Shattered Metropolis: The Great Migration and The Fragmentation of Political Jurisdictions*

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Abstract

Many U.S. metropolitan areas are fragmented into dozens of local political jurisdictions, which can exacerbate inequality in access to public services. Using a shift-share instrument, we estimate that 1940s Black migration to Northern cities caused the incorporation of over 800 new municipalities and a 14% slower consolidation of school districts in destination areas. Newly incorporated municipalities were predominately White, primarily use single-family residential zoning, and are more likely to have an exclusive school district, suggesting that preference for demographic homogeneity was a driver of fragmentation. Schools in cities with high jurisdictional fragmentation continue to be more racially segregated today.

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1 Introduction

Urban areas in the United States tend to be subdivided into a multiplicity of local governments. For example, the Chicago metropolitan area is comprised of a staggering 1,550 local jurisdictions, including entities such as municipalities, school districts, and special districts (Hendrick and Shi, 2015). In economics, this phenomenon is interpreted as a feature of preference heterogeneity for public good provision (Tiebout, 1956), and attributed to the trade-off between economies of scale and community homogeneity (Alesina et al., 2004). However, scholarship in history, law, sociology, and urban studies has argued that jurisdictional fragmentation in the U.S. often served to exclude racial minorities from access to high-quality public goods (Danielson, 1976, Burns, 1994, Austin, 1999, Anderson, 2010, Jenkins, 2021, Wyndham-Douds, 2023). U.S. cities that are fragmented into many local governments also tend to be more racially segregated (Rusk, 1993, Dreier et al., 2014), and racial gaps in student achievement have been shown to be larger in cities where segregation is primarily driven by local government fragmentation (Monarrez and Schönholzer, 2023).

While there is evidence that inflows of historically marginalized populations have led to residential resorting based on race (Card et al., 2008, Boustan, 2010) and to lower rates of social mobility for minorities (Derenoncourt, 2022a), we know little about whether these inflows affected the structure of local jurisdictions tasked with public goods provision itself. Hence, we ask: what is the role of race in shaping local jurisdictional fragmentation in the American city?

We address this question by examining the impacts of a pivotal demographic event that increased Black Americans' population share in many U.S. cities: the Second Great Migration (hereafter the Great Migration). Between 1940 and 1970, four million African Americans migrated from the South to cities in the North and West of the United States, which triggered a variety of fundamental changes in the demographic and political makeup of destination cities (Collins, 2021). The aim of our study is to determine whether and to what extent Black migration during this period caused jurisdictional fragmentation in receiving urban areas. This is a nontrivial endeavor, as this episode also coincided with a period of intense urban and suburban population growth, the birth of many new local governments, the growth of major cities via territorial annexation, and a dramatic contraction in the number of school districts, making this a critical period for the delineation of local polities.

To identify the causal impact of the Great Migration on jurisdictional fragmentation, we combine a migration shift-share design (Card, 1990, Boustan, 2010, Shertzer and Walsh, 2019, Derenoncourt, 2022a) with historical measures of political jurisdictions in the post-war era (U.S. Census Bureau, 2014, Goodman, 2023).[1] In our dataset, we observe the year of municipal incorporation, the number of municipalities, school districts, and special districts in 1940, 1970, and 2010, allowing us to document variation in the number of jurisdictions per capita (our preferred measure of fragmentation). The shift-share design is based on exogenous migration push factors combined with pre-existing migration links between Southern counties and destination commuting zones (hereafter CZs).

We find that the Great Migration was an important driver of the jurisdictional fragmentation of U.S. metro areas. We estimate that it led to the incorporation of over 800 new municipalities, reduced the rate of school district consolidation, increased the number of special districts per capita, and decreased the share of CZ residents served by the central city in impacted CZs. Our results persist to 2010 and are robust to a range of specification checks. Importantly, we find no evidence that White migration from the South had a comparable effect on jurisdictional fragmentation, indicating that our findings are

[1]We focus on the Great Migration not only because of its historical significance and co-incidence with a period of population growth and school district consolidation, but also because one of our primary data source begins in the 1940s.

not a generic feature of metropolitan population growth resulting from in-migration.

We supplement these findings with a descriptive analysis of municipalities incorporated as a result of the Great Migration, relative to municipalities incorporated in non-destination CZs, obtaining five broad findings. First, these municipalities were almost entirely White in 1970, regardless of the composition of the surrounding metro area. Second, they are relatively low income and collect fewer special assessments, indicating a more limited rationale for incorporation to isolate an affluent tax base. Third, they tend to collect a higher share of municipal revenues via police fines, consistent with stringent law enforcement activity. Fourth, they are more likely to use single-family land-use zoning for residential areas (as opposed to multi-family zoning), suggesting efforts to restrict entry for lower-income households. Finally, these municipalities are about 60% more likely than others to have a school district that exclusively serves that municipality, potentially limiting the impact of federal school desegregation policies which exclusively focused on within-district margins. Together, this evidence suggests many post-war era incorporations in destination CZs were at least partly driven by an aim to seclude White populations and exclude Black ones, at the cost of potential economies of scale in the provision of local public services.

Our study concludes with an analysis of the causal effect of the Great Migration on contemporary cross-jurisdictional school outcomes. We find that Great Migration population flows led to a long-run increases in both Black-White segregation and achievement gaps across school districts within a CZ. Because we cannot disentangle the mechanisms behind these effects, these results are more suggestive than our main findings on fragmentation. Notwithstanding, this evidence is indicative of the likely downstream consequences of jurisdictional fragmentation on inequality in public good provision.

Literature contributions. In addition to the literature on jurisdictional fragmentation outside economics mentioned earlier, our work speaks to research in political economy on jurisdictional formation (Casella, 2001, Henderson and Thisse, 2001, Alesina et al., 2004, Weese, 2015, Grossman et al., 2017) and to recent empirical work on contemporary resistance to municipal consolidation in France (Tricaud, 2023). Alesina et al. (2004) provides suggestive evidence that Black migration during the World Wars to a selected set of 47 destination counties in the North preserved a larger number of school districts. We show that this result holds up in a much broader set of migration destinations, using state-of-the-art causal inference methods. We also provide direct evidence that newly created jurisdictions had very different characteristics than existing ones, pointing towards a desire to accommodate separate public goods provision for different groups of residents. Finally, our approach allows us to quantify the impact of the Great Migration on the number of affected municipalities and school districts.

This paper complements evidence on White Flight and its effects on urban Black communities (Boustan, 2010, 2016) by documenting not only residential resorting within and across jurisdictions, but also the creation of new jurisdictions. Residential resorting and jurisdictional fragmentation could be potentially mutually reinforcing, where White Flight encourages incorporation, but incorporation (and an exclusive school district) also accelerates White Flight. Our work highlights the persistent costs of jurisdictional fragmentation on equitable access to education for Black households. This extends and provides causal evidence of the descriptive work in Monarrez and Schönholzer (2023), which demonstrated that cities with more salient local government boundaries tend to have more polarized educational outcomes. The causal evidence provided in the current paper suggests that, in the absence of the Great Migration, there would be many fewer local government boundaries and likely lower educational inequality.

Our work also contributes to the study of the effects of the Great Migration on the political economy of local governments in destination cities, demonstrating the long shadow of the Great Migration on urban governance of Northern cities. These effects include outcomes such as taxes and expenditures (Tabellini, 2019, Derenoncourt, 2022a), land use policy (Sahn, 2021), greater support for the civil rights movement (Calderon et al., 2022), and shifts from mayor-council to city manager systems in an effort to reduce the influence of Black voters (Trebbi et al., 2008, Grumbach et al., 2023).[2] We add to this literature that the Great Migration not only changed the governance and policies of existing local governments but fueled the preservation and creation of many additional ones, including hundreds of school districts and municipalities, thereby cementing the fragmentation of the American cityscape. Importantly, while policy preferences may evolve over time, polities once established are quite stable, potentially *permanently* decreasing the ability of local governments to provide equitable access to high-quality public goods.

2 Institutional Background

2.1 Jurisdictional Fragmentation

Jurisdictional fragmentation is the phenomenon of a large number of local governments exercising the same functions but in different subsets of the same metropolitan area. It is a central feature of the American cityscape: for example, Los Angeles County is home to 88 municipalities, 80 school districts, and 137 special districts. Understanding the causes and consequences of the proliferation of jurisdictions is of longstanding interest in economics and political science (Alesina and Spolaore, 1997, Alesina et al., 2004, Grossman and Lewis, 2014, Weese, 2015). A central premise in this literature is that the number of jurisdictions trades off the benefits of scale economies against preferences for homogeneous

[2] Calderon et al. (2022) also find that the (log) number of school districts increases in places affected by the Great Migration, although they do not find any effect on municipalities and only in counties that were substantially segregated.

communities, which is particularly salient with respect to Black-White heterogeneity in the U.S. context.

Municipal Incorporation, consolidation, and annexation. Municipalities have so-called home-rule powers granted by state constitutions that endow them with the power of running their own police departments, controlling land use, and providing other city services in a well-defined territory, making them the primary providers of general-purpose local government services (Briffault, 2004).[3] Historically, the number of municipalities and the boundaries of their territories have been determined by: (i) new municipal *incorporation* in unincorporated territory, (ii) *consolidation* of two or more municipalities into a single entity, and (iii) *annexation* of unincorporated territory by an existing municipality. Famously, the originally separate municipalities of New York City and Brooklyn consolidated in 1898. However, many states introduced constitutional barriers to municipal consolidation in the early part of the 20th century, and consolidations have waned since. Thus, variation in our counts of municipalities per capita is mostly driven by two opposing mechanisms: the incorporation of new municipalities in unincorporated territories (leading to an increase in per-capita jurisdictions) and the annexation of unincorporated territory by existing municipalities (leading to a decrease).

Examples of cities that grew primarily via annexation campaigns during this period include Phoenix, Arizona, which went from 17 square miles in 1950 to 185 square miles in 1960, and Eugene, Oregon, whose population grew over 50% from 1960 to 1970, largely due to the annexation of three major neighboring unincorporated settlements. Phoenix and Eugene saw negligible numbers of African American migrants during the Great Migration. By contrast, annexation efforts in cities impacted by the Great Migration were often met with resistance that sometimes took the form of new municipal incorporation.

[3] See Appendix for a discussion of townships and county governments.

For example, a slew of cities incorporated to fight annexation campaigns in Milwaukee, Wisconsin in the 1950s (including Brown Deer, Franklin, Greenfield, Mequon, and Oak Creek) and Denver, Colorado in the 1960s (including Commerce City, Glendale, Greenwood Village, Lakewood, and Wheat Ridge). Overall, the Second Great Migration coincides with the last big wave of municipal incorporations in the US. Nationally, the number of municipalities grew from 16,220 to 18,517 over the course of the Second Great Migration (U.S. Census Bureau, 2014).

School district consolidation. Historically, the provision of U.S. public education has been characterized by local control (Goldin and Katz, 2003). At the turn of the 20th century there were over 100,000 school districts in the US. Often, these local governments had control over the funding and administration of a single public school. Beginning around the turn of the century, school districts began consolidating, seeking out economies of scale and adapting to changes in population density in previously sparsely-populated areas of the country (Kenny and Schmidt, 1994), with evidence that more homogeneous districts were more likely to merge together (Gordon and Knight, 2009). The shift was dramatic: by the end of the consolidation period in the 1970s, there were fewer than 15,000 school districts in the United States, a number that is roughly equivalent to the current count.

Starting in the 1960s, the federal government began efforts to enforce the 1954 Brown ruling, leading to an era of school desegregation policies (Reardon and Owens, 2014). These policies induced White flight to suburban school districts (Boustan, 2012) as well as an increase in private education (Grady and Hoffman, 2018). Importantly, most desegregation efforts focused on within-district desegregation, generating incentives for segregation-motivated communities to retain separate school districts.[4]

[4]The 1974 Milliken v. Bradley decision ruled that the 1954 mandate applies only within school districts, cementing what had been a de facto enforcement policy for decades.

Special district formation. Special districts, which include entities like park districts, transportation districts, and library districts, serve to fill in gaps in services of existing municipalities. These types of districts have grown substantially over the last few decades, making up more than 40% of local governments today (U.S. Census Bureau, 2014). Many special districts like parks and libraries are at the municipality level, suggesting additional municipalities could facilitate the duplication of these types of entities within a metro area.

Others like transportation districts are typically regional, and may be either more necessary or more difficult in fragmented environments. On the one hand, Berry (2008) provides evidence that multi-level governments over-tax households (see also Ostrom et al. (1961)). On the other hand, the creation of special districts can allow municipalities to circumvent fiscal restrictions and address specific regional problems that cannot be handled by individual municipalities, such as the Bay Area Rapid Transit (BART) system in the San Francisco metropolitan area (Goodman and Leland, 2019).

Compared to the other political jurisdictions, the role of race in the creation of special districts is least well understood. Martinez-Vazquez et al. (1997) find no relationship between racial heterogeneity and the number of special districts, whereas Alesina et al. (2004) find a positive relationship.

2.2 Historical Examples

Cleveland, OH, versus Columbus, OH. We illustrate our identification strategy and argument with a comparative case study of two CZs in Ohio whose fates diverged over the course of the Great Migration. Figure 1 Panels A and B show maps of all municipalities in the Cleveland and Columbus, Ohio CZs, with shades denoting their contemporary share of White residents. It is apparent that Cleveland is more segregated across municipalities than Columbus, with largely White suburbs and a predominantly non-White central city. The central city in each CZ also makes up very different shares of the total incorporated area, reflecting that the City of Columbus continued to expand its territory through annexation as the CZ continued to grow, whereas the City of Cleveland's ability to expand its boundaries was restricted by newly formed municipalities in 1940-1970, shown as those marked with red circles on the map. Columbus has only a few newly incorporated municipalities, whereas Cleveland is home to more than two dozen. Unlike in Columbus, most new incorporations are overwhelmingly White, whereas those of Columbus are more diverse.

Figure 1 Panels C, D, and E illustrate how the Great Migration may have contributed to this pattern of municipal fragmentation in Cleveland and more integrated municipal services in Columbus. Panel C shows Cleveland and Columbus as well as their five most strongly established migration links from Southern origin counties (which includes counties from Kentucky and West Virginia) in the 1935-1940 period, seen as the yellow and green arrows, respectively. The shades of gray across these nine origin counties (Cleveland and Columbus share one top-five origin county) indicates the strength of predicted out-migration in each decade between 1940 and 1970 based on various Southern-county push factors. We can see that origin counties connected to Cleveland saw on average much greater out-migration shocks than the top migration links connected to Columbus. As a result, Panel D shows that the share of urban Black residents in Cleveland grew much more rapidly in 1940-1970 than in Columbus, even though Columbus started off with a larger share in 1940. Finally, Panel E shows the change in the number of jurisdictions in Cleveland and Columbus over this period. The number of municipalities grew much more rapidly in Cleveland than in Columbus. The number of school districts was falling in both CZs, but Columbus experienced much more consolidation than Cleveland.

