The Racial Dynamics of U.S. Neighborhoods and Their Housing Prices from 1950 Through 1990

Daniel Hartley, Jonathan Rose, and Becky Schneirov

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Abstract

We characterize the dynamics of neighborhood racial composition by using the k-medians machine learning technique to group neighborhoods into five different patterns according to the evolution of the Black population share of census tracts from 1950 through 1990. The procedure classifies tracts into groups that: always have a high Black population share, always have a low Black population share, have a steep increase in the Black population share from 1950-1960, or 1960-1970, and those that have a gradual increase in the Black population share from 1950-1990. We calculate the growth in median rents and home values in each to the five groups and find that those with steep increases in the Black population share show the smallest increases in home values and rent implying that Black households that bought homes in these neighborhoods in 1950 or 1960 were likely to have lost money or barely broken even by 1990.

JEL Codes: C38, N22, N92, G21, R23

Keywords: Blockbusting; neighborhood dynamics; cluster analysis; housing prices; wealth gap

1 Introduction

In 1950, Black people faced an extremely tight housing market in many Northern and Western cities. This was following a lull in housing construction during World War II as the United States focused its productive capacity on the war effort, and as the Great Migration continued. For Black people, access to many residential neighborhoods was either explicitly cut off through racial covenants written into deeds that prevented the sale of homes to Black people or implicitly through the threat of violence or the coordinated unwillingness of real estate professionals to facilitate sales of homes to Black households in neighborhoods without existing Black residents.[1]

After racial covenants were ruled unenforceable by the Supreme Court in Shelley v. Kraemer (1948), real estate professionals began facilitating more sales on the edges of existing Black neighborhoods (Helper, 1969). The pent-up housing demand combined with real estate professionals steering Black buyers to purchase homes in areas on the borders of existing Black neighborhoods gave rise very large increases in the Black population share in census

[1] See Helper (1969), Sood and Ehrman-Solberg (2023), and Bell (2013).

tracts that bordered existing Black neighborhoods. Examining decennial census data we show that extremely large increases in the Black population share of census tracts were relatively frequent in the 1950s, 1960s, and 1970s. These patterns are consistent with the evidence on blockbusting activity which is documented in Hartley and Rose (2023). Blockbusting is the practice of inducing people to sell their homes by stoking race-based fears about the entry of minorities to a neighborhood. It was outlawed in the 1968 Fair Housing Act. Hartley and Rose (2023) show that blockbusting induced extremely high rates of turnover in neighborhoods that were targeted, as almost all properties were sold in a relatively short time-frame. The population of one neighborhood of Baltimore, for example, changed from less than 1 percent Black populated to 96 percent Black populated, in about ten years.

Hartley and Rose (2023) use historical sources to show that blockbusting induced high rates of racial turnover in targeted neighborhoods. In this paper, we use cluster analysis to identify tracts that experienced rapid racial change associated with blockbusting. We use the resulting classifications to compare the dynamics of home values and rents between tracts with rapid racial change, tracts with gradual racial turnover, and tracts with a stable high Black population share or a stable low Black population share. In contrast to Hartley and Rose (2023) who focus on estimating the causal effect of blockbusting on the new residents and neighborhoods, we are focused on describing patterns of neighborhood racial change over time, as well as the housing market dynamics associated with different patterns of racial change or stability.

To motivate our analysis, Figure 1 shows the share of census tracts in which the Black, White, or Hispanic population share increased by 25 percentage points or more in each decade from the 1950s through the 2000s. To construct the figure we tabulate the later year census tract racial or ethnic population share to the earlier year census tract boundary using the share of land area for which they overlap. Tabulating to the earlier year boundary is less likely to induce spurious changes in racial/ethnic population shares since the most common change in tract boundaries is for tracts to be split over time as population grows. In practice, the results are robust to tabulating to the later year tract boundary. The figure uses all available census tracts in the earlier year of each decadal period. This means that the sample is expanding to cover more of the United States with each decade until 1990, when the entire country is tracted. While we find it informative to show data for all available tracts, the patterns are robust to limiting the data to the cities and geographic extents for which census tracts had been drawn in 1950.

