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Estimating the Impact of Neighborhood Racial and Ethnic Composition on Location Choice

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Policy Brief

While racial and ethnic segregation in the United States has fallen since peaking in the mid-twentieth century, it remains persistently elevated. At the same time, the racial and ethnic composition of neighborhoods in the United States is fairly dynamic; 40% to 50% of neighborhoods experience a change in Black, Hispanic, or White population share of 5 percentage points or more in a decade.

Our study provides an analysis of household preferences for neighborhoods' demographic composition and how these household preferences vary by household characteristics, including race and ethnicity, age, home-ownership status, and credit score. We find that same-race and ethnicity preferences are strong enough that even small changes in neighborhood demographics can set off a chain of reshuffling that eventually leads to more segregated neighborhoods.

Data and analysis

We examine the neighborhood location choices of households in 197 metropolitan areas (metros) using panel data from the Federal Reserve Bank of New York Consumer Credit Panel/Equifax data set (CCP). In addition to the racial and ethnic composition of the neighborhood, households' neighborhood preferences are determined by the amenities of the neighborhood, some of which may accompany racial/ethnic population shares (such as retail establishments targeted toward particular demographic groups) and some of which do not (such as whether the neighborhood is situated on a hill and has nice views).

The data set is comprised of a 5% random sample of U.S. adults with a Social Security number, who have an active credit file, and any individuals who reside in the same household as an individual from the initial 5% sample. For years 1999 to 2019, the dataset provides a quarterly record of variables related to debt, includes the Equifax Risk Score—which provides information on the financial wherewithal of the household—and includes in each period the current census block of residence.¹ Households are sorted into 54 mutually exclusive types: by age of the head of the household (young, middle, or old), by housing tenure status (renter or owner), by credit score (low, middle, or high), and by race/ethnicity (Black, Hispanic, White, or other), which we infer based on the census block in which the household is first observed.

A key difficulty in estimating preferences for neighborhood racial and ethnic shares is finding plausibly random variation in neighborhood racial and ethnic composition. Our insight is to construct an instrumental variable that predicts neighborhood racial/ethnic composition but is not correlated with the other factors that influence preferences for neighborhoods. We construct this instrument by ranking neighborhoods in each metro area by income percentile of that metro, pooling all of the data across metros, and then estimating the propensity of each type of household (race and ethnicity, age, homeownership status, and credit score) to live in any given income percentile. Then for each metro, we construct a simulated population distribution by distributing the metro's actual population of each type across the metro's census tracts according to each type's estimated average nationwide sorting propensities. We use the resulting simulated population distribution to compute simulated racial shares, which we use as our instruments. The phenomenon that this procedure harnesses is that in metros where a particular household type makes up a larger than average share of the metro-wide population, the neighborhoods at the income percentiles where that type of household disproportionately tends to live will tend to have a larger share of the population belonging to that type's race than neighborhoods at the same income percentile in other metros.

In order to understand the sources of variation that allow our instrument to estimate household types' preferences for neighborhood racial/ethnic composition, we decompose the instrument into components driven by each household type. We find that variation in the share of the neighborhood that is comprised of young to middle aged, Black, renting, households plays a large role in estimating preferences for the Black population share of a neighborhood. Similarly, variation in the young to middle aged, Hispanic, renting, household share plays a large role in estimating preferences for the Hispanic population share of a neighborhood. We also perform a partial validation check of our instrument by showing that it is strongly correlated with actual neighborhood Black and Hispanic population shares, but not with features of neighborhoods related to topography, access to public transit, and road network density (amenities that we consider either not to respond to neighborhood racial/ethnic composition or to respond quite slowly).

Results and implications

Many, but not all, household types exhibit preferences for living in neighborhoods with a higher share of same race and ethnicity neighbors than the average among the population. The average Black household would be willing to pay 3% higher rent to increase the share of Black residents in the neighborhood by one percentage point. The average White household would be willing to pay 1% higher rent to decrease the share of Black households in the neighborhood by one percentage point.

We analyze the stability of neighborhood racial and ethnic composition by considering whether small changes in that composition lead to households moving in ways that lead to much larger changes in neighborhood racial and ethnic composition, given the type-specific preferences that we estimate. We find that the racial and ethnic composition of the majority of neighborhoods in almost all of the metropolitan areas is not stable, meaning that a small change in neighborhood composition would tend to be followed by larger changes and greatly increased segregation.

Finally, we simulate what we consider a small policy change: increasing the number of low-income housing tax credit units by 10% in the locations where they already exist. We find that while this policy could decrease racial and ethnic segregation in the short run, it is likely to lead to a long-run equilibrium that is more segregated and that the speed to which the racial and ethnic composition converges to the new equilibrium depends upon whether households expect the neighborhood racial and ethnic composition to stay the same as it was in the past year or whether they can forecast the new long-run equilibrium.

Policy considerations

Our simulation exercise shows that because it takes time to move, the short-run implication of a policy that might initially create more integrated neighborhoods will likely not look like the long-run implications of that policy after the chain of re-sorting moves has settled to a new steady state.

While the policy simulation we consider slightly expands low-income housing in places where it already exists, another policy to promote integrated neighborhoods that has been considered is to encourage public housing residents to move to low-poverty neighborhoods. One effort to deconcentrate low-income housing was the Moving to Opportunity (MTO) for Fair Housing Demonstration.² The MTO demonstration, authorized by Congress in the Housing and Community Development Act of 1992, tested whether offering housing vouchers to families living in public housing projects in high-poverty neighborhoods of large inner cities could improve their lives by allowing them to move to low-poverty neighborhoods. The MTO program showed medium-run benefits for mental health of parents and boys who moved to low-poverty neighborhoods, as well as long-run educational and labor market benefits for children who moved when they were young.³ However, the results of the program demonstrated that it was difficult for voucher recipients to move to and remain in low-poverty neighborhoods for reasons including limited supply of rental housing in low-poverty neighborhoods, inadequate public transportation, and discrimination by landlords.

A 2018 [report](#) from the Urban Institute proposed the development and implementation of “opportunity neighborhood” plans in metropolitan regions, through which participating regions would engage in data-driven, participatory planning; develop a portfolio of investments and policy reforms to revitalize disinvested neighborhoods; and increase access to high-opportunity neighborhoods. The plan would also include support from philanthropic organizations and government.⁴ In addition to policy solutions for existing neighborhoods, policies like local inclusionary zoning laws aim to reduce segregation for new neighborhoods by encouraging or requiring developers to set aside a percentage of housing units for sale or rent at below-market prices.⁵

However, our estimates imply that some households, both White and Black, wish to live in more integrated neighborhoods than others. So, a policy objective of complete integration in every neighborhood may simply not be feasible. A different policy objective may be to try to create integrated neighborhoods among types of households that prefer them, of which there are many (and for whom their current allocation may not be ideal).

Finally, even among households that are open to integration, the optimal distribution of racial shares may not be identical. As long as preferences over the racial distribution are sufficiently flat over a wide-enough range, a small tax-transfer scheme might be able to preserve racial integration in these neighborhoods.

Notes

¹ An average residential Census block contains about 50 people.

² Sanbonmatsu et al. (2011).

³ See Leventhal and Brooks-Gunn, J. (2003). Also Chetty, Hendren, and Katz (2016).

⁴ Turner et al. (2018).

⁵ Ramakrishnan, Treskon, and Greene (2019).

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