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SYMBOLS OF OPPRESSION: THE ROLE OF CONFEDERATE MONUMENTS IN THE GREAT MIGRATION

Abstract. Dominant groups around the world have historically asserted their power by constructing in public spaces monuments that glorify their narrative, vis-à-vis their opponents'. How does the presence of divisive symbols affect the location choices of those who oppose them? I investigate this issue focusing on Confederate monuments in the US South, symbols that were erected by southern whites in the early 20th century and opposed by African Americans because of their connection to slavery. I isolate the role of these monuments from that of the underlying shifts in ideology and find that monuments directly impacted African Americans' migration patterns, both at the time of construction and today. Historically, I show that southern counties with monuments experienced a sharp decline in the African American share of the population following the construction. I then exploit the presence of a quasi-monopolist producer of Confederate monuments to construct an instrument for the stock of monuments based on transportation costs and the years in which the producer was active. The instrumental-variable analysis confirms that an exogenously higher stock of monuments caused a substantial reduction of the African American share of the population. In the contemporary context, I conduct an online experiment to assess whether monuments continue influencing migration choices. I randomize the presence of Confederate monuments in the visual description of hypothetical destination cities and I ask respondents to consider job offers located there. I find that respondents ask higher reservation wages and are substantially less likely to accept job offers if the city has a monument. The effect for African Americans is twice the size for whites in the South.

Keywords. Divisive monuments, racial segregation, US civil war

1. INTRODUCTION

Celebratory monuments shape public spaces worldwide. Some honour uncontroversial figures, while others reflect divisions within society and are typically imposed by dominant groups to assert power or glorify their narrative. For example, in the 20th century, thousands of Soviet and Fascist monuments were erected globally, and hundreds of statues of European colonizers stood across Africa prior to independence. These monuments continue to attract substantial political attention: memorials to past authoritarian leaders serve as rallying points for supporters of their legacies, while calls

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for their removal often spark conflict. For instance, Confederate monuments in the U.S. became targets of Black Lives Matter protests, while their removals sparked backlash from white supremacist groups.

Despite their pervasiveness, we know very little about the effects of divisive public monuments on the behavior of supporting and dissenting groups. An emerging empirical literature shows that (removals of) these monuments significantly affect voting behavior (Villamil *et al.* 2021, Rozenas *et al.* 2022, Taylor 2025) and racial resentment (Rahnama 2025). However, identifying their causal effect remains a key challenge. The construction and removal of ideological symbols inherently reflect concurrent local surges in the ideology they represent, which may themselves drive the outcomes under study. As a result, existing studies struggle to disentangle the direct effects of monuments from those ideological shifts. In addition, other key consequences of these monuments remain almost entirely unexplored – in particular, their potential influence on spatial sorting. By placing a divisive monument in public space, a group asserts ownership over that space, potentially prompting opposing groups to leave. While high non-monetary migration costs make individuals relatively "rooted" (Sjaastad 1962, Koşar *et al.* 2022), prominent theoretical predictions suggest that oppressed groups may relocate from areas perceived as increasingly hostile (Tiebout 1956, Hirschman 1970). Understanding whether groups sort geographically based on which symbols populate public space is crucial, given the profound economic consequences of (racial) segregation (Cutler *et al.* 1997, Ananat 2011).

This paper fills these gaps by providing quasi-experimental and experimental evidence on the effect of divisive monuments on the location choices of dissenting groups, focusing on Confederate monuments – erected by Southern whites in the early 20th-century U.S. and opposed by Black Americans. I address endogeneity concerns stemming from the correlation between monument presence and local ideology, and isolate their causal effect using two complementary approaches. In the first part of the paper, I use detailed historical data on monument unveilings and leverage exogenous variation in construction costs – which made some areas less likely to build monuments – to construct an instrument for the stock of monuments. This complements a standard difference-in-differences strategy and shows that Confederate monument construction induced Black Americans to migrate elsewhere. In the second part of the paper, I conduct an online experiment that randomizes exposure to monuments in hypothetical Southern cities. The results show that such monuments still disproportionately influence Black Americans' migration patterns, suggesting they continue to shape segregation today.

Confederate monuments provide an ideal case to study the role of divisive symbols, for three main reasons. First, the Confederacy's defense of slavery during the Civil War made these monuments racially divisive, with white and Black southerners forming two clearly identifiable groups of supporters and opponents, respectively. In contrast, other divisive monuments – such as fascist or communist ones – reflect ideological rather than racial divides, which are endogenous and harder to observe. Second, early 20th-century Black southerners lacked viable political responses, as they were largely disenfranchised and faced severe risks in protesting, while migration was their most viable response to a more hostile environment. Third, the construction of Confederate monuments was a highly concentrated market, dominated by a quasi-monopolist firm. High transportation costs due to the monuments' size and weight made counties better connected to the firm more likely to erect one. This predetermined variation in monument placement, unrelated to local ideology, forms the basis of my identification strategy.

The historical part of the paper begins by presenting motivating evidence that the Black share of the population declined following Confederate monument construction. To do so, I exploit the geographic and temporal variation in monument construction using a difference-in-differences strategy. Specifically, I first focus on counties that constructed their first monument during the peak construction years after the 1910 census (1910-1915), and I use never-treated counties as the control group. This exercise shows a progressive decline in the Black share of the population in treated counties relative to control ones, which accounts for 1.5 percentage points, primarily driven by an immediate negative impact on Black population growth. An event study incorporating all construction years, rather than peak years alone, qualitatively confirms these results, indicating a 5 percentage point decline in the Black share of the population.

I then employ an IV strategy to address concerns about the endogenous timing and location of monuments. Indeed, other factors – such as concurrent spikes in local racism or economic activity – could both facilitate the construction of expensive monuments and influence migration decisions. I thus construct an instrument based on each county's connection to the McNeel Marble Company (MMC), a quasi-monopolistic producer of Confederate monuments located in Georgia. Specifically, I instrument the stock of statues using the inverse of each county's transportation cost from Marietta in 1890 (from Donaldson *et al.* 2016) interacted with the period during which the firm operated, and condition on a set of controls that include each county's connection to other key destinations, such as New York City – the main destination of

migrants – and Richmond, the Confederate capital.[2] This strategy exploits the fact that monuments were heavy, costly to transport, and difficult to move in the early 20th century, meaning that better connection to the producer reduced costs and increased the likelihood of construction. Under the assumption that the instrument – conditional on controls – affects migration only through monument construction, this provides an exogenous source of variation in the number of statues. I validate this by showing that connection to MMC is not correlated with other forms of Confederate commemoration (a proxy for ideological fervor) beyond monuments. As a result, I compare otherwise similar areas that differ only in their likelihood of having a monument due to their connection to MMC. The IV confirms the direction of the difference-in-differences analysis but indicates a larger effect: a 13-percentage-point decline in the Black share of the population. The discrepancy between the two strategies suggests that the diff-in-diff results may be biased downward due to measurement error and the tendency of economically booming counties to both afford monuments and attract migrants.