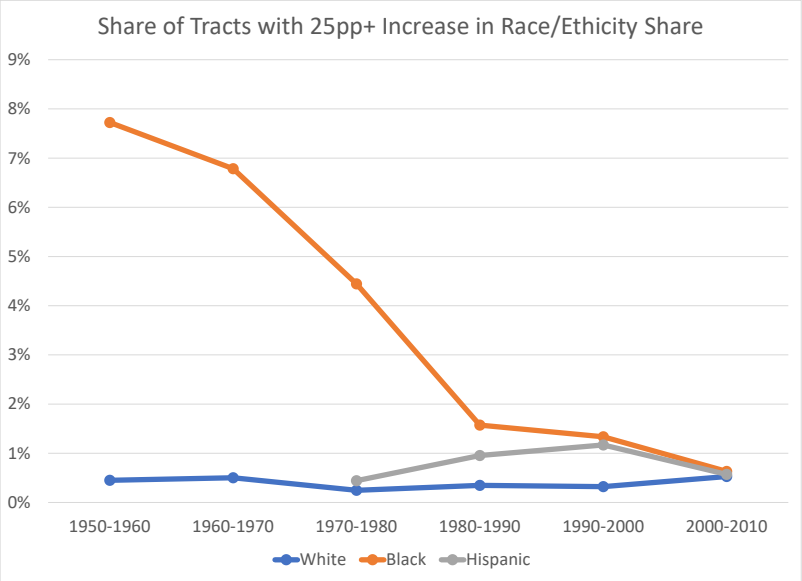

Figure 1:
Share of census tracts with a 25 percentage point or greater increase in race/ethnicity share in each decade from the 1950s through the 2000s

Figure 1 reveals that during the 1950s, 1960s, and 1970s the Black population share increased by 25 percentage points or more in a relatively large share of census tracts. This share fell from about 7.7% of tracts in the 1950s to about 4.5% of tracts in the 1970s. For the entire time range shown, the share of census tracts where the White population share increased by 25 percentage points or more was about 0.5% or less. Similarly, since 1970, when tract-level tabulations of the Hispanic population become available, large increases in the Hispanic population share of 25 percentage points or more have been relatively infrequent, occurring at most in about 1% of census tracts. We focus on these large changes in the Black population share which were extremely large compared to racial and ethnic changes in neighborhoods in the more recent past.

2 Classifying Racial Dynamics

For the following exercises, we use a panel of decennial census data from 1950-1990 in which all tracts have been standardized to 1950 tract tabulation boundaries according to land area. As in Hartley and Rose (2023) we use data for the 60 highest population cites in 1950, but limit the data to cities with census tract tabulations in the 1950 census.

We use k-medians clustering, an unsupervised machine learning technique, to classify census tracts by the evolution of Black population share from 1950 through 1990. To do so, we specify $k = 5$ (the number of groups) and use Black population share by decade from 1950 through 1990 to categorize tracts. The procedure finds a set of $k = 5$ time paths of Black population share that minimize the total distance between all actual tract time paths of Black population share and the median time path of their corresponding clusters. Specifying a $k < 5$ yields clusters that fail

to distinguish between tracts with rapid racial change, tracts with gradual racial turnover, and tracts with stable Black population shares.