3 Data and Empirical Strategy

3.1 Data

Measures of the primary outcome variables originate from two sources. We use count of municipalities, school districts, and special districts from the Census of Governments (COG), which was conducted in 1942 and every five years since 1952 (U.S. Census Bureau, 2014). We also construct a decadal municipality count from a novel dataset containing the municipal incorporation date of most municipalities in the country (as of 2012) provided by Goodman (2023). The Goodman data does not include municipalities that existed during our study period but were consolidated, annexed, or otherwise dissolved by 2012, though we expect the survival bias to be relatively limited because annexation slowed after 1970. The COG data were collected contemporaneously and are thus not subject to survival bias, but have other drawbacks, including a two-year lag relative to the instrument and data quality concerns in the 1942 census (see Appendix for details). As we show below, the results based on COG and Goodman municipality counts are quite similar, suggesting the other COG jurisdiction counts are also measured accurately.

For demographic data, we use the 1940 full count census and the 1972 County and City Data Book (CCDB) as a basis for 1940 and 1970 total and Black urban populations, respectively (U.S. Census Bureau, 2008). Our definition of urban follows from the CCDB definition, a census place having over 25,000 residents in either 1940 or 1970 [5]. This yields 296 non-Southern cities, which we then aggregate to 130 commuting zones (CZs). COG school district data inconsistently count dependent and independent school districts for cities in 12 of the CZs in our sample, so causal estimates on school districts are restricted to 118 CZs with consistent data. Of the 2010 non-Southern population in the US, 85% (77%) live in the 130 (118) CZs in our sample.

[5] This is the same definition used in Derenoncourt (2022a)

Data on county-city level migration links come from the 1940 full count census question on county of residence between 1935 and 1940. Southern county push factor data come from Derenoncourt (2022b), and include predictors of positive and negative economic shocks in origin counties. For example, percent acreage in cotton could predict higher out-migration as mechanization reduced labor demand, while WWII spending could predict lower out-migration as federal dollars create economic stimulus. We draw CZ-level covariates on climate from Vose et al. (2014), on transportation costs from Donaldson and Hornbeck (2016), on railroads from Atack (2016), and on topography, share in manufacturing, educational attainment, income, population density, and population growth from U.S. Census Bureau (2018).

Table 1 contains summary statistics of the main variables in our data. In our 130 CZs, the number of municipalities per ten thousand residents fell between 1940 and 1970 by 0.26 from around 1.49 (i.e. about one municipality per 6,700 residents) to 1.23 (i.e. one municipality per 8,100 residents). The number of school districts declined by about 13 from 14 per ten thousand (i.e. one per 700 residents) to one per ten thousand, reflecting the rapid period of district consolidation taking place in this period. In contrast to these two types of jurisdictions, the number of special districts per ten thousand residents roughly doubled in this period, from around one per ten thousand to two per ten thousand. Turning to our main treatment variable, the Great Migration increased the share of Black residents by about 6 percentage points in non-Southern CZs. See the next section for a detailed discussion of our treatment variable.

Additionally, we use official maps of 2021 municipal boundaries to generate measures of municipality adjacency (U.S. Census Bureau, 2021). We match these with 2023 maps of school district boundaries from the National Center for Education Statistics to identify geographically exclusive school districts (NCES, 2023). Municipal boundaries are also matched to 2023 parcel-level data on the universe of residential units from CoreLogic, which we use to measure land-use zoning (CoreLogic, 2023). Income and residential race data come from 1970, 2010, and 2020 censuses. Municipal revenue data originates from the 2012 survey of local government finances (U.S. Census Bureau, 2012a). Student race data is from the 2017 NCES Common Core of Data (NCES, 2017). Achievement data (2008-2019) comes from Stanford Education Data Archive (Reardon et al., 2024). In each case, we draw the most recent year with the most comprehensive data.

3.2 Empirical Strategy

We are interested in estimating the causal impact of the Great Migration on jurisdictional fragmentation. To account for the fact that Southern Black migrants tended to arrive in growing cities, our primary outcome measure of fragmentation is based on the number of jurisdictions per capita (scaled for every 10,000 residents), calculated as:

$$\Delta \text{LocGovPC}_{k\ell} = \frac{\text{LocGovs}_{k\ell,1970}}{\text{Pop}_{\ell,1970}} - \frac{\text{LocGovs}_{k\ell,1940}}{\text{Pop}_{\ell,1940}},$$

where $\text{LocGovs}_{k\ell,t}$ is the number of governments of type k in CZ ℓ and year t, and $\text{Pop}_{\ell,t}$ measures total population in the CZ.

The treatment of interest, GM_ℓ, captures the intensity of the second Great Migration, operationalized as the percentage point change in the Black share of the urban population in CZ ℓ:

$$GM_\ell = \frac{\text{BlackUrbPop}_{\ell,1970}}{\text{UrbPop}_{\ell,1970}} - \frac{\text{BlackUrbPop}_{\ell,1940}}{\text{UrbPop}_{\ell,1940}},$$

where $\text{UrbPop}_{\ell,1940}$ and $\text{BlackUrbPop}_{\ell,1940}$ are the 1940 total and Black urban populations from the 1940 Full Count Census in ℓ and $\text{UrbPop}_{\ell,1970}$ and $\text{BlackUrbPop}_{\ell,1970}$ are the 1970 total and Black urban populations from the 1970 CCDB.[6]

[6]We use urban Black share for two reasons. First, this specification choice aligns with the historical pattern of Black migration to the urban core of U.S. metro areas. Second, commuting zones are contiguous over the United States. Using urban population changes allows us to capture the fragmentation of central

We estimate a two-stage least squares framework in which the structural equation of interest is given by:

$$\Delta \text{LocGovPC}_{k\ell} = \alpha_k + GM_\ell \beta_k + \mathbf{X}_\ell' \gamma_k + \varepsilon_{k\ell}, \tag{1}$$

where GM_ℓ is the endogenous variable of interest. Covariates $\mathbf{X}_\ell$ are observed at the CZ-level, including region fixed effects; and $\varepsilon_{k\ell}$ is an error term capturing unobserved determinants of the outcome that could be correlated with GM_ℓ. The coefficient β_k is our primary interest, capturing how changes in the intensity of the Great Migration impacts the fragmentation of jurisdictions of type k. This coefficient is interpreted as the change in local governments per 10,000 residents for each percentage point change in urban Black share.

To account for the endogeneity of the Great Migration, we leverage a shift-share instrumental variable, defined as the predicted Black in-migration as a share of the 1940 urban population. In this case, the canonical shift-share IV takes the form

$$\widehat{GM}_\ell = \frac{\widehat{\text{BlackMig}}_{\ell,1940-70}}{\text{UrbPop}_{\ell,1940}}.$$

The shares, $\Omega_{j,\ell}$, are the number of pre-period Black Migrants from Southern county j who reported living in non-Southern city c within CZ ℓ, $\omega_{j,c,1935-39}$, over the total number of out-migrants from that Southern county j:

$$\Omega_{j,\ell} = \frac{\sum_{c \in \ell} \omega_{j,c,1935-39}}{\sum_{c=1}^{C} \omega_{j,c,1935-39}}.$$

The shifts, m_j, are the total predicted Black out-migration from Southern county j, defined

cities.

by:

$$m_j = \sum_{t=1950}^{1970} \widehat{\text{MigRate}}_{jt} \times \text{BlackPop}_{jt}$$

where $\widehat{\text{MigRate}}_{j,t}$ is the predicted value from the regression

$$\text{MigRate}_{jt} = \delta_0 + \tilde{\mathbf{Z}}'_{j,t-10}\delta_1 + \xi_{jt}$$

in which MigRate_{jt} is county j net Black migration rate between years t and $t-10$ (as in Boustan 2010) and $\tilde{\mathbf{Z}}_{j,t-10}$ is a set of predictors of out-migration chosen by a LASSO procedure.[7] We also construct a treatment variable and instrument for white Southern migration, WM and $\widehat{WM}$ respectively, using equivalent operations.

The key identifying assumption of the empirical strategy is that predicted changes in the urban Black share only affect fragmentation through actual changes in the urban Black share, at the CZ level. Recent work in applied econometrics has highlighted a potential identification concern in basic SSIV specifications (and other related quasi-experimental designs), that they do not account for non-random variation in the probability of shock exposure (Borusyak and Hull, 2023). One way to interpret this critique is that without adjustment for the likelihood of an exogenous shock, these quasi-experimental designs differ from the randomized controlled trial (RCT) ideal by excluding strata fixed effects, where treatment probability varies by strata.

Borusyak et al. (2022) offers a simple fix for SSIV, controlling for the sum of shares, which is akin to controlling for strata dummies in an RCT. All shift-share specifications in this paper control for each CZ ℓ's sum of 1935-39 origin-county to destination-city migration shares. These links represent shares of origin county out-migration, not destination city in-migration, thus they do not mechanically sum to one.

In defining our sum of shares control, we must rearrange the terms of our instrument

[7] See Appendix for details on the LASSO procedure used to select out-migration predictors.

so that shifts and shares are defined in relative terms (Borusyak et al., 2025). Shifts that reflect raw numbers of migrants are difficult to defend as being randomly assigned as total out-migration is likely to be positively correlated with the overall population of the sending county. Following (Borusyak et al., 2025), we express shares as relative to the CZ's total population as to include $\text{UrbPop}_{\ell,1940}$ in our identification conditions. More explicitly, we rearrange the instrument in the following manner:

$$\begin{aligned}\widehat{GM}_\ell &= \frac{1}{\text{UrbPop}_{\ell,1940}} \sum_{j=1}^{J} \left(\frac{\sum_{c\in\ell} \omega_{j,c,1935-39}}{\sum_{c=1}^{C} \omega_{j,c,1935-39}} \right) m_j \\ &= \sum_{j=1}^{J} \left(\frac{\sum_{c\in\ell} \omega_{j,c,1935-39}}{\text{UrbPop}_{\ell,1940}} \right) \left(\frac{m_j}{\sum_{c=1}^{C} \omega_{j,c,1935-39}} \right) \\ &= \sum_{j=1}^{J} \widetilde{\Omega}_{j,\ell} \widetilde{m}_j.\end{aligned}$$

The instrument itself is unchanged from the original, however the shifts and shares are now defined in relative terms. Thus, the sum of shares control will be each CZ ℓ's sum of 1935-39 origin-county to destination-city migration links, normalized by 1940 urban population: $\sum_{j=1}^{J} \widetilde{\Omega}_{j,\ell}$. We also construct an equivalent sum of shares control for estimation of White southern out-migration. We compute exposure robust standard errors from the share-weighted shift-level regression as suggested in Borusyak and Hull (2023).

Appendix Tables A1 and A3 present two intuitive identification tests. First, we test for whether our instrument predicts a series of CZ-level baseline covariates, akin to a balance test of baseline characteristics across treatment groups. When including the sum of shares control, our instrument is significantly correlated with population density, 1940 CZ average income, and labor force share in manufacturing. To account for this, we include these covariates in all primary specifications. Note that when including the sum of shares control our instrument is uncorrelated with pre-period (1930-40) CZ population growth. Second, in a regression akin to a pre-trend test, we test for whether our instrument predicts lagged values of the change in municipalities (using the Goodman data, the only jurisdictional fragmentation data available pre-1940), population growth, and average occupational scores (as a proxy for income). We find no evidence of pre-trends.[8]

4 Results

4.1 Main Results

Table 2 presents the main findings of the paper. Panel A presents the first stage (which differs only in Column (3) due to sample differences in the school district specifications), estimating that a one percent increase in predicted migration, $\widehat{GM}$, increases the actual urban Black population share by about two percentage points. The instrument is highly significant with an associated first-stage F-statistic of about 31.

Panels B and C present results (in OLS and 2SLS) for 1940 to 1970. Overall, exogenous increases in the urban Black share increase the number of municipalities per capita, school districts per capita, and special districts per capita, and decrease the fraction of the CZ population that resides in the central city. 2SLS coefficients in Columns (1) through (4) are higher than OLS coefficients, which are statistically indistinguishable from zero. One concern with our results is that they might simply reflect the effect of having more population growth in CZs impacted by the Great Migration, either due to entrants themselves or because migrants move to faster growing destinations. Indeed, Appendix Table A4 shows that our endogenous variable is positively correlated with 1940-70 population growth. However, municipality creation per 10,000 residents is negatively correlated with population growth (possibly due to economies of scale). These correlations could be one

[8]The pre-trend analysis depends on meaningful incorporations in the 1910-1940 pre-period. Appendix Figure A1 shows total decadal incorporations in the Goodman data in the 20th century. Note that total new municipalities in the contiguous United States from 1910-1940 are 2,622, from 1940-1970 are 2,364, and from 1970-2000 are 1,019, confirming that the phenomenon was much more limited after 1970, but also that the pre-trend analysis is valid.

source of negative bias in the OLS estimates.

Panels D and E present results for 1940 to 2010. The medium-term effects we estimate are remarkably stable over the long-term, highlighting a key reason why the study of the fragmentation of polities is an important area of inquiry. Our findings suggest the Great Migration led to permanent changes in the local political economy of U.S. metro areas, with potentially long-lasting consequences for the provision of public services. Because the Census of Governments captures a contemporary count of municipalities, whereas the Goodman data captures incorporation dates using current-day municipalities, the comparison of results across the two datasets illuminates the role of municipalities that no longer exist (e.g. due to consolidation or annexation). The estimates in columns 1 and 2 are similar, implying that any consolidation of municipalities does not affect our results.

The positive effect on the prevalence of special districts could arise through multiple mechanisms. Municipalities incorporated in response to the Great Migration could create special districts to serve only the municipality (as they may have done with school districts), things like parks and library districts. Secondly, public officials may use regional special districts to fill in gaps in public goods provision that would typically be provided by larger municipalities. However, this provision may come at the cost of higher tax burdens for residents and the fragmentation of local services across different functions (Berry, 2008).