In the contemporary part of the paper, I examine whether the historical findings extend to the present, particularly as Confederate monuments have regained salience, and whether they continue to influence location choices today. To test this, I conduct an online experiment on Prolific, sequentially presenting each respondent with five fictitious cities in the US South, each depicted through a set of images. I randomize the inclusion of Confederate monument images within the set of pictures describing each city, ensuring that each city appears to a respondent either with or without a monument. After viewing each city, respondents are asked if they would consider relocating there for a job similar to their most recent one, for a new job offer (presented with details on sector, hours, and wage), and what their reservation wage for relocating is. To ensure incentive compatibility, respondents receive a list of real job offers in a southern city that aligns with their stated preferences. The results indicate that the presence of a Confederate monument reduces Black respondents' willingness to accept job offers and relocate (between 0.33 and 0.53 standard deviations), while increasing their reservation wage by 21%. A significant effect is also observed among southern whites, reflecting shifts in racial attitudes and stigmatizations of the Confederacy, but the magnitude is about half that of Black respondents. These findings provide strong evidence that Confederate monuments continue to shape migration patterns, disproportionately deterring Black Americans from certain locations.

[2] Results are robust to including a progressively more restrictive set of controls, including connection to Chicago, to each state's capital, and a measure of the county's market access.

This article advances the literature on divisive political symbols. While areas with Confederate street names correlate with larger Black-white labor-market gaps (Williams 2021) and the construction of Confederate monuments correlated with more segregationist vote during 1878-1912 (Taylor (2025)), removals of divisive monuments can help intergroup reconciliation (Rahnama 2025), but also trigger political backlash by increasing electoral support for parties that defend those legacies (Rozenas *et al.* 2022, Villamil *et al.* 2021). This study makes four key contributions. First, I introduce a new outcome – differential racial migration – and show that hostile symbols can lead to the relocation of the oppressed group, in line with Tiebout sorting and Hirschman (1970)'s exit-voice framework. Second, this is the first study to exploit exogenous variation in monument construction, by relying on an IV strategy. Third, I introduce the first experimental evidence that randomizes exposure to divisive symbols. Together, these methods address the key endogeneity concern inherent in this literature – namely, that ideological shifts may explain both monument constructions (or removals) and the observed behavioral responses, complicating efforts to establish causality.

2. CONCEPTUAL FRAMEWORK

Imagine two identical counties, A and B, where two groups are competing for power. In both counties, the dominant group seeks to assert its supremacy in the public arena by constructing a monument that glorifies their views. However, because of purely random factors (such as the exogenously higher cost of the same monument in county B), the dominant group succeeds only in constructing it in county A. I ask whether the exogenous presence of the monument in only one of these otherwise identical counties can influence the behavior of the competing groups. In particular, I investigate whether it leads the oppressed group in county A to exhibit higher rates of out-migration in the subsequent years compared to county B. Obviously, a certain level of rivalry between groups and the perception that the monument represents only one group are necessary conditions for this research question.[3]

How do monuments affect oppressed groups in practice? Their presence in public space may have a direct effect, by heightening the salience of the dominant group's power (Rozenas *et al.* 2022). In the U.S. South – where the Union's victory abolished slavery and northern troops protected Black Americans' civil and political rights until

[3] Indeed, a symbol may cease or begin to be divisive (respectively, statues of French kings destroyed during the Revolution, but hardly divisive today, and statues of Columbus in modern US).

1877 – Confederate monuments visually signaled that white Southern elites had regained power and that Reconstruction was over. In a context of pervasive discrimination, they may have functioned as coordination devices, warning Black Americans which spaces to avoid. This direct effect also aligns with the memory-reactivation mechanism (Ochsner *et al.* (2017), Fouka *et al.* (2013)): since most Black Southerners were enslaved before 1865, monuments celebrating the antebellum era could reactivate the collective memory of slavery, intensifying the salience of discrimination and prompting out-migration. Monuments may also affect oppressed groups indirectly, by reshaping their environment – serving as rallying points for Confederate parades or white supremacist gatherings, or by entrenching a community's dominant values over time.

In the real world, I cannot replicate the ideal experiment described above; thus, I use an IV approach to introduce an exogenous shock to the likelihood of a county successfully constructing a monument. This allows me to capture the causal effect of both the direct and indirect mechanisms described above. Moreover, I replicate the ideal experiment as closely as possible by conducting an online experiment. In this case, the results capture the impact of the direct channels only as it only varies information about the presence of the monuments.

3. SETTING

The construction of Confederate monuments in the early 20th-century South provides an ideal setting to study how divisive monuments influence the migration decisions of opposing groups for three reasons. First, these monuments were ethnically divisive. Second, the highly concentrated market for monuments and the high transportation costs made some areas more likely to erect monuments than others, irrespectively of local ideology. Third, the limited political options for Black Americans made relocation their only viable response.

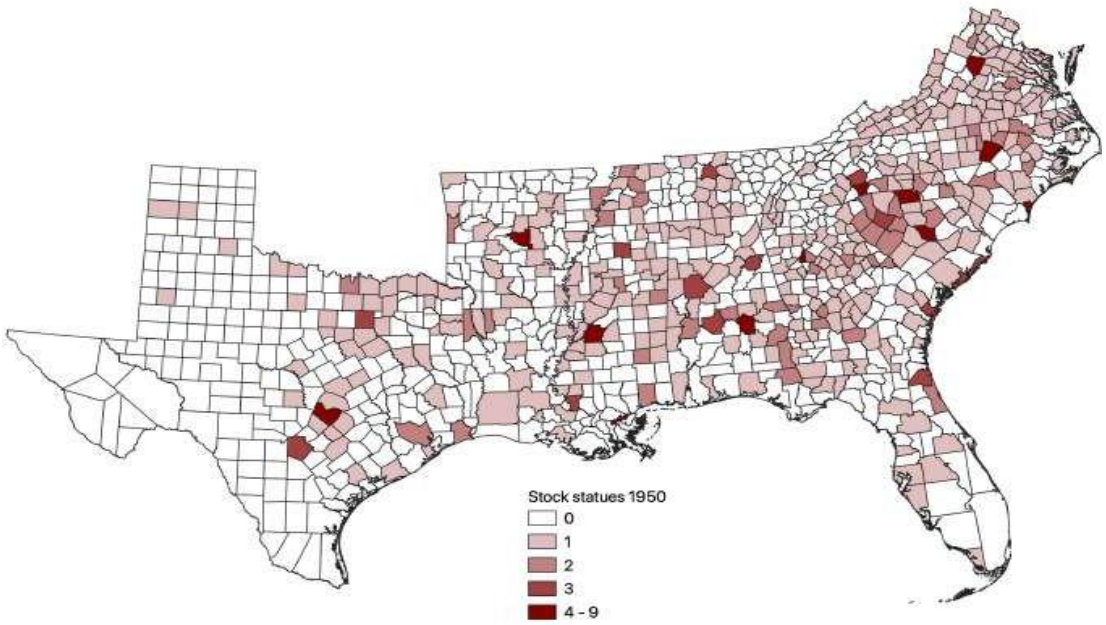
Ethnically divisive monuments. Confederate monuments are a typical example of symbols that glorify the narrative of one group at the expense of another. Their divisiveness stems from the central role of slavery in the decision of Southern states to secede. Historians widely agree that the desire to maintain slavery was a primary motive for secession. In fact, all the states that issued declarations of causes justifying their secession cited the preservation of slavery as a primary reason, and these documents discuss the topic extensively (Pierce 2023). In light of this, many historians argue that these monuments were implicitly intended to intimidate Black citizens (Cox 2019).