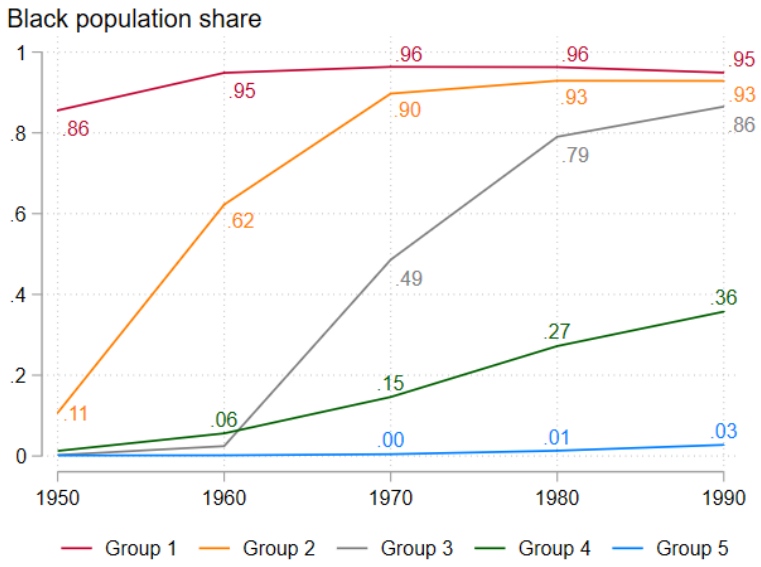

Figure 2:
Median Black population share by *k*-medians cluster, 1950-1990.

Number of tracts per group:
Group 1 - 742
Group 2 - 870
Group 3 - 1,083
Group 4 - 2,072
Group 5 - 6,783

Figure 2 plots the resulting clusters from using *k*-medians clustering to select 5 representative patterns for the evolution of the Black population share from 1950-1990. Consistent with narratives regarding the persistence of segregation, the *k*-medians clustering procedure classifies one set of census tracts as always having a high Black population share above 80% (Group 1) and another set of census tracts as always having a low Black population share very close to zero (Group 5). The other three clusters are characterized by a steep increase in the Black population share from 1950-1960 (Group 2), a steep increase in the Black population share from 1960-1970 (Group 3), and a gradual increase in the Black population share from 1950-1990 (Group 4).

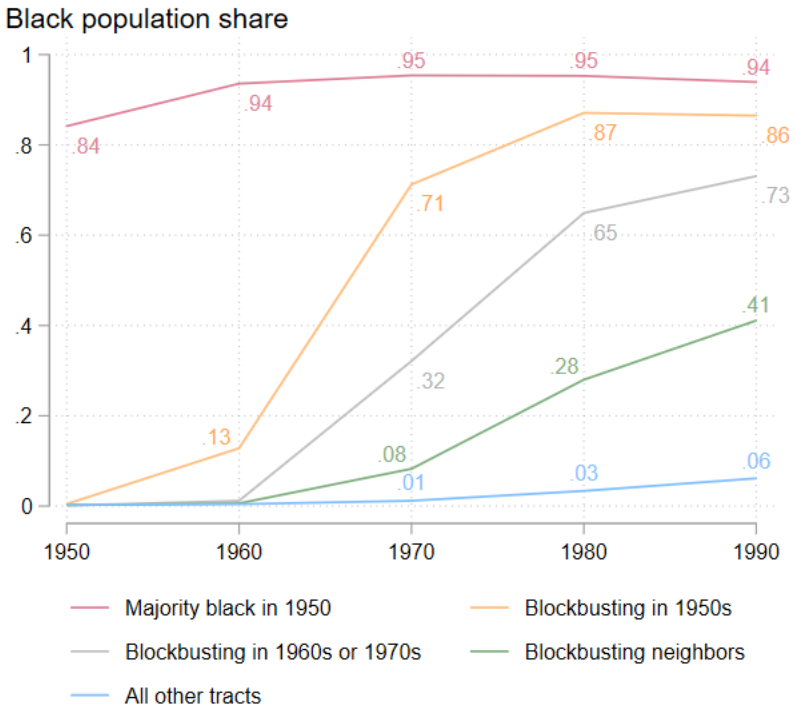

Figure 3:
Median Black population share by blockbusting category, 1950-1990

Figure 3 shows the medians of the Black population share for the set of census tracts that had a Black population share over 50% in 1950, that experienced blockbusting in the 1950s, that experienced blockbusting in the 1960s or 1970s, census tracts that did not experience blockbusting but were located adjacent to tracts that experienced blockbusting, and all other census tracts in the panel of decennial census data described above. The patterns are strikingly similar to the time series patterns of the five groups selected by the *k*-medians clustering procedure.