Further, Column (5) shows that the central city in the CZ made up a substantially smaller share of the overall population in the CZ if it experienced a large Great Migration shock, suggesting that central cities were blocked from annexing surrounding areas by newly created municipalities, in line with the example of Cleveland, OH, from Section 2.2. A lower share of residents in the central city could imply a less cohesive tax base for the urban center of the CZ, despite a heavy burden of public service responsibilities.

We now turn to interpreting the magnitude of these effects. To do so, we split the CZs in our sample at the median change in the urban Black share between 1940 to 1970. The mean change in urban Black share is about one percentage point in below-median CZs and about 11 percentage points in above-median CZs, a difference of about 10 percentage points. Since our coefficients represent the effect of an exogenous one percentage-point increase in Black residents, we multiply them by ten to arrive at an estimate of the difference in jurisdictional fragmentation between an above-median CZ (that saw significant inflow due to the Great Migration) and a below-median CZ (that saw little inflow). This corresponds to causal estimates of a 31% smaller reduction in municipalities per capita (measured using the Goodman data) from 1940 to 1970 ($10 \times 0.008/0.26$) relative to the average decrease in municipalities per capita; and a 14% smaller reduction in school districts per capita from 1940 to 1970 ($10 \times 0.177/12.95$), relative to its average decrease. In 1970, the 106 million people living in the 65 above-median CZs in our sample were served by 4,784 municipalities. These estimates suggest the Great Migration generated the incorporation of over 800 new municipalities between 1940 and 1970, about 13 per CZ ($106,000,000/10,000 \times 0.08 = 848/65 = 13$).

The linear causal estimates on school districts are not constrained to plausible counterfactuals; most CZs saw dramatic reductions in school districts per capita converging close to one school district per 10,000 people in both above and below median CZs. Still, applying 14% to 1970 levels can be illustrative in thinking about the magnitude of the effect size. In the 59 above median CZs with consistent school districts data, 94 million poeple in 1970 were served by 4,796 school districts. A 14% reduction would eliminate 671 school districts and would imply that school districts in the larger, more densely-populated CZs that saw the largest influx of migrants from the Great Migration would each serve several thousand additional students.

Robustness. We conduct a series of robustness checks on our main 1940-1970 results. Appendix Table A5 estimates our main effects for 1952-1972 to account for possible data quality issues in the 1942 COG data. Appendix Table A6 presents our main results excluding the imbalanced controls. Appendix Table A7 use a percentile scaling of the instrument and endogenous regressor as an alternative way to account for the skewed distribution of percentage point changes in urban Black share across our sample. Appendix Figure A2 tests for whether our findings are driven by the inclusion of a particular destination CZ, by dropping one CZ at a time. Appendix Figure A3 allays concerns about correlated shocks to origins and destinations by constructing three alternative instruments and conducting an over-identification test. Appendix Table A8 includes the European migration instrument from Sequeira et al. (2020) as a control, to test for whether European migration confounds our results. Appendix Figure A4 conducts placebo tests to address SSIV inference concerns articulated in Adão et al. (2019). Our results are relatively robust to this slew of tests, suggesting a causal interpretation is plausible.

Effect of Southern-White migration. A particular concern with our results is that they might simply reflect the effect of having more population growth in CZs affected by the Great Migration. To investigate this possibility, we rely on recent evidence on the effect of out-migration of Southern Whites on cultural and (national-level) political outcomes (Bazzi et al., 2023). We construct a equivalent instrument for Southern Whites as for Black migrants to investigate whether their migrant into non-Southern CZ had similar effects on jurisdictional fragmentation. We conduct a similar balance test on baseline covariates in Table A2 and include those that are imbalanced in the white migration analysis in Table 3. In contrast to our findings for exogenous Black migration into CZs, the arrival of Southern Whites decreased the rate of municipal and school district formation, increased the share in the principal city, and had no significant effect on special district amalgamation. These results suggest that our earlier findings are not simply the consequence of a larger number of households taking up residence in the affected CZ. An important caveat to these findings is that there was no historical phenomenon of mass migration of White Southerners to Northern cities as there was for Black Southerners. This leads to our White migration instrument being relatively weaker, with a larger number of imbalanced controls and a smaller first stage F-Statistic.

Characteristics of Black Migrants. In addition to the empirical limitations of the White migration analysis, one concern may be that Black Southern migrants were different than White Southern migrants on characteristics other than race that may have affected jurisdictional fragmentation in their destinations. This concern is not unfounded: the 1940 average incomes of Black Southern migrants were 41% lower than the average in their destinations, whereas those of White Southern migrants were 15% higher. This fact lends credence to the interpretation of our findings reflecting race-neutral sorting by income or preference heterogeneity, that jurisdictional fragmentation and white flight were simply incumbent residents not wishing to subsidize the public good consumption of their new, poorer neighbors.

To examine this possibility, we explore whether there was treatment heterogeneity for CZs that received Black migrants of higher or lower economic standing. To do this, we interact our treatment variable with an indicator for whether the Black Southerners who moved to a non-Southern CZ between 1930 and 1940 had above average occupational income scores in 1930, relative to all Black Southern migrants. The assumption behind this test is that the socioeconomic patterns of migration within the Southern Black population were similar between 1930-40 and 1940-1970, following the intuition behind a shift-share instrument, though we cannot test this directly do to data limitations. We construct this using the linked 1930 and 1940 censuses (Ruggles et al., 2025). As individual income was not collected in the 1930 census, we use their occupational income scores, a commonly used proxy for incomes. We choose to measure this in 1930, prior to their northbound move, so it is not confounded by any differences in location wage-premia they receive in the destinations they move to.

The results are in Table 4, where the coefficient on GM $\times$ Above Median reflects the differential effect of the Great Migration for CZs who received higher income Black migration. For municipalities, special districts, and the main city share, we see a reduced, but not eliminated, effect of the Great Migration in locations who receive higher income Black migrants. These differences are only significant for 1940-70 Census of Governments municipalities and 1940-2010 special districts outcomes. For school districts, we see an significantly increased fragmentation in destinations that received high income Black migrants. Possibly, high income Black migrants were more likely to be able to afford to reside in mostly White school districts, where White preferences for segregation were most salient, whereas competition for municipal services was more muted due to land use restrictions. In any case, these results are consistent with race as an important, though not exclusive, driver of jurisdictional fragmentation during this period. This interpretation is also consistent with the characteristics of the newly created municipalities in CZs that were heavily affected by the Great Migration, as described in the next section.

4.2 Mechanisms

The results above establish that the Great Migration was directly associated with an increase in the fragmentation of local governments in U.S. urban areas. To further characterize these effects, we now turn to a descriptive analysis of the demographic and local policy attributes associated with municipalities that were newly incorporated in affected CZs, likely as a reaction to the Great Migration. To explore this, we run the following regression at the municipality c level in Table 5:

$$y_c = \alpha + \beta_1 \text{High GM}_\ell + \beta_2 \text{Inc. 1940-70}_c + \beta_3 \text{High GM}_\ell \times \text{Inc. 1940-70}_c + \mathbf{X}_c' \gamma + \epsilon_c$$

where High GM_ℓ is a binary indicator if CZ ℓ received an above median Great Migration shock, Inc. $1940\text{-}70_c$ is whether municipality c incorporated between 1940-70, $\mathbf{X}_c'$ is the set of census region fixed effects, and y_c is one of the present-day outcomes discussed below. Our primary coefficient of interest is β_3 which tells us the differential relationship between municipalities incorporated between 1940-70 in CZs with high versus low great migration shocks and y_c. Standard errors are clustered at the CZ level and we use 2010 municipal populations as weights.

Demographics of newly incorporated municipalities. Panel (a) of Figure 2 shows the average share of White residents in 1970 in municipalities that were incorporated between 1940-1970, relative to the share of White residents in the CZ as whole at the same time. Notably, newly incorporated municipalities are almost exclusively White in almost all CZs, no matter how much lower the share White is in the CZ as a whole. For example, the Chicago, IL and Portland, OR CZs had an overall share of White residents of around 82% and 96%, respectively, yet in both CZs the share in the newly incorporated municipalities was over 99% in 1970. Overall, the newly incorporated municipalities in high exposure CZs are 7.27% more white than their CZ average, whereas those in low exposure CZs are only 1.31% more white [9]. Column 1 in Table 5 corroborates this pattern. It shows that, relative to others, municipalities incorporated between 1940-1970 that are located in CZs with above-median Great Migration flows, have significantly higher White population shares in 2010 than those that were less affected by the Great Migration. These findings

[9]Notably, the equivalent analysis in Appendix Figure **??** for average household income shows a different pattern. T

are consistent with a pattern of White concentration into newly created municipal entities, leading to metropolitan areas with higher levels of cross-jurisdictional segregation.

Household income of new municipalities. Panel (b) of Figure 2 shows the average household income 1970 in municipalities that were incorporated between 1940-1970, relative to the average household income in the CZ as whole at the same time. Notably, the pattern here diverges from that in panel (a): despite being on average more white, the newly incorporated municipalities in high exposure CZs have -1.16% lower household incomes than their CZ average, whereas those in low exposure CZs are 3.07% higher income.

To further examine the possibility that jurisdictional fragmentation is primarily driven by income heterogeneity rather than racial animus, we conduct a descriptive analysis using contemporary data. We compare municipalities incorporated between 1940 and 1970 in CZs with above and below median changes in the urban Black share, shown in column 3 of Table 5. Relative to their counterparts, newly-incorporated municipalities in high-exposure CZs had *lower* levels of income in 2010 and generated a smaller share of municipal revenues from special assessments, which are targeted property tax increases to fund specific public goods that tend to be higher in richer communities.[10] Like the evidence on Southern White migrants and Black migrant occupational score heterogeneity, this finding casts doubt on the idea that municipal incorporation during this period was primarily driven by higher income urban residents seeking exclusive access to public goods. Instead, these findings suggest that municipal incorporation in Great Migration destination CZs may have been more attractive due to their capacity to control local policy, as described in turn.

[10] Jenkins (2021) suggests that all-White suburban communities also have easier access to municipal debt to fund public services. We find no evidence of differences in municipal debt. See Appendix Table A10.

Municipal policy. An important aspect of municipal power is the administration of land-use zoning policy, which determines, among other things, the type of residential development that can take place in a given area. For example, single-family residential zoning is associated with relatively large homes for individual families, which favor the preferences of wealthier households, and may be an entry barrier for lower income households. We use parcel-level real estate data aggregated to the municipality level to measure the land-use zoning composition of municipalities in 2023. Columns 6 and 7 of Table 5 show that newly-incorporated municipalities in high-exposure CZs tend to have a larger share of homes in single-family residential zones, relative to their counterparts in low-exposure CZs. Our estimates imply a 10 percentage point higher share of homes zoned to single-family residences and a 0.6 percentage point lower share of homes zoned for multi-family dwellings and apartment dwellings. While earlier evidence suggests that fragmentation was not primarily a result of income differences between incumbents and newly arriving residents, it seems that new municipalities may have sought to use implicit income thresholds to prevent the entry of less desirable co-residents.

Another key aspect of municipal activities is the management of police services. While comprehensive data on the practices of municipal departments is outside the scope of this paper, we can test one aspect of this using data on the share of municipal revenues stemming from fines and forfeitures, which can be interpreted as a crude proxy for the intensity of policing in a jurisdiction. Column 5 of Table 5 shows these estimates. The results indicate that newly incorporated municipalities in high-exposure CZs tend to generate 0.6 percentage point higher share a municipal revenues from fines and forfeitures. This difference is large (75%) relative to low-exposure CZs, suggesting that considerably more intense policing practices are in place in these jurisdictions.

We also explore whether these municipalities are more/less likely to have City Manager forms of government in Column 3 of A10. While we do not find that newly incorporated municipalities are any more likely to in high- versus low-exposure CZ, however all municipalities that were incorporated during this time are significantly more likely to have City Manager forms of government.

Exclusive school districts. Legal pressure regarding school desegregation typically only applied within school districts. As such, a newly incorporated municipality with an aim of self-seclusion could have an incentive and a claim to retain an exclusive school district with a coterminous boundary. We provide an initial test of this theory by spatially matching the location of school districts to municipal boundaries. We assess whether municipalities likely borne out of the Great Migration are more likely to also feature at least one exclusive school district, i.e. a district whose geographic attendance boundaries are fully contained by the municipality's boundaries. Column 8 of Table 5 shows these results, which suggest newly-incorporated municipalities were roughly 11 percentage points more likely to retain an autonomous school district (rather than be consolidated into the central city school district), relative to new municipalities in low-exposure CZs and older municipalities in destination CZs.[11]

Spatial proximity to central city. Furthermore, we document that new municipalities tend to be about the same size in land area and not significantly less likely to be adjacent to the central city (Appendix Table A10). This suggests that the phenomenon we document is unlikely to be driven solely by exurban or rural growth being different in high-exposure CZs. More generally, on average only 18% of the border of the central city in the 130 CZs in our sample was enclosed by another municipality, water, or national parks in 1940. Appendix Figure A5 shows distance to edge and center of central city,

[11]In Appendix Table A11, we examine if there were differential effects for CZs whose largest school district (by 2000 enrollment) was placed under a court-ordered desegregation plan. We find this reduced the fragmentation of school districts and accelerated white flight, but no significant differences in municipal or special district fragmentation. Additionally, several of the reported F-Statistics are below 10, suggesting these estimates are likely unreliable.

with a pattern suggesting new municipalities in above-median exposure CZs have similar spatial dispersion as below-median exposure CZs. Together these findings suggest that differential patterns of White flight are likely not the only driver of our findings, as some incorporations may have been the result of ”segregation in place.”

4.3 Long-Run Effects on School District Segregation and Achievement Gaps

Given the impacts that the Great Migration had on the local political fragmentation of US metropolitan areas, a natural next question is whether this fragmentation of service provision resulted in heightened levels of urban inequality. To this end, we study the consequences of jurisdictional fragmentation for segregation across school districts and inequality in student achievement, which we interpret as a downstream effect of increased levels of local political fragmentation. While we cannot use our research design to isolate the impact of fragmentation itself, we can use it to look at the impact of the Great Migration on urban inequality, which we posit is partly driven by the downstream effects of heightened levels of local political fragmentation.

Table 6 uses our primary 2SLS model to estimate the relationship between exogenous increases in the urban Black share generated by the Great Migration and present-day measures of school district inequality: between-district racial segregation and variability in student achievement . Columns 1 and 2 show the Great Migration caused increased levels of Black-White school district segregation. Columns 3 and 4 show between-district academic outcomes became more disparate: increases in GM resulted in a higher interquartile range and variance of school district achievement scores as measured in Reardon et al. (2024). Finally, columns 5 and 6 show the effect of GM on the exposure of Black and White students to high achieving school districts. These results show the Great Migration caused greater academic segregation and achievement gaps, with school district fragmentation (facilitated by municipal fragmentation) as a likely contributing mediator.