Confederate monuments have been associated to slavery by Black Americans both today and at the time of construction. Modern surveys show that Black southerners are significantly more likely than whites to express dislike for Confederate monuments (PRRI-EPU 2022). More importantly, at the time of their construction, Confederate monuments were widely associated with slavery by Black Americans.[4] For example, in 1890, the Richmond Planet, a prominent southern Black newspapers, published a series of articles criticizing the unveiling of the monument to Confederate General Robert E. Lee in Richmond.[5] One article stated that "Lee ... gave his magnificent abilities to the infamous task of... perpetuating the system of slavery."
In contrast, white newspapers extensively portrayed monument unveilings in favorable terms.[6] Figure A2 plots the share of newspaper pages containing the words: (Confederat* and monument* and (honor* or respect*)). These plots demonstrate that unveilings were salient local events, in comparison both with previous years and with counties without a monument, and that they were described in a positive light.

Monument constructions and connection to McNeel Marble. Company The vast majority of Confederate monuments was purchased by white private groups, the most influential of which was the United Daughters of the Confederacy (UDC), which placed almost two-thirds of all Confederate monuments. The process typically began with fundraising campaigns in the UDC's official magazine, The Confederate Veteran. Statues were then acquired and privately placed in public spaces, with the implicit approval of local authorities. The explicit purpose of the UDC was to glorify the Confederacy by promoting the narrative of the "Lost Cause", erasing slavery as a key reason for the Confederacy's decision to secede and instead portraying the Confederate cause as heroic and just. By 1950, Confederate monuments were present in nearly half of Southern counties (Figure 1), with a strong concentration around Richmond, Virginia, the former Confederate capital.

[4] The False Image of History project collects historical Black newspaper articles across the US that criticized the celebration of the Confederacy (see an example in Figure A3).
[5] The Library of Virginia reports a collection of the Richmond Planet's articles opposing constructions.
[6] Figure A1 shows an example of a celebratory article.

FIGURE 1 • DISTRIBUTION OF ALL EXISTING CONFEDERATE MONUMENTS IN 1950 BY COUNTY (509 STATUES)

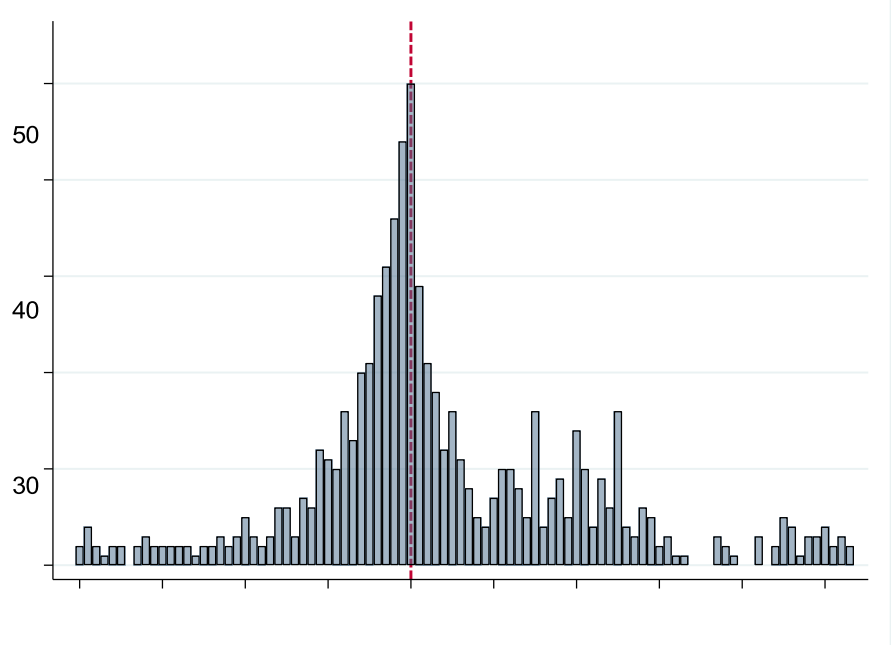


Most Confederate monuments in the South were manufactured and installed by a quasi-monopolistic firm, the McNeel Marble Company (MMC). Founded in 1892 in Georgia, near the quarries of Marietta, the company produced its first Confederate monument for the UDC in 1905. The firm claimed to have been entrusted with 95% of all Confederate monuments ordered in 1909 – the peak of the construction period.[7] I argue that MMC emerged as a quasi-monopolist due to two key factors: its preexisting advantages, including its proximity to a granite quarry and specialized expertise in granite and marble carving, and a highly time-concentrated demand for monuments, which made market entry difficult for other firms. As shown in Figure 2, only few Confederate monuments were built before the 20th century and more than half of the monuments were erected between 1905 and 1915.

The transportation cost to a county from MMC was an important determinant of the success of construction. Monuments were extremely costly, ranging between 530% and 5,000% of the average southerner's yearly income, making the cost the only obstacle to construction.

FIGURE 2 • NUMBER OF CONFEDERATE MONUMENTS CONSTRUCTED BY YEAR

[7] Statement published in 1910 in the Confederate Veteran (Figures A4 and A5). While MMC's statements are hard to verify, a catalog from 1924 lists at least 142 public Confederate monuments produced by MMC (The Atlanta Journal-Constitution, August 2017).



Indeed, some fundraising campaigns took years.[8] The typical monument was made of marble or granite, weighed between 8 and 15 tons, and would be transported by railroad, if possible, or trucks owned by MMC, if not. While the exact transportation cost for the average monument is hard to obtain, it is possible to benchmark the cost using estimates for regular freight at the beginning of the last century. Glaeser *et al.* (2003) estimate an average cost of $0.185 per ton-mile (in 2001 dollars) for transport via railway, implying around $4 (in 2023 dollars) per mile for an average-size monument, to be added to a high interline transfer cost. Donaldson *et al.* (2016) use transportation costs by wagon in 1900 that are 37 times higher than the cost by train, which would imply a cost of transportation by wagon up to $150 per mile for an average monument. Monuments were likely more expensive to move than regular freights, but the price was also concave in distance. All in all, these values suggest that even an additional 100 miles of distance would significantly increase the final price, especially in the absence of railways.

The combination of a highly concentrated monument market and high transportation costs suggests that proximity to MMC significantly increased a county's likelihood of erecting a Confederate monument. Consistent with this, Figure 7 reveals a significant surge in the stock of statues since 1906 – precisely when MMC commenced its production of Confederate monuments – in counties with stronger connection to MMC, as measured by the inverse of transportation cost in 1890.

[8] Figure A6 shows some cases.

