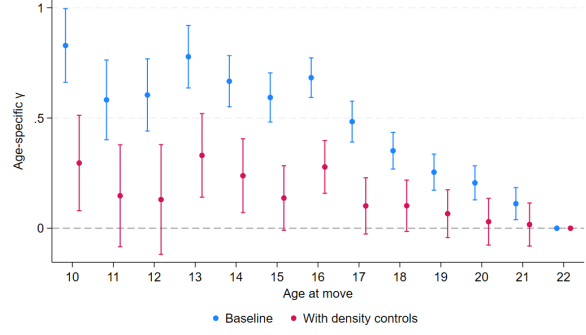
(f) College share: control

*Notes:* Each panel is a binned scatter plot of census block group characteristics against age at move. Circles show the average for the origin block group (before the move) and triangles the average for the destination block group (after the move). Panels (a), (c), and (e) show the treatment group: families that moved from block groups with fewer than 2,000 people per km<sup>2</sup> to block groups with more than 5,000 people per km<sup>2</sup>. Panels (b), (d), and (f) show the control group: families that moved from block groups with fewer than 2,000 people per km<sup>2</sup> to block groups with at most 5,000 people per km<sup>2</sup>. Panels (a) and (b) plot block group population density, (c) and (d) block group median household income, and (e) and (f) the share of adults with a college degree.

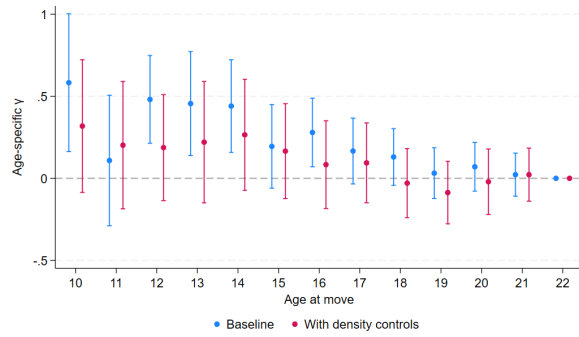
Figure A9: Age at Move: Alternative Density Cutoffs and Samples



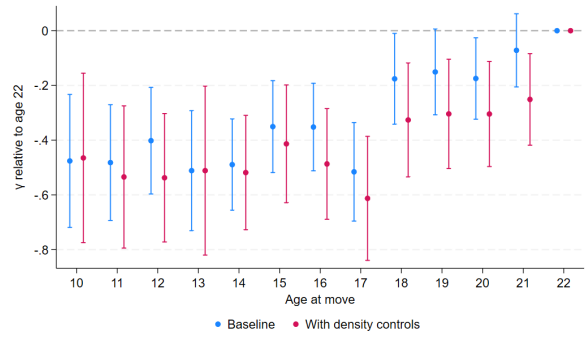
(a) Treatment cutoff: 7,000 per  $\text{km}^2$



(b) Treatment cutoff: 4,000 per  $\text{km}^2$



(c) Moves into high density



(d) Moves out of high density

*Notes:* Each panel compares treatment and control families by age at move. In panel (a), treatment families moved from neighborhoods with fewer than 2,000 people per  $\text{km}^2$  to neighborhoods with at least 7,000 people per  $\text{km}^2$ ; panel (b) uses a destination cutoff of 4,000 people per  $\text{km}^2$  instead. In both panels, the control group consists of the other families that moved out of neighborhoods with fewer than 2,000 people per  $\text{km}^2$ . Panels (c) and (d) restrict the sample to individuals who moved out of their childhood block group. Panel (c) uses the baseline treatment, moves from low- or moderate-density neighborhoods to high-density neighborhoods, and panel (d) considers the reverse, moves from high-density neighborhoods to low- or moderate-density neighborhoods.