5 Conclusion

We show that the Great Migration contributed to the fragmentation of jurisdictions in U.S. urban areas. We estimate it caused the creation of hundreds of new municipalities in destination CZs and the preservation of hundreds of independent school districts. Many of these newly created municipalities looked very different, in terms of demographics, socioeconomic composition and local policy, than the surrounding urban areas. They are also more likely to have their own school district today, suggesting that preventing school district consolidation may have been an important factor in their creation.

Destination CZs also have a higher number of special districts, which may explain the uniquely fragmented service provision across many different types of jurisdictions, especially in segregated urban areas. We show that, in these places, the central city often serves a much smaller share of residents. This relatively small market share may contribute to the severe fiscal challenges many of these central cities face

Finally, we find that the Great Migration may have contributed to more segregated schools and greater differences in student achievement across school districts. Together these suggest jurisdictional fragmentation may have imposed long-term costs on destination CZs, although an explicit welfare estimate is left for future work. Such an estimate would require valuing both the costs of fragmentation accruing to the efficiency of public goods provision and downstream effects on local labor markets as well as the benefits of fragmentation due to higher responsiveness of smaller government units. These estimates could then be used to inform policy in which metropolitan areas a reduction of fragmentation might be feasible and desirable.

References

ADÃO, R., M. KOLESÁR, AND E. MORALES (2019): "Shift-Share Designs: Theory and Inference," *The Quarterly Journal of Economics*, 134, 1949–2010, published: 20 August 2019.

ALESINA, A., R. BAQIR, AND C. HOXBY (2004): "Political Jurisdictions in Heterogeneous Communities," *Journal of Political Economy*, 112, pp. 348–396.

ALESINA, A. AND E. SPOLAORE (1997): "On the number and size of nations," *The Quarterly Journal of Economics*, 112, 1027–1056.

ANDERSON, M. W. (2010): "Mapped Out of Local Democracy," *Stanford Law Review*, 62, 931–1003.

ATACK, J. (2016): "Historical Geographic Information Systems (GIS) database of U.S. Railroads," Dataset.

AUSTIN, D. (1999): "Politics vs Economics: Evidence from Municipal Annexation," *Journal of Urban Economics*, 45, 501 – 532.

BAZZI, S., A. FERRARA, M. FISZBEIN, T. PEARSON, AND P. A. TESTA (2023): "The Other Great Migration: Southern Whites and the New Right*," *The Quarterly Journal of Economics*, 138, 1577–1647.

BERRY, C. (2008): "Piling on: Multilevel Government and the Fiscal Common-Pool," *American Journal of Political Science*, 52, pp. 802–820.

BORUSYAK, K. AND P. HULL (2023): "Nonrandom exposure to exogenous shocks," *Econometrica*, 91, 2155–2185.

BORUSYAK, K., P. HULL, AND X. JARAVEL (2022): "Quasi-Experimental Shift-Share Research Designs," *The Review of Economic Studies*, 89, 181–213.

——— (2025): "A Practical Guide to Shift-Share Instruments," *Journal of Economic Perspectives*, 39, 181–204.

BOUSTAN, L. (2010): "Was Postwar Suburbanization "White Flight"? Evidence from the Black Migration," *The Quarterly Journal of Economics*, 125, 417–443.

——— (2012): "School desegregation and urban change: Evidence from city boundaries," *American Economic Journal: Applied Economics*, 4, 85–108.

BOUSTAN, L. P. (2016): *Competition in the promised land: Black migrants in northern cities and labor markets*, Princeton University Press.

BRIFFAULT, R. (2004): "Home rule for the twenty-first century," *The Urban Lawyer*, 253–272.

BURNS, N. (1994): *The Formation of American Local Governments: Private Values in Public Institutions*, Oxford University Press.

CALDERON, A., V. FOUKA, AND M. TABELLINI (2022): "Racial Diversity and Racial Policy Preferences: The Great Migration and Civil Rights," *The Review of Economic Studies*, 90, 165–200.

CARD, D. (1990): "The Impact of the Mariel Boatlift on the Miami Labor Market," *ILR Review*, 43, 245–257.

CARD, D., A. MAS, AND J. ROTHSTEIN (2008): "Tipping and the Dynamics of Segregation," *The Quarterly Journal of Economics*, 123, 177–218.

CASELLA, A. (2001): "The Role of Market Size in the Formation of Jurisdictions," *The Review of Economic Studies*, 68, 83–108.

COLLINS, W. J. (2021): "The Great Migration of Black Americans from the US South: A guide and interpretation," *Explorations in Economic History*, 80, 101382.

CORELOGIC (2023): "CoreLogic Real Estate Data," Accessed October 1, 2024. https://www.corelogic.com/360-property-data/.

DANIELSON, M. N. (1976): "The politics of exclusionary zoning in suburbia," *Political Science Quarterly*, 91, 1–18.

DERENONCOURT, E. (2022a): "Can you move to opportunity? Evidence from the Great Migration," *American Economic Review*, 112, 369–408.

——— (2022b): "Data and code for Can you move to Opportunity? Evidence from the Great Migration." *Inter-University Consortium for Political and Social Research, Ann Arbor, MI.*, https://doi.org/10.3886/E147963V1.

DONALDSON, D. AND R. HORNBECK (2016): "Railroads and American Economic Growth: A "Market Access" Approach," *The Quarterly Journal of Economics*, 131, 799–858.

DREIER, P., J. MOLLENKOPF, AND T. SWANSTROM (2014): *Place Matters: Metropolitics for the Twenty-First Century*, University Press of Kansas.

GOLDIN, C. AND L. F. KATZ (2003): "The" virtues" of the past: Education in the first hundred Years of the new republic," .

GOODMAN, C. B. (2023): "Municipal Incorporation Data, 1789-2020," https://github.com/cbgoodman/muni-incorporation/.

GOODMAN, C. B. AND S. M. LELAND (2019): "Do Cities and Counties Attempt to Circumvent Changes in Their Autonomy by Creating Special Districts?" *The American Review of Public Administration*, 49, 203–217.

GORDON, N. AND B. KNIGHT (2009): "A spatial merger estimator with an application to school district consolidation," *Journal of Public Economics*, 93, 752–765.

GRADY, M. AND S. C. HOFFMAN (2018): "Segregation Academies then and school choice configurations today in Deep South states," .

GROSSMAN, G. AND J. I. LEWIS (2014): "Administrative Unit Proliferation," *American Political Science Review*, 108, 196–217.

GROSSMAN, G., J. H. PIERSKALLA, AND E. B. DEAN (2017): "Government Fragmentation and Public Goods Provision," *The Journal of Politics*, 79, 823–840.

GRUMBACH, J. M., R. MICKEY, AND D. ZIBLATT (2023): "The Insulation of Local Governance from Black Electoral Power: Northern Cities and the Great Migration," *Working Paper*.

HENDERSON, J. V. AND J. THISSE (2001): "On Strategic Community Development," *Journal of Political Economy*, 109, 546–568.

HENDRICK, R. AND Y. SHI (2015): "Macro-Level Determinants of Local Government Interaction: How Metropolitan Regions in the United States Compare," *Urban Affairs Review*, 51, 414–438.

JENKINS, D. (2021): *The Bonds of Inequality: Debt and the Making of the American City*, University of Chicago Press.

KENNY, L. W. AND A. B. SCHMIDT (1994): "The decline in the number of school districts in the US: 1950–1980," *Public choice*, 79, 1–18.

MARTINEZ-VAZQUEZ, J., M. RIDER, AND M. B. WALKER (1997): "Race and the Structure of School Districts in the United States," *Journal of Urban Economics*, 41, 281–300.

MONARREZ, T. AND D. SCHÖNHOLZER (2023): "Dividing Lines: Racial Segregation across Local Government Boundaries," *Journal of Economic Literature*, 61, 863–87.

NCES (2017): "National Center for Education Statistics Common Core of Data, 2017," Accessed via Urban Institute's Education Data Explorer.

——— (2023): "National Center for Education Statistics 2023 School District Boundaries Shapefile," U.S. Department of Education.

OSTROM, V., C. M. TIEBOUT, AND R. WARREN (1961): "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry," *American Political Science Review*, 55, 831–842.

REARDON, S. F., A. D. HO, B. R. SHEAR, E. M. FAHLE, D. KALOGRIDES, AND J. SALIBA (2024): "Stanford Education Data Archive (Version 5.0)," Retrieved from Stanford University.

REARDON, S. F. AND A. OWENS (2014): "60 years after Brown: Trends and consequences of school segregation," *Annual Review of Sociology*, 40, 199–218.

RUGGLES, S., N. OZDER, C. A. FITCH, M. SOBEK, J. A. R. DREW, J. D. HACKER, J. HELGERTZ, C. LONOBILE, M. A. NELSON, E. ROBERTS, AND J. R. WARREN (2025): "IPUMS Multigenerational Longitudinal Panel: Version 2.0," dataset.

RUSK, D. (1993): *Cities Without Suburbs*, Woodrow Wilson Press.

SAHN, A. (2021): "Racial Diversity and Exclusionary Zoning: Evidence from the Great Migration," *Working Paper*.

SEAN F. REARDON, ELENA GREWAL, D. K. AND E. GREENBERG (2012): "Brown Fades: The End of Court Ordered School Desegregation and the Resegregation of American Public Schools." *Journal of Policy Analysis and Management*, 31, 876–904.

SEQUEIRA, S., N. NUNN, AND N. QIAN (2020): "Immigrants and the Making of America," *Review of Economic Studies*, 87, 382–419.

SHERTZER, A. AND R. P. WALSH (2019): "Racial sorting and the emergence of segregation in American cities," *Review of Economics and Statistics*, 101, 415–427.

TABELLINI, M. (2019): "Racial Heterogeneity and Local Government Finances: Evidence from the Great Migration," *Working Paper*.

TIEBOUT, C. M. (1956): "A pure theory of local expenditures," *Journal of political economy*, 64, 416–424.

TREBBI, F., P. AGHION, AND A. ALESINA (2008): "Electoral rules and minority representation in US cities," *The Quarterly Journal of Economics*, 123, 325–357.

TRICAUD, C. (2023): "Better Alone? Evidence on the Costs of Intermunicipal Cooperation," *Working Paper*.

U.S. CENSUS BUREAU (2008): "County and City Data Book [United States] Consolidated File: City Data, 1944-1977," ICPSR07735.v1, Distributed by Inter-university Consortium for Political and Social Research.

——— (2012a): "Annual Survey of State and Local Government Finances and Census of Governments," U.S. Census Bureau Publication, available online: https://www.census.gov/programs-surveys/gov-finances.html.

——— (2012b): "Government Master Address File," https://www.census.gov/programs-surveys/gus/technical-documentation/methodology/information-collection.html, accessed: October 4, 2023.

——— (2014): "Census of Governments, Government Organization Phase," https://www.census.gov/programs-surveys/cog/data/historical-data.html.

——— (2018): "U.S. Coastline Counties," Released in August 2018 by the US Census Bureau, Population Division.

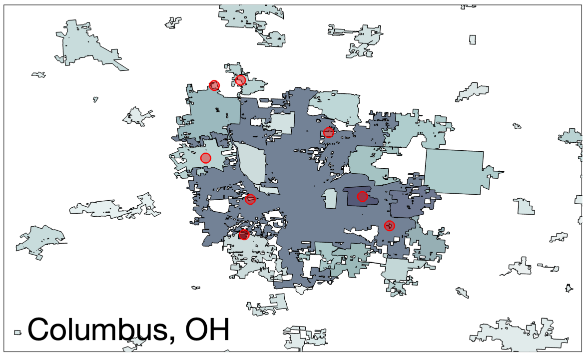
——— (2021): "2021 TIGER/Line Shapefiles (machine readable data files)," U.S. Department of Commerce.

VOSE, R. S., S. APPLEQUIST, M. SQUIRES, I. DURRE, M. J. MENNE, J. WILLIAMS, CLAUDE N., C. FENIMORE, K. GLEASON, AND D. ARNDT (2014): "NOAA Monthly U.S. Climate Divisional Database (NClimDiv)," NOAA National Climatic Data Center.

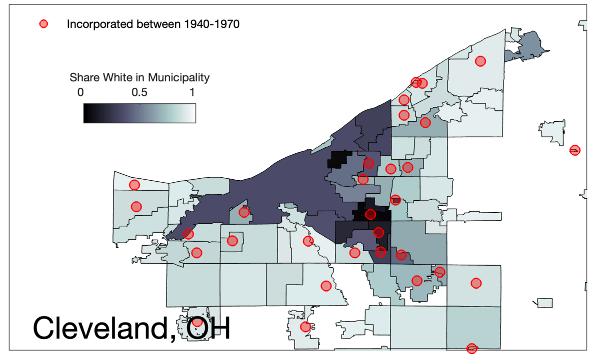
WEESE, E. (2015): "Political Mergers as Coalition Formation: An Analysis of the Heisei Municipal Amalgamations," *Quantitative Economics*, 6, 257–307.

WYNDHAM-DOUDS, K. (2023): "Suburbs, Inc.: Exploring Municipal Incorporation as a Mechanism of Racial and Economic Exclusion in Suburban Communities," *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 9, 226–248.

