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THE GEOGRAPHY OF OPPORTUNITY AFTER THE CIVIL WAR:
BLACK AND WHITE AMERICANS' INTRA- AND INTERGENERATIONAL MOBILITY
INTO PROPERTY OWNERSHIP

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The Geography of Opportunity after the Civil War: Black and White Americans' Intra- and Intergenerational Mobility into Property Ownership

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ABSTRACT

This paper sheds new light on historical black-white disparities in wealth and economic mobility by examining datasets of linked census records. First, we compare black and white men's intra- and intergenerational mobility into property ownership between 1870, the first census taken after the Civil War, and 1900. Conditional on not owning property in 1870, black men's mobility rate into property ownership was far lower than white men's. If black men's post-1870 mobility had mirrored that of landless white men, the black-white home ownership gap in 1900 would have been small. Second, we show that for black men located in cotton-intensive counties in 1870, the likelihood of owning property in 1900 was far lower than for black men located elsewhere. This is salient in national samples as well as in samples restricted to the states of the former Confederacy, with and without extensive controls. The pattern is connected to the prevalence of sharecropping and relatively high black population shares. For white men, the difference in upward mobility between cotton-intensive and other areas was much smaller. Many black households acquired land and homes of their own in this era, an important channel for economic advance, but their geographic concentration in areas with fewer opportunities to acquire property implied low aggregate rates of upward mobility.

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1. Introduction

Although 160 years have passed since the end of the American Civil War, the economic ramifications of slavery and the Reconstruction Era (1865-77) are still ingrained in large racial disparities in income, wealth, health, and other measures of well-being. In 1870, the first census taken after the Civil War, only 7 percent of black household heads owned land, reflecting the prevalence of slavery before the Civil War and the federal government’s decision against distributing resources to freedpeople after the war.¹ In an era and region where agricultural production was predominant, many black Americans made the acquisition of land a priority (Du Bois 1901, Foner 1988). Property ownership provided not only a source of income, but also a source of independence from white employers, many of whom had enslaved black workers before the war and sought to reassert white dominance afterwards. By 1900, black Americans had accumulated substantial wealth holdings, primarily in the form of home and farm ownership (Du Bois 1901, Higgs 1982, Margo 1984, Schweninger 1990). Cross-sectional data sources show that the racial gap in home ownership and wealth narrowed in this era despite the rise of the “Jim Crow” regime of disenfranchisement and segregation (Collins and Margo 2011, Derenoncourt et al. 2024).

In this paper, we analyze large individual-level datasets of linked census records to uncover black and white men’s intra- and intergenerational movement into property ownership between 1870 and 1900, and to highlight spatial variation in this mobility.² Cotton agriculture was fundamental to the southern economy in this period, and it powerfully shaped black Americans’ economic fortunes (Du Bois 1906, Myrdal 1944, Higgs 1977, Ransom and Sutch 1977, Wright 1986). Therefore, we pay special attention to differences in upward mobility between cotton-intensive counties and other areas.³ This level of geographic detail has not been examined in prior work on economic mobility and property ownership in the late nineteenth century. For *intra-generational* analyses, we examine outcomes in 1900 for men who were ages 18 to 40 in 1870. More than 90 percent of black men in this age group were born into slavery.⁴ The analyses reveal how their quest for property ownership

¹ This figure is calculated from the 1870 census microdata using the *realprop* variable for household heads. More than 90 percent of the black population was enslaved in 1860. See Cox (1958), Oubre (1978), Foner (1988), and Ransom (2005) for discussions of unsuccessful proposals for land redistribution.

² We use links produced by Abramitzky et al. (2022) and Zimran (2022). See Bailey et al. (2020) and Abramitzky et al. (2021) for discussion of the opportunities and challenges of automated record linkage. We confirm our main results under both linking algorithms.

³ Rice and sugar producing areas are also of interest, but they were much more geographically concentrated than cotton-intensive areas and home to far fewer black Americans. We incorporate rice and sugar production into our regression analysis later in the paper.

⁴ Calculated from Haines (2006) for males, ages 10-29, in 1860.

unfolded and varied with their personal characteristics and local environment. For the *intergenerational* analyses, we focus on males, ages 0 to 18, who were living with a parental head of household in 1870. This analysis enables us to characterize each household's economic situation in 1870 and the strength of its association with the son's outcome in 1900.⁵

We first show that black men's mobility rate into property ownership fell far below that of white men and that this racial mobility gap was consequential. A simple but striking counterfactual based on mobility matrices illustrates that the black-white gap in home ownership rates would have been nearly eliminated in a single generation if black men had transitioned from "no property" in 1870 to "home owner" in 1900 at the same rate as similarly aged white men.⁶ In practice, aggregate black and white home ownership rates have never come within 20 percentage points of each other (Collins and Margo 2011, appendix table 2). In this sense, large differences in mobility rates into property ownership, as opposed to differences in rates of landlessness in 1870, underpinned more readily observed racial disparities in cross-sectional data. This motivates a deeper analysis of the microdata.

The most salient finding that emerges from the microdata is that black men's rate of mobility into property ownership was far lower for those who resided in counties that were intensive in the production of cotton than for those living elsewhere. This pattern stands out in both the nationwide dataset and when the sample is restricted to men who resided in states of the former Confederacy in 1870.⁷ Moreover, it is evident in both intra- and intergenerational analyses, and with or without conditioning on sub-regional fixed effects and a rich set of local or individual covariates. For white men, this pattern is much weaker and less robust. Thus, the large mobility disadvantage in cotton-intensive areas was specific to black men, and it was especially important because black men were geographically concentrated in such areas.

We then examine the connections underpinning this finding. The proximate evidence points to the prevalence of sharecropping or tenancy in cotton-intensive areas. Sharecropping was a prominent characteristic of these areas, a rung on the agricultural "tenure ladder" beyond which many black men (and some white men) did not ascend.⁸ Wright summarizes: "Sharecropping was a

⁵ Linking women from childhood to adulthood is difficult due to name changes at marriage.

⁶ The 1870 census has information on real estate property values, and the 1900 census has information on home ownership. We discuss this in more detail in the "data" section.

⁷ Our baseline cotton-intensive counties are those that produced more cotton per capita in 1870 than the median southern county. Results also go through with a higher threshold for cotton intensive.

⁸ Many southern white men were sharecroppers or tenants in this era, but they comprised a much smaller portion of the white labor force, and their mobility rate into ownership was much higher than black men's.

balance between the freedmen's desire for autonomy and the employer's interest in extracting work effort and having labor when it was needed," within a context of scarce credit and crop lien laws that were unfavorable toward sharecroppers (1986, p. 86-87, 102). Of course, the prevalence of sharecropping also reflects the limits on black workers' economic opportunities outside southern agriculture due to discrimination in both northern and southern labor markets.

Further investigation shows that cotton-intensive counties in 1870 were not strongly differentiated within the former Confederate states in terms of having especially valuable farmland, concentrated real estate wealth, low rates of black literacy, low rates of post-1870 black out-migration, or low levels of wages. Rather, the most striking difference was in the black share of the county's population. One simple interpretation of this pattern is that even though *some* black men in these areas were able to purchase property from white landholders, a relatively small *share* of black men found willing sellers and financing. Combined with other features of sharecropping and the limited outside opportunities mentioned above, this implied a bottleneck to black property ownership in cotton-intensive areas.

Finally, the analyses shed light on other important themes in the economic history of this era through the lens of home ownership, though this is not the paper's focus. Our analyses include several variables that reflect the presence of federal Army units and the strength of Republican voting during Reconstruction. The results are mixed and, for the most part, muted. Within the former Confederacy, the presence of military personnel circa 1870 and Republican vote shares in 1872—variables reflecting federal protections for the black population—are weakly correlated with black men's likelihood of mobility into property ownership after 1870. The temporary protection federal troops provided, which was necessary but geographically uneven (Downs 2015), does not appear to have left a strong basis for black upward mobility, though more research is merited on these questions.⁹

This paper contributes to several branches of research. First, it contributes to the literature on intergenerational economic mobility patterns, their role in perpetuating racial inequality, and their unevenness across places (Davis and Mazumder 2018, Chetty et al. 2020, Deroncourt 2022, Althoff and Reichardt 2024).¹⁰ Recent research has uncovered a high degree of geographic variation in

⁹ This is consistent with research that shows a reversal of black civil rights and local political influence as Reconstruction ended and white southerners established a new regime racial oppression (Logan 2020, Chacón and Jensen 2020, Logan 2023, Chyn et al. 2024). Of course, federal troops were not randomly distributed, and so we do not assign a causal interpretation to these correlations.

¹⁰ For studies on black-white differences in intergenerational mobility that are less focused on geographic variation, see Duncan (1968), Featherman and Houser (1976), Hout (1984), Darity et al. (2001), Hertz (2005),

intergenerational mobility rates across the United States, as well as changes in the geography of mobility over time (Connor and Storper 2020, Tan 2023). Documenting and analyzing this variation can clarify the forces that have shaped cross-sectional inequality in each generation. Relative to this literature, our paper features a novel *intra*-generational perspective to complement its intergenerational findings, focuses on black-white differences in property ownership rather than occupational status (which is more commonly studied in historical settings), and emphasizes how local agricultural conditions shaped opportunities for upward mobility at a time when agriculture was the dominant economic activity. Collins, Holtkamp, and Wanamaker (2024) is similar in spirit to this paper. That paper studies intergenerational mobility between 1880 and 1900 but with smaller samples, due to its reliance on transcribed manuscripts from the census of agriculture, and with less ability to measure local correlates of mobility. That paper does not address freedmen's movement into property ownership (i.e., *intra*-generational mobility), does not draw upon the personal and real estate wealth information that is available in the 1870 census, and has little to say about how patterns of agricultural specialization coincided with patterns of upward mobility.

Second, the paper contributes to the literature on racial disparities in wealth in the United States, in which the history of land and home ownership plays a key role (*inter alia*, Du Bois 1901, DeCanio 1979, Higgs 1982, Margo 1984, Spriggs 1984, Oliver and Shapiro 1995, Schweninger 1990, Nier 2008, Baradaran 2017, and Derenoncourt et al. 2024). By starting in 1870, we begin with the first generation of post-Civil War black families, many of whom accumulated wealth despite the headwinds of deteriorating civil rights and pervasive discrimination and violence. By basing our analyses on micro-level datasets for black and white families, we offer a more detailed mapping of transitions into property ownership during the late nineteenth century than was previously available. These micro-level flows into and out of property ownership, which were invisible to scholars until quite recently, are the building blocks of population-level disparities. By focusing on mobility into property ownership by those who held no property in 1870, our paper offers a perspective on postbellum southern wealth that complements recent research on the southern white elite (Dupont and Rosenbloom 2018, Ager et al. 2019). It is important to keep in mind that property ownership in this period was not always a sign of or path to prosperity (Schweninger 1989, Ransom 2005); for instance, many owned farms that were small subsistence enterprises. Yet, the bulk of black wealth

Bhattacharya and Mazumder (2011), Margo (2016), and Collins and Wanamaker (2022). For studies of black intergenerational mobility that reach back to the nineteenth century, see Sacerdote (2005) and Miller (2020).

was held in the form of real estate (Hornsby 1989); therefore, the accumulation of property and factors that hindered this process are essential to the economic history of racial disparities.

Third, the paper contributes to the long-running economics literature on the South's economic under-development in contrast to the rapid structural transformation occurring elsewhere (Woodward 1951, Nicholls 1960, Higgs 1977, Ransom and Sutch 1977, Cobb 1982, Jaynes 1986, Wright 1986, Caselli and Coleman 2001, Hornbeck and Naidu 2014, Jung 2020). After the Civil War, cotton production grew and dominated the South's exports, though there was substantial heterogeneity within the region. Elsewhere in the US, industrialization, urbanization, and mass immigration from Europe were hallmarks of a rapidly transforming economy. Comparatively little is known about the individual-level and generation-to-generation transitions that underpinned this era's structural change and its persistent regional and racial disparities. In this paper, our window centers on opportunities for mobility into property ownership. But this specific story unfolds in the broader context of American industrial ascendancy, regional divergence, and racial discrimination. All these forces come into play through the nationwide dataset we have assembled and have a role in interpreting the results.

Last, and more generally, this study illustrates how minority groups' economic prospects may be hindered in settings where war has brought forth a new but fragile set of economic and political institutions. Bynam (2021, p. 56) notes that "In different guises, the dynamics of Reconstruction appear around the world when, after a civil war, the victor seeks to change the political system and society of the war's loser." Glaeser (2005) cites rising anti-black rhetoric after the US Civil War as "Example No. 1" in his model of the "political economy of hatred." Downs (2015) describes southern whites' widespread resistance to federal policy and black empowerment, which often led to violence against black Americans. Consequently, black Americans' civil and political rights eroded as the federal government's protection receded (Du Bois 1935, Franklin 1961, Foner 1988, Logan 2020 and 2023, Chacón and Jensen 2020). Du Bois (1901) and subsequent scholars have emphasized that many black Americans were determined to better their economic situation through land ownership, thus availing themselves of property rights even as other rights eroded. Our analyses show that gaining ground required an uphill climb, especially in areas where cotton cultivation was prevalent.

2. Background and Historical Context

At the conclusion of the Civil War, American policymakers faced fundamental questions regarding the Confederate states' political reintegration and freedpeople's rights and resources. These questions were intertwined and addressed in the Constitution's Thirteenth, Fourteenth, and Fifteenth

Amendments and related legislation, in what Foner characterized as a “...first attempt, flawed but truly remarkable for its time, to build an egalitarian society on the ashes of slavery” (2019, p. xix). For a time, black Americans, about 90 percent of whom resided in the South, were able to exercise their newly won political rights, electing hundreds of black officeholders in the late 1860s and 1870s (Du Bois 1935, Franklin 1961, Foner 1996). But as federal influence waned and white southerners regained political power, they undermined black southerners’ political rights and reversed Reconstruction-era policies that black voters and politicians had championed (Chacón and Jensen 2020, Logan 2020, Suryanarayan and White 2021). Violence against black Americans and their political allies was common in the South throughout the period we study (Egerton 2014, Downs 2015, Logan 2023, Chyn et al. 2024), and the Jim Crow regime of disenfranchisement and rigid segregation spread and intensified (Woodward 1955, Kousser 1974).

Du Bois pointed out that “one of the greatest problems of emancipation in the United States was the relation of the freedmen to the land” (1901, p. 647). Congress created the Freedmen’s Bureau in 1865, including authorization to divide confiscated and abandoned lands in the former Confederacy into 40-acre plots for rent and eventual sale (Cox 1958; Oubre 1978, p. 21).¹¹ A year later, Congress passed the Southern Homestead Act, offering publicly held land for private settlement in five southern states, again with the idea of assisting freedpeople in their quest for landownership. Neither initiative succeeded in conveying much land to black Americans. President Andrew Johnson undermined the Bureau’s efforts to settle black families on farms of their own by issuing pardons to wealthy supporters of the Confederacy, thereby restoring their sizable landholdings.¹² The Southern Homestead Act was unsuccessful for many reasons, including the low quality of available land, land offices that were poorly staffed and operated, and the black population’s lack of financial resources to support themselves while starting a new farm (Oubre 1978, pp. 183-188).¹³

¹¹ The First and Second Confiscation Acts (1861 and 1862) allowed the president to seize the land and free the enslaved of disloyal southerners whose property came under control of the Union Army, providing a legal basis for the government’s wartime acquisition of privately held southern land. A feature of this legislation, which undermined efforts to redistribute land permanently, was a provision that limited confiscation to the lifetime of the landowner and, therefore, did not convey clear title to the government (Oubre 1978, p. 3).

¹² In July of 1865, the Bureau had issued “Circular No. 13,” which instructed Bureau agents to set aside 40-acre tracts for freedmen. Johnson, however, had the Bureau rescind Circular No. 13 and issue Circular No. 15 (September 1865), which clarified that lands would be restored to former Confederates who received pardons, except for a small amount of land that had been sold under court decree (Foner 1988, p. 159).