Table A1: Summary Statistics of Linked Children

|                                         | Mean   | Median | SD    | Min  | Max     | Obs.       |
|-----------------------------------------|--------|--------|-------|------|---------|------------|
| Birth year                              | 1995.0 | 1994   | 4.2   | 1989 | 2006    | 6,859,475  |
| Age at outcome observation (annual)     | 26.4   | 26     | 4.4   | 18   | 36      | 23,659,975 |
| Distance from childhood home (mi)       | 144.0  | 5.3    | 408.9 | 0.0  | 5,156   | 23,660,804 |
| <i>Childhood neighborhood</i>           |        |        |       |      |         |            |
| Population density (persons/sq. km)     | 2,024  | 929    | 5,035 | 0    | 180,504 | 6,859,475  |
| Distance to downtown (mi)               | 18.3   | 14.5   | 16.2  | 0.0  | 199.9   | 6,856,053  |
| Share of adults with BA or higher       | 0.30   | 0.25   | 0.19  | 0.00 | 1.00    | 6,859,226  |
| Median household income (2014 \$1,000s) | 66.0   | 59.3   | 33.2  | 2.5  | 250.0   | 6,858,680  |
| Share commuting by public transit       | 0.04   | 0.00   | 0.11  | 0.00 | 1.00    | 6,859,113  |
| <i>Adulthood neighborhood</i>           |        |        |       |      |         |            |
| Population density (persons/sq. km)     | 2,413  | 1,053  | 5,924 | 0    | 201,395 | 23,659,887 |
| Distance to downtown (mi)               | 16.6   | 12.6   | 15.9  | 0.0  | 199.2   | 23,649,104 |
| Share of adults with BA or higher       | 0.30   | 0.26   | 0.20  | 0.00 | 1.00    | 23,654,076 |
| Median household income (2014 \$1,000s) | 60.2   | 54.7   | 29.2  | 2.5  | 250.0   | 23,645,765 |
| Share commuting by public transit       | 0.05   | 0.00   | 0.12  | 0.00 | 1.00    | 23,652,819 |

*Notes:* The sample includes linked individuals with at least one observed childhood neighborhood. Birth year and childhood neighborhood characteristics are measured at the individual level. Age, distance from childhood home, and adulthood neighborhood characteristics are measured at the person-year level. Childhood neighborhood characteristics are year-weighted averages of the characteristics of the neighborhoods in which the individual's linked parents lived during the individual's ages 5–17. Age at outcome observation is the individual's age in each year observed at an independent address. Distance from childhood home is the distance between the individual's current neighborhood and their childhood home. All neighborhood characteristics are measured at the Census block-group level: Population density, education, income, and transit shares are from the 2010–2014 American Community Survey, with income in 2014 dollars. Distance to downtown is the distance from the block-group centroid to the CBSA's central business district following Holian and Kahn (2015).

Table A2: Correlates of Log Population Density

|                                                                              | (1)                     | (2)                       | (3)                       | (4)                           | (5)                    | (6)                 | (7)                                   |
|------------------------------------------------------------------------------|-------------------------|---------------------------|---------------------------|-------------------------------|------------------------|---------------------|---------------------------------------|
|                                                                              | Log median<br>HH income | Share of<br>college grads | Share non-<br>Hisp. white | Share single-<br>family homes | Share 5+<br>unit bldgs | Share<br>transit    | Distance to<br>city center<br>(miles) |
| <i>Panel A: Outcome Variable: Log Pop Density - No fixed effects</i>         |                         |                           |                           |                               |                        |                     |                                       |
| Coefficient                                                                  | -0.130***<br>(0.008)    | 1.659***<br>(0.021)       | -2.987***<br>(0.013)      | -2.396***<br>(0.014)          | 3.743***<br>(0.015)    | 7.401***<br>(0.028) | -0.0474***<br>(0.0003)                |
| Observations                                                                 | 218,380                 | 219,146                   | 219,187                   | 218,749                       | 218,749                | 218,908             | 216,304                               |
| $R^2$                                                                        | 0.001                   | 0.027                     | 0.220                     | 0.110                         | 0.196                  | 0.202               | 0.217                                 |
| <i>Panel B: Outcome Variable: Log Pop Density - With Metro fixed effects</i> |                         |                           |                           |                               |                        |                     |                                       |
| Coefficient                                                                  | -0.968***<br>(0.063)    | -0.118<br>(0.197)         | -2.387***<br>(0.100)      | -1.857***<br>(0.233)          | 2.424***<br>(0.145)    | 5.357***<br>(0.347) | -0.0786***<br>(0.0058)                |
| Observations                                                                 | 201,294                 | 202,023                   | 202,063                   | 201,648                       | 201,648                | 201,809             | 199,380                               |
| $R^2$                                                                        | 0.412                   | 0.346                     | 0.449                     | 0.422                         | 0.440                  | 0.424               | 0.513                                 |
| Within $R^2$                                                                 | 0.098                   | 0.000                     | 0.158                     | 0.114                         | 0.141                  | 0.119               | 0.254                                 |
| Metro clusters                                                               | 929                     | 929                       | 929                       | 929                           | 929                    | 929                 | 914                                   |
| <i>Panel C: All variables</i>                                                |                         |                           |                           |                               |                        |                     |                                       |
|                                                                              | (1)                     | (2)                       |                           |                               |                        |                     |                                       |
| Log median household income                                                  | 0.126***<br>(0.010)     | -0.559***<br>(0.074)      |                           |                               |                        |                     |                                       |
| Share of college grads                                                       | 1.434***<br>(0.024)     | 1.322***<br>(0.180)       |                           |                               |                        |                     |                                       |
| Share non-Hispanic white                                                     | -2.328***<br>(0.013)    | -1.309***<br>(0.081)      |                           |                               |                        |                     |                                       |
| Share single-family homes                                                    | 0.607***<br>(0.025)     | 0.365*<br>(0.216)         |                           |                               |                        |                     |                                       |
| Share in 5+ unit buildings                                                   | 2.255***<br>(0.027)     | 1.212***<br>(0.183)       |                           |                               |                        |                     |                                       |
| Share commuting by transit                                                   | 3.129***<br>(0.026)     | 1.077***<br>(0.295)       |                           |                               |                        |                     |                                       |
| Distance to city center (miles)                                              | -0.0296***<br>(0.0003)  | -0.0519***<br>(0.0040)    |                           |                               |                        |                     |                                       |
| Metro fixed effects                                                          | No                      | Yes                       |                           |                               |                        |                     |                                       |
| Observations                                                                 | 215,476                 | 198,587                   |                           |                               |                        |                     |                                       |
| $R^2$                                                                        | 0.507                   | 0.599                     |                           |                               |                        |                     |                                       |
| Within $R^2$                                                                 |                         | 0.382                     |                           |                               |                        |                     |                                       |