Available political reactions and Black migration. Another reason the 20th-century South is a useful setting to study reactions to divisive monuments is the set of actions available to each group. While whites could express discontent or support at the ballot box, Black citizens, with limited political rights, had migration as their only viable response. At the start of the 20th century, Black Southerners had no means to react to monument construction through voting, as they were largely disenfranchised. Further, the threat of violence made open protests rare and extremely risky for them. The combination of an inhospitable economic and political environment in the South and better labor opportunities and political rights in the North led many Black Southerners to migrate. By 1940, 35% of Black Southerners born between 1880 and 1940 had left the South, with peaks of 45% for those born between 1930 and 1940 (see Figure A7). Additionally, an even larger within-South migration was taking place.[9]

4. HISTORICAL DATA

My main dataset consists of decennial census data on the number of inhabitants per county and their ethnicity, as provided by IPUMS USA. I focus on the 11 formerly-Confederate states, between 1870 and 1950. I augment this dataset with Southern Poverty Law Center information on the exact location, year of construction, and type of all documented Confederate dedications. I focus on the 509 Confederate monuments constructed in the South before 1950, but I also rely on the naming of buildings and streets for secondary analyses. I use data from Clubb *et al.* (2006) to assess how voting patterns changed over time, and data on lynchings from Seguin *et al.* (2019) to proxy for the hostility of the local environment. Moreover, I use data from Donaldson *et al.* (2016), who compute county-to-county matrices of cost of grain transportation accounting for the expansion of the railway network, to proxy for the cost of transporting freight across the South. Tables B1 and B2 report summary statistics for the main variables of interest.[10] Finally, I rely on data from Newspapers.com to assess how salient monument construction was among local newspapers.

[9] Individual data from the Census Tree suggest that between 1880 and 1940, about 25% of Black southerners in each census had moved to a different southern county by the following census year.
[10] Counties with monuments tend to be larger and have a higher proportion of Black residents.

5. THE HISTORICAL EFFECT OF MONUMENTS ON MIGRATION

To isolate the historical effect of monuments on migration, I rely on two groups of identification strategies. First, I rely on simple difference-in-differences and event-study specifications comparing demographic patterns after the construction of a monument. Second, I rely on an IV for the stock of monuments, which allows me to isolate their effect on migration, from confounding factors.

5.1 Difference-in-Differences and event-study analyses

5.1.1 Identification strategy

My first specification is a difference-in-differences in which never-treated counties are used as a control group for counties with their first monument erected between 1910-15. With this specification, we can observe pre-construction trends in the two groups and ensure they were not diverging before the construction of a monument. The preferred outcome of interest is the Black share of the population, as it symmetrically reflects the dynamics of both Black and white residents. My main specification is thus:

$$Y_{c,t} = \sum_{t=1880}^{1950} \gamma_t Treated_c * Decade_t + \beta X_{c,t} + \chi_c + \gamma_{s,t} + \epsilon_{c,t} \qquad (1)$$

where, $Y_{c,t}$ is the Black share of the population in county c and decade t. $Treated_c$ is an indicator for counties whose first monument was constructed in 1910–15. χc and $\gamma_{s,t}$ are respectively county and state-by-year fixed effects, while Xc,t controls for the lagged county population.[11] Standard errors are clustered at the county level. My identifying assumption is that the two groups of counties would have followed the same population pattern in the absence of treatment. Since people could migrate from treated to untreated areas in response to a monument, this effect has to be interpreted as the differential effect across areas. I corroborate the diff-in-diff estimates with a simple event study wherein my event is the first construction date in each county. This approach exploits the full time-range of constructions, not just the peak construction years.[12] As a robustness test, I even exclude counties whose first construction occurred in the peak years, focusing instead on the tails of the distribution of monument

[11] If anything, not controlling for lagged population (a potential "bad control") makes results more significant.

[12] The event study is described by the following equation, where DC_t is decade relative to the unveiling of the county's first monument, all never-treated counties are among the reference group at $j = -1$ and the other components are like in Equation 1. Table B3 reports the distribution of first unveilings per decade.

$$Y_{c,t} = \sum_{j=-5}^{+5} \gamma_j \mathbb{1}_{\mathbb{DC}t=j} + \beta X_{s,c,t} + \chi_c + \gamma_{s,t} + \epsilon_{c,t} \qquad (2)$$

construction years. This approach helps rule out the possibility that the peak construction years were too specific or coincided with other economic or political shocks in the treated counties.

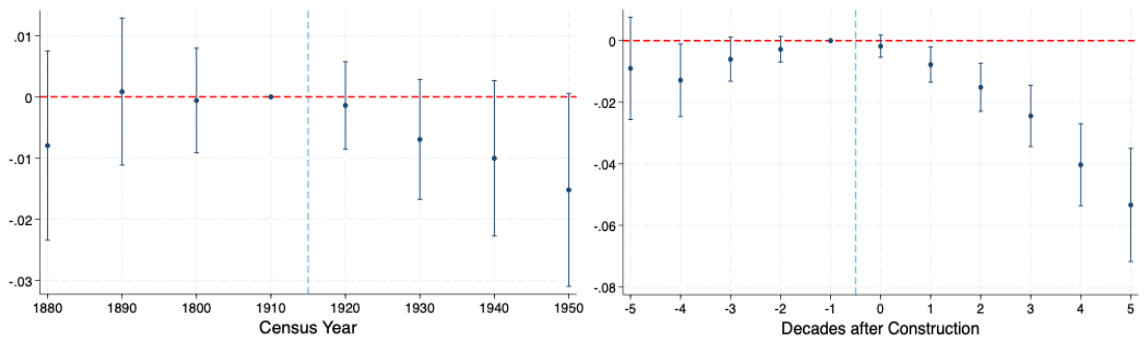
Both specifications include county and state-by-year fixed effects, ruling out the possibility that time- or county-fixed characteristics or state-specific yearly shocks explain my results. For instance, this rules out explanations such as treated counties being permanently more racist or wealthier than control ones, or that the state-level introduction of Jim Crow laws led to both more monument constructions and more out-migration.

5.1.2 Results

The results from the difference-in-differences analysis described in Equation 1 are plotted in Figure 3, panel (a). The figure shows parallel trends between the two groups in the pre- treatment period and a decline in the Black share of the population right after construction. Because the treated counties unveiled monuments between 1910-1915, the change in population (observed from 1920) follows in time the construction of monuments, ruling out reverse causality concerns.

FIGURE 3 • BLACK SHARE OF POPULATION

(a) Difference-in-differences, Equation 1 **(b)** Event study, Equation 2



Controls: lag of population; county and state-by-year fixed effects; clustering at county level. 95% c.i.

The difference-in-differences specification relies only on treated counties where the first monument was constructed within a relatively narrow time window (1910-1915). As the Great Migration intensified from the 1880s onward, peaking after the 1940s, one concern is that counties constructing monuments during the peak construction years also experienced a disproportionate upsurge in migration flows around the 1910s

for reasons unrelated to the monuments themselves. To reduce this concern, I present results from the event-study strategy, which uses each county's first monument construction as the event date, whenever that occurred. The coefficients from Equation 2 are plotted in panel (b) of Figure 3 and show a 5 percentage point reduction in the Black share of the population, following unveilings.