¹³ Homesteading elsewhere in the US under the 1862 Homestead Act was possible, but relatively few freedmen pursued such opportunities far from the South. See Edwards et al. (2019) and Muhammad et al. (2023). Lack of capital, connections, and experience with northern climates and agriculture may have been deterrents. The experience of the Exodusters in Kansas is particularly interesting in this context.

Instead of becoming a large new class of yeoman farmers under a policy of widespread land redistribution, most freedmen worked on farms owned by southern white families, either as wage laborers or sharecroppers. In 1870, 71 percent of all southern black men between the ages of 18 and 60 were enumerated as laborers in the census returns (agricultural or general labor); 17 percent were enumerated as farmers, but approximately 90 percent of these farmers did not own land (i.e., their real estate assets were listed as zero). Most probably worked as sharecroppers. In time, sharecropping became a prevalent form of tenure in southern agriculture (Woodson 1930, Higgs 1974, Ransom and Sutch 1977, Reid 1979, Wright 1986). In exchange for access to land and various provisions, sharecroppers agreed that the landowner would be entitled to a sizable share of the crops produced, with the terms of the contract depending on the amount of capital (e.g., mules) and expertise the farmer possessed.¹⁴

Alongside the rise of sharecropping, cotton production intensified. By 1900, total cotton output had risen by nearly 80 percent compared to 1860 (Olmstead and Rhode 2006). Indeed, one of the strongest continuities in the southern economy, before and after emancipation, was the enduring importance of cotton agriculture, albeit under different economic and political institutions. Black Americans were disproportionately engaged in the production of cotton; therefore, their economic fortunes were strongly connected to the operation, organization, and geography of the global cotton economy. This paper examines the empirical strength of those connections, specifically as they pertain to mobility into property ownership.

Despite the rollback of their political and civil rights, black Americans made significant gains in property ownership and literacy in the later decades of the nineteenth century. Rising from very low rates at the time of emancipation, by 1900, census microdata samples indicate that more than 20 percent of male household heads owned their homes and more than 50 percent of the black population was literate (age 10-69).¹⁵ Black income per capita, however, remained far below that of white Americans. Margo (2016) estimates that the ratio of black/white income per capita was about 0.28 in 1870 and 0.32 in 1900. This reflected the relative underdevelopment of the South compared

¹⁴ Higgs (1977) writes, “By the 1870s, tenants who provided only labor normally received one-half of the crops plus a cabin, fuel, and garden plot” (1977, p. 49). Alston and Kaufmann (1998) point out that croppers “...differed from other tenants in important respects, especially when he worked on a plantation. He was usually closely supervised; he made none of the major farming decisions; and he generally supplied no input besides labor services. In most southern states he had no legal possession of the land except the right of daily access at the landlord’s pleasure” (p. 264). Also see Graves (1943) and Woodman (1995) for discussion of relevant laws. In 1920, the census of agriculture distinguished between share tenants and sharecroppers, but the manuscripts have been destroyed.

¹⁵ The literacy figure is from Collins and Margo (2006). Homeownership is from Collins and Margo (2011).

to the non-South, the low levels of human, financial, and physical capital owned by the black population after slavery, and the limited opportunities for economic advancement due to widespread discrimination. Yet it is notable that black Americans raised their average level of income at a faster rate than white Americans in this period. Engerman observed that such gains belie, "...the impression of complete domination and exploitation by landlords and/or merchants" (1980 p. 496). Black Americans' gains in property ownership were both a cause and consequence of their income gains; moreover, recent research suggests that land ownership aided in intergenerational advances in schooling and literacy (Miller 2020, Collins, Holtkamp, and Wanamaker 2024).

The simultaneous rise of Jim Crow policies and black property ownership may seem incongruous; scholars have recognized this for more than a century (Du Bois 1901, p. 669). Penningroth emphasizes that "...even as whites fought to deny Black people the right to vote, to hold office, to sit beside them in a theater or train, and more, almost nobody denied that Black people had contract and property rights" (2023, p. 51). This does not mean that legal authorities consistently protected black property or that extra-legal tactics (e.g., intimidation, violence, fraud) were uncommon. Rather, it conveys that there was a clear legal basis for black property ownership. Many black households exercised contract and property rights to advance their economic interests.

Scholars have offered contrasting views on the scope of black households' opportunities to become landowners in the late-nineteenth-century South. Based on ownership patterns in Coweta County, Georgia in 1878, Ransom and Sutch argued, "Clearly something other than mere poverty must explain the low level of black landownership," and later that, "The threat of violence did not completely prevent land sales to blacks, but it did substantially escalate the costs and risks faced by both the black buyer and the white seller" (1977, pp. 86, 87). Higgs offered a different view, arguing that in the 15 years after the Civil War, "Although some whites objected to black landownership and attempted to prevent it, such attempts generally failed," and that by the end of the century, "White hostility toward black landownership gradually waned as more and more blacks acquired land" (1977, pp. 52, 69). Instead, Higgs emphasized legal rather than private market channels for low rates of black land ownership: "...the attenuation of black property rights produced by the racial discrimination of legal authorities made investment in land less attractive than it would otherwise have been" (1977, p. 52).¹⁶ Writing about a later period, Raper (1936) explained that black

¹⁶ This may not square well with the quote from Penningroth (2023) cited above, though Penningroth does go on to point out that "...rather than simply take a Black person's horses or land, whites used brutal whippings and threats to coerce him to sign a contract of sale or a lease" (p. 98). Thus, the lack of protection could undermine property rights, even if those rights were acknowledged under the law.

landownership, "...can be achieved only by means of a most exacting and highly selective procedure; the would-be owner must be acceptable to the white community, have a white sponsor, be content with the purchase of acreage least desired by the whites, and pay for it in a very few years" (quoted in Myrdal 1944, p. 241). Wright noted the rising number of black landowners and, with appropriate caution, pointed out that, "...in comparison to the rigid assignments to dead-end jobs in nonagricultural pursuits...agriculture at least offered some hope" (1986, p. 104-106). In all these views, racism distorted economic interactions and depressed black economic advancement. These channels, of course, were not mutually exclusive, and there is ample historical evidence of each.

Approximately 10 percent of black Americans resided outside the South in 1870, and their economic circumstances were, on average, quite different from those prevailing in the South. On the eve of the Civil War, few people were enslaved outside the South (except for Missouri), and some black families had been free for several generations (Litwack 1961).¹⁷ Although subject to many forms of discrimination, black northerners were much more likely own real estate than black southerners. In 1870, approximately 25 percent of black male household heads owned real estate in the North compared to 5 percent in the South; moreover, approximately 56 percent could read and write in the North (ages 10-69), compared to 15 percent in the South.¹⁸ Northern black men were also far less likely to be employed in agriculture than black men in the South (47 percent versus 85).

Much of the discussion in this paper is centered on the South, reflecting the black population's geographic concentration there. But for completeness, we always start with a national perspective on racial disparities in economic mobility. Doing so captures the experiences of both the relatively small northern black population and the relatively large northern white population. This scope is essential to seeing how racial differences in "initial conditions" and subsequent "upward mobility" combined to yield the national-level disparities that characterized the US at the turn of the twentieth century and beyond.

3. Dataset Construction: Linked Records, Sources, and Variable Definitions

We rely heavily on microdata from the 1870 and 1900 censuses of population (Ruggles et al 2021, Ruggles et al. 2023). This choice of years has several advantages and reflects certain data

¹⁷ The 1860 census enumerated nearly 115,000 enslaved in Missouri and less than 20 enslaved in each of New Jersey, Nebraska, and Kansas; all other northern states enumerated zero enslaved (Carter 2006, Table Bb1-98). See Berlin (1974) or Schweninger (1990) on the free black population of the South, which was approximately equal in size to the free population in the North in 1860.

¹⁸ Authors' calculation using the IPUMS-USA 1 percent sample for 1870.

constraints. The 1870 census was the first that attempted to enumerate the full population of black Americans on the same basis as white Americans. It is also the last census that collected information on the market value of real estate owned and personal wealth (i.e., other assets).¹⁹ The 1870 dataset contains individual-level information on occupation, industry, literacy, school attendance, urban residence, farm residence, and county.²⁰ The 1900 census of population records are the earliest microdata source with information about home ownership. This variable is not as detailed as the real estate wealth variable that is available in 1870, though it does distinguish property owners from non-owners.²¹ The 1880 census of population did not inquire about home ownership or real estate wealth, and the 1890 census manuscripts were destroyed.²² Therefore, we do not rely on those data in this paper.

Linkage and weighting: Our core dataset is built using record linkage techniques that are now well established in the economic history literature. We build on publicly available crosswalks of the IPUMS variable *histid* provided by the Census Linking Project (Abramitzky et al. 2022), and we check the robustness of results using links made by Zimran (2022). The *histid* crosswalks are based on algorithms that search for unique matches of individuals in decennial census records at two points in time, relying on name, birthplace, and birth-year similarity in restricted-access versions of the full count census records.²³ We merge publicly available full count census records of 1870 and 1900 (Ruggles et al. 2021), including key individual-level variables, into the dataset of *histid* crosswalks. Because linked samples are not randomly drawn from the base population, we calculate and employ

¹⁹ Enumerator instructions said that personal wealth below \$100 should not be recorded, but often it was. We left the data “as is.”

²⁰ There are questions regarding the quality of coverage in the 1870 census. See Hacker (2013), Ransom and Sutch (1977, p. 284), and Reid (1995) for discussion. For the purposes of our analyses, under-counting *per se* is not a major concern because we do not require accurate aggregate counts of the 1870 population. But there are (at least) two remaining concerns. (1) Biased enumeration would result in a linked sample that is unrepresentative of the population. This is partly addressed by the sample weights that are applied to the linked sample and based on population characteristics in the 1900 census. (2) Missing large numbers of men in the full count files might raise the error rate in linkage by increasing the number of men who appear to be unique and, therefore, eligible for linkage. We have selected a conservative set of links (“ABE exact conservative”) with the goal of having relatively high-quality data.

²¹ The 1900 census also includes an indicator for whether owner-occupied housing is mortgaged or owned “free and clear.” This is not sufficient to estimate home equity or observe the terms of any mortgage. In this period, purchases of property, even when mortgaged, usually required a large downpayment relative to the value of the property, implying that home owners in the census had positive real estate wealth.

²² See Collins, Holtkamp, and Wanamaker (2024) for evidence based on farm ownership drawn from manuscripts in the 1880 census of agriculture.

²³ Specifically, we use the “ABE Exact Conservative” links from the Census Linking Project.

inverse probability weights based on 1900 population characteristics.²⁴ In essence, this process adds weight to observations with characteristics that are under-represented in the linked data relative to the population in the full count census data. We focus on US-born males to avoid complications from immigrants' arrival, assimilation, and return migration. Nearly all black men in 1870 were US-born. Black and white changes in the aggregate ownership rate from 1870 (ages 18-40) to 1900 (ages 48-70) are similar in the linked sample compared to the pre-linkage cross-sectional datasets.

Mobility-into-ownership: In 1870, we code men as property owners if they report real property wealth of greater than \$0 (or \$100 to test sensitivity). In 1900, we code men as property owners if they are the household head (or spouse of head) *and* reside in owner-occupied housing; we code men as non-owners if they are not head of household (or spouse) *or* reside in a home that is not owner-occupied. For the purposes of this paper, given that emancipated black Americans placed a priority on gaining ownership of property and that few owned *any* real property in 1870, movement at the extensive margin of home ownership is economically important.

Figure 1 maps the county-level mobility rate into home ownership by 1900 among adult black and white men (18-40) who did not own real estate in 1870. This is key to our intra-generational analyses. Figure 2 maps similar information for the intergenerational sample of sons who resided with a parent head of household who did not own real property in 1870.²⁵ We map the information for all counties in which we have at least 10 observations in the linked dataset, though all men with linked records are used in the analyses below. The maps reveal a great deal of variation across space and race, which will be central to our analyses.

County-level population and agricultural variables: We include each person's 1870 county-of-origin's economic, social, and political characteristics. We calculate some variables directly from the 1870 census of population microdata, including the county's total population, black population, urban population, and the share of all real estate wealth held by the top 10 percent of men. We draw other variables from the 1870 census of agriculture's published volumes, as reported in Haines, Fishback, and Rhode (2016), including crop production and farm values.

²⁴ These are based on a probits for linkage (0-1) regressed on 1900 age bins (10-year intervals), home ownership, occupation score bins (10-point intervals), literacy categories (na, illiterate, and literate), an urban residence dummy, and 1900 census division dummies. Probits are estimated separately by race.

²⁵ As in any intergenerational study, we require information on the parent in the base year and on the child decades later. In cases where children did not reside with parents in the base year, we do not include them in the intergenerational analyses. For perspective, 76 percent of black and 88 percent of white children in 1870's full-count census records were the child of the household head.

Cotton-intensive localities: Figure 3 maps cotton bales *per capita* for each county in the Confederacy, drawn from the 1870 census of agriculture. In most analyses, we classify a county as “cotton intensive” if its production of cotton bales per capita was above the median level for southern counties in 1870. This provides a simple but key distinction across counties within the South. In additional results, we examine the top quartile of cotton-intensity, which we call “very cotton intensive.” We also provide binscatters of mobility outcomes plotted against county-level cotton per capita.

Federal presence and voting: We use county-level presidential election data from 1872 to characterize the relative strength of support for the Republican candidate (Ulysses S. Grant), an indicator of black voting and political power in the South (Clubb et al. 2006).²⁶ We use the 1870 census microdata to count the number of men with military occupation codes in each county. We create an indicator variable equal to one in counties with at least 10 men with military occupations. For an alternative view, we used data from Downs and Nesbitt (2015) to identify counties that had federal troops in place during Reconstruction.²⁷ We implement this as an indicator for federal troop presence at any time between 1871 and 1880 and (in a different specification) as the average number of federal troops present between 1865 and 1880. Later in the paper, we also employ data on black officeholders during Reconstruction (Foner 1996, Logan 2019).

4. Empirical frameworks

We begin by describing national-level, aggregate patterns of mobility into and out of property ownership between 1870 and 1900. Since very few black men owned property in 1870, our emphasis is on their movement into home ownership in 1900, which we refer to as “upward mobility.”²⁸ We then compare black mobility patterns to those for the white population. Finally, within the black sample, we compare those in cotton-intensive counties to those elsewhere to highlight distinctive features of the cotton belt and motivate deeper analysis with the microdata.

One way to summarize the importance of black-white differences in mobility patterns is by assigning the *white* 1870-to-1900 mobility rates to the black population circa 1870. To fix ideas, the actual black ownership rate in 1900 can be written as the weighted average of the mobility rate into

²⁶ Former Union Army General Ulysses S. Grant was, obviously, not a popular candidate among southern whites who had supported the Confederacy and sought to end federal intervention during Reconstruction.

²⁷ These data originate from a compilation of archival data sources that record the presence of federal troops at the locality-monthly level from 1865 to 1880 for the eleven former Confederate states and Kentucky.

²⁸ One caveat is that movement to towns or cities may have lowered opportunities for home ownership but raised income levels; that said, our sample of black men is still overwhelmingly settled in rural areas in 1900.

ownership for those who did not own real property in 1870 (m_{blk}) and the persistence rate of those who already owned real property in 1870 (p_{blk}), where the weights pertain to the black population share that did *not* own in 1870 (α_{blk}) and the share that did ($1 - \alpha_{blk}$). We replace the black mobility and persistence rates with the white rates to calculate a counterfactual 1900 black ownership rate ($= \alpha_{blk}m_{wht} + (1 - \alpha_{blk})p_{wht}$). We use a similar approach to assess differences within the black population according to whether the 1870 county of residence was cotton intensive. Each calculation provides perspective on the magnitude of racial or regional mobility gaps and their importance in connecting disparities over time. These aggregate perspectives are simple but novel in that they require linked data that until recently did not exist.

Next, harnessing the sheer size of the linked dataset, we turn to regression analyses to characterize mobility patterns and their correlates in greater detail. As emphasized above, the prevalence of cotton production was one of the most salient aspects of southern economic activity. Scholars have noted the low rate of black farm ownership in cotton-intensive regions (e.g., Du Bois 1906; Ransom and Sutch 1977; Schweninger 1990, ch. 5; Ayers 1992, p. 208), but they have lacked data that would enable them to measure the strength of the connection between cotton and property accumulation over time, while also conditioning on local and personal covariates.

Our baseline regression analyses consist of linear probability models for moving into property ownership by 1900, focusing on subsamples of men who did not own property in 1870. We estimate regression equations of the following form:

$$Y_{iacd} = \beta_1 Cotton_c + \beta_2 L_c + \gamma_d + \lambda_a + e_{iacd}$$

where Y_{iacd} is an individual-level outcome, primarily movement from “no real property” in 1870 into “home ownership” by 1900; $Cotton_c$ is an indicator for counties that have high levels of cotton production per capita in 1870 (defined above); L_c is a vector of other county-level variables of interest measured circa 1870, including information on military presence and voting; λ_a is a vector of age fixed effects; and γ_d is a vector of sub-regional fixed effects for the individual’s place of residence in 1870.²⁹ For additional insight or to test robustness, we sometimes augment the equation with more local, individual, or household-level variables. We do not include these in the baseline

²⁹ The Northeast and West regions correspond to those defined by the census. We created a set of “Border” states (DE, MD, DC, WV, KY, and MO), which did not join the Confederacy but did allow slavery on the eve of the Civil War. Our Midwest category corresponds to the census definition, but without Missouri. The remaining regional areas consist of the West South Central, East South Central, and South Atlantic states that were members of the former Confederacy (i.e., not those allocated to the “Border” category).

regressions since they may be “bad controls”; that is, cotton-intensive agriculture may affect them and through them may affect mobility.

We estimate equations separately for black and white men, thus allowing all coefficient estimates to differ by racial category. We also estimate equations separately for *intra-generational* outcomes (for males 18-40 in 1870) and *intergenerational* outcomes (for males 0-18 in 1870 and living with a parent). Our baseline regressions include men from all parts of the US to provide the broadest possible view of Americans’ mobility patterns. We then report results specifically for men who, in 1870, resided in states of the former Confederacy. In this case, men who migrated after 1870 remain in the sample even if they left the region. To be clear, in our analysis we take 1870 place of residence as given, and it is possible for men to move away from such areas before we see them again in 1900. Thus, the coefficient (β_1) on the variable for “cotton-intensive county” measures differences in the average rate of mobility into home ownership for men who resided in such counties in 1870 relative to men of the same race who resided elsewhere, with or without additional conditioning variables. We then explore potential mechanisms in more depth.

These regressions are descriptive but informative. First, and our main point of emphasis in this paper, the revival and expansion of cotton cultivation after the Civil War was a defining characteristic of the postbellum South. Within the South, however, there was substantial geographic variation in the importance of cotton cultivation, largely reflecting the underlying characteristics of soil and climate. Whether residing in an area with intense cotton cultivation as a young man facilitated or deterred mobility into property ownership later in life has not been explored empirically to our knowledge. Black men had extensive experience in cotton agriculture prior to Emancipation. In theory, cotton cultivation might have been relatively lucrative compared to alternatives, and this might have led to more upward mobility over the lifecycle, *ceteris paribus*. In practice, however, we find that such places were much less conducive to upward mobility for black men.

Second, the assertion of federal power in the South during Reconstruction, the extent to which the Army protected (or failed to protect) black Americans’ lives and rights, and the consequences of the federal withdrawal as Reconstruction waned are core themes in this era’s history (e.g., Du Bois 1935, Foner 1988). In 1870, we pick up the story near the peak of federal influence. By this time, Congress had attempted to ensure black Americans’ citizenship and civil rights, many black officeholders had been elected, and federal troops were spread throughout the region, albeit at numbers incapable of fully suppressing violent reprisals (Egerton 2014, Downs 2015, Chyn et al. 2024). In our data, we can see whether variation in federal influence and black political power across

localities during Reconstruction is associated with durable differences in black men’s entry into home ownership. We can also see whether including such covariates confounds the empirical relationship between mobility and cotton intensity.

5. Results

National-level Mobility Patterns and Counterfactuals

Table 1A reports four transition matrices for black and white, intra- and intergenerational mobility patterns. Within each 2-by-2 panel of “owner” versus “not-owner” status, the percentages sum to 1. The third column sums across the previous columns to show the relative size of the owner and non-owner categories in 1870. To fix ideas at the start: 96 percent of adult black men in the sample were propertyless in 1870, and 91 percent of black children resided in propertyless households.

The top panel shows that 29 percent of black men (18-40 in 1870) owned no real estate in 1870 but transitioned into home ownership by 1900, an upward mobility rate of 30 percent (29/96). The panel’s most populated cell, however, is for men who were propertyless in both 1870 and 1900 (67 percent). A small group of black men owned property in 1870 (4 percent); obviously, this is a stark contrast to a counterfactual history in which “40 acres and a mule” had been distributed to those who had been enslaved. Although most of these men still owned homes in 1900, many did not.³⁰

Black intergenerational patterns are qualitatively similar (second panel). By far the largest cell is for non-owner household heads in 1870 and non-owner sons in 1900, at 75 percent. About 16 percent of the black sons in our sample transitioned from non-owning households in 1870 to home ownership by 1900, an upward mobility rate of 17 percent. These men were ages 30 to 48 in 1900. Given that the ownership-age gradient was upward sloping, it is likely that more men in this cohort would have gained ownership later in their lifecycle. But this snapshot is still revealing and offers a stark contrast with similarly aged white men.

The white transition matrices are strikingly different. In the intra-generational panel, fewer white men than black men were without land holdings in 1870 (72 percent white compared to 96 percent black). The dominant transition cell for white men is from non-owner status in 1870 to owner status by 1900, at 39 percent of the sample, an upward mobility rate of 54 percent (39/72). Only 33

³⁰ We do not put too much weight on interpreting this row due to their small share of the sample and because errors and mismatches in the linked data are likely to introduce some noise.

percent of the white intra-generational sample were non-owners in both 1870 and 1900, compared to 67 percent of the black sample.³¹

In the white intergenerational panel, only 37 percent of white sons resided in households that had no property wealth in 1870. Their upward mobility rate was 27 percent (10/37), compared to the black rate of 17 percent. It is interesting, and perhaps surprising, that there is a sizable group of white sons (37 percent) who resided in households with real property wealth in 1870 but did not own homes in 1900 themselves. As mentioned above, we observe the sons at ages 30-48, and it is likely that more gained ownership status later in their lifecycle. But it is also clear that having a household head who owned real property in 1870 was no guarantee of the son's home ownership in 1900. This may, in part, reflect the era's rapid urban growth, which tended to attract young workers to cities where home ownership rates were low (Collins and Margo 2011).

The divergent starting points in 1870 and subsequent ebbs and flows into ownership resulted in large racial disparities in property ownership rates circa 1900. To provide a simple metric of how important differences in mobility were, we assign the white mobility rates to the black population to calculate a counterfactual black home ownership rate in 1900, as described above. We estimate that 55 percent black men would have owned homes in 1900 if they had transitioned into (and out of) ownership at the rates that white men did. This is nearly double the rate of actual 1900 black ownership rate of 31 percent, and it almost equals the white ownership rate of 59 percent.³² Thus, within a single generation after emancipation, the home ownership gap would have been nearly eliminated under a scenario of equal mobility rates. For perspective, Collins and Margo (2011, web appendix table 6) report that the home ownership rate for black male household heads, ages 55-64, finally reached 53 percent in 1960; the racial gap in that year was still 20 percentage points.

This mobility gap was not merely a reflection of black-white differences in *personal* wealth holdings circa 1870 (i.e., non-real-estate wealth).³³ Although white men without real estate wealth in 1870 were more likely to report holding some personal wealth than were black men, the relatively high rate of white mobility into home ownership by 1900 is nearly the same when the sample is restricted to those without personal wealth in 1870. Therefore, the counterfactual calculation would

³¹ A substantial fraction of white men in the intra-generational analysis, despite being ages 18 to 40, were not yet household heads. Although it is impossible to observe inheritance in census data, it is simple to drop men who resided in households headed by parents, grandparents, or other family members in 1870 (i.e., adult men working on a "family farm"). The upward mobility rate in this reduced sample is similar to the full sample.

³² Analogous intergenerational calculations are also stark: with white mobility rates, black sons would have had an ownership rate of 28 percent in 1900 compared an actual rate of 18 and a white rate of 36.

³³ Enumerators were to record personal property wealth if the total exceeded \$100. When we restrict the analysis to men with zero wealth reported, it is possible there were unobservable differences in the 0-99 range.

be little changed. In addition, it does not appear that the racial mobility gap is easily attributable to differential access to northern land for homesteading. The 1862 Homestead Act, which offered publicly held lands in the Midwest for settlement by US citizens, is often portrayed as a watershed policy that made land more readily accessible at low financial cost.³⁴ When we drop landless white men who resided in the Midwest in 1870 from the sample (i.e., those most proximate to lands available for homesteading), the white mobility patterns are again similar to those in the full sample.

The mobility analyses described to this point pertain to national-level statistics, which we argue are necessary to appreciate the full scope and scale of economic mobility in the United States. But we also want to draw attention to important variation *within* the black population’s mobility patterns—specifically the remarkably low upward mobility rates for men who resided in cotton-intensive areas in 1870. About 63 percent of black men in the sample resided in cotton-intensive counties in 1870, implying that conditions there strongly influenced the overall black mobility rate.

The panels in Table 1B are arranged similarly to those in Table 1A, but now we split the black sample by whether the county was cotton intensive (as defined above). For brevity, we focus on the intra-generational data. Few black men in either subsample owned real property in 1870. But black men residing outside cotton-intensive areas in 1870 were much more likely to attain home ownership by 1900 than those residing in cotton-intensive areas—the upward mobility rate was 11 percentage points (or 42 percent) higher in areas that were not cotton intensive (37 versus 26). A counterfactual assigning the non-cotton-intensive areas’ mobility rates to men in the cotton-intensive areas would raise the black sample’s overall 1900 home ownership rate from 31 percent (actual) to 38 percent (counterfactual). In this sense, the low upward mobility rates for black men in the cotton belt were a significant drag on black households’ aggregate gains in home ownership.

The main takeaways from Tables 1A and 1B are as follows. First, despite extremely low levels of wealth and literacy in 1870 and the rise of Jim Crow institutions, many black households attained property ownership by 1900. In our linked sample, more than one-quarter of propertyless black men in 1870 (ages 18-40) were home owners by 1900, and about one-sixth of black sons in propertyless households in 1870 were home owners by 1900 while still relatively young men. To be sure, the average value of black-owned homes was substantially less than that of white-owned homes in 1900; nonetheless, gains in property ownership at the extensive margin were historically important and contributed to an overall narrowing of the black-white wealth gap (Du Bois 1906, Derenoncourt

³⁴ In general, homesteaders could claim 160 acres, but to gain “free and clear” title to the land they had to improve it and reside on it for five years, or they could purchase the land after a shorter period of settlement.

et al. 2024).³⁵ Second, black men’s rates of mobility into ownership were far lower than those of white men who did not own real property in 1870, and this is not readily attributable to differences in other forms of personal wealth holding or proximity to homesteading opportunities in the Midwest. The counterfactual highlights the empirical significance of that mobility gap. Third, black upward mobility rates in cotton-intensive areas were far lower than elsewhere in the US, including elsewhere in the South. In the paper’s subsequent sections, we dig deeper into the patterns of black and white mobility that are embedded in the microdata, harnessing detailed information about people and places to better understand the dynamics and disparities of mobility into homeownership.

Correlates of Intra-Generational Mobility: Black Men

Table 2 reports regression coefficients that describe patterns of intra-generational mobility into property ownership for black men between 1870 and 1900, focusing on differential mobility in cotton-intensive areas. For reference, Appendix Table 1 reports sample summary statistics. Since 96 percent of black men, ages 18 to 40, reported owning no real estate in 1870’s census, this segment of the population and its upward mobility is of particular interest.

Column 1’s specification is parsimonious—it measures the differential likelihood of moving into home ownership for black men who resided in cotton-intensive counties in 1870 relative to those residing elsewhere in the US, controlling only for age fixed effects. Column 2 adds subregional fixed effects as described in equation 1, and so the estimate of β_1 is based on *within*-subregion differences in mobility across counties. In both columns 1 and 2, black men had far lower chances for moving into home ownership if they resided in cotton-intensive areas in 1870, by 11 or 12 percentage points.³⁶ Men in the Midwest and West South Central region in 1870, which includes Texas and Arkansas, were substantially more likely to gain ownership by 1900 than in the South Atlantic (the reference region). Column 3 adds county-level variables to the regression (L_c), including voting, military presence, and urban share variables. Column 4’s specification is identical, but the sample is restricted to men in the states of the former Confederacy. The estimates of β_1 hover around -0.12 and are statistically significant, even when measurement relies solely on differences in the Confederacy.

³⁵ The average black owner-operated farm was about one-fourth as valuable as the average white owner-operated farm in 1900. See the published volumes of the 1900 Census (Vol. V, Agriculture, Part 1, Tables 13 and 14). In 1930, the first census with home values, black-owned non-farm homes were also less valuable than white-owned homes (about one-third as valuable), based on the 1-percent IPUMS microdata sample.

³⁶ Regional regression coefficients are expressed relative to the South Atlantic Confederate states. Using state fixed effects instead of regional fixed effects and only the Confederate states reduces the coefficient on cotton intensity to -0.09. Therefore, it seems unlikely that differences in state-level policy variables drive our results.

For black men residing in the former Confederacy (col. 4), there is no evidence that those in places with a military presence in 1870 or higher voting rates for Ulysses S. Grant in 1872 had higher mobility-into-ownership than black men in other places.³⁷ Thus, Reconstruction-era protection of the black population’s rights and measures of black political power do not appear to have supported higher home ownership in 1900. If anything, there is evidence of a reversal of fortune—higher Republican voting in 1872 is associated with slightly lower black mobility into ownership in column 4, *ceteris paribus*, such that 1 s.d. difference in Republican voting (18 pp) is associated with 1.3 pp lower mobility into ownership by 1900.

We confirmed that upward mobility regression results are not sensitive to using \$100 of real property value as the cutoff for “ownership” in 1870 (rather than > 0). They are also not sensitive to clustering standard errors at the state-economic-area level rather than the county level.³⁸ We have also run the baseline regressions while omitting all counties with zero cotton production, again yielding similar results. Assigning cotton-intensity based on 1900 location rather than 1870 also yields similar coefficients on the cotton intensity variable.

Augmenting the baseline regressions to include additional covariates for 1870, such as whether the county produced rice or sugar, literacy, positive personal wealth, and farmer and farm laborer indicators, has little influence on the estimate of β_1 (Appendix Table 2).³⁹ To address the possibility that cotton intensity reflects differences in local white attitudes toward black Americans, we included four additional covariates. The first captures information contained in the choice of first names for white males, comparing those born between 1860 and 1865 to those born between 1850 and 1859. First names reflect parental choices that are unhindered and essentially costless.⁴⁰ Names beginning with “Rob...” (as in Robert E. Lee) or “Jef...” (as in Jefferson Davis) increased sharply in

³⁷ The same is true if we replace the variable based on census counts of men with military occupations (baseline regression) with variables based on data from Downs and Nesbitt (2015) indicating any troop presence between 1871 and 1880 or the average number of troops over the full span of Reconstruction. For recent and focused exploration of how federal authorities shaped political and economic outcomes in the South see Chyn et al. (2024) and Frieden et al. (2024). From maps in Chyn et al. (2024), we transcribed (perhaps imperfectly) information on counties with and without Freedmen’s Bureau offices. Adding this indicator variable to column 4 specifications of tables 2 and 3 does not substantially change the cotton coefficient.

³⁸ State economic areas (SEAs) are contiguous groups of several counties with similar economic and social characteristics. This provides a simple way to cluster over larger geographic areas than counties. SEAs were defined based on mid-twentieth century data (Bogue 1951).

³⁹ Rice and sugar production were much more geographically concentrated than cotton production. This regression framework might not be ideal for detecting more localized patterns within counties, and case studies of such areas might be more revealing. The results suggest that upward mobility for black men was positively associated with rice production, conditional on covariates. See appendix tables 2 and 4.

⁴⁰ See, for instance, Bazzi, Fiszbein, and Gebresilas (2020) who used first names to study local patterns of “rugged individualism.”

the Confederate states, modestly in the Border states, and barely at all in the North.⁴¹ The second variable is an indicator for whether federal troops were stationed in a county between 1871 and 1880, again drawing on Downs and Nesbitt (2015), since these deployments sometimes reflected responses to violence against black Americans. The third is the number of local black officeholders during Reconstruction (Logan 2019, drawing on Foner 1996).⁴² Finally, for a subset of the Confederate states, we have included the number of lynchings between 1882 and 1900, as reported in the Project HAL dataset for black victims (Hines and Steelwater n.d.).⁴³ The coefficients on cotton intensity are robust to these additions, whereas the coefficients on the additional controls are typically small and statistically insignificant (Appendix Table 2).

Later in the paper, we explore covariates such as local land values, wealth concentration, literacy rates, and black population size that might have served as intermediating variables between cotton intensity and reduced rates of black property ownership.

Correlates of intergenerational mobility: Black men

Table 3 pertains to intergenerational mobility into property ownership—the likelihood that sons whose household head did not own real estate in 1870 moved into home ownership themselves by 1900. Appendix Table 3 reports sample summary statistics. In general, the key findings echo those from the intra-generational analysis.⁴⁴ There is a sizable and statistically significant negative association between this measure of upward mobility and residing in a cotton-intensive area in 1870. When sub-region fixed effects are included, the gap is typically around 5 to 6 percentage points, relative to a sample mean of 18 percent moving into ownership. Adding covariates in column 3 and then restricting the sample to the states of the Confederacy in column 4 does not substantially change the coefficient relating cotton intensity to black intergenerational mobility into home ownership.

Column 4 reveals no evidence that the presence of the military in 1870 or the vote share for Ulysses S. Grant in 1872 supported higher intergenerational mobility into ownership. Augmented

⁴¹ We relied on the publicly available 1880 dataset from IPUMS-International (Ruggles et al. 2025), which includes names. We adjusted for boundary changes using (Ferrara, Testa, and Zhou 2022).

⁴² We assign county codes to the data using Klarner (2019).

⁴³ We excluded cases where the dataset’s “mob” variable is “black.” The Project HAL dataset does not include Texas and Virginia. See Cook (2012) for insight on lynching datasets. One line of research on lynching investigates whether its prevalence is endogenous to local economic conditions, arguably making it a “bad control” in the context of this study.

⁴⁴ While the coefficients are smaller in terms of percentage points, it is also notable that the intra-generational rate of mobility into ownership was larger than the intergenerational rate, presumably because sons observed in 1900 were still relatively young (30-47) compared to men in the intra-generational analysis.

specifications (Appendix Table 4) again have similar estimates of β_1 . Those regressions reveal that those who attended school in 1870 fared better than others in terms of gaining home ownership by 1900, but the difference was small (about 2 to 3 percentage points). Those in female-headed households had slightly lower probabilities of upward mobility into ownership (1 to 2 percentage points), as did those in Confederate areas in which federal troops were stationed after 1870.

Additional Robustness and Extensions

The baseline dummy variable for cotton intensity—indicating whether a given county had cotton per capita production above the southern median—is a coarse but easily interpreted way to characterize differences in the geography of mobility. We also explored whether variation in cotton intensity *within* the subset of “cotton-intensive” counties is predictive of black intra- and intergenerational mobility. To do so, we created a “very high” cotton intensity indicator, comprised of counties that rank in the top quartile of southern counties in cotton bales per capita. Restricting the samples to black men in high cotton-intensive counties, those residing in “very high” counties had substantially lower upward mobility rates than those elsewhere *within* the cotton-intensive sample, by about 9 percentage points in the intra-generational analysis and 6 percentage points in the intergenerational analysis (Appendix Table 5).

Figures 4 (intra-generational) and 5 (intergenerational) provide binscatter graphs that relate black men’s upward mobility to underlying measure of cotton bales per capita, rather than relying on the discrete thresholds for “high” or “very high” cotton intensity. These figures condition on age and are restricted to the states of the former Confederacy. The strongly negative relationship is clear in both figures.

To check robustness to alternative methods of linkage, we built a second dataset of linked records using Zimran (2022) crosswalks. Although similar in spirit, there are several differences between the Zimran and ABE linking algorithms, leading to different sets of crosswalks.⁴⁵ Nonetheless, the results of our analysis are similar. Appendix Tables 6 and 7 report black intra-generational and intergenerational mobility regression results using Zimran links, confirming the findings discussed above.

Finally, we offer a view that exploits an exogenous geologic feature. One might argue that cotton was intensively cultivated in certain places because there was a large supply of landless men, implying reverse causality. Our view is that, historically, the potential for cotton cultivation drew

⁴⁵ See the “Readme” file in Zimran (2022) for some comparative discussion.

enslaved labor to these areas, not the reverse; therefore, we are not very concerned about reverse causation confounding our interpretation’s emphasis on the primacy of cotton cultivation. Nonetheless, we offer an analysis that builds on a remarkable feature of Alabama’s geology—the “black belt” soil that cuts a swath through the center of the state (Appendix Figure 1). This reflects the location of ocean shores millions of years ago. It is a useful and exogenous feature in that it altered the land’s agricultural characteristics relative to surrounding areas both north and south of the belt.⁴⁶ The linked sample is much smaller when limited to Alabama, of course, but we see in both reduced-form and instrumental-variable regressions that places particularly well-suited for cotton production due to this geologic feature had lower rates of black upward mobility than other places in Alabama (Appendix Table 8).

Correlates of Intra- and Intergenerational Mobility: White men

Black men and white men had substantially different patterns of mobility into property ownership. We have already seen this in the aggregate mobility rates in Table 1A. In this section, we examine the microdata for white men and compare their mobility patterns with black men’s.

Table 4 examines white men’s intra-generational mobility, using the same framework as Table 2. It shows that white men who did not own real estate in 1870 and resided in cotton-intensive counties had roughly similar rates of mobility into home ownership by 1900 as white men elsewhere in the US and within the Confederacy. This is in stark contrast with the results for black men. In column 1, the most parsimonious regression, the coefficient on cotton intensity is positive—white men in cotton-intensive areas had better chances of upward mobility than elsewhere. Once sub-regional fixed effects and other covariates are added in columns 2 to 4, the point estimates of β_1 are between 0 and -0.03.⁴⁷ In all cases, the gap is much smaller than that 12 percentage-point gap for the black population. In the Confederacy (column 4), the 1872 Republican vote share and presence of federal military were weakly negatively correlated with white mobility into ownership.

Table 5 reports intergenerational mobility results for the white sample. White children were more likely to move into ownership in cotton-intensive areas than elsewhere in the US, by a remarkable 10 percentage points in column 1. This partly reflects the relatively low mobility rates in the Northeast, where a large fraction of the white population resided and cities were growing rapidly. The coefficient is greatly reduced when relying on within-region variation (column 2) and is of

⁴⁶ We prefer this to modern measures of cotton suitability given Rhode’s critique (2024).

⁴⁷ Restricting the sample to men who were not living with relatives in 1870—to partly insulate the results from those working the “family farm”—results in only a small change in the coefficient on cotton intensity.

negligible size once additional covariates are included (column 3) and the sample is restricted to the Confederacy (column 4). Within the former Confederacy, federal military presence and 1872 Republican vote share were again weakly negatively correlated with white intergenerational mobility, *ceteris paribus*.

Overall, the most interesting finding in our analysis of white men's mobility patterns is the strong contrast they present relative to that of black men in cotton-intensive areas. Whereas black men had much lower chances of gaining ownership if they started in such places in 1870 compared to black men elsewhere, white men in these areas faced little or no mobility deficit.

6. Interpreting Cotton Intensity and Black Movement into Property Ownership

The combination of occupational and home ownership data from 1900 can clarify key aspects of the patterns described above. In our linked sample, the most striking difference between black men from cotton-intensive counties compared to those from elsewhere in the former Confederacy is the large share who, in 1900, were “farmers” but not “home owners” (44 percent versus 22 percent in the intra-generational analysis). On the other hand, the difference across high- and low-cotton-intensity counties in the share who were farmers *and* owned homes was small (21 versus 18 percent), as was the difference in the share of agricultural laborers (14 versus 13 percent). In sum, black men who resided in cotton-intensive counties in 1870 were much more likely to work in agricultural occupations in 1900 than men from elsewhere in the Confederacy, *and* nearly all the “extra” agricultural workers were sharecroppers or tenant farmers (i.e., farmers who did not own their homes).⁴⁸ In this sense, the size and organization of the agricultural sector in cotton-intensive areas were distinct and closely related to the low rate of black home ownership.

It is notable, however, that this difference goes only part of the way to accounting for black men's low rate of upward mobility when from in cotton-intensive areas. For men who did *not* work in agriculture in 1900, there is still evidence of a mobility gap between those who resided in high- and low-cotton-intensity counties of the former Confederacy in 1870 (about 7 pp). This is smaller than the gap for those working in agriculture in 1900 (about 15 pp), but still a sizable difference. In other words, for black men, exposure to cotton-intensive agriculture circa 1870 was negatively correlated with one's likelihood of mobility into home ownership even if they did not hold an

⁴⁸ The pattern for white men is far less pronounced (e.g., 20 vs 15 percent were farmers but not homeowners in cotton-intensive counties compared to others in the former Confederacy in 1900). It is not possible in the 1900 data to definitively identify sharecroppers.

agricultural occupation in 1900. Thus, the story is not entirely about men getting stuck at a low rung on the agricultural ladder.

Potential mechanisms

To go beyond the observation of differences in occupation-by-ownership distributions, we explored five economic factors that might have inhibited black men's mobility into property ownership. In theory, each of these (or all in combination) could be a mechanism linking cotton intensity and black men's ability to acquire land. First, perhaps land was relatively valuable in these areas and, therefore, expensive to acquire, especially for freedmen who had few savings and limited credit networks. Second, perhaps real estate ownership in such areas was especially concentrated. If so, a small number of landholders might collude to keep property from potential black buyers. Third, perhaps in places with relatively large black populations, a smaller *share* of black households was able to find willing (white) sellers of land or providers of credit than elsewhere. Fourth, perhaps black educational attainment was depressed in cotton-intensive areas due to demand for children's labor (Baker 2015) and low public goods provision. Illiteracy may have limited access to formal contracts, better farming techniques, and employment opportunities outside agriculture. Fifth, perhaps geographic mobility from such areas was more difficult or debt was more immobilizing, impeding movement to areas where land was more readily obtainable.

We constructed several variables to help evaluate the plausibility of these hypotheses. From the 1870 census of agriculture, we calculated the county-level average farm value per acre.⁴⁹ From the 1870 census of population microdata, we calculated the share of real estate wealth held by the top 10 percent of each county's male population and the black share of each county's population. For each individual in the sample, we created an indicator for literacy and another indicator for interstate migration between 1870 and 1900.

Using the sample of adult black men residing in the former Confederacy in 1870, we regressed each of these variables in turn on the indicator for cotton-intensive counties, subregional fixed effects, urban share of the county population, and age fixed effects.⁵⁰ This is akin to a balance test of whether the cotton-intensive counties differed from others in ways that correspond to each of the mechanisms proposed above. If there is no difference or if the difference goes in the "wrong direction," then we would discount the likelihood of that mechanism's importance.

⁴⁹ This is farm value divided by the sum of improved and unimproved (wooded and other) acres.

⁵⁰ This is in the spirit of Pei, Pischke, and Schwandt (2019), which argues that tests for balance are more informative than tests for coefficient stability when covariates are imperfectly measured.

Table 6 reports results. The most outstanding characteristic of cotton-intensive areas relative to others in the Confederacy is their high black population shares in 1870—about 13 percentage points higher than elsewhere. After the Civil War, despite much migration within the South, cotton-intensive areas retained relatively large black labor forces. In contrast, there is no evidence that farmland in cotton-intensive areas was more valuable per acre than elsewhere in the Confederacy, conditional on subregional fixed effects and urban share.⁵¹ If anything, farmland was less valuable in such areas. Three other channels receive some weak empirical support. Landownership was more concentrated in cotton-intensive areas, perhaps reflecting the survival of plantations, but the difference between high- and low-cotton-intensity counties was only about 2 percentage points, which is small relative to the sample average. Black men’s literacy and likelihood of interstate migration were slightly lower in cotton-intensive areas, by about 2 percentage points in each case, but these estimates are not statistically significant.⁵² The last column in Table 6 reports the coefficient on cotton intensity while controlling for all the potentially intermediating variables we assembled. The cotton intensity coefficient is diminished, but not greatly, which may suggest a large role for other factors (but see Pei, Pischke, and Schwandt 2019 for a critique of coefficient stability interpretations).

More detailed analysis of the empirical link between migration and mobility into property ownership for black men who resided in a formerly Confederate state in 1870 reveals that relatively few black men achieved ownership through migration. This holds in both the intra- and intergenerational samples (Appendix Table 9). Most black men neither moved across state lines nor achieved ownership. Of those who did move into ownership by 1900, only about 20 percent were interstate migrants (6.4/28.9 in the intra-generational sample and 3.2/17.5 in the intergenerational sample). Comparing stayers and movers (Appendix Table 10) and conditioning on age, those who resided in the same state in 1870 and 1900 had somewhat higher rates of mobility into ownership (i.e., interstate migrants were less likely to have become owners). It is notable that this advantage for stayers is centered in the low-cotton intensity subsample. For those who started in the high cotton-intensity counties in 1870 (which encompasses most black men), there is no apparent difference

⁵¹ To ensure that this result is not driven by outliers, we omit the top and bottom 1 percent of the sample in terms of value per acre.

⁵² There is a larger difference in interstate migration rates for young men in the intergenerational sample, where high cotton intensity is associated with less interstate migration. Migration rates are likely inflated due to false matches (Zimran 2024). We do not expect that mismatches are more common in cotton-intensive areas than elsewhere; so, this difference should still be informative. In subsequent analysis where we compare outcomes for “movers” and “stayers,” more caution is required since the mover sample might include a disproportionate number of false matches.

between stayers and movers.

We also considered whether low upward mobility in cotton-intensive areas might be due to lower earnings potential for unskilled laborers in these areas. It is impossible, unfortunately, to measure individuals' earnings in this period. We surmise, based on state-level averages for farm laborers' monthly earnings with board reported in Lebergott (1964, p. 539), that states intensive in postbellum cotton production did *not* have lower wages than elsewhere in the former Confederacy.⁵³ This is relevant because sharecroppers were close in economic status to laborers in this setting (Graves 1943, Woodman 1995, Alston and Kaufman 1998). More research would surely be useful in this area. For now, the evidence suggests it is unlikely that earnings advantages in low cotton-intensity places in the former Confederacy drove the advantages in mobility into ownership.

Further Discussion

The combination of evidence in Tables 2 to 5 (in which black men had far lower upward mobility rates in cotton-intensive areas but white men did not) and Table 6 (in which the outstanding observable characteristic of cotton-intensive places is their black population share) is consistent with an interpretation in which black men in cotton-intensive areas had a lower chance of finding a willing seller of land or provider of credit. Indeed, Figures 6 and 7 show that there is a strong empirical relationship between intra- and intergenerational mobility rates and the black share of the population in the former Confederacy.⁵⁴

More formally, suppose there is a distribution of racial animus or fear of reprisal across white landowning households in each locality. Some white households might be willing to sell parcels of land to black households at a price reflecting its productivity, but others require a premium to do so.⁵⁵ For increasing quantities of land to be sold to black households, a higher premium would be required, reflecting the sentiment of sellers at the margin. Some black households might be willing and able to pay a premium to own land (e.g., independence is highly valued), but each has a reservation premium above which they will not or cannot purchase land. In localities with relatively small black

⁵³ This statement is based on comparing simple averages across South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Texas (cotton states) to averages across Virginia, North Carolina, Florida, Tennessee, and Arkansas. We omit Kentucky since it was not part of the Confederacy. Weighted averages using 1870 black population reinforce the conclusion that high cotton intensity states paid at least as well as others.

⁵⁴ For perspective, if given a causal interpretation, analysis using Stata's *medeff* command suggests that black population share mediates 20 percent of the total cotton intensity association with black upward mobility in the intra-generational sample (Hicks and Tingley 2011).

⁵⁵ Canaday and Reback (2010) find that black households paid more than white households for land of similar quality in a sample of Tennessee transactions in 1880.

populations, a relatively large *share* might find parcels of land for sale below their reservation price (i.e., a sizable share can buy parcels from low-premium sellers). In localities with relatively large black populations, the premium is higher, and a smaller *share* of black households would become owners. This framework does not require differences in distributions of anti-black sentiment or fear of reprisal across counties in the former Confederacy, but of course, that too is possible.

Heterogeneity within the sample is consistent with the view that the black population share mediated at least part of the relationship between cotton intensity and black mobility into property ownership. In the black intra-generational sample, the mobility-cotton relationship is relatively weak (-0.042) where the black population share was below 25 percent (Appendix Table 11). But the relationship is strong in the subsample with black population shares equal to or above 25 percent (-0.122). Black intergenerational mobility point estimates on cotton intensity are also larger in magnitude for the subsample with large black population shares.

In sum, in areas with large black populations and cotton-intensive agriculture, land ownership remained out of reach for most black households, and sharecropping became and remained the norm. This resonates with Ransom and Sutch's (1977) and Raper's (1936) emphasis on the supply side of the market for land (described in section 2), which was distorted by racism in ways that hindered black mobility into property ownership. It is also complementary to, or at least compatible with, other scholars' emphasis on sharecropping and crop lien laws constituting an economic and legal system that inhibited black households' accumulation of assets and that may have blunted their incentives to do so (e.g., see Wright 1986, p. 102).

7. Conclusions

In this paper we examine new data revealing American men's intra- and intergenerational mobility into property ownership in the late nineteenth century, with a special focus on outcomes for black Americans in the wake of the Civil War and Emancipation. Because formerly enslaved black Americans were not provided with land or other forms of compensation, they worked primarily as laborers and sharecroppers on farms owned by white southerners. Against this backdrop, many black men did succeed in attaining home ownership between 1870 and 1900, albeit at lower rates than white men who held no real property in 1870. This black-white mobility gap had significant implications. A simple assessment of the black and white transition matrices reveals that the racial home ownership gap among older men in 1900 would have been only 4 percentage points if black men had transitioned from non-ownership in 1870 to ownership in 1900 at the same rate as white men. The actual black-white home ownership gap has never been that small (Collins and Margo

2011). Thus, understanding the mobility gap is important, as it was (and is) an essential mechanism in the perpetuation of racial differences in home ownership and wealth.

Closer inspection of the data indicates that the cotton belt of the US South played an important role in this early, national-level mobility gap. The intra-generational analysis finds that black men in cotton-intensive counties were about one-third less likely to gain home ownership than black men elsewhere in the US (26 vs 38 percent), conditional on holding no real property in 1870. The intergenerational analysis, focused on younger men, is qualitatively similar though less stark (16 vs 20 percent). Even within the states of the former Confederacy, cotton-intensive areas stand out for their lack of black mobility into home ownership. It is striking that white men in the cotton belt did not face a similar mobility deficit relative to white men elsewhere. Thus, the interaction of agricultural history, slavery, and post-war racial discrimination is paramount to understanding the size and transmission of racial disparities in the decades following the Civil War.

One feature of the cotton-intensive areas that stands out, circa 1900, is the large share of black men who were farmers but not home owners. Surely, the prevalence of sharecropping in cotton agriculture is part of the story for why black mobility into home ownership was so low. For most black men, sharecropping was not an intermediate rung on a tenure ladder that would eventually lead to ownership. Going further, we evaluated several potential channels that may have mediated the relationship between cotton-intensity and black mobility into property ownership. The relatively high black population share of cotton-intensive counties compared to others in the former Confederacy is salient in this regard.

Future research could go in many useful directions by building on the complete count census records. For instance, the linkage of census records to local property, tax, or court records may reveal more about the timing, magnitude, and precise location of black property accumulation. Information about transaction prices and mortgage contracts might be especially revealing (e.g., Canaday and Reback 2010). Research could also build linkages forward into the next generation, allowing detailed examination of the boll-weevil shock, the onset of the Great Migration, and their interactions with black property ownership and wealth, all of which lie beyond this paper's scope. It would be interesting to learn how property ownership influenced adjustments to new shocks and opportunities. Finally, going even further ahead in time, linked records could reveal patterns of displacement associated with the Great Depression, New Deal, and, later, the mechanization of cotton harvesting (Day 1967, Whatley 1985, Heinicke 1994), which fundamentally altered the connection between black workers and the agricultural South.

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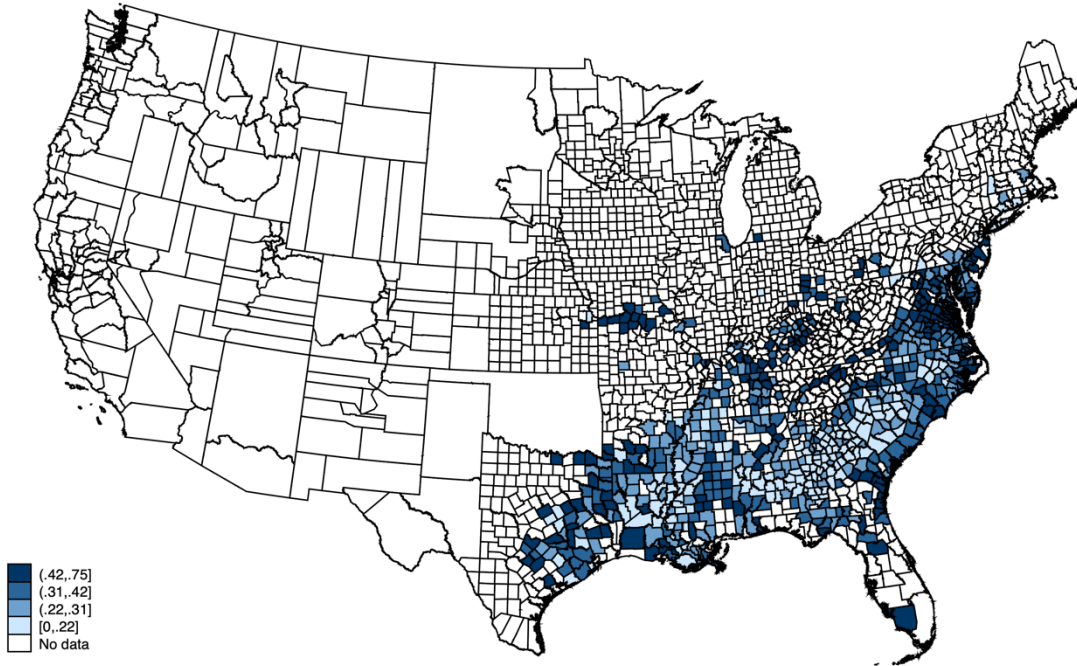
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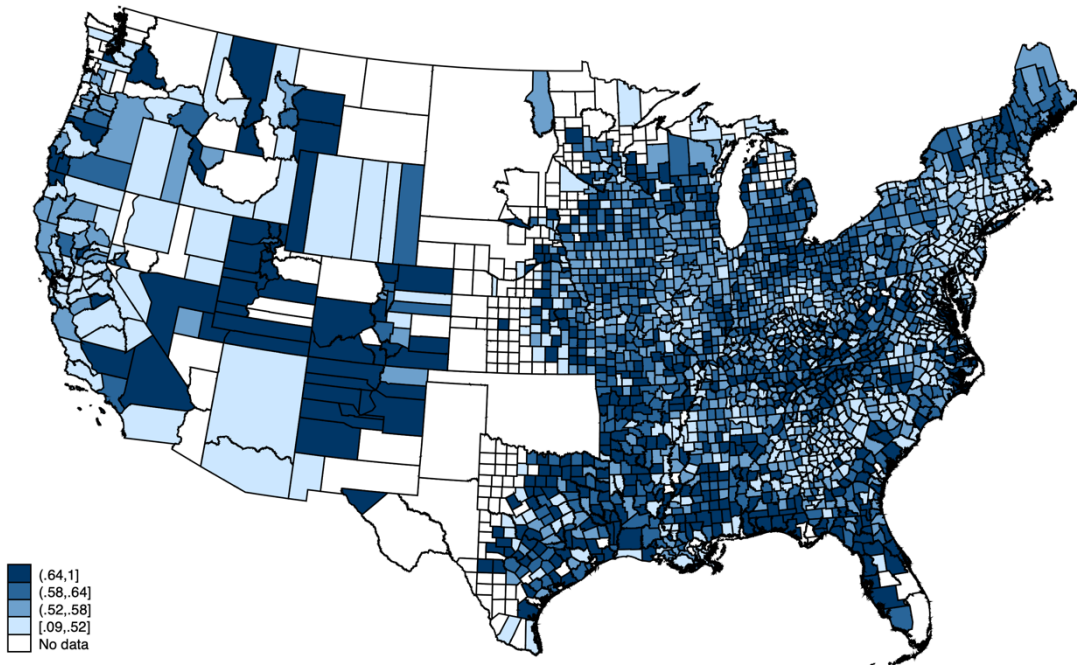
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Figure 1: Intra-generational Mobility Rates, by 1870 County of Origin

Black Men



White Men

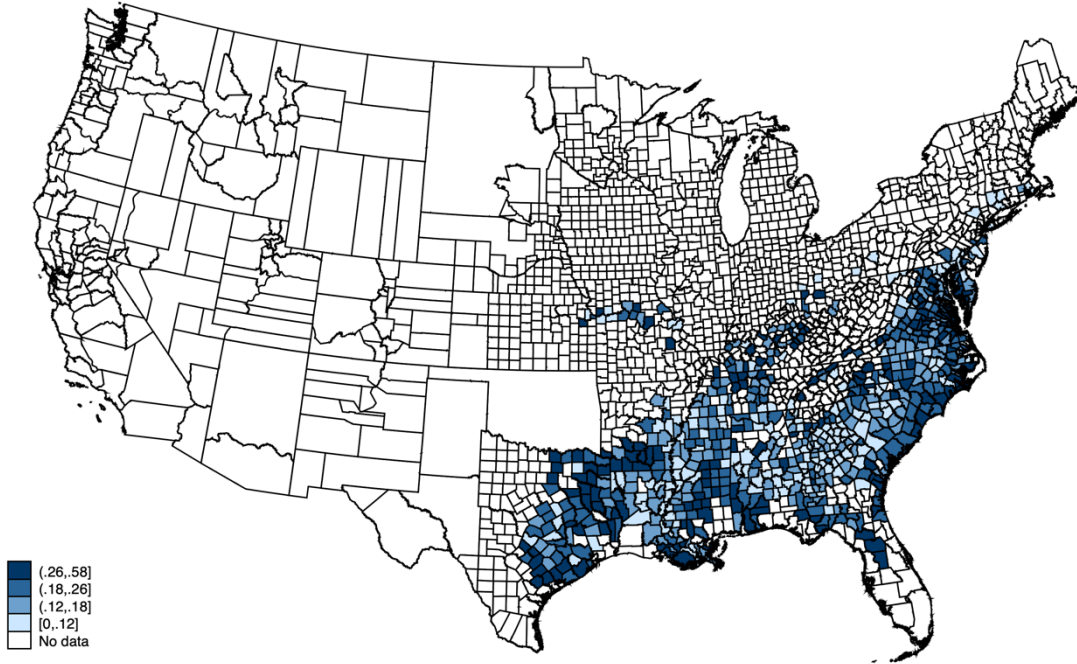


Notes: The maps are on different scales, with the white men's scale shifted higher. Counties are shaded only if we have at least 10 men in the linked sample for the relevant race category. Intra-generational mobility is movement into home ownership by 1900 conditional on owning no real property in 1870. See notes to Table 1A for more details.

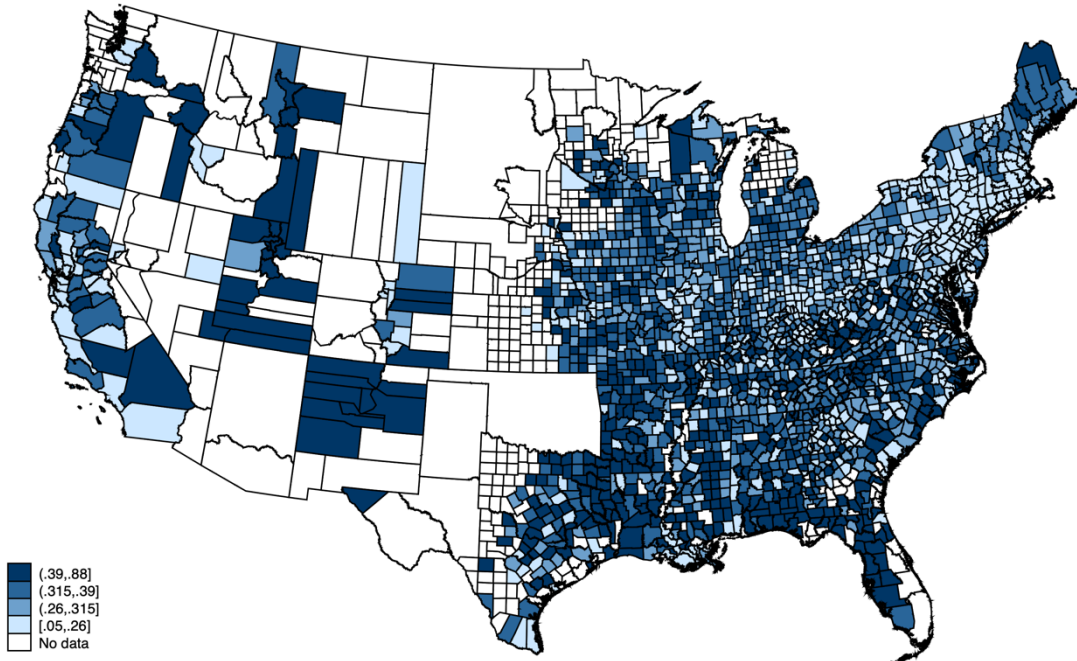
Sources: Links are from Abramitzky et al. (2022). Census data are from Ruggles et al. (2021) and Ruggles et al. (2023). More discussion of the data is provided in section 3 of the main text.

Figure 2: Intergenerational Mobility Rates, by 1870 County of Origin

Black Men



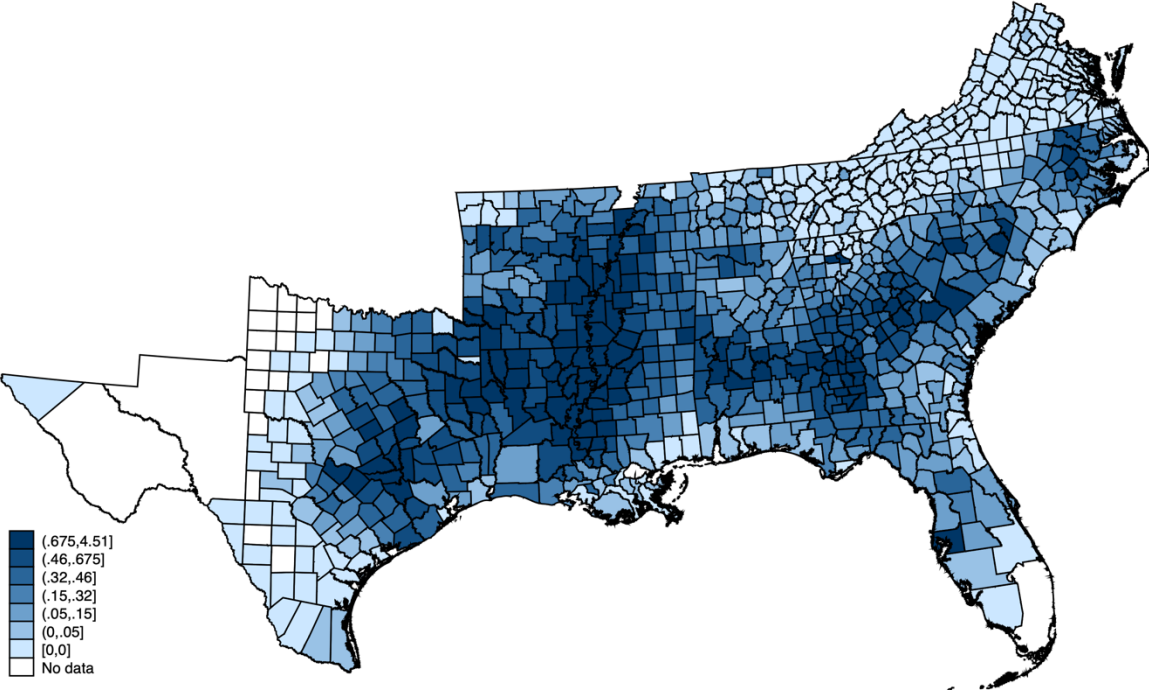
White Men



Notes: The maps are on different scales, with the white men's scale shifted higher. Counties are shaded only if we have at least 10 men in the linked sample for the relevant race category. Intergenerational mobility is movement into home ownership by 1900 conditional on residing with a parent head of household who did not own property in 1870.

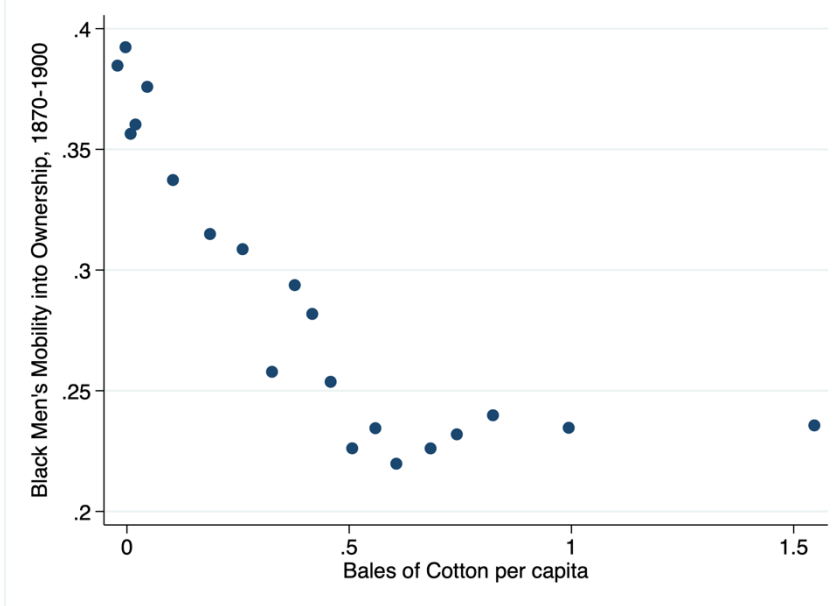
Sources: Links are from Abramitzky et al. (2022). Census data are from Ruggles et al. (2021) and Ruggles et al. (2023). Boundary files are from Manson et al. (2023). More discussion of the data is provided in section 3 of the main text.

Figure 3: Cotton Bales per capita in the Former Confederacy, 1870 Census of Agriculture



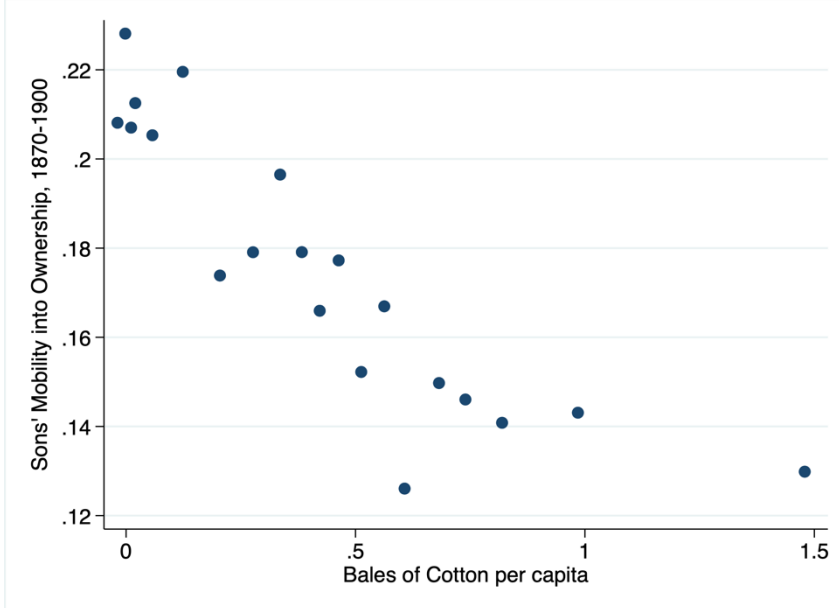
Sources: Calculated with data from Haines, Fishback, and Rhode (2016). Boundary files are from Manson et al. (2023).

Figure 4: Binscatter, Intra-generational Mobility and Cotton Intensity, Black Men



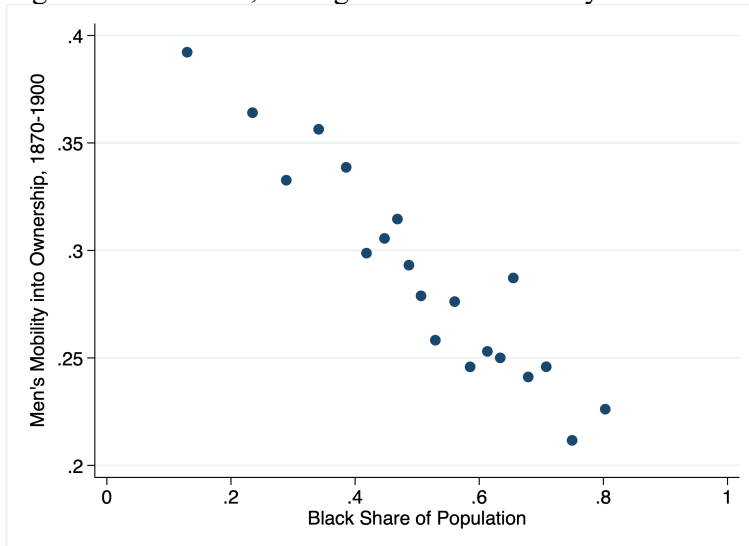
Notes: This plots intra-generational upward mobility rates for black men observed in 1870 and 1900. Cotton per capita refers to 1870. The sample is restricted to men residing in states of the former Confederacy in 1870. The binscatter absorbs age fixed effects.

Figure 5: Binscatter, Intergenerational Mobility and Cotton Intensity, Black Sons



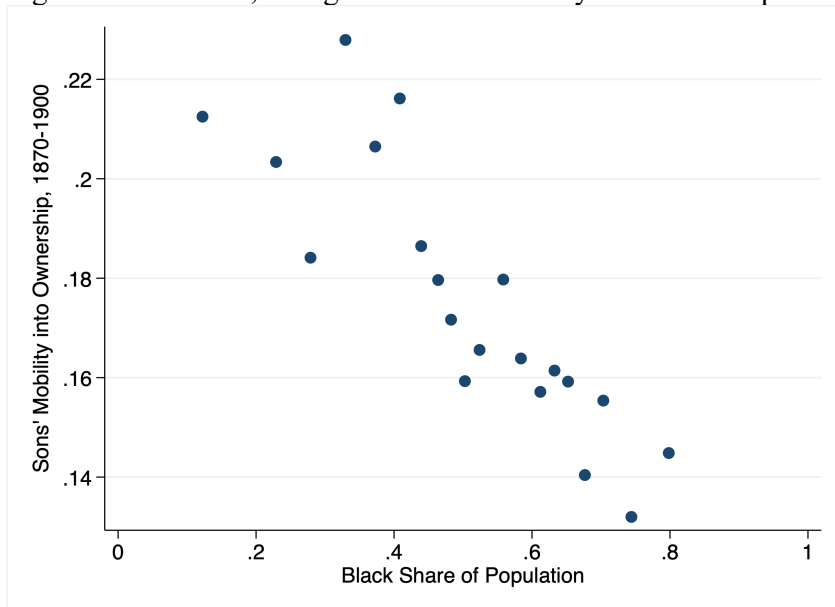
Notes: This plots intergenerational upward mobility rates for black sons observed in 1870 and 1900. Cotton per capita refers to 1870. The sample is restricted to men residing in states of the former Confederacy in 1870. The binscatter absorbs age fixed effects.

Figure 6: Binscatter, Intra-generational Mobility and Black Population Share, Black Men



Notes: This plots intra-generational mobility into property ownership black men observed in 1870 and 1900. Black population share refers to 1870. The sample is restricted to states of the former Confederacy. The binscatter absorbs age fixed effects.

Figure 7: Binscatter, Intergenerational Mobility and Black Population Share, Black Men



Notes: This plots intergenerational mobility into property ownership for black men observed in 1870 and 1900. Black population share refers to 1870. The sample is restricted to states of the former Confederacy. The binscatter absorbs age fixed effects.

Table 1A: Black and White, Intra- and Intergenerational Mobility into Property Ownership, 1870-1900

	Not Owner 1900	Owner 1900	Fraction 1870
Black, Intra-generational			
Not owner 1870	0.672	0.288	0.961
Owner 1870	0.018	0.021	0.039
Black, Intergenerational			
Not owner 1870	0.750	0.158	0.908
Owner 1870	0.068	0.024	0.092
White, Intra-generational			
Not owner 1870	0.329	0.393	0.722
Owner 1870	0.080	0.198	0.278
White, Intergenerational			
Not owner 1870	0.270	0.099	0.369
Owner 1870	0.373	0.258	0.631

Notes: Percentages sum to 1 across the four interior cells of each panel. “Not owner 1870” implies that the census recorded no real estate property for this individual (intra-generational) or the household head (intergenerational). “Not owner 1900” implies that the census recorded this individual’s household as living in rental housing or that the individual was not the head of household (or spouse of the head). “Fraction 1870” sums the cells to the left. Observations are weighted to adjust for selection into linkage. Intra-generational calculations pertain to men who were ages 18-40 in 1870. Intergenerational calculations pertain to men who were 0-18 and residing with a parent head of household in 1870.

Sources: Links are from Abramitzky et al. (2022). Census data are from Ruggles et al. (2021) and Ruggles et al. (2023). More discussion is provided in section 3 of the main text.

Table 1B: Black, Intra- and Intergenerational Mobility into Property Ownership, 1870-1900

	Not Owner1900	Owner 1900	Fraction 1870
Cotton-Intensive, Intra-generational			
Not owner 1870	0.721	0.255	0.977
Owner 1870	0.012	0.012	0.023
Cotton-Intensive, Intergenerational			
Not owner 1870	0.789	0.155	0.945
Owner 1870	0.041	0.015	0.055
Not Cotton-Intensive, Intra-generational			
Not owner 1870	0.586	0.347	0.933
Owner 1870	0.029	0.038	0.067
Not Cotton-Intensive, Intergenerational			
Not owner 1870	0.677	0.165	0.841
Owner 1870	0.117	0.042	0.159

Notes: Percentages sum to 1 across the four interior cells of each panel. See Table 1A for additional details.
Sources: See Table 1A.

Table 2: Correlates of Black Intra-generational Mobility into Property Ownership, 1870-1900

	All	All	All	Confed.
High cotton intensity	-0.1117 (0.0093)	-0.1171 (0.0134)	-0.1226 (0.0129)	-0.1221 (0.0130)
Northeast	.	-0.0921 (0.0252)	0.0094 (0.0565)	.
Midwest	.	0.0554 (0.0240)	0.1084 (0.0550)	.
Border States	.	0.0128 (0.0175)	0.0442 (0.0449)	.
West	.	-0.1626 (0.0643)	-0.0856 (0.0877)	.
E Sth Cent	.	0.0012 (0.0109)	0.0039 (0.0109)	0.0038 (0.0109)
W Sth Cent	.	0.0417 (0.0163)	0.0418 (0.0145)	0.042 (0.0147)
Military presence, 1870	.	.	-0.0728 (0.0224)	0.0044 (0.0218)
Military x Confederacy	.	.	0.0812 (0.0305)	.
Republican Share 1872	.	.	-0.0012 (0.0008)	-0.0007 (0.0003)
Republican x Confederacy	.	.	0.0005 (0.0009)	.
Urban Share	.	.	-0.0928 (0.0289)	-0.082 (0.0408)
Constant	0.3734 (0.0075)	0.3701 (0.0106)	0.4186 (0.0173)	0.4176 (0.0174)
Adj. R-sq.	0.016	0.019	0.022	0.017
N	28146	28146	28146	24076

Notes: The sample consists of men who were 18-40 in 1870 and did not report owning real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. The Northeast and West regions correspond to usual census delineations. “Border states” (DE, MD, DC, WV, KY, and MO) did not join the Confederacy. The West South Central, East South Central, and South Atlantic states were members of the former Confederacy (i.e., not in the “border state” category). Urban share pertains to the county’s whole population. Standard errors are clustered at the county level.

Sources: See Section 3 of the main text for discussion of sources and variable definitions.

Table 3: Correlates of Black Intergenerational Mobility into Property Ownership, 1870-1900

	All	All	All	Confed.
High cotton intensity	-0.0349 (0.0071)	-0.0502 (0.0100)	-0.0552 (0.0089)	-0.0565 (0.0089)
Northeast	.	-0.1058 (0.0151)	-0.0434 (0.0474)	.
Midwest	.	-0.0203 (0.0174)	-0.0073 (0.0434)	.
Border States	.	-0.0166 (0.0139)	-0.0118 (0.0356)	.
West	.	-0.21 (0.0148)	-0.1581 (0.0539)	.
E Sth Cent	.	-0.0049 (0.0078)	-0.0039 (0.0077)	-0.0035 (0.0077)
W Sth Cent	.	0.0365 (0.0119)	0.0361 (0.0106)	0.0359 (0.0104)
Military presence, 1870	.	.	-0.082 (0.0221)	0.0046 (0.0128)
Military x Confederacy	.	.	0.0776 (0.0236)	.
Republican Share 1872	.	.	-0.0002 (0.0007)	-0.0003 (0.0002)
Republican x Confederacy	.	.	-0.0001 (0.0007)	.
Urban Share	.	.	-0.0585 (0.0259)	-0.0824 (0.0313)
Constant	0.1993 (0.0058)	0.2084 (0.0080)	0.2323 (0.0120)	0.2336 (0.0119)
Adj. R-sq.	0.021	0.024	0.026	0.024
N	33673	33673	33673	29831

Notes: The sample consists of men who were 0-18 in 1870 and lived with a parent head of household who did not own real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Urban share pertains to the county's whole population. Standard errors are clustered at the county level.

Sources: See Section 3 of the main text for discussion of sources and variable definitions.

Table 4: Correlates of White Intra-generational Mobility into Property Ownership, 1870-1900

	All	All	All	Confed.
High cotton intensity	0.0413 (0.0075)	-0.0101 (0.0154)	-0.0217 (0.0085)	-0.0276 (0.0073)
Northeast	.	-0.0763 (0.0146)	-0.0887 (0.0226)	.
Midwest	.	0.0123 (0.0099)	-0.0414 (0.0217)	.
Border States	.	-0.027 (0.0120)	-0.0781 (0.0192)	.
West	.	-0.0635 (0.0187)	-0.102 (0.0246)	.
E Sth Cent	.	0.0276 (0.0086)	0.0258 (0.0075)	0.0267 (0.0073)
W Sth Cent	.	0.0431 (0.0256)	0.0506 (0.0125)	0.0514 (0.0102)
Military presence, 1870	.	.	-0.0493 (0.0118)	-0.0329 (0.0172)
Military x Confederacy	.	.	-0.0147 (0.0263)	.
Republican Share 1872	.	.	0.0007 (0.0003)	-0.0003 (0.0002)
Republican x Confederacy	.	.	-0.0011 (0.0004)	.
Urban Share	.	.	-0.1184 (0.0167)	-0.1926 (0.0438)
Constant	0.5422 (0.0061)	0.5719 (0.0092)	0.6066 (0.0114)	0.6076 (0.0111)
Adj. R-sq.	0.001	0.008	0.016	0.008
N	346419	346419	346419	51223

Notes: The sample consists of men who were 18-40 in 1870 and did not report owning real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Standard errors are clustered at the county level.

Sources: See Section 3 of the main text for discussion of sources and variable definitions.

Table 5: Correlates of White Intergenerational Mobility into Property Ownership, 1870-1900

	All	All	All	Confed.
High cotton intensity	0.0991 (0.0087)	0.0344 (0.0218)	0.0087 (0.0087)	0.0016 (0.0080)
Northeast	.	-0.1022 (0.0133)	-0.124 (0.0159)	.
Midwest	.	-0.0089 (0.0123)	-0.0662 (0.0154)	.
Border States	.	-0.0208 (0.0155)	-0.0742 (0.0151)	.
West	.	-0.0638 (0.0262)	-0.0992 (0.0178)	.
E Sth Cent	.	0.025 (0.0104)	0.0256 (0.0085)	0.0278 (0.0084)
W Sth Cent	.	0.0271 (0.0373)	0.052 (0.0135)	0.058 (0.0109)
Military presence, 1870	.	.	-0.0291 (0.0108)	-0.0279 (0.0150)
Military x Confederacy	.	.	-0.0465 (0.0206)	.
Republican Share 1872	.	.	0.0006 (0.0002)	-0.0004 (0.0002)
Republican x Confederacy	.	.	-0.001 (0.0003)	.
Urban Share	.	.	-0.0885 (0.0123)	-0.1784 (0.0255)
Constant	0.2583 (0.0064)	0.3056 (0.0108)	0.3494 (0.0122)	0.3545 (0.0119)
Adj. R-sq.	0.043	0.053	0.061	0.052
N	262373	262373	262373	41879

Notes: The sample consists of men who were 0-18 in 1870 and lived with a parent head of household who did not own real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Standard errors are clustered at the county level. Sources: See Section 3 of the main text for discussion of sources and variable definitions.

Table 6: Potential Mediating Variables

	Value per acre	Top 10 wealth share	Black prop.	Literate	Interstate migrant	Mobility into Ownership
High cotton intensity	-6.4229 (1.2007)	0.0194 (0.0084)	0.1344 (0.0163)	-0.0204 (0.0177)	-0.0185 (0.0120)	-0.1164 (0.0131)
E Sth Cent	3.9382 (1.0490)	0.0092 (0.0098)	-0.0261 (0.0197)	0.0249 (0.0219)	0.0584 (0.0123)	0.0071 (0.0099)
W Sth Cent	5.8585 (1.5296)	0.0000 (0.0114)	-0.0536 (0.0212)	0.0279 (0.0233)	0.0737 (0.0173)	0.0429 (0.0129)
Urban share	22.757 (6.8835)	0.1616 (0.0178)	0.0422 (0.0521)	0.1612 (0.0467)	0.0973 (0.0580)	-0.0309 (0.0441)
Value per acre	.	.	.	.	.	-0.0009 (0.0008)
Top 10 wealth	.	.	.	.	.	-0.1252 (0.1033)
Black prop.	.	.	.	.	.	-0.1088 (0.0572)
Literate	.	.	.	.	.	0.0347 (0.0099)
Interstate mig.	.	.	.	.	.	-0.0358 (0.0095)
Constant	9.6973 (0.8441)	0.8707 (0.0073)	0.4226 (0.0140)	0.1414 (0.0151)	0.2288 (0.0104)	0.546 (0.0689)
Adj. R-sq.	0.413	0.086	0.102	0.010	0.009	0.022
N	24102	25025	25035	25035	25035	23241
Mean dep. var.	8.724	0.899	0.509	0.15	0.253	0.284

Notes: Sample is restricted to black men 18 to 40 years old and residing a state of the former Confederacy in 1870. The reference subregion is the South Atlantic. All variables pertain to 1870, except for migration which pertains to 1870-1900. All regressions include age indicators. Regressions are weighted to adjust for selection into linkage. Standard errors are clustered at the 1870 county level. The last column regresses mobility into ownership on cotton intensity and the other variables. It includes men who did not own property in 1870 and omits those in counties with extreme farm value-per-acre, as described in the text.

Sources: See Section 3 of the main text for discussion of sources and variable definitions.

Online Appendix

Appendix Table 1: Summary Statistics, Intra-generational Samples

	Black sample		White sample	
	mean	sd	mean	sd
Mobility into Ownership	0.3014	0.4589	0.5463	0.4978
High Cotton Intensity	0.6444	0.4787	0.1014	0.3019
Northeast	0.0280	0.1651	0.3591	0.4797
Midwest	0.0264	0.1602	0.3230	0.4676
Border States	0.1004	0.3005	0.1251	0.3309
West	0.0007	0.0258	0.0137	0.1162
Sth Atl	0.4272	0.4947	0.0842	0.2776
E Sth Cent	0.2655	0.4416	0.0584	0.2346
W Sth Cent	0.1519	0.3589	0.0364	0.1874
Confederate	0.8446	0.3623	0.1790	0.3834
Military Presence 1870	0.1102	0.3132	0.1909	0.3930
Republican Votes 1872	56.6172	17.5502	55.0519	13.7790
Urban Share of County Pop.	0.0872	0.2074	0.2237	0.3009
Age, 1870	26.4251	6.4542	24.6957	5.7328
N	28,146		346,419	

Notes: This is the sample for the analysis of intra-generational upward mobility into property ownership.

Observations were ages 18 to 40 in 1870 and did not report owning real property in 1870. Mobility into ownership equals one if the observation was a home owner by 1900 (as defined in the text). Observations are weighted to adjust for selection into linkage as described in the main text.

Sources: See descriptions of sources and additional definitions of variables in section 3 of the main text.

Appendix Table 2: Augmented Regressions, Black Intra-generational Mobility

	All	All	All	Confed.	Confed., no TX/VA	Confed., no TX/VA
High cotton intensity	-0.115 (0.0095)	-0.1179 (0.0136)	-0.1255 (0.0131)	-0.1191 (0.0127)	-0.0942 (0.0150)	-0.0931 (0.0151)
Northeast	.	-0.0849 (0.0257)	-0.0485 (0.0629)	.	.	.
Midwest	.	0.0581 (0.0248)	0.0381 (0.0596)	.	.	.
Border	.	0.0165 (0.0181)	0.0235 (0.0469)	.	.	.
West	.	-0.1606 (0.0646)	-0.162 (0.0927)	.	.	.
E Sth Cent	.	0.0022 (0.0110)	-0.0047 (0.0106)	-0.0054 (0.0102)	0.005 (0.0103)	0.0072 (0.0107)
W Sth Cent	.	0.0388 (0.0167)	0.0251 (0.0160)	0.0245 (0.0157)	-0.0081 (0.0175)	-0.0067 (0.0174)
Sugar	.	.	0.0013 (0.0168)	0.0014 (0.0158)	0.0123 (0.0160)	0.0118 (0.0159)
Rice	.	.	0.0198 (0.0096)	0.0215 (0.0101)	0.0338 (0.0097)	0.0339 (0.0096)
Military presence, 1870	.	.	-0.0757 (0.0228)	-0.003 (0.0203)	-0.016 (0.0201)	-0.0195 (0.0196)
Military x Confederacy	.	.	0.0658 (0.0296)	.	.	.
Republican share 1872	.	.	-0.001 (0.0009)	-0.0007 (0.0003)	-0.0007 (0.0003)	-0.0007 (0.0003)
Republican x Confederacy	.	.	0.0002 (0.0009)	.	.	.
Urban share	.	.	-0.1059 (0.0325)	-0.1003 (0.0413)	-0.1124 (0.0482)	-0.1103 (0.0478)
Share of child. in school	.	.	0.1298 (0.0543)	0.1281 (0.0703)	0.1955 (0.0769)	0.1917 (0.0775)
Share of adults literate	.	.	-0.0251 (0.0226)	-0.0201 (0.0233)	-0.0067 (0.0235)	-0.0067 (0.0234)
Literate	.	.	0.0359 (0.0093)	0.042 (0.0108)	0.0474 (0.0117)	0.0473 (0.0117)
Urban	.	.	-0.0352	-0.018	-0.0171	-0.0174

	.	.	(0.0179)	(0.0241)	(0.0239)	(0.0239)
Farmer	.	.	0.0165	0.0057	-0.0029	-0.0031
	.	.	(0.0128)	(0.0137)	(0.0149)	(0.0149)
Farm laborer	.	.	-0.04	-0.0514	-0.0507	-0.0507
	.	.	(0.0094)	(0.0105)	(0.0114)	(0.0114)
Positive personal wealth	.	.	0.0609	0.0547	0.0551	0.055
	.	.	(0.0097)	(0.0105)	(0.0112)	(0.0112)
Rob/Jef	.	.	-0.2139	-0.318	-0.7915	-0.816
	.	.	(0.3353)	(0.3515)	(0.3865)	(0.3937)
Troops 1871-80	.	.	.	-0.0089	0.0005	0.0025
	.	.	.	(0.0123)	(0.0125)	(0.0127)
Blk officeholders	.	.	.	-0.0008	-0.0006	-0.0005
	.	.	.	(0.0016)	(0.0014)	(0.0014)
Lynchings, 1882-1900	.	.	.	.	.	-0.0012
	.	.	.	.	.	(0.0018)
Constant	0.376	0.3707	0.4377	0.4384	0.3997	0.4003
	(0.0077)	(0.0108)	(0.0196)	(0.0213)	(0.0239)	(0.0240)
Adj R-sq.	0.017	0.019	0.029	0.024	0.02	0.02
N	26689	26689	26689	22908	18857	18857

Notes: The sample consists of men who were 18-40 in 1870 and did not report owning real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Age effects are absorbed. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Standard errors are clustered at the county level. Share of children in school and share of adults who are literate are race-specific county-level variables. Literate, urban, farmer, and farm laborer pertain to the individual in 1870. The variable “Rob/Jef” is the change in the share of males whose first names begin with “Rob...” (or “Rbt”) or “Jef...” between the 1860-65 birth cohorts and the 1850-59 birth cohorts. The count of black office holders is from Logan (2019, 2020), originally drawn from Foner (1996). Lynching count data are from Project HAL (Hines and Steelwater n.d.) and does not include Texas or Virginia, hence the change in number of observations.

Sources: See Sections 3 and 5 of the main text for discussion of sources and variable definitions.

Appendix Table 3: Summary Statistics, Intergenerational Mobility Samples

	Black sample		White sample	
	mean	sd	mean	sd
Mobility into Ownership	0.1756	0.3805	0.2684	0.4431
High Cotton Intensity	0.6792	0.4668	0.1018	0.3023
Northeast	0.0179	0.1325	0.3608	0.4802
Midwest	0.0183	0.1340	0.2872	0.4525
Border States	0.0865	0.2811	0.1396	0.3465
West	0.0005	0.0219	0.0190	0.1367
Sth Atl	0.4207	0.4937	0.0824	0.2750
E Sth Cent	0.2807	0.4494	0.0639	0.2446
W Sth Cent	0.1754	0.3803	0.0471	0.2117
Confederate	0.8769	0.3286	0.1934	0.3950
Military Presence 1870	0.0953	0.2937	0.2834	0.4506
Republican Votes 1872	56.4301	17.8730	54.0500	13.7580
Urban Share of County Pop.	0.0709	0.1871	0.2968	0.3557
Age, 1870	6.7448	5.3882	6.0227	5.4221
N	33,673		262,373	

Notes: This is the sample for the analysis of intergenerational upward mobility into property ownership. Observations were ages 0 to 18 in 1870 and lived with parent heads of household who did not report owning real property in 1870. Mobility into ownership equals one if the son was a home owner by 1900 (as defined in the text). Observations are weighted to adjust for selection into linkage as described in the main text.
Sources: See descriptions of sources and additional definitions of variables in section 3 of the main text.

Appendix Table 4: Augmented Regressions, Black Intergenerational Mobility

	All	All	All	Confed.	Confed., no TX/VA	Confed., no TX/VA
High cotton intensity	-0.0351 (0.0071)	-0.0502 (0.0100)	-0.0607 (0.0090)	-0.0559 (0.0094)	-0.0485 (0.0118)	-0.048 (0.0117)
Northeast	.	-0.1057 (0.0151)	-0.0465 (0.0503)	.	.	.
Midwest	.	-0.0203 (0.0174)	-0.0165 (0.0455)	.	.	.
Border	.	-0.0163 (0.0140)	-0.0181 (0.0352)	.	.	.
West	.	-0.21 (0.0148)	-0.1696 (0.0589)	.	.	.
E Sth Cent	.	-0.0051 (0.0078)	-0.0064 (0.0072)	-0.0057 (0.0073)	-0.0011 (0.0073)	-0.0002 (0.0076)
W Sth Cent	.	0.0365 (0.0119)	0.031 (0.0119)	0.031 (0.0114)	0.003 (0.0122)	0.0036 (0.0125)
Sugar	.	.	0.0129 (0.0113)	0.0146 (0.0114)	0.0242 (0.0121)	0.024 (0.0122)
Rice	.	.	0.0285 (0.0072)	0.0303 (0.0072)	0.0352 (0.0070)	0.0353 (0.0070)
Military presence, 1870	.	.	-0.0795 (0.0226)	0.0152 (0.0138)	0.0082 (0.0155)	0.0069 (0.0161)
Military x Confederacy	.	.	0.0684 (0.0237)	.	.	.
Republican share 1872	.	.	-0.0001 (0.0007)	-0.0002 (0.0002)	-0.0001 (0.0002)	-0.0001 (0.0002)
Republican x Confederacy	.	.	-0.0003 (0.0007)	.	.	.
Urban share	.	.	-0.0521 (0.0269)	-0.0598 (0.0272)	-0.0627 (0.0352)	-0.0619 (0.0356)
Share of child. in school	.	.	-0.0186 (0.0442)	-0.0043 (0.0543)	0.0415 (0.0622)	0.0396 (0.0634)
Share of adults literate	.	.	-0.0051 (0.0167)	0.0003 (0.0178)	0.0145 (0.0189)	0.0145 (0.0187)
In school	.	.	0.0184 (0.0103)	0.0219 (0.0122)	0.0325 (0.0131)	0.0326 (0.0131)
Urban	.	.	-0.0221 (0.0134)	-0.0238 (0.0160)	-0.03 (0.0165)	-0.0304 (0.0165)
Head, pos. pers. wealth	.	.	0.0151	0.009	0.0042	0.0042

	.	.	(0.0059)	(0.0063)	(0.0065)	(0.0065)
Head, literate	.	.	0.0014	0.0061	0.0004	0.0004
	.	.	(0.0070)	(0.0077)	(0.0085)	(0.0085)
Head, female	.	.	-0.0151	-0.0172	-0.0128	-0.0128
	.	.	(0.0071)	(0.0074)	(0.0081)	(0.0081)
Head, farmer	.	.	0.0039	0.0036	0.0047	0.0047
	.	.	(0.0094)	(0.0101)	(0.0109)	(0.0109)
Head, farm laborer	.	.	-0.0243	-0.0255	-0.0265	-0.0265
	.	.	(0.0068)	(0.0073)	(0.0080)	(0.0080)
Rob/Jef	.	.	-0.0543	-0.0747	-0.2921	-0.3018
	.	.	(0.2620)	(0.2705)	(0.2929)	(0.2917)
Troops 1871-80	.	.	.	-0.0266	-0.0201	-0.0194
	.	.	.	(0.0079)	(0.0078)	(0.0081)
Blk officeholders	.	.	.	-0.0006	-0.0005	-0.0005
	.	.	.	(0.0008)	(0.0007)	(0.0007)
Lynchings, 1882-1900	.	.	.	.	.	-0.0005
	.	.	.	.	.	(0.0013)
Constant	0.1994	0.2084	0.2416	0.2327	0.2158	0.216
	(0.0058)	(0.0080)	(0.0136)	(0.0152)	(0.0178)	(0.0178)
Adj. R-sq.	0.021	0.024	0.029	0.028	0.025	0.025
N	33650	33650	33650	29811	24373	24373

Notes: The sample consists of men who were 0-18 in 1870 and lived with a parent head of household who did not own real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Age effects are absorbed. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Standard errors are clustered at the county level. Share of children in school and share of adults who are literate are race-specific county-level variables in 1870. The variables for literate, urban, farmer, and farm laborer pertain to the individual in 1870. The variable “Rob/Jef” is the change in the share of males whose first names begin with “Rob...” (or “Rbt”) or “Jef...” between the 1860-65 birth cohorts and the 1850-59 birth cohorts. The count of black office holders is from Logan (2019, 2020), originally drawn from Foner (1996). Lynching data are from Project HAL (Hines and Steelwater n.d.) and does not include Texas or Virginia, hence the change in number of observations.

Sources: See Sections 3 and 5 of the main text for discussion of sources and variable definitions.

Appendix Table 5: Mobility and “Very High” Cotton Intensity, Sample Restricted to High Intensity Cotton Counties

	Black Intra-gen	Black Intergen	White Intra-gen	White Intergen
Very High Cotton Intensity	-0.0883 (0.0107)	-0.0566 (0.0078)	-0.0251 (0.0081)	0.002 (0.0107)
E Sth Cent	0.0288 (0.0097)	0.012 (0.0077)	0.0335 (0.0094)	0.0423 (0.0120)
W Sth Cent	0.1063 (0.0135)	0.0689 (0.0103)	0.0885 (0.0098)	0.0896 (0.0144)
Military presence, 1870	-0.0087 (0.0237)	0.0006 (0.0119)	-0.0377 (0.0212)	-0.0361 (0.0198)
Republican Share 1872	-0.0006 (0.0002)	-0.0003 (0.0002)	-0.0003 (0.0002)	-0.0006 (0.0003)
Urban Share	-0.0082 (0.0442)	-0.0439 (0.0292)	-0.0797 (0.0440)	-0.0815 (0.0370)
Constant	0.325 (0.0144)	0.203 (0.0116)	0.5735 (0.0121)	0.3488 (0.0175)
Adj. R-sq.	0.016	0.024	0.007	0.046
N	18268	23092	28572	22048

Notes: The sample consists of men residing in “high cotton intensity” counties of the former Confederacy in 1870. That is, all men resided in counties with above southern median cotton per capita production in 1870. The coefficient on “very high cotton intensity” is the conditional difference in mobility into ownership between the top quartile and next quartile of cotton-per-capita.

Sources: Linked sample description and variable definitions are provided in the main text.

Appendix Table 6: Correlates of Black Intra-generational Mobility into Property Ownership, Zimran Links

	All	All	All	Confed.
High cotton intensity	-0.1134 (0.0107)	-0.1304 (0.0168)	-0.137 (0.0145)	-0.1366 (0.0144)
Northeast	.	-0.0949 (0.0293)	-0.0337 (0.0643)	.
Midwest	.	0.0551 (0.0267)	0.0624 (0.0594)	.
Border States	.	-0.0094 (0.0190)	-0.0206 (0.0488)	.
West	.	-0.1246 (0.1217)	-0.1185 (0.1265)	.
E Sth Cent	.	0.0107 (0.0129)	0.0129 (0.0128)	0.0129 (0.0128)
W Sth Cent	.	0.0567 (0.0204)	0.057 (0.0171)	0.0569 (0.0171)
Military presence, 1870	.	.	-0.0784 (0.0247)	0.0074 (0.0272)
Military x Confederacy	.	.	0.0873 (0.0357)	.
Republican Share 1872	.	.	-0.0003 (0.0009)	-0.0007 (0.0003)
Republican x Confederacy	.	.	-0.0004 (0.0010)	.
Urban Share	.	.	-0.1029 (0.0421)	-0.0987 (0.0623)
Constant	0.3817 (0.0086)	0.3837 (0.0130)	0.433 (0.0203)	0.4321 (0.0202)
Adj. R-sq.	0.016	0.019	0.023	0.019
N	19757	19757	19757	16760

Notes: The sample consists of men who were 18-40 in 1870 and did not report owning real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. The Northeast and West regions correspond to usual census delineations. “Border states” (DE, MD, DC, WV, KY, and MO) did not join the Confederacy. The West South Central, East South Central, and South Atlantic states were members of the former Confederacy (i.e., not in the “border state” category). Urban share pertains to the county’s whole population. Standard errors are clustered at the county level.

Sources: See Section 3 of the main text for discussion of sources and variable definitions. The census record links are from Zimran (2022).

Appendix Table 7: Correlates of Black Intergenerational Mobility into Property Ownership, Zimran Links

	All	All	All	Confed.
High cotton intensity	-0.0399 (0.0078)	-0.0591 (0.0115)	-0.063 (0.0101)	-0.0632 (0.0101)
Northeast	.	-0.1157 (0.0174)	-0.0135 (0.0526)	.
Midwest	.	0.0071 (0.0199)	0.062 (0.0489)	.
Border States	.	-0.0277 (0.0149)	0.0101 (0.0405)	.
West	.	-0.1284 (0.0952)	-0.0253 (0.0989)	.
E Sth Cent	.	-0.0013 (0.0093)	-0.0006 (0.0090)	-0.0004 (0.0090)
W Sth Cent	.	0.0353 (0.0125)	0.0347 (0.0107)	0.0348 (0.0107)
Military presence, 1870	.	.	-0.0919 (0.0221)	-0.008 (0.0146)
Military x Confederacy	.	.	0.0819 (0.0230)	.
Republican Share 1872	.	.	-0.0011 (0.0008)	-0.0004 (0.0002)
Republican x Confederacy	.	.	0.0006 (0.0008)	.
Urban Share	.	.	-0.0456 (0.0288)	-0.0502 (0.0378)
Constant	0.2136 (0.0064)	0.2255 (0.0091)	0.256 (0.0133)	0.256 (0.0133)
Adj. R-sq.	0.02	0.023	0.025	0.023
N	25547	25547	25547	22497

Notes: The sample consists of men who were 0-18 in 1870 and lived with a parent head of household who did not own real estate. The dependent variable equals 1 if the individual was recorded as a homeowner in 1900. Regressions are weighted to adjust for selection into linkage. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. Urban share pertains to the county's whole population. Standard errors are clustered at the county level.

Sources: See Section 3 of the main text for discussion of sources and variable definitions. The census record links are from Zimran (2022).

Appendix Table 8: Reduced Form and IV Analysis of Mobility into Ownership, Alabama Black Men

	Reduced form	First stage, bales p.c.	IV: Mobility into ownership	First stage, very high cotton intensity	IV: Mobility into ownership
Alabama black belt	-0.0784 (0.0169)	0.1722 (0.0603)	. .	0.4352 (0.0965)	. .
Bales per capita	.	.	-0.4552 (0.1458)	.	.
Very high cotton intensity	.	.	.	.	-0.1801 (0.0355)
Constant	0.2688 (0.1250)	0.4531 (0.0804)	0.475 (0.1445)	0.4637 (0.1553)	0.3523 (0.1266)
Adj. R-sq	0.012	0.15	0.004	0.221	0.013
N	3155	3155	3155	3155	3155

Notes: The sample consists of men who were 18-40 in 1870 and did not own real estate. Alabama counties are coded zero or one for “black belt” according to the USDA’s Soil Associations map (Turnure 1938) in Appendix Figure 1. We compared this map to the 1870 county boundaries in Thorndale and Dollarhide (1987). Regressions control for a quadratic in age. Standard errors are clustered at the 1870 county level. The first-stage F-statistic in column 2 is 8.14 and in column 4 is 20.33. We use the “very high cotton intensity” category here (indicator for top quartile in cotton bales per capita) because nearly all Alabama black men are in the broader group of “high intensity” counties (above the southern median in cotton production per capita).

Sources: See descriptions of sources and additional definitions of variables in sections 3 and 5 of the main text. See also Appendix Figure 1.

Appendix Table 9: Black Men’s Interstate Migration and Mobility into Ownership

	Non-owner	Owner	Total
Panel A: Intra-generational sample, Former Confederacy			
Non-migrant	52.6	22.4	75.1
Migrant	18.5	6.4	24.9
Total	71.1	28.9	100
Low cotton intensity			
Non-migrant	43.2	31.1	74.4
Migrant	19	6.6	25.6
Total	62.3	37.7	100
High cotton intensity			
Non-migrant	55.6	19.7	75.3
Migrant	18.3	6.4	24.7
Total	73.9	26.1	100
Panel B: Intergenerational sample, Former Confederacy			
Non-migrant	64.1	14.3	78.5
Migrant	18.3	3.2	21.5
Total	82.5	17.5	100
Low cotton intensity			
Non-migrant	52.4	17.6	70
Migrant	26.3	3.7	30
Total	78.8	21.2	100
High cotton intensity			
Non-migrant	67.5	13.4	80.9
Migrant	16	3.1	19.1
Total	83.5	16.5	100

Notes: Confederacy, low cotton intensity, and high cotton intensity refer to the 1870 location. Observations are weighted for selection into linkage as described in the text. The interior four cells of each panel sum to 100.

Sources: Linked samples are described in text.

Appendix Table 10: Black Men's Mobility into Ownership and Interstate Migration, Conditioning on Age

	Confed sample	Low cotton	High cotton
Panel A: Intra-generational sample			
Migrant	-0.0427 (0.00934)	-0.159 (0.0190)	-0.00635 (0.0101)
Constant	0.299 (0.00695)	0.418 (0.0136)	0.263 (0.00708)
Observations	24,076	5,808	18,268
R-squared	0.005	0.026	0.004
Panel B: Intergenerational sample			
Migrant	-0.0373 (0.00758)	-0.127 (0.0143)	-0.00945 (0.00834)
Constant	0.183 (0.00482)	0.250 (0.0115)	0.166 (0.00497)
Observations	29,831	6,739	23,092
R-squared	0.021	0.055	0.016

Notes: Confederacy, low cotton intensity, and high cotton intensity refer to the 1870 location. All regressions are weighted as described in the text and absorb age effects.

Sources: Linked samples are described in text.

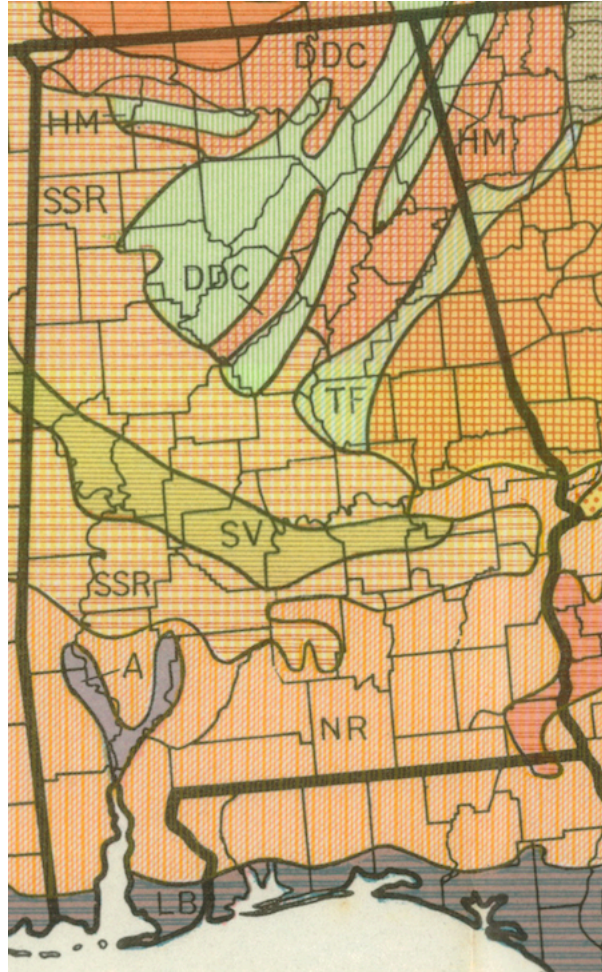
Appendix Table 11: Heterogeneity in Black Upward Mobility and Black Population Share

	Intra-gen, < 25 pct black	Intra-gen, ≥ 25 pct black	Intergen, < 25 pct black	Intergen, ≥ 25 pct black
High cotton intensity	-0.0422 (0.0294)	-0.1216 (0.0145)	-0.0290 (0.0224)	-0.0567 (0.0100)
E Sth Cent	0.0281 (0.0278)	-0.0044 (0.0116)	-0.0111 (0.0218)	-0.0046 (0.0083)
W Sth Cent	0.0985 (0.0404)	0.0330 (0.0152)	0.0611 (0.0283)	0.0316 (0.0110)
Military 1870	0.0400 (0.0503)	0.0023 (0.0218)	-0.0287 (0.0503)	0.0046 (0.0131)
Republican 1872	0.0012 (0.0007)	-0.0004 (0.0003)	0.0011 (0.0006)	-0.0002 (0.0002)
Urban share	0.1423 (0.2104)	-0.0724 (0.0392)	-0.2508 (0.1636)	-0.0779 (0.0315)
Constant	0.3333 (0.0360)	0.3990 (0.0206)	0.1903 (0.0304)	0.2289 (0.0142)
R-squared	0.016	0.015	0.028	0.023
Observations	1943	22133	2583	27248

Notes: Samples consist of men who resided in former states of the Confederacy in 1870, split by the share of the county's population that was black in that year (below and above 25 percent).

Sources: Linked samples and variable definitions are provided in the main text.

Appendix Figure 1: Alabama Counties in “Soil Associations of the United States” Map



Notes: We coded the counties covered in part by the SV region (“Sumter-Vaiden”) as “black belt” counties in Appendix Table 5’s analysis. This includes, from west to east: Pickens, Greene, Hale, Perry, Dallas, Lowndes, Montgomery, Macon, and Bullock counties (based on 1870 boundaries in Thorndale and Dollarhide 1987). A small portion of eastern Sumter County falls within the SV band above. Recoding it to “black belt” does not alter the qualitative results described in the text.

Source: Turnure, Robert F. (1938), “Soil Associations of the United States.” USDA, Bureau of Chemistry and Soils.