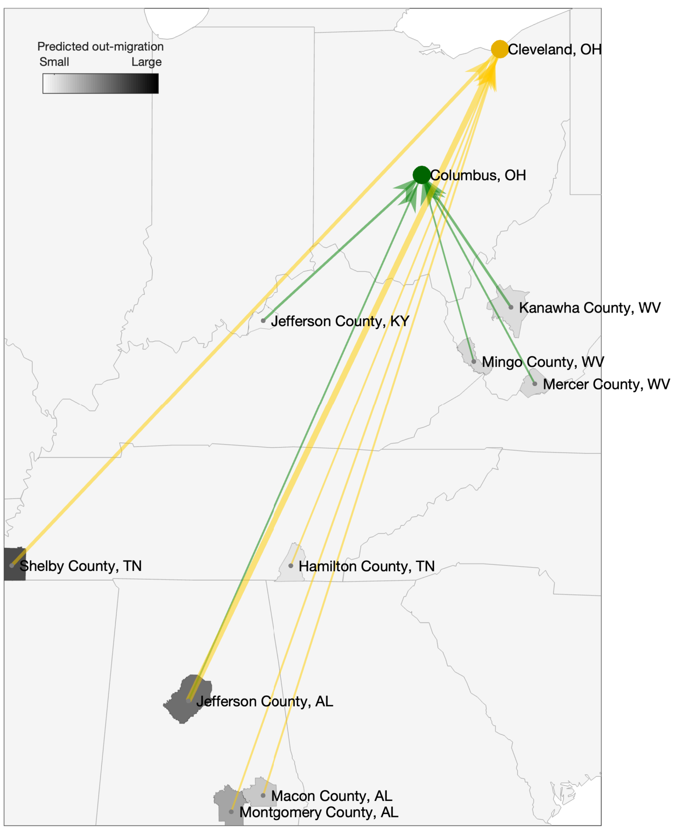
Figure 1: Illustration of empirical investigation using Cleveland and Columbus, OH



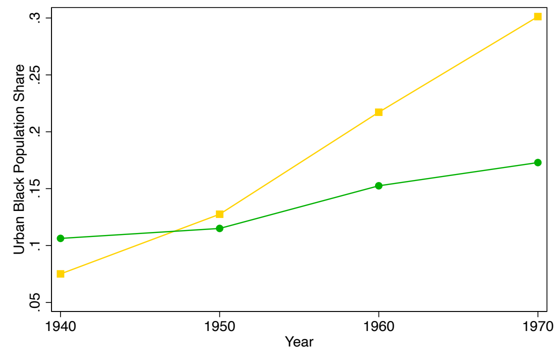
(a) All Municipalities in Columbus, OH



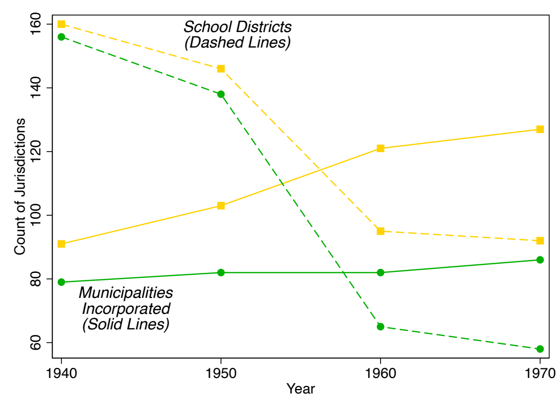
(b) All Municipalities in Cleveland, OH



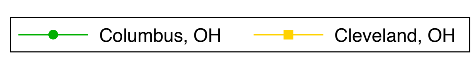
(c) Pre-existing Migration Links (Shares)



(d) Change in Urban Black Share



(e) Jurisdictional Fragmentation



Notes: Shades in Panels A and B indicate share of White residents in each of the municipalities; red markers indicate municipalities incorporated between 1940-1970. The large White space above Cleveland is Lake Erie. The data on the share of White residents we use here is from the 2020 Census, by which time several of the newly incorporated municipalities in Cleveland had diversified relative to the time of their founding. Panel C shows a map of established links from Southern counties to Cleveland, OH, and Columbus, OH. Panel D shows the evolution of the urban Black share over the course of 1940-1970. Panel E shows the evolution of the number of municipalities and school districts over 1940-1970.

Table 1: Summary statistics

	Mean	10th Percentile	Median	90th Percentile
Panel A: Outcome Variables				
$\Delta_{1940-70}$ Number of Municipalities, Per Capita (C. Goodman)	-0.26	-0.65	-0.28	0.12
$\Delta_{1940-70}$ Number of Municipalities, Per Capita (CoG)	-0.33	-0.78	-0.30	0.08
$\Delta_{1940-70}$ Number of School Districts, Per Capita	-12.95	-33.12	-8.18	-1.26
$\Delta_{1940-70}$ Number of Special Districts, Per Capita	0.64	-0.16	0.46	1.95
$\Delta_{1940-70}$ Main City Share	-3.37	-19.31	-2.59	9.14
Panel B: Treatment Variables				
GM	6.01	0.01	3.58	16.68
$\widehat{GM}$	1.28	-0.12	0.33	4.00
Panel C: Control Variables				
Sum of shares control	0.00	0.00	0.00	0.00
Share of LF employed in manufacturing, 1940	20.44	7.09	19.07	33.77
Average Income, 1940	1094.01	946.86	1092.76	1210.29
Population Density, 1940	54.17	8.98	29.46	120.23
Observations	130	130	130	130

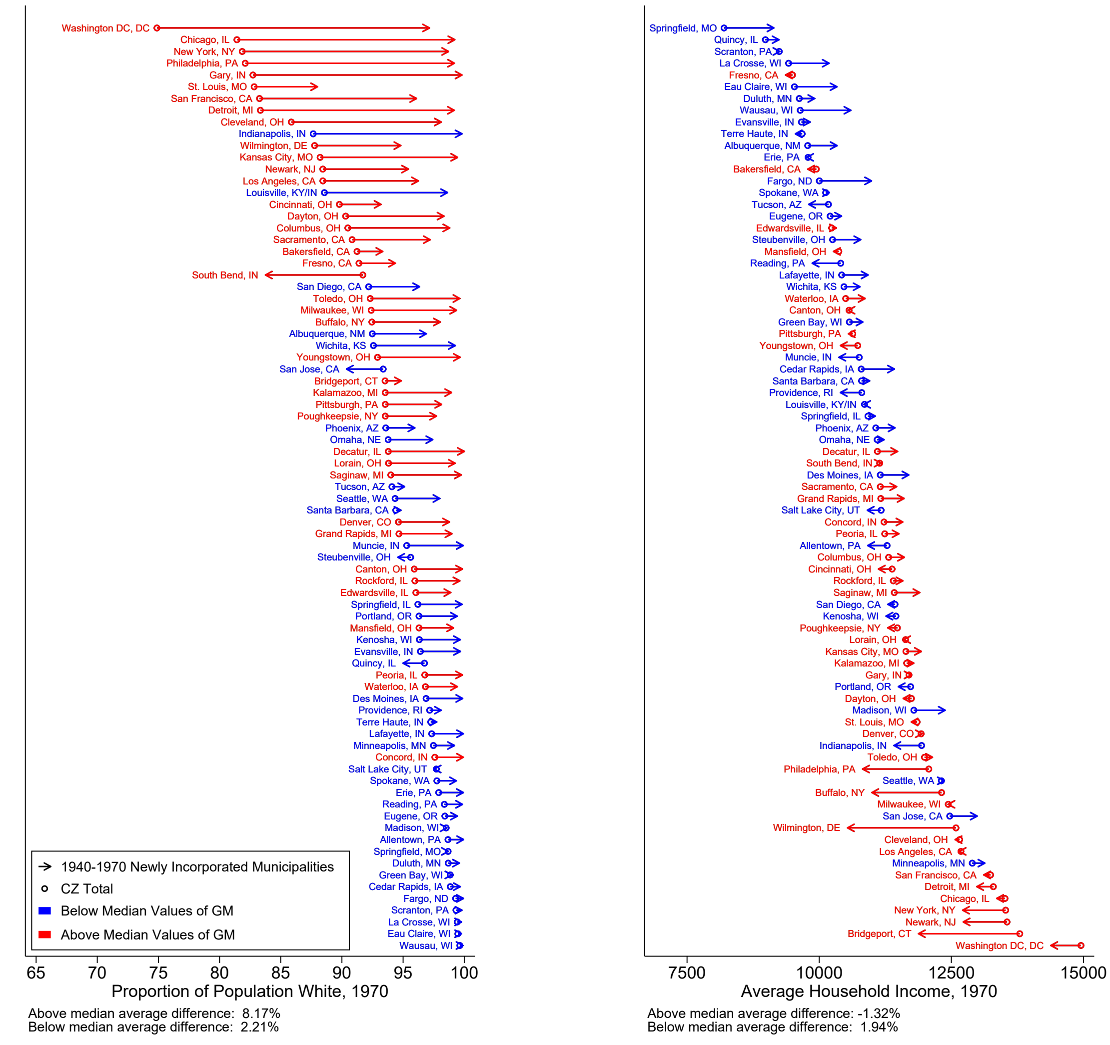
Notes: Summary statistics (unweighted) for outcome variables (Panel A), treatment variables (Panel B), and control variables (Panel C). Sum of shares represents the sum of the share of all 1935-39 sending county to destination city migration links.

Table 2: The Effect of the Great Migration on Jurisdictions Per Capita using the Shift-Share Design

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
$\widehat{GM}$	1.771***	1.771***	1.841***	1.771***	1.771***
	(0.315)	(0.315)	(0.330)	(0.315)	(0.315)
Panel B: OLS 1940-1970					
GM	0.003	0.005	0.101	-0.006	-0.896***
	(0.003)	(0.004)	(0.077)	(0.009)	(0.171)
Panel C: 2SLS 1940-1970					
GM	0.008***	0.011***	0.177**	0.011*	-1.577***
	(0.003)	(0.003)	(0.072)	(0.006)	(0.090)
1940-70 Avg.	-0.26	-0.33	-12.95	0.64	-3.37
Panel D: OLS 1940-2010					
GM	0.005	0.007	0.101	-0.009	-1.137***
	(0.005)	(0.005)	(0.077)	(0.008)	(0.223)
Panel E: 2SLS 1940-2010					
GM	0.010***	0.012***	0.178**	0.020***	-1.873***
	(0.003)	(0.004)	(0.073)	(0.006)	(0.130)
1940-2010 Avg.	-0.39	-0.49	-13.31	1.04	-7.96
1940 Avg.	1.49	1.61	14.09	0.89	32.86
First Stage F-Stat	31.55	31.55	31.18	31.55	31.55
Observations	130	130	118	130	130

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 2: Most Incorporations in 1940-1970 are Mostly White, without large income differences



(a) Proportion of Population White, 1970

(b) Average Household Income, 1970

Notes: Share of White residents and average household income in 79 of the 130 CZs in our sample (those with one or more incorporations between 1940-70 and non-missing place-level racial data in 1970), depicted as circles, and share of White residents and average household income in municipalities that were incorporated in 1940-1970, at the tip of the arrows. Newly incorporated municipalities have a lower share of White residents in only five of the 79 CZs for which we can conduct this exercise, while 37 had lower incomes.

Table 3: White migration effect, 1940-1970

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
$\widehat{WM}$	1.185***	1.185***	0.694	1.185***	1.185***
	(0.412)	(0.412)	(0.495)	(0.412)	(0.412)
Panel B: OLS 1940-1970					
WM	-0.002	-0.003	-0.158**	0.009	0.765***
	(0.003)	(0.004)	(0.062)	(0.008)	(0.144)
Panel C: 2SLS 1940-1970					
WM	-0.015**	-0.020**	-0.086	-0.021	1.347***
	(0.006)	(0.008)	(0.321)	(0.016)	(0.289)
1940-70 Avg.	-0.26	-0.33	-12.95	0.64	-3.37
Panel D: OLS 1940-2010					
WM	-0.004	-0.005	-0.162**	0.013*	1.062***
	(0.005)	(0.005)	(0.063)	(0.008)	(0.205)
Panel E: 2SLS 1940-2010					
WM	-0.024***	-0.029***	-0.118	-0.035*	1.574***
	(0.009)	(0.010)	(0.333)	(0.021)	(0.292)
1940-2010 Avg.	-0.39	-0.49	-13.31	1.04	-7.96
1940 Avg.	1.49	1.61	14.09	0.89	32.86
First Stage F-Stat	8.26	8.26	1.97	8.26	8.26
Observations	130	130	118	130	130

Notes: WM is the change in the urban White share from 1940 to 1970 at the CZ level. Regression results follow equation in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Main results, Split on whether CZ's 1930-40 Black Migrants had above median occupation scores

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage $\widehat{GM}$					
$\widehat{GM}$	1.882***	1.882***	1.952***	1.882***	1.882***
	(0.424)	(0.424)	(0.404)	(0.424)	(0.424)
$\widehat{GM}$ X Above Median	0.590	0.590	0.151	0.590	0.590
	(0.824)	(0.824)	(0.877)	(0.824)	(0.824)
F-Stat	19.75	19.75	23.31	19.75	19.75
S.W. F-Stat	28.39	28.39	28.08	28.39	28.39
Panel B: First Stage $\widehat{GM}$ X Above Median					
$\widehat{GM}$	-0.148	-0.148	-0.037	-0.148	-0.148
	(0.285)	(0.285)	(0.240)	(0.285)	(0.285)
$\widehat{GM}$ X Above Median	3.032***	3.032***	2.890***	3.032***	3.032***
	(0.769)	(0.769)	(0.834)	(0.769)	(0.769)
F-Stat	15.55	15.55	12.02	15.55	15.55
S.W. F-Stat	25.57	25.57	18.47	25.57	25.57
K.P. F-Stat	10.74	10.74	10.53	10.74	10.74
Panel C: OLS 1940-1970					
GM	0.008***	0.012***	0.037	-0.008	-1.037***
	(0.003)	(0.004)	(0.091)	(0.010)	(0.188)
GM X Above Median	-0.006	-0.011**	0.180	-0.012	0.196
	(0.004)	(0.005)	(0.155)	(0.014)	(0.251)
Panel D: IV 1940-1970					
GM	0.015***	0.020***	0.141*	0.005	-1.717***
	(0.003)	(0.004)	(0.081)	(0.005)	(0.116)
GM X Above Median	-0.004	-0.013**	0.389***	-0.008	0.161
	(0.006)	(0.006)	(0.091)	(0.009)	(0.204)
Panel E: OLS 1940-2010					
GM	0.010**	0.013***	0.040	-0.006	-1.290***
	(0.004)	(0.005)	(0.093)	(0.011)	(0.250)
GM X Above Median	-0.002	-0.006	0.178	-0.007	0.267
	(0.005)	(0.006)	(0.158)	(0.017)	(0.320)
Panel F: IV 1940-2010					
GM	0.021***	0.025***	0.151*	0.027***	-1.888***
	(0.004)	(0.005)	(0.083)	(0.005)	(0.181)
GM X Above Median	0.001	-0.009	0.386***	-0.023**	0.098
	(0.006)	(0.006)	(0.092)	(0.010)	(0.227)
Below Median 1940-70 Avg.	-0.360	-0.421	-8.791	0.534	-5.957
Below Median 1940-2010 Avg.	-0.478	-0.554	-9.137	0.717	-11.874
Observations	107	107	97	107	107

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population, with the addition of the interaction term. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. The interaction term is developed from the individuals who moved from the South in 1930 to a Northern city in 1940 as identified by the 1930 and 1940 linked full count censuses (Ruggles et al., 2025). The interaction represents whether the average 1930 occupation score of a CZs Black migrants was above average for all Black migrants. S.W. F-Stat refers to the Sanderson-Windmeijer test for the conditional strength of each instrument. K.P. F-Stat refers to the joint Kleibergen-Paap Wald test for weak identification. Standard errors from Borusyak and Hull (2023) in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Municipalities Incorporated between 1940 and 1970: Is racial exclusion a key motivator?

	2010 Muni Characteristics			Percentage of Municipal Revenues		Percentage of Municipal Land Uses		Muni-District Similarity
	(1) Percentage White	(2) Land Area	(3) 2010 Household Income	(4) Special Assessments	(5) Fines and Forfeitures	(6) Single Family	(7) Apartments	(8) Exclusive District
Above Median GM X Inc. 1940-70	7.185*	-124.829**	-15.442***	-1.540**	0.584**	9.859***	-0.634***	0.115*
	(3.853)	(57.534)	(5.224)	(0.684)	(0.276)	(3.095)	(0.179)	(0.068)
Above Median GM	-16.001***	38.745	7.998**	0.189	0.540***	-4.996*	0.741***	-0.084
	(3.001)	(80.548)	(3.569)	(0.402)	(0.159)	(2.882)	(0.260)	(0.069)
Incorporated 1940-70	-2.112	-75.819**	23.785***	1.267**	-0.051	-1.804	-0.302***	-0.142**
	(2.405)	(36.210)	(3.891)	(0.610)	(0.194)	(2.594)	(0.086)	(0.061)
Omitted Category Avg.	81.01	221.56	66.11	1.00	0.85	76.32	0.94	0.19
Observations	7836	7845	7836	7738	7738	7716	7716	7849

Notes: All specifications include census region fixed effects and are weighted by municipality population. The sample includes all contemporary (2023) municipalities in the 130 CZs in our analysis. Exclusive district is a 0/1 indicator for at least one school district that only serves that municipality. Omitted Category Average is the average for municipalities not incorporated between 1940 and 1970 in below median exposure CZs, weighted by municipality population. Standard errors are clustered at the CZ level. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Downstream: School Segregation and Achievement

	School District Segregation		School District Achievement			
	(1) Variance Ratio	(2) Dissimilarity Index	(3) Interquartile Range	(4) Variance	(5) Black	(6) White
GM	0.006***	0.001***	0.005***	0.001*	-0.000	0.004**
	(0.002)	(0.000)	(0.001)	(0.001)	(0.002)	(0.002)
Dep. Var. Mean	-0.006	-0.001	-0.008	-0.001	0.003	-0.002
Observations	1207	1207	1207	1207	1207	1207

Notes: The first column is the Black-White variance ratio, a common measure of exposure between minority and majority groups. The second column is the Black-White dissimilarity Index, a common measure of evenness between majority and minority groups. Both columns 1 and 2 are constructed using 2017 NCES CCD data (NCES, 2017) Columns 3-6 use 2008-2019 test score data, pooled by school district across all grades, years, and subjects, as constructed by (Reardon et al., 2024). We pool by school district due to potential issues with the micro-level race data. Column 3 measures the difference between the 75th and 25th percentiles of school district achievement within each CZ. Column 4 measures the variance in school district achievement. Columns 5 and 6 measure the exposure of Black and White students to high achieving school districts, or the level of achievement of the school district that the average Black or White student attends in a CZ. We construct this by taking the mean of achievement across school districts within a CZ, weighted by the school districts' Black or White enrollment, respectively. Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix for Online Publication

Townships. Townships are a weaker form of general-purpose government that is common in the Midwest, but not in other parts of the country. Some municipal incorporations during the time period we study could have been the result of a conversion from a township to a municipality. The Census of Governments data source includes measures of townships, so we conduct our primary analysis on townships to test for whether our effects are driven primarily by conversion from townships. Appendix Table A9 presents these results. We find that the Great Migration significantly increased the number of townships per capita in our data, suggesting that the municipality results we document are not simply the result of township conversion (and thus masking a constant count of general-purpose governments). Instead, though some townships may have been converted in the Midwest, these results suggest more may have been created.

Counties. County governments are separate layer of local governance. They serve primarily to execute state functions and change very rarely in the postwar era.

Goodman Data Details. The backbone of this dataset is the Census' Governments Master Address File (U.S. Census Bureau, 2012b). This is taken as the universe of municipal governments as of 2012, which Goodman then matches to the year of incorporation using data from state agencies and municipal leagues. Goodman is able to record the year of incorporation for 95.67 percent of municipalities nationwide. While this is extremely comprehensive, there is heterogeneity in the unreported data: the states of Oklahoma and Nebraska both have sub-50 percent reporting rates (although none of our 130 CZs are in Oklahoma).

Census of Government 1942 Data Issues. See the ”Special Caveat Regarding Data for 1942” in the County Area Counts notes. The 1942 Census of Governments has two issues. First, surveys were ”less extensive and less detailed” for some states than later years (which states is not disclosed). This could lead to under-counting in the 1942 counts. Second, some ”municipalities and special districts located in other counties but which also serve the county area specified” are included in the counts. This could lead to over-counting in the 1942 counts. We do not know how this under- and over-counting is distributed geographically, nor do we know their relative magnitudes. That said, the similarity between Columns (1) and (2) of Table 2 and the similarly between our estimates in Table 2 and our estimates in Appendix Table A5 lead us to believe these data issues are of minimal concern for our main results.

Scaling the Endogenous Regressor. Our modeling diverges from that of Derenoncourt (2022a) in terms of scaling. Her work uses percent changes (rather than percentage point) and transforms the endogenous variable and the instrument into a rank/percentile form, to address the skew of the underlying distribution of changes in the urban Black share. However, we find using percentage point changes to disaggregate changes in Black urban population from changes in total urban population to be important for our research question. Moreover, we find expressing the effect in terms of absolute, rather than relative, changes to be more informative. Our main results are robust to using the original scaling (see Appendix Table A7).

Using LASSO to Predict Outmigration. We estimate the decadal migration outflow rate for each Southern county using a Least Absolute Shrinkage and Selection Operator (LASSO) regression to select supply-side county-level characteristics that could drive out-migration rates, with a penalty for the absolute number of predictors, as follows:

$$\tilde{\mathbf{Z}}_{j,t-10} = \left\{ \tilde{\mathbf{Z}}_{j,t-10} \subseteq \mathbf{Z}_{j,t-10} : \min_{\delta_0,\delta_1} \left\{ \sum_{j=1}^{J} \left(\text{mig rate}_{j,t} - \delta_0 - \tilde{\mathbf{Z}}'_{j,t-10}\delta_1 \right)^2 \right\} \text{ s.t. } \sum_{r=1}^{R} |\delta_r| \leq p \right\}$$

where p is the tuning parameter and the predictors in $\mathbf{Z}_{j,t-10}$ are the predictors. The set of push factor county-level characteristics at the decadal level is drawn from (Derenoncourt, 2022b). Variables selected by LASSO in $\mathbf{Z}_{j,t-10}$ include percent acreage in cotton, percent tenant farms, share of the labor force in agriculture, an indicator for being in a tobacco-growing state, the interaction between tobacco growing state and share in agriculture, WWII spending per capita, share of the labor force in mining, an indicator for being in a mining state (OK and TX), and the interaction between the mining state and share in mining.

Alternative instruments. We construct three alternative instruments, following (Derenoncourt, 2022a). The first of these residualizes the Southern county out-migration rates by state fixed effects, accounting for any correlation between shocks to Southern states and northern CZs. The second of these drops the 15 Southern counties coded as central in MSAs with a 1990 population over one million, accounting for any nationwide shocks to urban areas. The third of these constructs the pre-period weights using Southern state of birth, rather than 1935-39 Southern residence, which accounts for correlation between shocks to the original set of origin counties and their destination CZs. The results are shown in Figure A3, where we see similar point estimates in all outcomes and that an overidentification test does not reject the null hypothesis that all instruments are estimating the same parameter in all outcomes barring school districts.

Placebo tests. Following Adão et al. (2019), we conduct a placebo test to assuage concerns about our standard errors being understated due to correlations between the ”shares” each CZ has in our instrument, resulting in dependence between residuals. We construct 1,000 placebo instruments, where we substitute the shocks $\mathbf{Z}_{t-10}$ in our original instrument for $r_i \sim \mathcal{N}(0,5)\ \forall i \in [1,1000]$. Since the variation in these instruments is randomly generated, we would expect to see the results reject the null hypothesis in 1% or 5% of cases at the specified significance level. In Figure A4, we see our placebo results are similar, all outcomes lying between 5.4% and 16% significant at the 5% level across all outcomes, far below the 55% found in the example described in Adão et al. (2019).

Segregation Indices. The variance ratio is defined as $VR = \frac{{}_mP^*_m - \pi_m}{1-\pi_m}$, where π_m is the proportion minority enrollment in the CZ and ${}_mP^*_m = \sum_{i \in CZ} \frac{t_{im}}{T_m}\frac{t_{im}}{t_i}$ is the isolation index, where t_{im} and t_i are the minority and total enrollment in school district i and T_M is the aggregate minority enrollment in the CZ. It ranges from 0 to 1 and can be interpreted as the excess segregation between school districts, given the overall racial composition of the CZ. The dissimilarity index is defined as $D = \frac{1}{2}\sum_i \frac{t_i|\pi_{im}-\pi_m|}{2T\pi_m(1-\pi_m)}$ where, in addition to variables defined above, T is the total enrollment in the CZ and π_{im} is the proportion minority enrollment in school district i. It ranges from 0 to 1 and can be interpreted as the proportion of minority students that would have to change school districts to achieve an even racial distribution.

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Table A1: Balance Tests: 1940 Observables

	$\widehat{GM}$		Mean
	(1)	(2)	(3)
Average precipitation	0.351	-0.046	15.069
	(0.349)	(0.391)	(1.225)
Average temperature	-0.787	-0.821	40.212
	(0.846)	(1.357)	(1.634)
Number of Streams	19.984	21.417	507.061
	(13.949)	(16.781)	(30.174)
Coastal CZ	0.018**	0.001	0.491
	(0.009)	(0.017)	(0.044)
Share of LF employed in manufacturing, 1940	0.228	1.177**	25.027
	(0.493)	(0.468)	(0.738)
Meters of Railroad per Square Meter of Area, 1940	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Average Transport Cost out of CZ, 1920	-0.052**	-0.047	9.575
	(0.025)	(0.038)	(0.235)
Fraction of area incorporated	0.021*	0.015	0.212
	(0.012)	(0.010)	(0.020)
Prop HS Grads	-0.002	-0.005	0.119
	(0.002)	(0.003)	(0.003)
Prop College Grads	-0.002	-0.003	0.047
	(0.001)	(0.003)	(0.003)
Average Income, 1940	16.435***	15.334*	1169.966
	(5.905)	(8.076)	(8.136)
Population Density, 1940	25.855*	22.346*	256.698
	(14.575)	(11.898)	(24.630)
1930-40 Population Growth Rate	0.944***	-0.038	7.319
	(0.297)	(0.389)	(0.641)

Notes: In columns 1 and 2, each coefficient comes from a separate regression of the baseline covariate on the instrument. Column 1 does not include the sum of shares control while column 2 does. Both columns 1 and 2 include census region fixed effects and are weighted by 1940 CZ urban population (mirroring the main specification). Column 3 reports the mean and standard deviation of the variables. Data on climate from Vose et al. (2014), on transportation costs from Donaldson and Hornbeck (2016), on railroads from Atack (2016), and on topography, share in manufacturing, educational attainment, income, population density, and population growth from U.S. Census Bureau (2018). Transportation costs represent the 1920 dollar cost of rail transportation to a county outside of the CZ, averaged over all counties in the CZ. Robust standard errors in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A2: White Instrument Balance Tests: 1940 Observables

	$\widehat{WM}$		Mean
	(1)	(2)	(3)
Average precipitation	0.161 (0.530)	0.159 (0.522)	15.069 (1.225)
Average temperature	0.143 (1.055)	0.474 (1.111)	40.212 (1.634)
Number of Streams	22.341 (21.338)	21.962 (23.186)	507.061 (30.174)
Coastal CZ	-0.029** (0.012)	-0.034** (0.014)	0.491 (0.044)
Share of LF employed in manufacturing, 1940	1.181** (0.587)	1.507*** (0.409)	25.027 (0.738)
Meters of Railroad per Square Meter of Area, 1940	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Average Transport Cost out of CZ, 1920	-0.040 (0.030)	-0.037 (0.028)	9.575 (0.235)
Fraction of area incorporated	-0.019* (0.010)	-0.018* (0.011)	0.212 (0.020)
Prop HS Grads	-0.002 (0.002)	-0.004** (0.002)	0.119 (0.003)
Prop College Grads	0.002 (0.001)	0.001 (0.001)	0.047 (0.003)
Average Income, 1940	-16.014** (7.271)	-16.982** (7.705)	1169.966 (8.136)
Population Density, 1940	-15.357 (12.476)	-13.086 (12.712)	256.698 (24.630)
1930-40 Population Growth Rate	-0.422 (0.735)	-1.108*** (0.299)	7.319 (0.641)

Notes: In columns 1 and 2, each coefficient comes from a separate regression of the baseline covariate on the White migration instrument. Column 1 does not include the sum of shares control while column 2 does. Both columns 1 and 2 include census region fixed effects and are weighted by 1940 CZ urban population (mirroring the main specification). Column 3 reports the mean and standard deviation of the variables. Data on climate from Vose et al. (2014), on transportation costs from Donaldson and Hornbeck (2016), on railroads from Atack (2016), and on topography, share in manufacturing, educational attainment, income, population density, and population growth from U.S. Census Bureau (2018). Transportation costs represent the 1920 dollar cost of rail transportation to a county outside of the CZ, averaged over all counties in the CZ. Robust standard errors in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A3: Pre-trends

	1900s	1910s	1920s	1930s
	(1)	(2)	(3)	(4)
Panel A: Δ Municipalities Per Capita				
$\widehat{GM}$	-0.028*	0.008	0.003	0.006
	(0.015)	(0.010)	(0.006)	(0.005)
Dep. var. mean	0.02	-0.04	-0.09	-0.04
Dep. Var. Std Dev	0.35	0.20	0.15	0.12
Panel B: Population Growth				
$\widehat{GM}$	-7.880	-3.184*	-5.493*	-0.086
	(6.283)	(1.829)	(3.174)	(0.353)
Dep. var. mean	49.37	9.37	27.84	6.83
Dep. Var. Std Dev	59.57	55.25	32.46	9.03
Panel C: Occupation Scores				
$\widehat{GM}$	0.022	0.018	0.077**	0.027
	(0.070)	(0.026)	(0.032)	(0.037)
Dep. var. Avg.	10.37	11.11	11.33	11.03
Dep. var. Std Dev	1.12	1.05	0.83	0.84
Observations	117	128	109	130

Notes: Each coefficient comes from separate regression of the outcome on the instrument. In panel A, the outcome variable is the change in municipalities per capita over the decade in the Goodman data. In panel B, the outcome variable is the percentage change in urban population in destination CZs over the decade. In panel C, the outcome variable is the average occupation score in urban areas for destination CZs at the start of the decade. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density, and are weighted by 1940 CZ urban population (mirroring the main specification) with robust standard errors. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A4: Correlation Table

	GM	Δ Municipalities P.C.
	(1)	(2)
Pop. Growth 1940-70	0.166*	-0.320***
Observations	130	130

Notes: This tables presents simple correlation regressions relating CZ population growth over the period of the Great Migration to our endogenous variable, change in urban Black population share in the CZ (in Column (1)) and to change in municipalities per capita as measured in the Goodman data (in Column (2)). $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A5: Main effects, 1950-1970, avoiding the 1942 CoG measurement issues

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
$\widehat{GM}$	1.771***	1.771***	1.841***	1.771***	1.771***
	(0.315)	(0.315)	(0.330)	(0.315)	(0.315)
Panel B: OLS 1940-1970					
GM	0.001	0.003	0.096**	0.002	-0.726***
	(0.002)	(0.003)	(0.043)	(0.009)	(0.159)
Panel C: 2SLS 1940-1970					
GM	0.003*	0.004**	0.175***	0.005	-1.385***
	(0.002)	(0.002)	(0.038)	(0.005)	(0.082)
1940-70 Avg.	-0.16	-0.19	-7.11	0.45	-2.65
Panel D: OLS 1940-2010					
GM	0.003	0.004	0.097**	-0.001	-0.967***
	(0.003)	(0.004)	(0.044)	(0.008)	(0.204)
Panel E: 2SLS 1940-2010					
GM	0.005**	0.005*	0.175***	0.014**	-1.680***
	(0.002)	(0.003)	(0.039)	(0.006)	(0.119)
1940-2010 Avg.	-0.29	-0.34	-7.46	0.86	-7.24
1940 Avg.	1.39	1.47	8.24	1.07	32.13
First Stage F-Stat	31.55	31.55	31.18	31.55	31.55
Observations	130	130	118	130	130

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A6: Main effects, 1940-1970, without controls for imbalanced baseline covariates

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
$\widehat{GM}$	2.557***	2.557***	2.690***	2.557***	2.557***
	(0.367)	(0.367)	(0.412)	(0.367)	(0.367)
Panel B: OLS 1940-1970					
GM	0.004	0.007**	0.351***	-0.026***	-1.022***
	(0.003)	(0.003)	(0.088)	(0.008)	(0.143)
Panel C: 2SLS 1940-1970					
GM	0.007***	0.011***	0.432***	-0.017***	-1.429***
	(0.002)	(0.002)	(0.046)	(0.003)	(0.052)
1940-70 Avg.	-0.26	-0.33	-12.95	0.64	-3.37
Panel D: OLS 1940-2010					
GM	0.011***	0.014***	0.363***	-0.038***	-1.249***
	(0.004)	(0.004)	(0.089)	(0.008)	(0.187)
Panel E: 2SLS 1940-2010					
GM	0.013***	0.017***	0.444***	-0.021***	-1.679***
	(0.002)	(0.003)	(0.047)	(0.005)	(0.083)
1940-2010 Avg.	-0.39	-0.49	-13.31	1.04	-7.96
1940 Avg.	1.49	1.61	14.09	0.89	32.86
First Stage F-Stat	48.57	48.57	42.64	48.57	48.57
Observations	130	130	118	130	130

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and a CZ-level control for the sum of shares. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A7: Main effects, 1940-1970, using percentile transformation of instrument and endogenous regressor

	C. Goodman		Census of Governments		Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
Percentile $\widehat{GM}$	0.639***	0.639***	0.510***	0.639***	0.639***
	(0.099)	(0.099)	(0.121)	(0.099)	(0.099)
Panel B: OLS 1940-1970					
Percentile GM	0.000	0.001	0.134***	-0.012***	-0.246***
	(0.001)	(0.001)	(0.032)	(0.003)	(0.054)
Panel C: 2SLS 1940-1970					
Percentile GM	0.007***	0.011***	0.344***	-0.016***	-1.419***
	(0.002)	(0.002)	(0.046)	(0.003)	(0.254)
1940-70 Avg.	-0.26	-0.33	-12.95	0.64	-3.37
Panel D: OLS 1940-2010					
Percentile GM	0.002	0.004**	0.137***	-0.018***	-0.307***
	(0.001)	(0.002)	(0.033)	(0.003)	(0.071)
Panel E: 2SLS 1940-2010					
Percentile GM	0.013***	0.017***	0.354***	-0.021***	-1.667***
	(0.003)	(0.003)	(0.048)	(0.004)	(0.282)
1940-2010 Avg.	-0.39	-0.49	-13.31	1.04	-7.96
1940 Avg.	1.49	1.61	14.09	0.89	32.86
First Stage F-Stat	41.80	41.80	17.75	41.80	41.80
Observations	130	130	118	130	130

Notes: Both the instrument and the endogenous regressor are transformed in these specifications to percentile/rank among all 130 (or 118) CZs. All specifications include census region fixed effects, the sum of shares control, and are weighted by 1940 CZ urban population. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Main effects, 1940-1970, including European migration control

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage					
$\widehat{GM}$	1.292***	1.292***	1.227***	1.292***	1.292***
	(0.323)	(0.323)	(0.356)	(0.323)	(0.323)
Panel B: OLS 1940-1970					
GM	0.003	0.007	-0.104	-0.009	-0.877***
	(0.004)	(0.005)	(0.109)	(0.012)	(0.264)
Panel C: 2SLS 1940-1970					
GM	0.010***	0.015***	-0.007	0.017*	-1.885***
	(0.004)	(0.005)	(0.106)	(0.009)	(0.146)
1940-70 Avg.	-0.26	-0.33	-12.95	0.64	-3.37
Panel D: OLS 1940-2010					
GM	0.004	0.006	-0.106	-0.000	-0.936***
	(0.006)	(0.007)	(0.110)	(0.012)	(0.324)
Panel E: 2SLS 1940-2010					
GM	0.011**	0.014**	-0.009	0.039***	-2.074***
	(0.005)	(0.006)	(0.108)	(0.009)	(0.206)
1940-2010 Avg.	-0.39	-0.49	-13.31	1.04	-7.96
1940 Avg.	1.49	1.61	14.09	0.89	32.86
First Stage F-Stat	15.98	15.98	11.90	15.98	15.98
Observations	130	130	118	130	130

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. All specifications also include the instrument for European migration from Sequeira et al. (2020) as a control to test for whether European migration is a potential confounder. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A9: Main effects, Township Outcome

	Census of Governments
	Townships
	(1)
Panel A: First Stage	
$\widehat{GM}$	1.771***
	(0.315)
Panel B: OLS 1940-1970	
GM	0.015***
	(0.006)
Panel C: 2SLS 1940-1970	
GM	0.034***
	(0.004)
1940-70 Avg.	-0.57
Panel D: OLS 1940-2010	
GM	0.021***
	(0.007)
Panel E: 2SLS 1940-2010	
GM	0.045***
	(0.006)
1940-2010 Avg.	-0.86
1940 Avg.	2.29
First Stage F-Stat	31.55
Observations	130

Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and a CZ-level control for the sum of shares. Standard errors from Borusyak and Hull (2023) in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A10: Municipalities Incorporated between 1940 and 1970: Additional variables

	(1) Adjacent to Principle City	(2) Outstanding Debt as Pct of Municipal Revenues	(3) Council Manager Gov't
Above Median GM X Inc. 1940-70	-0.130	-22.259	0.003
	(0.159)	(33.806)	(0.094)
Above Median GM	0.010	-15.697	-0.062
	(0.033)	(14.097)	(0.062)
Incorporated 1940-70	0.091	5.398	0.191**
	(0.153)	(31.486)	(0.083)
Below Median Avg.	0.250	150.680	0.550
Observations	7719	7738	7668

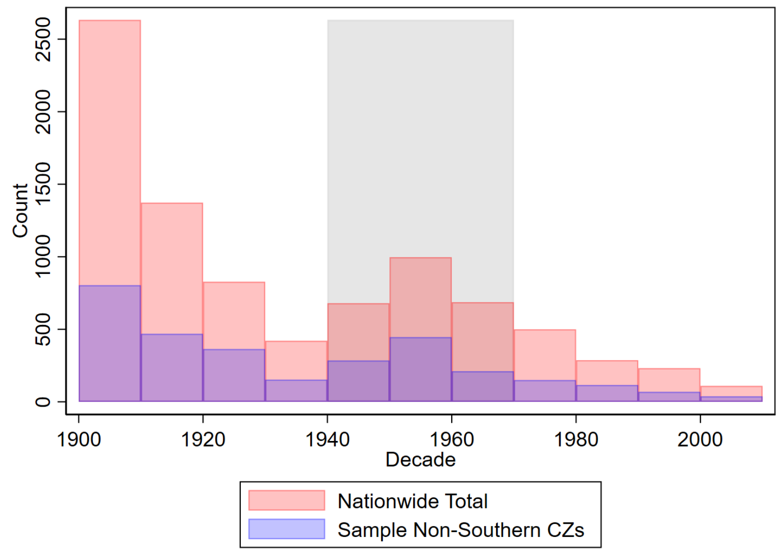
Notes: All specifications include census region fixed effects, weighted by municipality population. The sample includes all contemporary (2023) municipalities in the 130 CZs in our analysis. Adjacency comes from authors' calculations using the TIGER/Line shapefiles from U.S. Census Bureau (2018). Adjacent is a 0/1 indicator for municipal boundaries adjacent to boundary of the central city; this specification drops central cities. School district boundaries come from NCES (2023). Municipal finance data comes from U.S. Census Bureau (2012a). Council manager government is a 0/1 indicator for whether the municipality had a council-manager form of government in either the 1987 or 1992 Census of Governments' Directory Surveys (U.S. Census Bureau, 2014). Standard errors clustered at the CZ level. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A11: Main results, Split on whether CZ's largest school district had a Court Ordered Desegregation Plan

	C. Goodman	Census of Governments			Census
	Municipalities		School districts	Special Districts	Main City Share
	(1)	(2)	(3)	(4)	(5)
Panel A: First Stage $\widehat{GM}$					
$\widehat{GM}$	2.568***	2.568***	2.071**	2.568***	2.568***
	(0.951)	(0.951)	(0.882)	(0.951)	(0.951)
$\widehat{GM}$ X C.O.	-0.472	-0.472	-0.065	-0.472	-0.472
	(0.963)	(0.963)	(0.886)	(0.963)	(0.963)
F-Stat	7.29	7.29	5.51	7.29	7.29
S.W. F-Stat	9.73	9.73	8.83	9.73	9.73
Panel B: First Stage $\widehat{GM}$ X C.O.					
$\widehat{GM}$	-0.276	-0.276	-0.507	-0.276	-0.276
	(0.399)	(0.399)	(0.439)	(0.399)	(0.399)
$\widehat{GM}$ X C.O.	2.522***	2.522***	2.672***	2.522***	2.522***
	(0.410)	(0.410)	(0.455)	(0.410)	(0.410)
F-Stat	37.92	37.92	34.54	37.92	37.92
S.W. F-Stat	13.64	13.64	9.28	13.64	13.64
K.P. F-Stat	5.00	5.00	3.83	5.00	5.00
Panel C: OLS 1940-1970					
GM	-0.006**	-0.003	0.223**	-0.011	-0.418***
	(0.003)	(0.004)	(0.104)	(0.014)	(0.151)
GM X C.O.	0.011**	0.009*	-0.239	0.006	-0.475**
	(0.005)	(0.005)	(0.148)	(0.015)	(0.196)
Panel D: IV 1940-1970					
GM	0.001	0.003	0.606***	-0.008	-0.851***
	(0.007)	(0.008)	(0.160)	(0.009)	(0.161)
GM X C.O.	0.005	0.007	-0.475***	0.012*	-0.449***
	(0.005)	(0.005)	(0.101)	(0.007)	(0.120)
Panel E: OLS 1940-2010					
GM	-0.006	-0.004	0.221**	-0.019	-0.501***
	(0.005)	(0.005)	(0.105)	(0.016)	(0.177)
GM X C.O.	0.013**	0.011	-0.240	0.012	-0.627***
	(0.006)	(0.007)	(0.151)	(0.020)	(0.241)
Panel F: IV 1940-2010					
GM	0.012	0.013	0.622***	0.014	-0.819***
	(0.008)	(0.008)	(0.162)	(0.014)	(0.216)
GM X C.O.	-0.004	-0.002	-0.493***	-0.006	-0.774***
	(0.005)	(0.005)	(0.102)	(0.012)	(0.178)
Non-C.O. 1940-70 Avg.	-0.232	-0.316	-15.380	0.727	-0.146
Non-C.O. 1940-2010 Avg.	-0.390	-0.509	-15.808	1.210	-3.074
Observations	130	130	118	130	130

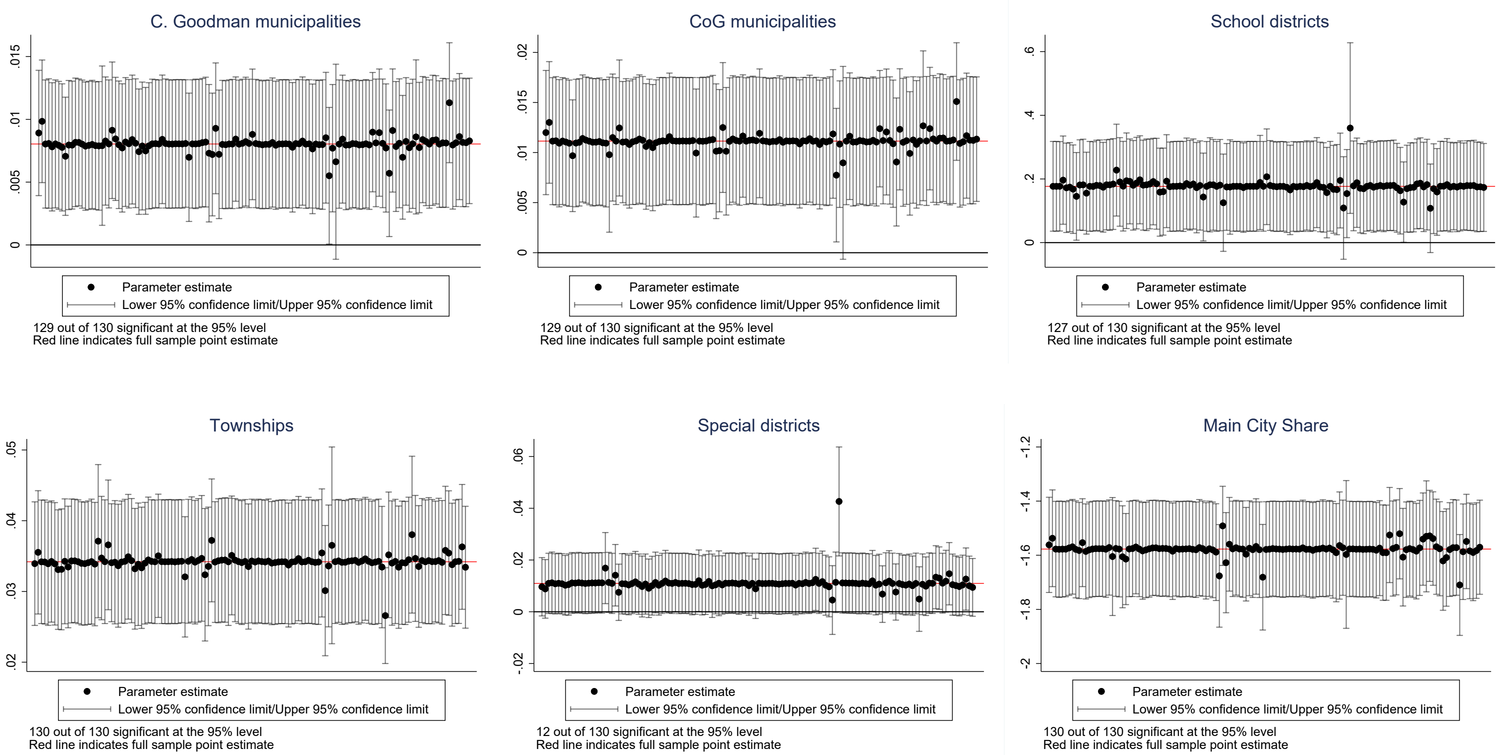
Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population, with the addition of the interaction term. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. The interaction term is a dummy for whether the largest school district in the CZ (based on 2000 enrollment) ever received a Court Ordered Desegregation Plan, based on the data from Sean F. Reardon and Greenberg (2012). S.W. F-Stat refers to the Sanderson-Windmeijer test for the conditional strength of each instrument. K.P. F-Stat refers to the joint Kleibergen-Paap Wald test for weak identification. Standard errors from Borusyak and Hull (2023) in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure A1: Municipal incorporations by decade



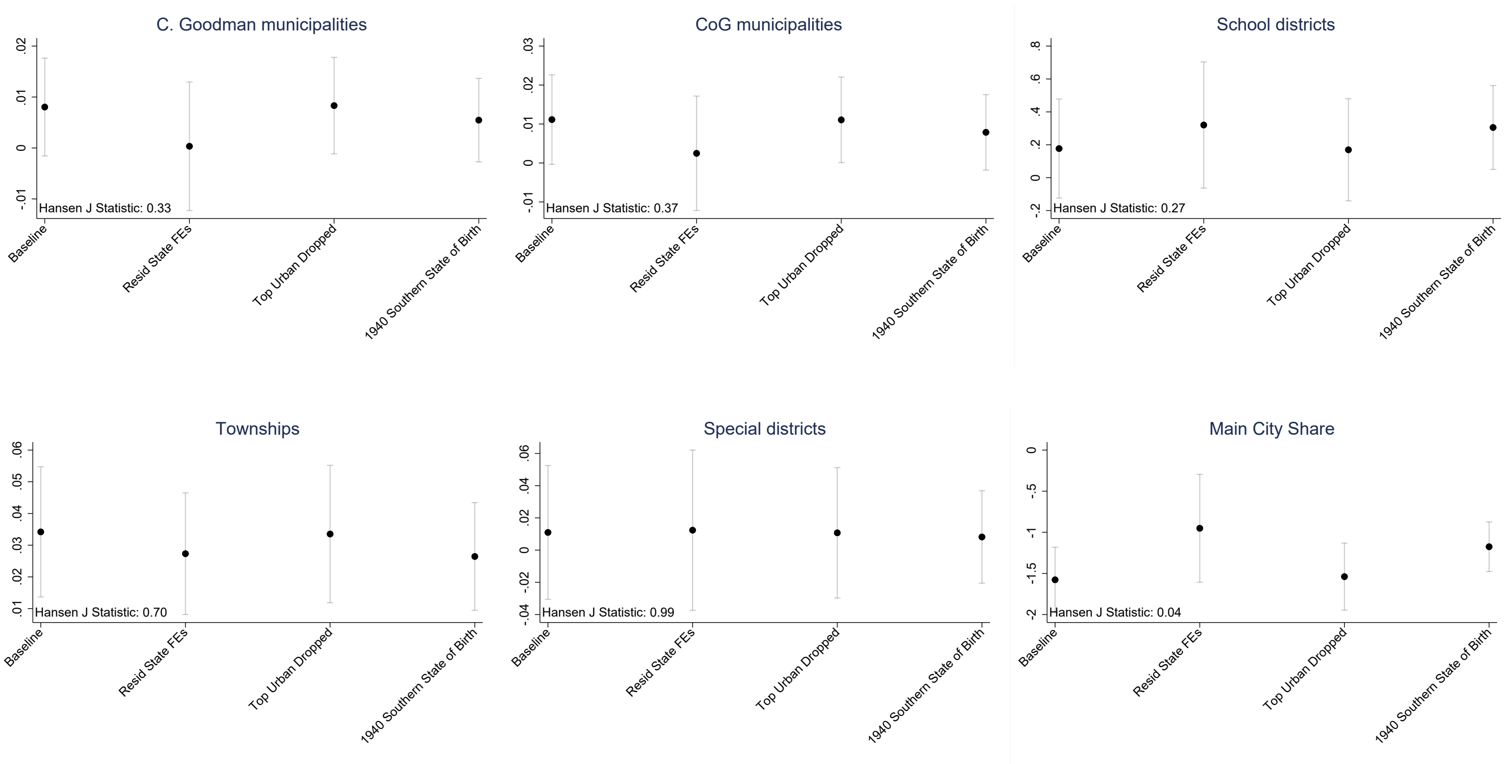
Notes: Data from Goodman (2023). Shaded region denotes the Great Migration, 1940-70

Figure A2: Leave-one-out IV Tests, Balanced Controls



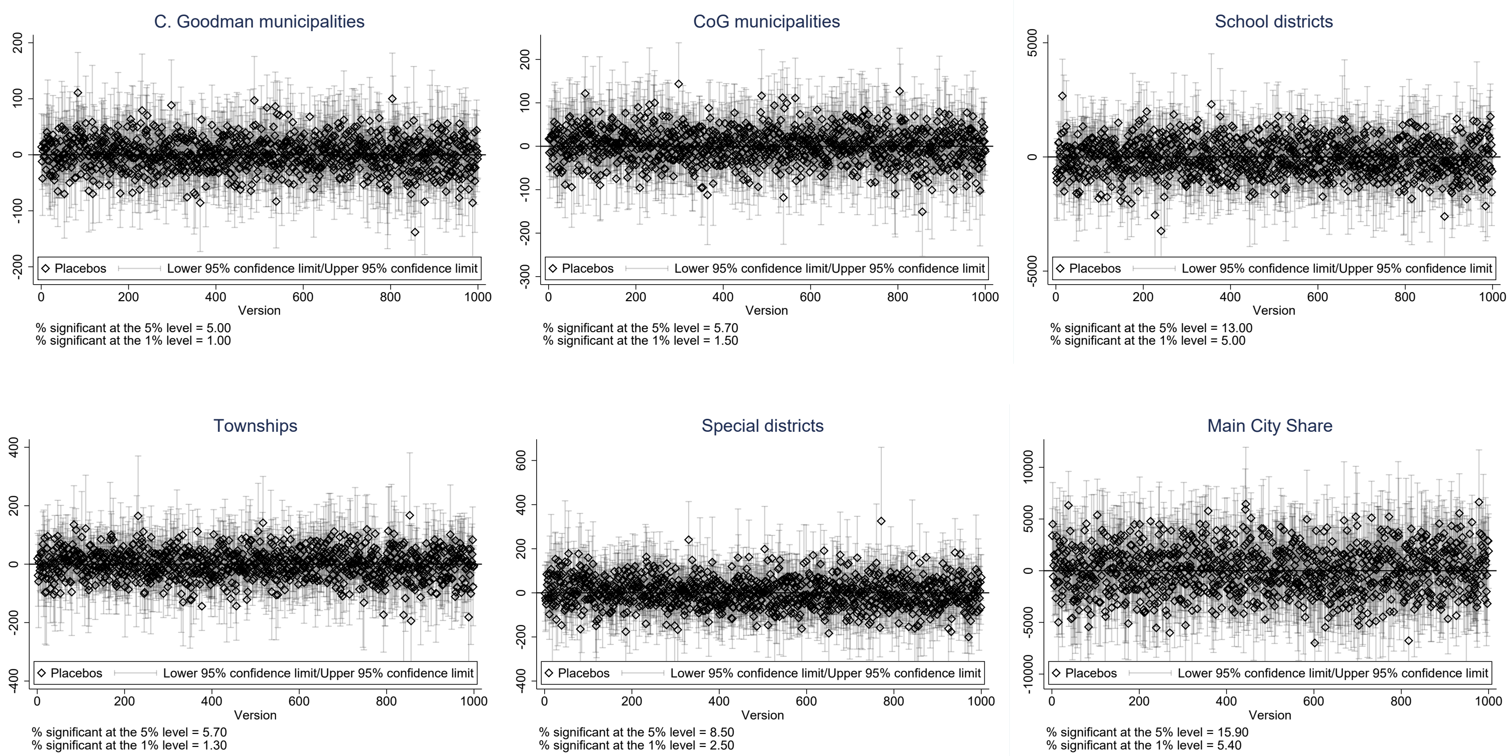
Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density.. Each parameter estimate comes from a regression that drops one CZ at a time. Robust standard errors generate 95% confidence intervals.

Figure A3: Overidentification IV Tests, Balanced Controls



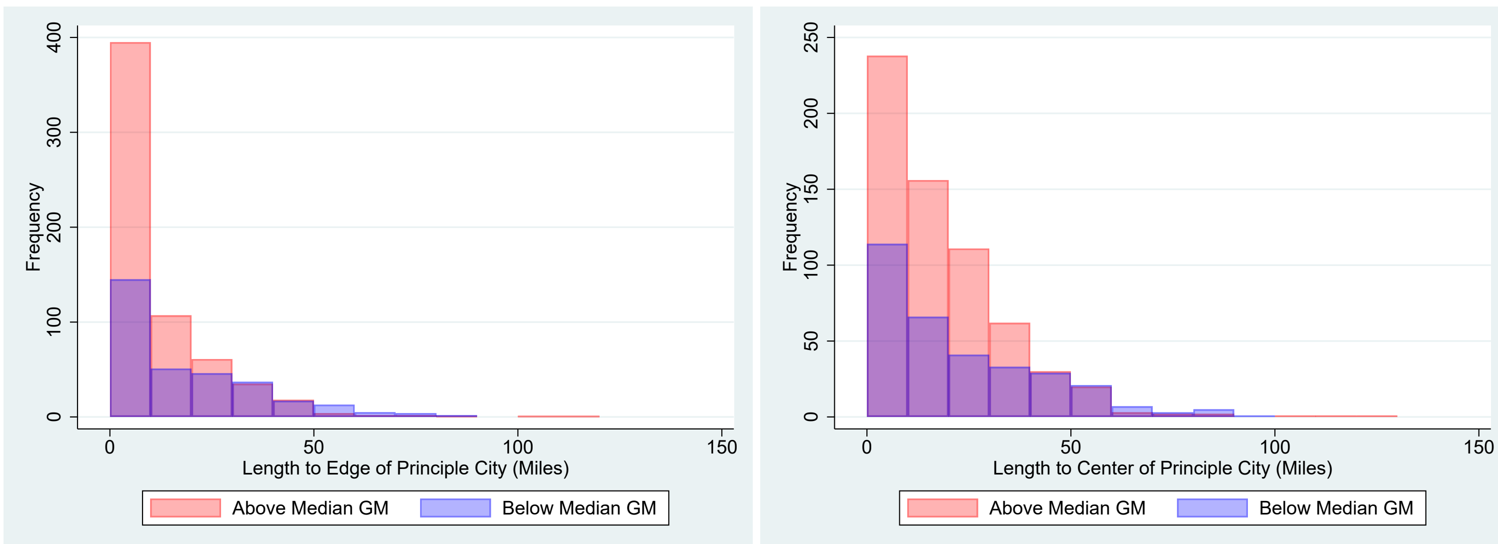
Notes: Point estimates come from our baseline instrument and three alternative instruments, where all specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density, and are weighted by 1940 CZ urban population. Robust standard errors generate 95% confidence intervals. We are unable to generate the exposure-robust Standard Errors for this overidentification test, hence why the confidence interval of the baseline estimates here may not align with those in 2.

Figure A4: Placebo Tests, Balanced Controls



Notes: Regression results according to equations in the Empirical Strategy section, weighted by 1940 CZ urban population. All specifications include census region fixed effects and CZ-level controls for the sum of shares and 1940 CZ average income, labor force share in manufacturing, and population density. Each of the 1,000 instruments is constructed using randomly generated variation in Southern county-level shocks. Robust standard errors generate 95% confidence intervals.

Figure A5: Distribution of Distance to Central City, 1940-70 Incorporations



Notes: Distributions present length to edge and length to center of the principal city for each of the nearly 1,000 municipalities incorporated between 1940 and 1970 in our 130 sample CZs. More municipalities were incorporated in Above Median GM CZs, which drives part of the differences in these distributions. In addition, new municipalities in Above Median GM CZs are bunched closer to zero, suggesting they primarily take the form of adjacent or inner-ring sururbs rather than far-flung exurbs.