5.2 Instrumental-variable approach

5.2.1 Identification strategy

The identification strategies described in the previous section show that Black Americans disproportionately left treated counties after monuments were constructed, suggesting that monuments actively influenced out-migration. However, this is not sufficient to establish that monuments had an independent effect on migration patterns. Indeed, other time- and place-varying concurrent factors may have induced both Confederate monument construction and Black out-migration. For instance, it is possible that during the first decade of the 20th century, racial hostility sharply escalated in only some Southern counties, which in turn may explain both the construction of monuments therein and Black Americans' decision to leave.

To address this potential endogeneity problem, I construct an instrument for the stock of monuments. The instrument is based on a county's connection – measured in terms of freight transportation costs – to the McNeel Marble Company (MMC) in Marietta, Georgia. MMC played a pivotal role in the proliferation of Confederate monuments in the South by extensively advertising them and ultimately constructing a significant share of those built between 1905 and 1960. Better connection to MMC reduced transportation costs, thereby increasing the likelihood of erecting a monument. Under the assumption that a county's connection to MMC affects migration only through the construction of monuments, conditional on controls, this provides a predetermined source of variation in monument construction. This approach allows for a comparison between otherwise similar areas, where monuments exist only in those with better connectivity to MMC.

As a measure of connection to MMC, I use the inverse of Donaldson *et al.* (2016)'s county-to-county minimum-cost path, which estimates the lowest grain transportation cost from a county centroid to any other county's centroid. This measure assigns a cost per ton-mile to different means of transportation, including water, rail, and wagon, plus a transfer cost when railroads are disconnected. Notably, the cost assigned to wagon transportation is approximately 37 times higher than rail transportation. To rule out

potential endogeneity from railway expansion in response to MMC's needs, I use transport cost values from 1890, before MMC began operating. Figure 4 illustrates the geographical variation in the connection to MMC across the South.

FIGURE 4 • CONNECTION TO MMC IN 1890

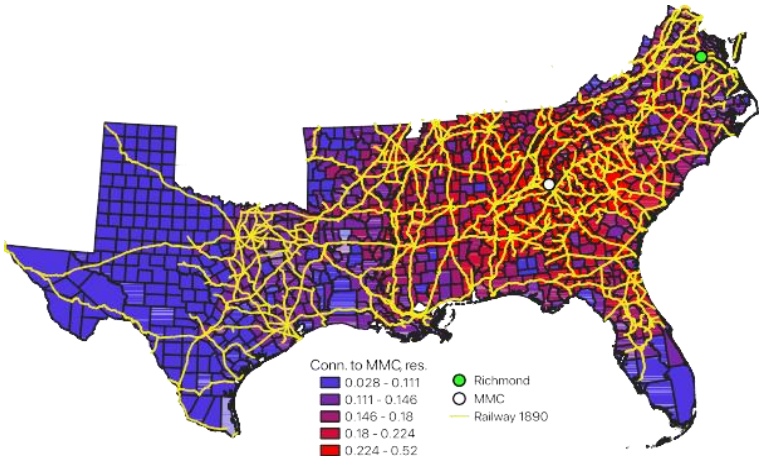
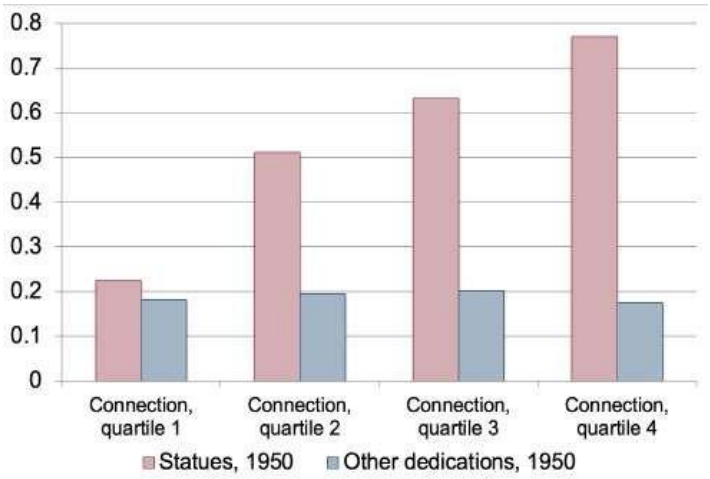


FIGURE 5 • EXCLUSION RESTRICTION: IDEOLOGY



Number of confederate monuments VS other confederate dedications (e.g. parks) in 1950 by county's connection (quartiles) to MMC.

Using connection to MMC as an instrument for monuments while studying Black migration may raise some concerns. First, places with strong connections to MMC may simply have been more pro-Confederacy. If this were true, it could explain both higher demand for monuments and greater hostility toward Black Americans, increasing the likelihood of out-migration. I rule this out by showing that connection to MMC is uncorrelated with ideological attachment to the Confederacy. Figure 5 shows that while

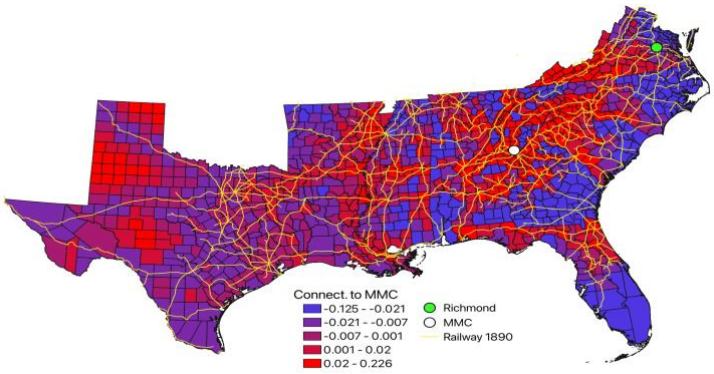
counties better connected to MMC had substantially more Confederate monuments by 1950 – consistent with monuments being logistically easier for them to obtain – we observe no correlation when examining other types of Confederate dedications, such as naming schools or parks after Confederate leaders. These alternative dedications do not involve logistical difficulties or transportation costs, as monuments do, but instead purely reflect local decisions to celebrate the Confederacy, without frictions. The fact that we observe a similar number of such other dedications in counties with high or low connection to MMC suggests that a county's ideology is orthogonal to its connection to MMC.

Another concern with the instrument is that a strong connection to MMC – if due to the railway – may indicate that a county was also well-connected to the broader railway system, potentially facilitating migration and thereby violating the exclusion restriction. Similarly, while 1890 transportation cost to MMC predates both the monuments and the migration waves I study, the historical expansion of the railroad network was non-random, as railways primarily connected major cities. For instance, Richmond played a central role in the railway network's development, being the South's second-largest city in the late 19th century and the former Confederate capital. I address this concerns in two ways.

First, I include a set of controls – primarily connection to Richmond, connection to New York City (NYC), lagged county population, historical lynchings, and state fixed effects – and rely on the residuals of the connection to MMC regressed on these controls. By controlling for connection to Richmond and NYC, I hold constant a county's overall connection to the rail- way network and instead rely relatively more on its specific connection to MMC, through the ramification of the railway network. Figure 6 shows the geographical variation of the residualized measure. As depicted in the map, this approach places less weight on raw distance to MMC and pure railway access, while the relative connection to MMC via railway becomes more relevant. Figure A8 shows that connection to MMC in 1890 is generally uncorrelated to individual characteristics of Black Americans at the county level. I show 2SLS results for both specifications: with and without controls.
Second, and most importantly, the measure of connection to MMC should become relevant only after MMC began selling Confederate monuments – namely, after 1905. Figure 7, effectively a dynamic first-stage, confirms that connection to MMC predicts a county's stock of monuments more strongly after 1905. I exploit this temporal variation and instrument the existing stock of monuments using the interaction between connection to MMC (measured in 1890) and the post-1905 period. The temporal variation allows to include in my IV specification both county fixed effects –

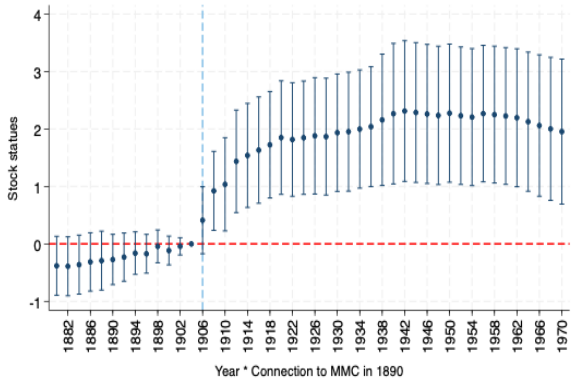
further controlling for time-invariant, cross-county differences that could violate the exclusion restriction (e.g., a county being permanently more racist or wealthier than others) – and state-by-year fixed effect.

FIGURE 6 • SPATIAL VARIATION IN THE INSTRUMENT



Residuals of *connection to MMC* regressed on connection to NYC and connection to Richmond in 1890, population in 1880, and state fixed effects.

FIGURE 7 • TIME VARIATION IN THE INSTRUMENT



Stock of monuments regressed on *year * connection to MMC in 1890*. Controls: interpolated lagged population, *1890 connection to Richmond * post 1905, connection to NYC, stock of lynchings*, and county and state-by-year.

The IV model is therefore described by the following first- and second-stage equations:

$$First\ \ Stage: StockMon_{c,t} = \delta Conn1890_c * Post1905_t + \beta X_{c,t} + \chi_c + \gamma_{s,t} + \epsilon_{c,t} \qquad (3)$$

$$Second\ \ Stage: Y_{c,t} \models \delta \widehat{StockMon}_{c,t} + \beta X_{c,t} + \chi_c + \gamma_{s,t} + \epsilon_{c,t} \qquad (4)$$

where $Y_{c,t}$ is the Black population share in decade t, county c, state s; $StockMon_{c,t}$ is the existing stock of monuments; $Conn1890_c$ is connection to MMC in 1890; $Post1905_t$ is an indicator for years after 1905. $X_{c,t}$ includes an interaction between the connection to Richmond and $Post1905_t$, controlling for possible post-1905 differential increases in attachment to the Confederacy (the closer a county is to Richmond); a time-varying measure of connection to NYC to control for the ease of out-migration; the lagged county population; and the stock of lynchings. County and state-by-year fixed effects are always included.

5.2.2 Results

Table 1 reports the first and second stages of the IV specification outlined in Equation 4. Column (1) shows that the stock of monuments at the county level is positively and significantly correlated with the instrument, conditional on county and state-by-year fixed effects. An increase in connection to MMC from 0 to 1 increases the number of monuments by 2.8. Since connection to MMC ranges from 0.03 to 0.52, with a standard deviation of 0.08, a one–standard deviation increase in connection raises the number of monuments by 0.2. Column (2) of Table 1 shows that the correlation remains positive and significant after including controls – namely, connection to Richmond in 1890 interacted with a post-1905 indicator, yearly connection to NYC, lagged population, and the stock of lynchings. In this case, a one–standard deviation increase in connection to MMC increases the number of monuments by 0.14. Importantly, the instrument does not correlate with possible predictors of underlying ideology, other than monuments themselves. In Table B4, I show that the instrument is not correlated with either the stock of lynchings or with Confederate dedications other than monuments (e.g., naming schools or parks after Confederate leaders), after conditioning on the set of controls. Since these alternative dedications do not involve cost or economic constraints, they are stronger proxies of local ideological attachment to Confederate ideals. This suggests that it is the cost of monuments – rather than ideology – that explains why better-connected areas had more monuments. The F-statistic exceeds Staiger and Stock's rule of thumb for weak instruments in both the regressions without and with controls, being 27.7 and 12.9, respectively.

TABLE 1 • IV STRATEGY

	FS	FS	OLS	OLS	IV	IV
	(1) Stock statues	(2) Stock statues	(3) Black share	(4) Black share	(5) Black share	(6) Black share
Connection to Marietta 1890*post1905	2.789***	1.850***				
	(0.530)	(0.519)				
Stock statues			-0.013***	-0.010***	-0.132***	-0.133***
			(0.003)	(0.003)	(0.030)	(0.044)
Connection to Richmond 1890*post1905		0.435		-0.384***		-0.127
		(0.865)		(0.084)		(0.150)
Connection to NYC, yearly		-0.790		0.672***		0.454***
		(0.820)		(0.107)		(0.151)
Numb. past lynchings		0.020***		-0.003***		-0.001
		(0.006)		(0.001)		(0.001)
Lagged population		0.000***		0.000		0.000**
		(0.000)		(0.000)		(0.000)
Observations	7989	7989	7989	7989	7989	7989
R^2	0.680	0.713	0.970	0.972	-1.146	-1.041
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
County Cluster	Yes	Yes	Yes	Yes	Yes	Yes
Fstat	27.67	12.89				
	8	3				

Dependent variable: existing stock of statues at time t (columns (1), (2)); share of county population classified as Black in the census (columns (3)–(6)). First stage (FS) reported in columns (1)-(2). 2SLS results presented in columns (5)-(6). Connection to Marietta (Richmond) 1890*post1905: the inverse of county-to-county 1890 minimum transportation cost to MMC (Richmond) after 1905. Connection to NYC, yearly: yearly cost of the connection to New York City. Nb. past lynchings: the number of lynchings in the county up to time t. Lagged population: population in the previous census. Standard errors, clustered at the county level, in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

Columns (5) and (6) of Table 1 show the second-stage results. The presence of monuments substantially reduced the Black share of the population, conditional on county and state-by- year fixed effects. The result is virtually unaffected by the inclusion of the usual set of controls. Both specifications show that the presence of a Confederate monument reduces the Black share of the population by 13 percentage points, compared to counties without monuments. Similarly, Table B8 shows the IV result using the decennial change in the Black population as the outcome, indicating an average effect for treated counties of 143 individuals per year.

Robustness. In the Appendix I run several robustness tests. For instance, I redefine the controls in my main specification by using alternative measure of connection costs to relevant American cities or adding other controls, such as measures of market access.[13]

[13] See Tables B5, B6 and B7.

6. ONLINE EXPERIMENT: RANDOMIZING MONUMENTS

The historical analysis shows the *real-world* impact of Confederate monument construction on Black migration. This approach relies on certain assumptions, such as the exogeneity of constructions or the validity of the exclusion restriction in my IV strategy. While purely random variation in exposure to monuments is not possible in the historical setting, an online experiment allows for causal inference with fewer identifying assumptions, complementing the historical analysis. At the same time, the historical analysis leaves some key questions open: do Confederate monuments still influence location decisions today? Is it sufficient to provide information of their presence to impact location choices? To answer these questions, I conduct an experiment in which respondents are randomly assigned to alternative visual depictions of the same hypothetical city – one featuring a Confederate monument and one without. Participants are then presented with job opportunities in these cities and asked whether they would consider relocating. The experiment confirms that the presence of Confederate monuments in a city discourages respondents from relocating there. Notably, while the impact is statistically significant for both white and Black respondents, it is substantially larger for the latter.

The gap in racial attitudes is also evident in responses to open-ended questions about how participants perceive these monuments. As Figure 8 shows, Black respondents generally associate them with concepts such as racism and disgust, whereas whites tend to emphasize their connection to history.

FIGURE 8 • "HOW DO YOU FEEL WHEN YOU THINK ABOUT OR ENCOUNTER A CONFEDERATE MONUMENT?"

(a) Southern Blacks

(b) Southern whites

The Online Experiment. The experiment was conducted online through the Prolific platform and involved a 10- to 15-minute survey. Respondents were compensated with $2.20 upon survey completion. The study was advertised as an investigation into the city characteristics that matter to individuals considering relocation, but no specific mention of monuments was made *ex ante*.[14] In terms of incentives, participants were informed that the cities mentioned in the study were hypothetical, but they also knew that the study would match them to real cities (and jobs therein) based on their responses. It was emphasized that providing precise answers in the survey would result in a better match to an actual city and its list of jobs. The structure of the incentives thus follows the Incentivized Resume Rating (IRR) method in Kessler *et al.* 2019.[15]

The survey consists of three main parts. The first part collects standard demographic information and details about respondents' most recent job. The second part contains the experiment, in which five hypothetical cities, appearing either with or without monuments, were presented to respondents. After being presented with each city, respondents were asked city-specific questions, including their willingness to move there. The final part of the survey includes questions aimed at understanding respondents' views and knowledge regarding Confederate monuments. No question about the monuments was asked before the experiment.

Sample. My primary sample of interest consists of individuals between the ages of 18 and 50 who currently reside in the southern United States and are actively seeking employment. The sample, stratified by race due to Prolific's policies on prescreening, comprises 132 Black and 198 white respondents. The age and occupation criteria were applied to select for individuals with a relatively high likelihood of migration, who may be interested in the job offers and the list of jobs I provide, and to align participants with the socioeconomic status of migrants during the Great Migration. Prolific relies on a rigorously screened pool of participants, which enhances data quality but results in a reduced pool of respondents, particularly when applying demographic restrictions and focusing on minority groups. Table D1 shows that respondents are relatively similar across races; they are on average 34 years old, and their most recent income was around $36,000. A majority of respondents are women, and the most frequent political identification is Democratic.

[14] Respondents were debriefed ex post about the goals of the experiment.
[15] The recruitment material is displayed in Figure D1. In practice, I use some responses (how much respondents dislike Confederate monuments, or value the presence of a waterfront) to match them with a real city. A link will direct respondents to the city's indeed.com list of job posts.

Hypothetical cities. I created five hypothetical cities by combining real photos and Google Street View images sourced from various locations throughout the South.[16] Two versions of the same city exist: one with a Confederate monument (treatment group) and one without (control group). Each city was introduced to the respondents using a set of five sequential images, with each image requiring four seconds of viewing before proceeding to the next. More specifically, four of the five images, representing a residential street, a city hall, a public park, and a commercial street, were identical in both versions. The fifth image distinguished the versions, either showcasing the Confederate monument or providing an additional – and thus uninformative – image of the same residential street shown earlier. Figure 9 shows the two versions for one of the five cities.[17] Each respondent only saw one of the two versions of each city.

Design. The treatment consists of randomizing the presence of a monument in the depicted city. Each respondent was exposed to five different cities, but they would only encounter each city either in the version featuring a monument or the one without (similar to Macchi 2023). My analysis is thus run at the city-respondent level, which gives me a large sample of 1650 observations. I can thus isolate the causal effect of Confederate monuments on migration decisions using a within-subject specification that controls for both city and individual fixed effects, thus accounting for potential sources of sample imbalance. This is particularly important because the randomization is performed on a relatively small sample size. The structure of the experiment is exemplified in Figure 10.

[16] More precisely, the images are introduced as representing a "typical neighborhood" of a city.
[17] See the example of a slideshow for another city and respondents' precise view in Figures D2 and D3.

FIGURE 9 • THE TWO POSSIBLE VERSIONS OF CITY A
Column (a): control version of the city; Column (b): version with the monument.
Each of the five images is presented one by one to respondents, as displayed in figure D3.
See an example of another city in figure D2.

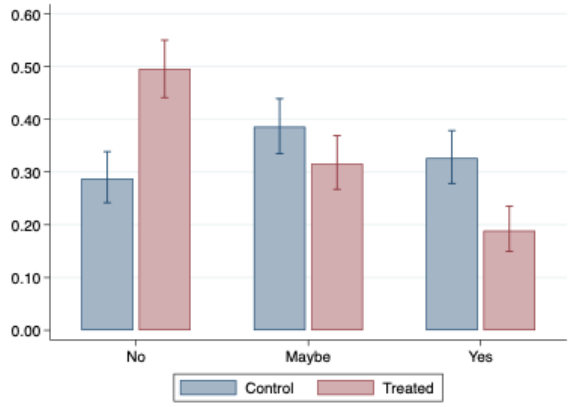
(a) Control Group **(b)** Treatment Group

FIGURE 10 • EXPERIMENT DESIGN

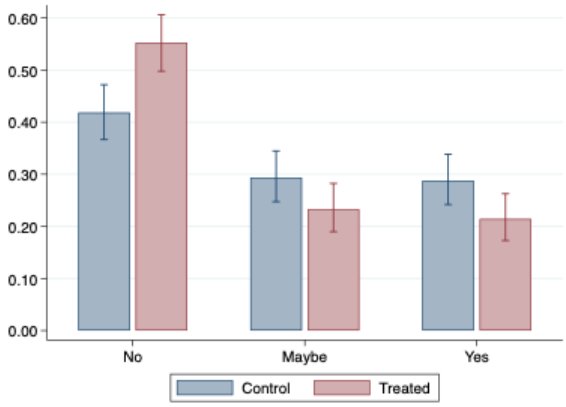
Outcomes. For each city, following exposure to the images, respondents were presented with three questions, the answers to which serve as my primary outcome variables. The first question measures the extensive margin of willingness to move to the city: *If offered a job similar to your most recent one, would you be open to the possibility of relocating to the depicted city?* This question keeps the participant's job situation constant in an abstract sense and aims to capture their overall evaluation of the city. The second question presents a more concrete job offer, including details such as the job sector (using the respondent's actual sector), weekly working hours and wage, which was determined as a randomized percent increase over the respondent's most recent wage. The final question asks: What is the minimum annual income that would convince you to accept a job and relocate to the depicted city? This question aims to determine respondents' reservation wage, shedding light on the welfare cost that respondents suffer when they learn that the city has a Confederate monument. The treatment effect emerges clearly by simply comparing the distribution of the answers to each question by treatment status, as I do in Figure 11. The treatment dramatically increased the rejection rate for both types of job offers and shifted the distribution of reservation wages to the right.

FIGURE 11 • RAW DISTRIBUTION OF THE RESPONSES TO THE MAIN OUTCOMES, BY TREATMENT STATUS

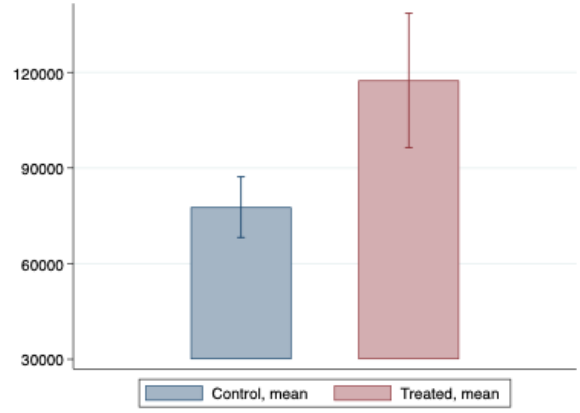
(a) Would move (last job)



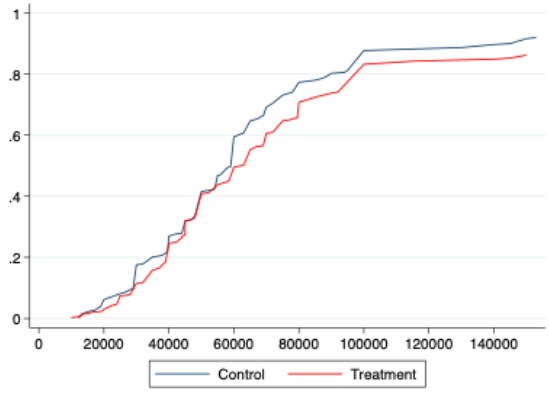
(b) Would move (tailored job offer)



(c) Reservation wage



(d) Reservation wage, CDF



Specification and Results. To estimate the impact of having a monument in the city when considering whether to relocate there, I estimate the following equation:

$$Y_{i,c} = \beta CM_{i,c} + \chi_i + \gamma_c + \epsilon_{i,c} \qquad (5)$$

where, $Y_{i,c}$ indicates respondent i's decision regarding jobs in city c, namely their willingness to relocate and their reservation wage, and $CM_{i,c}$ is an indicator for whether respondent i was exposed to the monument version of city c. χ_i and γ_c are respondent and city fixed effects.

Results for each of the three outcomes, using Equation 5, are reported in Table 2. The coefficient on *Monument* represents the treatment effect among whites. The coefficient

on *Monument*Black* represents the differential effect for Blacks compared to whites. Column (1) shows the causal effect of the presence of a Confederate monument on respondents' willingness to relocate to that city, following a job offer similar to their most recent job. Monuments reduce whites' willingness to move by 0.301 standard deviations. The effect is significantly larger for Blacks, with a reduction of 0.533 standard deviations. Column (2) shows that monuments also influence responses to more concrete and tailored job offers that include information on the wage, sector, and weekly hours. In this case, the monument decreases whites' willingness to move by 0.189 standard deviations, and it decreases Blacks' willingness to move by 0.333 standard deviations. Finally, column (3) shows that the treatment increases reservation wages by 8.3% for whites and by 20.7% for Blacks, equivalent to an average of more than $15,000. To sum up, the treatment effect is strong and significant in both groups, but the effect for Blacks is about twice the size of the effect for whites.

To better understand results, I run several heterogeneity analyses. Tables D3 and D4 show that the effect is virtually offset among Republicans and entirely driven by individuals who, at the end of the survey, reveal they are bothered by Confederate monuments. Moreover, the effect does not substantially vary by age among Blacks, but it is stronger among young whites.

TABLE 2 • EFFECT OF SIGHT OF MONUMENT ON RELOCATION DECISION AND RESERVATION WAGE

	All Southerners		
	(1) Move (s.d.)	(2) Move, tailored (s.d.)	(3) Res. wage, log
Monument	-0.301*** (0.055)	-0.189*** (0.052)	0.083*** (0.019)
Monument*Black	-0.232** (0.096)	-0.144* (0.087)	0.124** (0.051)
High Offer		0.498*** (0.044)	
Observations	1650	1649	1650
R^2	0.577	0.622	0.868
Respondent FE	Yes	Yes	Yes
City FE	Yes	Yes	Yes

Unit of observation: city-per-respondent. Outcome: respondents want to move to a city for a job similar to their most recent one (column (1)) or for a tailored job offer (column (2)) (on a scale of 1-3, corresponding to *No*, *Maybe*, *Yes* and expressed in standard deviations, and logarithm of reservation wage (column (3), winsorizing the top 2% by race). *Monument:* indicator for the city in the version with monument. Standard errors clustered at the participant level in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

7. CONCLUSION

In this paper, I show that divisive monuments in public spaces can influence location decisions for groups with opposing views on such symbols. To illustrate this, I focus on Confederate monuments, which were constructed in the U.S. South during the early 20th century, supported by white Southerners endorsing the Confederate legacy, and opposed by Black Americans. Given their lack of political rights, Black Americans' primary response to these monuments was deciding whether to remain or relocate.

First, I show with a simple difference-in-differences specification that the time of construction of a monument marked a breaking point for Black out-migration patterns. Second, I shed light on the independent effect of monuments, in isolation from other time varying shocks, by using an instrumental variable for the stock of monuments in a county. The IV shows a large effect of the stock of monuments on the decline of the Black population. Finally, I conduct an online experiment whereby I randomize information on the presence of Confederate monuments in possible destination cities for my respondents. The results reveal that the sight of a monument significantly reduces Black respondents' propensity to relocate there and raises the reservation wage of the job offers they accept. This demonstrates that monuments continue to influence migration preferences to this day.

These findings have important political implications in contexts with significant multi-cultural migration flows. Minority groups are likely to consider divisive public monuments when deciding where to settle, making these symbols key drivers of ethnic segregation – in itself an important determinant of inequality. Local governments seeking to reduce segregation, attract migrants, or curb out-migration should carefully consider the symbols that shape their public spaces.

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APPENDIX CAN BE VIEWED SCANNING THIS QR CODE