3 Housing Returns and Rents

Figure 4 plots the change in group median of tract-level median rents in the five *k*-medians clustering groups.[2] The figure shows that rents rose by about 20-25% in each of the 5 groups of tracts from 1950-1960. By 1970, the differences in rents between the five sets of census tracts begin to emerge. Rents in tracts with persistently low Black population shares (Group 5) have increased by about 40% since 1950; rents in census tracts which have a gradually increasing Black population share (Group 4) have increased by about 30% since 1950, while rents in Group 3 tracts that saw steep increases in the Black population share in the 1960s look roughly the same as their 1960 level (up 20% since 1950). Finally, rents fell a little from 1960 to 1970 in tracts with persistently high Black population shares (Group 1) and those that had steep increases in the Black population share in the 1950s (Group 2). Rents in the Group 4 and 5

[2] All dollar denominated variables are expressed in real terms in 2020 dollars.

tracts saw roughly no change from 1970 to 1980. Over the same period, rents in the Group 1, 2, and 3 tracts decreased markedly.

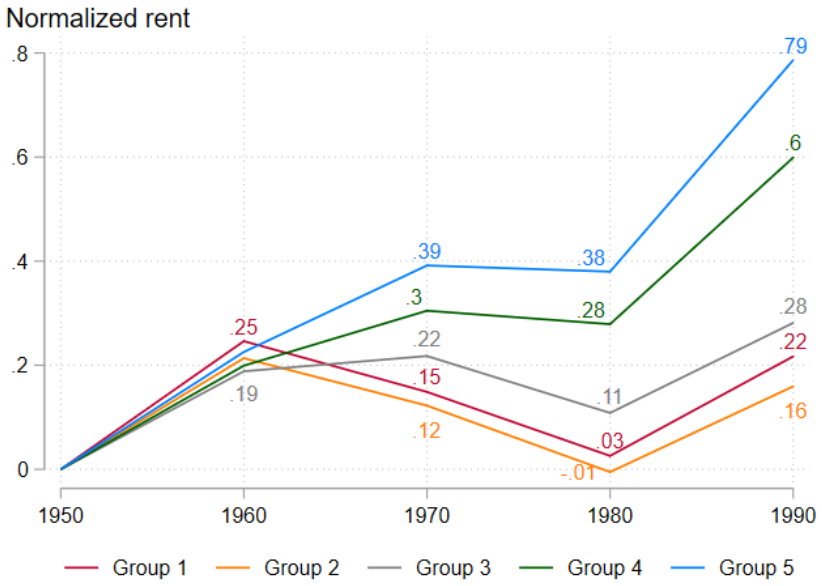

Figure 4:
Normalized median rent by *k*-medians clustering groups, 1950-1990

Rents reflect the monthly cost of housing in the different sets of census tracts and may fluctuate due to supply and demand changes in those tracts or changes in the quality of housing units or in the amenities available in the neighborhood (such as school quality, park and road maintenance, and public safety). Some of the difference in rents trajectories among the different groups of tracts are likely to be driven by changes in the public goods provided to neighborhoods as municipal fiscal conditions worsened during the 1970s driven by de-industrialization and related factors.

Figure 5 plots the net return earned by investing a dollar in the median house value for each group of census tracts in 1950. Initially, from 1950-1960, when housing options are still quite limited for Black people, house prices grow the fastest (by 20%) in Group 1 tracts which already have a high Black population share in 1950. Groups 2 and 3 which saw steep increases in the Black population share in the 1950s and 1960s, respectively, show the lowest housing returns. In these groups, home values fall steadily from 1960-1980. By 1980 they are roughly 15% below their 1950 level. They recover somewhat from 1980-1990, returning to their 1950 level in terms. In contrast, Group 1, which consists of tracts with a persistently high Black population share, have increased in value by about 30% from 1950-1990. These lower housing returns are consistent with the evidence in Hartley and Rose (2023) showing that rapid racial change caused by blockbusting was often accompanied by riskier financing such as land contracts (contract sales) in which equity did not accrue until ownership was transferred at the time that the final loan payment was made. Higher foreclosure rates in neighborhoods where steep increases in the Black population share occurred

due to blockbusting were likely to have depressed the sale price of those properties and possibly had spillover effects to depress nearby property values, too.

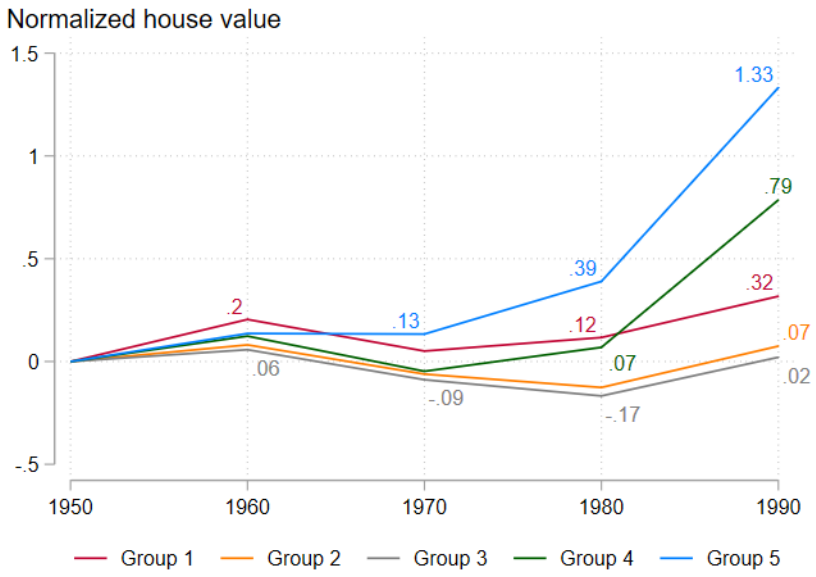

Figure 5:
Normalized median house value by k-medians clustering groups, 1950-1990

From the perspective of Black households buying homes in 1950 or 1960, the options were largely limited to buying in Group 1 neighborhoods that were already predominantly populated by Black residents or buying in Group 2 or Group 3 neighborhoods as realtors began selling to Black people in those neighborhoods in the 1950s, 1960s, and 1970s. From an investment perspective, none of the three options turned out great, but buying in an existing majority Black neighborhood in 1950 would have had a return of about 25% total from 1950-1990, while the newly available neighborhoods would have barely broken even over the same time period. In contrast, White households would have done much better, investing in a home in either the Group 1 neighborhoods with a low Black population share throughout throughout the time period (about 130% return) or the Group 2 neighborhoods where the Black population share rose gradually (about an 80% return).

4 Conclusion

We examine the racial dynamics of neighborhoods in the United States from 1950-1990. To do so, we use the machine learning technique, k-medians clustering, to group census tracts by similarity according to each tract's evolution of the Black population share from 1950-1990. Using this technique, we obtain 5 representative patterns for the evolution of the Black population share from 1950-1990 across different census tracts. These groups consist of tracts with a persistently high Black population share, tracts with a persistently low Black population share, tracts with a steep increase in the Black population share in the 1950s, tracts with a steep increase in the Black population share in the

1960s, and tracts with gradually increasing Black population shares from 1950-1990. For each group of tracts, we calculate growth in median rents and net growth rates of median home values. We find that for neighborhoods that first became accessible to Black households in the 1950s and 1960s (as measured by steep increases in their Black population share) median home values began to fall such that Black households that bought in these neighborhoods in 1950 or 1960 were likely to have lost money or barely broken even by 1990. Neighborhoods that already had a high Black population share in 1950 did slightly better, showing about 30% growth in median home values by 1990. In contrast neighborhoods accessible to White households in 1950 had much larger growth in median home values, roughly doubling in value by 1990 (80% growth for tracts with a gradual increase in the Black population share and 130% growth in tracts that with a persistently low Black population share). Our results are consistent with Hartley and Rose (2023) who estimate that blockbusting results in large increases in the Black population share and decreases in housing values, likely in part due to financial exploitation resulting in paying higher prices and high costs for access to credit that may have led to less neighborhood stability in the following decades.

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