*Notes:* The dependent variable is log population density. Each column of Panels A and B reports the coefficient from a separate regression of log population density on the variable named in the column heading. Panel C includes all variables jointly, without metro fixed effects in column (1) and with them in column (2). All regressions are weighted by population. Regressions without fixed effects (Panel A and Panel C, column 1) report heteroskedasticity-robust standard errors; regressions with metro fixed effects (Panel B and Panel C, column 2) report standard errors clustered by metro. Constants are not reported. Standard errors are clustered at the individual child level in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A3: Full Sample Regressions: Adult Neighborhood Characteristics on Childhood Characteristics

| Dependent variable:                                 | Ln<br>Income              | College<br>Share          | Distance to<br>City Center | Transit<br>Share          | 5+ Unit<br>Share          |
|-----------------------------------------------------|---------------------------|---------------------------|----------------------------|---------------------------|---------------------------|
|                                                     | (1)                       | (2)                       | (3)                        | (4)                       | (5)                       |
| <i>Mean childhood neighborhood characteristics:</i> |                           |                           |                            |                           |                           |
| Ln Population Density                               | 0.0047***<br>(0.0002)     | 0.0005***<br>(0.0001)     | 0.1108***<br>(0.0080)      | 0.0036***<br>(0.0001)     | 0.0122***<br>(0.0002)     |
| Ln Neighborhood Income                              | 0.5997***<br>(0.0007)     | 0.0223***<br>(0.0002)     | 0.2882***<br>(0.0155)      | -0.0517***<br>(0.0002)    | -0.1153***<br>(0.0004)    |
| Share College Graduates                             | 0.0440***<br>(0.0015)     | 0.6445***<br>(0.0006)     | -2.3548***<br>(0.0365)     | 0.1145***<br>(0.0005)     | 0.3418***<br>(0.0010)     |
| Distance to City Center                             | 0.000581***<br>(0.000015) | 0.000071***<br>(0.000005) | 0.7472***<br>(0.0013)      | 0.000591***<br>(0.000004) | 0.000523***<br>(0.000009) |
| Ring Density Controls                               | Yes                       | Yes                       | Yes                        | Yes                       | Yes                       |
| Observations                                        | 4,008,699                 | 4,009,619                 | 4,009,682                  | 4,009,487                 | 4,009,242                 |
| $R^2$                                               | 0.4416                    | 0.4894                    | 0.5306                     | 0.2612                    | 0.0770                    |

*Notes:* Each column reports a separate regression of the adult neighborhood characteristic in the column heading on mean childhood neighborhood characteristics, where childhood characteristics are year-weighted averages over ages 5–17. The regressions mirror Panel B of Table 1, but are estimated on the full sample and control for the log average population density of rings 0–1, 1–2, 2–5, 5–10, 10–20, and 20–50 miles around the childhood neighborhood instead of restricting the sample to individuals residing more than 500 miles from their childhood neighborhood. Childhood density and childhood neighborhood income enter in logs, and the share of college graduates enters in levels. Distance to the city center, both as an adult outcome and as a childhood experience as the regressor, is measured in miles. Standard errors are clustered at the individual child level in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .