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

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Abstract: We shed new light on the foundations and persistence of Black-white disparities in wealth by examining datasets of linked census records. Specifically, we characterize and compare Black and white men's mobility into property ownership between 1870, the first census taken after the Civil War and end of slavery, and 1900. We find that if Black men's mobility into property ownership, conditional on not owning property in 1870, had mirrored that of white men, the Black-white home ownership gap in 1900 would have been quite small—far smaller than has ever been achieved in US history. We also find that for Black men located in "cotton-intensive" counties in 1870, the likelihood of owning property by 1900 was far lower than for Black men located elsewhere. This is apparent in national samples as well as in samples restricted to the states of the former Confederacy, and it is apparent in both intra-generational and intergenerational analyses. This geographic pattern is associated with sharecropping and tenancy, but it is not explained by differences in local land values, access to schooling, the concentration of real estate wealth, the presence of federal troops, or voting patterns during Reconstruction. For white men, the mobility difference was much smaller between cotton-intensive and other areas, and their rate of upward mobility into ownership conditional on observables was much higher than for Black men.

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## 1. Introduction

Although nearly 160 years have passed since the end of the US Civil War, the economic ramifications of the Reconstruction Era (1865-77) and its aftermath are still with us. Today's Black-white disparities, a major social concern and long-running focus of public policy debates, are rooted in the economics and politics of the late nineteenth century. Only 7 percent of Black household heads owned land in 1870, reflecting the prevalence of slavery before the Civil War and the federal government's decision against distributing resources to freedpeople after the war.[1] Yet, despite their initial poverty and the eventual rise of the "Jim Crow" regime of disenfranchisement and segregation, Black Americans accumulated substantial wealth holdings by 1900, primarily in the form of home and farm ownership (Du Bois 1901, Higgs 1982, Margo 1984, Derenoncourt *et al*. 2022). In fact, cross-sectional data sources indicate that Black-white gaps in home ownership and wealth narrowed more in the late nineteenth century than at any time since (Collins and Margo 2011, Derenoncourt *et al.* 2022). A deeper understanding of this era would be valuable because it would clarify the early foundations and sources of persistence for long-run racial disparities in the United States. It may also yield broader insights regarding the fragility of new, post-conflict institutions and their ability to sustain security and promote shared prosperity in the face of entrenched hostility.

In this paper, we analyze datasets of linked census records to discover and analyze the intra- and inter-generational movement of Black and white men into property ownership between 1870 and 1900. The 1870 census was the first taken after the Civil War and the emancipation of the enslaved population. It was, therefore, the first to enumerate the entire Black population by name, which enables linkage with later census records. Emancipation entailed no permanent redistribution of land or wealth to those formerly enslaved. Instead, the vast majority of the southern Black population entered the post-war era with few economic resources apart from their ability to supply labor to the market.[2] In an era and region dominated by agriculture, Black Americans made the acquisition of land a priority (Du Bois 1901, Foner 1988). Ownership of land provided not only a source of income and consumption, but also a source of independence from white employers, many of whom had enslaved Black workers before the war and sought to re-assert white dominance afterwards. Black households' acquisition of property was an important first step toward narrowing racial disparities in

[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.
[2] See Cox (1958), Oubre (1978), Foner (1988), and Ransom (2005) for discussions of unsuccessful proposals for land redistribution.

wealth, economic power, and well-being, albeit in a context of eroding civil and political rights. This paper provides new insights on the micro-level dynamics of this process.

To develop evidence on transitions into property ownership, we link census records for the same individual at two points in time (Abramitzky *et al*. 2020, Zimran 2022).[3] The linked datasets provide new perspectives on Black-white differences in economic status and prospects for upward economic mobility after the Civil War, including variation across space. This level of detail has not been examined in prior work on property ownership in the late nineteenth century.[4] For the *intra*-generational analyses, we observe men who were ages 18 to 40 in 1870 and then observe them again in 1900. More than 90 percent of Black men in this age group were born into slavery.[5] The analyses reveal how their quest for property ownership unfolded over their lifecycle and varied with their personal characteristics and local environment. For the *inter*-generational analyses, we focus on males, ages 0 to 18, who were living with a parental head of household in 1870. This analysis allows us to characterize each household's economic situation in 1870 and the strength of its association with the son's outcome in 1900.[6]

We first show that the Black-white mobility gaps into property ownership were large and consequential. For perspective, a simple counterfactual based on aggregate mobility matrices illustrates that *the Black-white gap in ownership 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 white men*.[7] In practice, and more than 120 years later, 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, differences in upward mobility conditional on initial conditions have been empirically crucial in underpinning more readily observed Black-white cross-sectional disparities.

We then examine the microdata and focus on variation in mobility-into-ownership rates for men who did not already own real property in 1870 (or for sons whose parents did not own property).

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[3] See Bailey *et al*. (2020) and Abramitzky *et al*. (2021) for discussion of the opportunities and challenges of automated record linkage.

[4] Collins, Holtkamp, and Wanamaker (2023), which is most similar in spirit to this paper, studies intergenerational mobility between 1880 and 1900 but with smaller samples and less ability to measure local correlates of mobility.

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

[6] Linking women from childhood into adulthood is difficult due to name changes at marriage, hence our focus on linking men.

[7] 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.

The main finding that emerges from the microdata analysis is that the rate of mobility into property ownership was far lower for Black men who resided in cotton-intensive counties in 1870 than for Black men living elsewhere. This pattern stands out in both the nation-wide dataset and when the sample is restricted to states of the former Confederacy.[8] Moreover, it is evident in both intra- and intergenerational analyses, and with or without conditioning on sub-regional or state fixed effects. This mobility deficit appears to be due to residing in cotton-intensive areas *per se* in 1870. That is, when regressions include a long list of individual, family, and local characteristics, the sizable negative coefficient relating cotton-intensity and Black mobility is not diminished.

Considering mechanisms, preliminary and proximate evidence points to the prevalence of sharecropping (or tenancy) among Black men in such areas, a salient characteristic of the cotton belt and a rung of the "tenure ladder" beyond which many Black farmers did not ascend. In contrast, it is striking that white men residing in cotton-intensive counties in 1870 experienced a much smaller (or no) upward mobility deficit relative to white men elsewhere. Further investigation shows that the low rate of Black upward mobility cannot be attributed to farmland being especially valuable in cotton-intensive areas, to wealth being especially concentrated in such areas, to differences in interstate migration rates, nor to high Black shares of the local population.

Decomposition analyses clarify the empirical importance of cotton-intensive areas to the national-level Black-white gap in mobility-into-ownership. Cotton-intensive areas had relatively low upward mobility rates for Black men, *and* they were home to a relatively large share of the nation's Black population. This combination implies a substantial contribution to the racial mobility gap at the national level. However, the decompositions also reveal that, Black-white differences in geographic distributions (and other observable personal characteristics) circa 1870 can account for only a limited portion of the aggregate mobility gap. That is, shifting the Black population's observable characteristics to match those of the white population, while retaining Black-specific mobility rates conditional on characteristics, would still leave a large overall racial mobility gap. In this sense, the postbellum era's severe and widespread limits on Black economic mobility are salient, above and beyond the initial postbellum disadvantages of poverty, illiteracy, and regional concentration that were rooted in antebellum slavery.

Finally, the micro-level analyses allow us to address other important themes in the economic history of this era and its racial disparities. We investigate the potential roles of variation in the

[8] 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."

presence of federal Army units, strength of Republican voting, and Black literacy and schooling circa 1870 in promoting subsequent upward mobility into property ownership. The results are mixed and, for the most part, quite muted. Within the former Confederacy, the presence of federal military personnel circa 1870 and Republican vote shares in 1872—a variable reflecting Black political strength—are only weakly correlated with Black men's likelihood of upward mobility into property ownership after 1870. The protection federal troops provided during Reconstruction, which was necessary and important but geographically uneven and localized (Downs 2015), does not appear to have left a solid basis for continuing upward mobility for Black men.[9] Regarding schooling and literacy, intra-generational analyses reveal that Black men (age 18-40) who were literate in 1870 were more likely than others to move into homeownership status by 1900, but not by a large amount. The intergenerational results reveal only a weak association between movement into homeownership by 1900 and one's own school attendance or household head's literacy in 1870.

This paper contributes to several branches of research. First, it contributes to the general literature on intergenerational mobility patterns, their role in perpetuating racial inequality, and their unevenness across places (Davis and Mazumder 2018, Chetty et al. 2020, Derenoncourt 2022, Althoff and Reichardt 2023).[10] Recent research has uncovered a striking degree of geographic variation in 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 dynamic 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 most common in historical settings), studies earlier cohorts at finer levels of geography, and emphasizes how local conditions shaped opportunities for upward mobility at a time when agriculture was the dominant economic activity.

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

[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).

[10] For studies on Black-white differences in intergenerational mobility that are less focused on geographic variation, see Duncan (1968), Hertz (2005), 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).

1990, Nier 2008, Baradaran 2017, and Derenoncourt *et al*. 2022). By starting in 1870, we begin with the first generation of post-Civil War Black families—an essential point of departure for any discussion of the origins of modern Black-white wealth disparities. 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 primarily on mobility into property ownership by those who held no property in 1870, our paper offers a perspective on postbellum southern wealth that is complementary to recent work that has focused on the intergenerational status of the white elite (Dupont and Rosenbloom 2018, Ager *et al*. 2019).

Third, the paper contributes to the long-running economics literature on the South's economic under-development compared to the rapid structural transformation occurring elsewhere in the United States (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 expanded and dominated the South's exports. 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 the era's economic development (or, in some places, lack thereof) and its persistent 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 ascendance, regional divergence, and widespread racism. All these forces come into play through the data we have assembled and have a role in interpreting the results.

Last, and more generally, this study illustrates how precarious minority groups' economic mobility and security may be in settings where war has brought forth a new but fragile set of economic and political institutions. Bynam (2021), for instance, points out 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" (p. 56). Glaeser (2005), after proposing his general model of the "political economy of hatred," cites as "Example No. 1" evidence of rising anti-Black hatred after the US Civil War. Downs (2015) shows that after the war, resistance to federal policy and resentment of Black empowerment were widespread: "Soon [ex-Confederates] would launch a powerful insurgency to undermine the army's rule and then topple the military-backed freedpeople's governments in the South" (p. 9). Consequently, within the timeframe we study, Black Americans' civil and political rights were dismantled as the federal government's protection receded

(Du Bois 1935, Foner 1988, Logan 2020, Chacón and Jensen 2020). Our findings view Black Americans' economic progress in this tumultuous period through the lens of property acquisition. As Du Bois (1901) and others have emphasized, Black Americans were determined to better their economic situation, particularly through land ownership. In aggregate, they succeeded in acquiring a significant amount of real estate wealth by 1900. Yet our analyses clearly show that gaining ground was an uphill climb, made in a context of deteriorating civil rights.

**2. Background and Historical Context**

At the conclusion of the Civil War, American policymakers faced fundamental questions regarding the political reintegration of the Confederate states and the rights and resources that would accrue to those formerly enslaved. These questions were intertwined and addressed in the Constitution's Thirteenth, Fourteenth, and Fifteenth Amendments and related legislation, in what Eric Foner has characterized as a "…first attempt, flawed but truly remarkable for its time, to build an egalitarian society on the ashes of slavery" (Foner 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 office holders in the late 1860s and 1870s (Foner 1996, Logan 2020). But as white southerners regained political power and federal influence waned, they gradually rolled back Black southerners' political rights. Violence and intimidation against Black Americans and their political allies were endemic in the South (Downs 2015) throughout the period we study, and the Jim Crow regime of disenfranchisement and rigid segregation ascended.

Despite the rollback of their political and civil rights, Black Americans made significant gains in terms of literacy and property ownership 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 50 percent of the Black population (age 10-69) was literate, and more than 20 percent of male household heads owned their homes.[11] Yet Black income per capita 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.[12] This deficit reflected the relative underdevelopment of the South compared to the non-South, the low levels of human, financial, and physical capital owned by

[11] The literacy figure is from Collins and Margo (2006). The homeownership figure is from Collins and Margo (2011).
[12] Higgs (1977 and 1989) suggests a faster pace of relative income gains between 1870 and 1900, but Margo (2016) points out that Higgs's 1870 estimate is likely too low, and his 1900 estimate is likely too high.

the Black population, and the limits on opportunities for economic advancement due to widespread discrimination in both the South and non-South.

Du Bois (1901, p. 647) pointed out that "one of the greatest problems of emancipation in the United States was the relation of the freedmen to the land." Congress created the Freedmen's Bureau in 1865 to assist those who had been enslaved, including authorization to divide confiscated and abandoned lands in the former Confederacy into 40-acre plots for rent and eventual sale (Oubre 1978, p. 21).[13] 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 recently emancipated Black Americans in their quest for landownership. Neither of these initiatives succeeded in conveying land to many Black Americans. President Andrew Johnson undermined the Bureau's efforts to settle Black families on farms of their own by issuing thousands of pardons to wealthy Confederate supporters, thereby restoring their sizable landholdings.[14] The Southern Homestead initiative was unsuccessful for many reasons: 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).[15]

Instead of becoming a large new class of yeoman farmers under a policy of widespread land redistribution, the vast majority of formerly enslaved Black Americans 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 "farmers," but approximately 90 percent of these farmers did not own land (i.e., their real estate assets were listed as zero). They most likely worked as sharecroppers. In time, sharecropping became a prevalent form of tenure in southern agriculture for poor farmers, both Black and white (Higgs 1974, Ransom and Sutch 1977, Reid 1979). In exchange for access to land and various provisions, sharecroppers agreed to pay the landowner a share of the

[13] 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, thus providing a legal basis for the government's wartime acquisition of privately held southern land. A feature of this legislation, which undermined later 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).

[14] In July of 1865, the Bureau had issued "Circular No. 13," which instructed Bureau agents to set aside 40-acre tracts for freedmen in the hope that such claims would not be reversed by subsequent pardons of Confederates. 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).

[15] Once recognized as US citizens under the Fourteenth Amendment, homesteading elsewhere in the US under the 1862 Homestead Act was possible in theory, but relatively few freedmen pursued homesteading opportunities far from the South (Edwards et al. 2019).

crops produced, with the terms of the contract depending on the amount of capital (e.g., mules) and expertise that the farmer possessed.[16] Alongside this institutional change, cotton production expanded; by 1900, total cotton output had risen by nearly 80 percent compared to 1860 (Olmstead and Rhode 2006).

Scholars have offered contrasting assessments of the role of race in determining opportunities for becoming a landowner in the late nineteenth century South. Based on ownership patterns in Coweta County, Georgia, 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).[17] 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). Higgs did acknowledge that racial discrimination may have limited Black mobility into property ownership, but he emphasized legal rather than private market channels: "…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). In both of these views, racism distorted economic interactions and depressed Black property ownership and economic advancement.

In 1870, approximately 10 percent of the US Black population resided outside the South, and their economic circumstances were, on average, quite different from those prevailing in the South. Before the Civil War, the northern Black population had been free from slavery, and some families

[16] Higgs (1977) reports that "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 Woodman (1995). It was not until 1920 that the census of agriculture began to distinguish between share tenants and sharecroppers. Unfortunately, the manuscripts of the 1920 census of agriculture have been destroyed.

[17] Writing about a later period, Raper (1936) explained that Black landownership "can be achieved only 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).

had been free for several generations (Litwack 1961).[18] After the war, although subject to many forms of economic, political, and social discrimination, Black northerners were far more likely to be literate and possess real estate wealth than Black southerners. Approximately 56 percent could read and write in the North in 1870 (ages 10-69), compared to 15 percent in the South, and approximately 25 percent of male household heads owned real estate in the North compared to 5 percent in the South.[19] Relatively few northern Black men at this time were employed in agriculture compared to those in the South (47 vs. 85 percent).

Much of the discussion in this paper is centered on the experiences of the southern Black population, reflecting their concentration in that region. But for completeness, we always start with a nationwide perspective in describing racial disparities and economic mobility. Doing so enables us to capture 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 "mobility" within and across regions added up to yield the post-Civil War national-level disparities that are foundational to all that has followed.

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

Our core datasets are built using census-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*. 2020) and by Zimran (2022). [This preliminary version of the paper features only the CLP-based links. Future versions will compare results with Zimran-based links.] The crosswalks are on based on algorithms that search for unique matches of individuals in decennial census records at two points in time, relying on name, birthplace, and birthyear similarity in the restricted-access versions of the full count census records (Ruggles *et al*. 2021).[20] Because there is evidence of selection into linkage (i.e., linked samples are not good-as-randomly drawn from the base population), we calculate and employ inverse probability weights in our analyses of the linked samples.[21] In essence, this process adds weight to observations with characteristics that are under-represented in the linked dataset relative to the

[18] 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. Maryland and Virginia had the largest free Black populations.
[19] Authors' calculation using the IPUMS-USA 1 percent sample for 1870.
[20] Specifically, we use the "ABE Exact Conservative" links from the Census Linking Project.
[21] These are based on a probits for linkage (0-1) regressed on 1900 age bins (10-year intervals), 1900 occupation score bins (10-point intervals), 1900 literacy categories (na, illiterate, and literate), a 1900 urban residence dummy, and 1900 census division dummies. Probits are estimated separately by race.

population in the full count census dataset. We focus our attention on US-born males. Nearly all Black men in 1870 were US-born, and we chose to restrict the sample this way to avoid complications from European immigrants and their settlement, assimilation, and return migration patterns.

We merge the publicly available full count census records of 1870 and 1900 into the dataset of *histid* crosswalks mentioned above (Ruggles *et al*. 2023). This choice of years has several advantages and reflects certain data 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 value of real estate (the market value of land and housing owned) and personal wealth (other assets) holdings.[22] The 1870 census dataset from IPUMS also has individual-level information on occupation, industry, literacy, school attendance, urban residence, farm residence, and county. In combination, therefore, it provides the earliest and most comprehensive view of Americans' economic status soon after the Civil War.

There are, however, questions regarding the quality of coverage in the 1870 census.[23] 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, such as under-counting of the poor relative to others, would result in a linked sample that is unrepresentative of the population. This is at least 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. For this preliminary draft of the paper, we have selected a relatively conservative set of links ("ABE exact conservative") with the goal of having relatively high-quality data. In a future draft we will test the sensitivity of all results to alternative approaches to linking.

The 1900 census of population records are the earliest microdata source with information about home ownership. The 1880 census of population did not inquire about home ownership or real estate wealth, and the 1890 census manuscripts were destroyed.[24] "Home ownership," of course, is

[22] Enumerator instructions said that personal wealth below $100 should not be recorded, but often it was. We left the data "as is."
[23] See Hacker (2013), Ransom and Sutch (1977, p. 284), and Reid (1995) for discussion.
[24] See Collins, Holtkamp, and Wanamaker (2023) for evidence based on farm ownership drawn from manuscripts in the 1880 census of agriculture. The 1890 census of population did inquire about home ownership, but the microdata were destroyed.

not as detailed as the "real estate wealth" variable that is available in 1870. In principle, it is possible, but rare in this period, for someone to own real estate but not their home.[25]

The primary outcome of interest in this preliminary version of the paper is mobility-into-ownership. In 1870, we code men as property owners if they report real property holdings of greater than $0 (or $100 to test sensitivity). In 1900, we code men as 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). 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 in this historical context.

The datasets of linked census records are large enough that we can meaningfully examine county-level correlates of economic mobility. We focus on county-of-origin (1870) economic, social, and political characteristics. The county-level variables are constructed from various sources. We calculate some directly from the 1870 full count microdata by collapsing the data to the county level. This includes the county's total population, Black population, urban population, the number of men in the military, the share of children (by race) attending school, the share of adults (by race) who are literate, and the share of all real estate wealth held by the top 10 percent of men.

Other key variables, most importantly cotton production and farmland value per acre, are drawn from the 1870 census of agriculture's published volumes, as reported in Haines, Fishback, and Rhode (2016). We classify a county as "cotton intensive" if its production of cotton bales per capita was above the median level for all southern counties. (We have also tested sensitivity to setting the cotton-intensive threshold at the top quartile.) We gather information on county-level voting patterns in 1872's presidential election (Grant vs. Greeley) from Clubb *et al*. (2006).[26] We draw information on the deployments of federal troops at various points in time between 1865 and 1880 from Downs and Nesbitt (2015). 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.

[25] 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, but it can tell us something about differences across localities and racial groups in the prevalence of mortgage use.
[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 in the South during Reconstruction.

## 4. Empirical framework

We begin by describing national-level, aggregate patterns of mobility into and out of property ownership between 1870 and 1900. We show this from both intra- and intergenerational perspectives. Since very few Black men owned property in 1870, our emphasis is on movement into home ownership in 1900, which we often refer to as "upward mobility."[27] A natural comparison is then with the white population's mobility rate into ownership, conditional on not owning property in 1870. For both groups, movement out of property ownership is also apparent.

We summarize the importance of Black-white differences in mobility patterns by assigning the white mobility matrix to the Black population. That is, the actual Black ownership rate in 1900 can be written as the weighted average of the mobility rate into 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 ($\alpha_{blk}$) and the share that did ($1 - \alpha_{blk}$). We simply replace the Black mobility and persistence rates with the white rates to calculate a counterfactual 1900 Black ownership rate ($= \alpha_{blk} m_{wht} + (1 - \alpha_{blk}) p_{wht}$).

It would be straightforward to partition and expand these mobility matrices, separating the South from the non-South, and so on, though it quickly becomes unwieldy for exposition and interpretation. Instead, we turn to regression analyses of the linked microdata to characterize mobility patterns in more detail. Our baseline regression analyses consist of linear probability models for moving into property ownership by 1900, focusing on subsamples of those who did not own property in 1870 (which, again, is nearly the entire Black sample). We estimate regression equations of the following form:

$$Y_{icd} = \beta_1 Cotton_c + \beta_2 L_c + \beta_3 X_i + \gamma_d + e_{icd}$$

where $Y_{icd}$ 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 (defined above); $L_c$ is a vector of other county-level variables of interest measured circa 1870, including information on military presence, voting, and schooling; $X_i$ is a vector of individual- or household-level variables of interest, again measured in 1870; and $\gamma_d$ is a

[27] One caveat to keep in mind 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.

vector of region fixed effects for the individual's place of residence in 1870.[28] All regressions include age fixed effects.

We estimate equations separately for Black and white males. We also estimate equations separately for *intra*-generational outcomes (for males 18-40 in 1870) and *inter*-generational (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 mobility patterns. We also report results specifically for men who resided in states of the former Confederacy in 1870. 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 within our sample for men to move away from such areas to gain access to land (if doing so was advantageous) before we see them again in 1900. Thus, the coefficient on the variable for "cotton intensive county" measures differences in the average rate of mobility into home ownership for men who started in such counties in 1870 relative to men of the same race who resided elsewhere, with or without additional conditioning variables (e.g., region, literacy, urban residence, etc.). We can then explore potential mechanisms in more depth.

These regressions are descriptive but informative. They provide preliminary evidence on three key themes in the economic history literature on this era. First, the revival and expansion of cotton cultivation after the Civil War was a defining characteristic of the post-bellum 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. Where cotton could be grown profitably, it generally was. Whether residing in an area with intense cotton cultivation as a young man facilitated or deterred mobility into property ownership is theoretically ambiguous and has not been explored empirically to our knowledge. It is possible that areas with intense cotton cultivation enhanced men's opportunities to earn income, accumulate savings, and achieve ownership. But it is also possible that such areas had higher demand for child labor (curtailing education), more frequent indebtedness, or stronger social norms and sanctions against selling productive land to Black families. Support for all of these views can be found in the literature.

Second, the assertion of federal power in the South during Reconstruction, the extent to which the Army protected Black Americans' lives and rights, and the consequences of the federal

[28] 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 also members of the former Confederacy (i.e., not those allocated to the "Border" category).

withdrawal as Reconstruction waned are core themes in this era's history and how it set the stage for large and long-running racial disparities (Du Bois 1935, Foner 1988). In 1870, we pick up the story near the peak of federal influence—the Confederacy had been defeated, Congress had attempted to ensure Black Americans' citizenship and civil rights through legislation, and federal troops were spread throughout the region, albeit at numbers far reduced from the height of war and incapable of fully suppressing violent reprisals against Black Americans and their political allies (Downs 2015).

We approach these issues from three empirical vantage points. In our baseline analyses, we use the 1870 full count census 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, according to their archival work, had federal troops in place during Reconstruction. 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. (Troops, of course, were not randomly allocated over space, and we caution against a causal interpretation of the coefficients.) Finally, for a salient manifestation of Reconstruction-era political change, we use election results from 1872 to characterize the relative strength of support for the Republican candidate (Ulysses S. Grant), an indicator of Black voting and political power. After Reconstruction, white men regained political dominance in the South, and they stripped away Black Americans' civil and political rights. Here, we test whether variation in federal influence and Black political power across localities during Reconstruction had a detectable legacy in terms of Black men's entry into home ownership.

Third, under slavery, Black Americans were forbidden from learning to read and write. Therefore, they entered the post-bellum period with very low levels of literacy, but also with a strong determination to acquire those skills (Margo 1990, Anderson 1988, Margo 1990, Williams 2005). Public schools were established throughout the South after the war, although on a segregated basis and with varying degrees of accessibility and quality. There is strong evidence of rising Black literacy rates throughout the late nineteenth century (Collins and Margo 2006). Literacy may have supported Black economic advances through many channels, including writing and understanding of contracts in agriculture, facilitating migration to more advantageous locations, seeking and securing credit, ensuring fair payment, or perhaps accessing employment opportunities outside agriculture. Of course, literacy might also have reflected selection on unobserved ability, motivation, pre-war conditions, or post-war resources. We pay attention to both individual- and local-level literacy (for adults) or school attendance (for children) to see whether variation in opportunities for the

acquisition of human capital circa 1870 was closely connected to variation in movement into home ownership after 1870.

We estimate the regressions described above separately for Black and white samples. Combined, however, the regressions and underlying samples provide the building blocks for decompositions that partition Black-white differences in upward mobility into a component that can be attributed (in a proximate sense) to differences in observable characteristics and a residual component reflecting conditional differences in mobility patterns.

## 5. Results

*National-level Mobility Patterns and Counterfactuals*

Table 1 reports several 2-by-2 transition matrices for Black and white, intra- and inter-generational mobility patterns. Within each 2-by-2 panel of owner vs. 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. The top panel shows that, among Black men (18-40) in our linked sample, approximately 29 percent owned no real estate in 1870 but had transitioned into home ownership by 1900. The men in the most populated cell, however, were propertyless in both 1870 and 1900 (67 percent). A much smaller group of Black men owned property in 1870 (4 percent of the sample), obviously a stark contrast to a counterfactual history in which 40 acres of land had been distributed to all who had been enslaved. Although most of these men owned their homes in 1900 (2 percent of sample), many did not. We do not put too much weight on interpreting the row for Black property owners in 1870 due to their small share of the sample and because errors and mismatches in the linked data introduce some noise.

Black intergenerational patterns are qualitatively similar: by far the sample's largest cell is for "non-owning" household heads in 1870 and "non-owning" 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. We note that in 1900 the men in the intergenerational analysis are ages 30 to 48. Given that the age-ownership gradient was still upward sloping in this range, more men in this cohort would have gained ownership later in their lifecycle. But this snapshot is still revealing, especially in comparison with the transitions for similarly aged white men, discussed below. Only 2 percent of the Black sons in our sample populate the cell for land-owning household heads and home-owning sons.

The white transition matrices are strikingly different from those for the Black population. In the intra-generational panel, fewer white men than Black men, ages 18-40, 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" by 1900, at 39 percent of the sample. Only 33 percent of the white intra-generational sample (compared to 67 percent of the Black sample) were "non-owners" in both 1870 and 1900. About 20 percent of white men were real property holders in both 1870 and 1900 (compared to 2 percent of Black men). Among men who owned no real property in 1870, 54 percent of white men transitioned "up" to home ownership by 1900 compared to only 30 percent (0.288/0.961) of Black men.[29]

The intergenerational transition matrices are also quite different for Black and white sons. Whereas the "non-owner" household head and "non-owner" son cell is dominant for the Black sample (75 percent), only 27 percent of the white sample falls into that cell. Whereas 91 percent of Black sons in 1870 resided with "non-owner" household heads, only 37 percent of white sons did. As for evidence of "upward mobility": conditional on residing with a non-owner household head in 1870, 17 percent of Black sons moved into home ownership by 1900 compared to 26 percent of white sons. Again, in this sense, there was a sizable Black-white gap in upward mobility gap. It is interesting, and perhaps surprising, that there is a sizable group of white sons (37 percent of the white sample) who resided with "owner" household heads in 1870 but did not themselves own homes in 1900. As mentioned above, we observe the sons at ages 30-48, and it is likely that more would have gained ownership status later in their lifecycle. But it is also clear that having a household head who owned real property was no guarantee of the son's homeownership. This may, in part, reflect the era's rapid urban growth, which tended to attract young workers to places where home ownership rates were relatively low (Collins and Margo 2011).

The widely 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 patterns were, we can cycle the Black population through the white transition matrix to yield a counterfactual Black home ownership rate in 1900. Taking as given the low rate of Black ownership in 1870 and applying the white intra-generational mobility matrix, 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 nearly equals the white ownership rate of

[29] It is notable that 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 likely working on a "family farm"). The "upward" mobility rate in this group is similar to that in the full sample.

59 percent. That is, within in a single generation post-emancipation, the home ownership gap would have been nearly eliminated under a scenario of equal mobility rates (conditional on 1870 ownership status). For historical perspective, Collins and Margo (2011) report that the home ownership rate for Black male household heads, ages 55-64, finally reached 53 percent in 1960.

This mobility gap was not merely a reflection of Black-white differences in personal wealth holdings circa 1870 (i.e., non-real estate wealth), at least to the extent that such can be seen in the census returns.[30] 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 is little changed.

Moreover, it does not appear that the 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.[31] When we drop landless white men who resided in the Midwest in 1870 from the sample (i.e., those who would have been most proximate to lands for homesteading), the white mobility patterns are similar to those in the full sample.

The main takeaways from Table 1 are as follows. First, despite their extremely low levels of wealth and literacy in 1870, their concentration in the South, and the rise of Jim Crow institutions, many Black households attained property ownership by 1900. In our 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 of propertyless Black men in 1870 were home owners by 1900 (while still relatively young men). To be sure, we would surmise that the average value of Black-owned homes was substantially less than that of white-owned homes in 1900, but nonetheless the convergence in property ownership at the extensive margin was historically important and contributed to an overall narrowing of the Black-white wealth gap.[32] 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. Our back-of-the-

[30] Enumerators were instructed to record personal property wealth if the total exceeded $100. When we restrict the analysis to men with zero wealth reported, it is possible that there were unobservable differences within the 0-99 interval.

[31] 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).

[32] The average Black-owned farm was much less valuable than the average white-owned 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.

envelope counterfactual highlights the empirical significance of that mobility gap. In the paper's subsequent sections, we dig deeper into the patterns of Black and white mobility that are embedded in the microdata, with emphasis on harnessing variation across places and individuals to better understand the dynamics and disparities of upward mobility.

*Disaggregated Patterns*

Figure 1A 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. Figure 1B 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. We map the information for all counties in which we have at least 10 observations in the linked dataset, though all men are used in the analyses below. The maps reveal a great deal of variation across space and race, which will be central to the regression analyses conducted below.

Figure 2A summarizes intra-generational upward mobility rates by region of residence in 1870 for each race group. Black men's rates were variable across regions, with relatively high rates in the Midwest and Border states compared to the southern subregions where the Black population was concentrated. White men's rates were high and relatively even across regions, although with substantially lower rates for the Northeast than the Midwest or South. Comparing Black to white mobility rates within regions, white rates were much higher than Black rates everywhere, especially the East South Central.[33]

Figure 2B summarizes similar information for the inter-generational sample, which consists of young men (0-18) who resided with a household head who reported zero real estate wealth in 1870. The patterns are qualitatively similar to those in 2A in that white mobility rates far exceeded Black rates everywhere, and the Northeast had low mobility rates for both race groups. There is more variability across regions for white men in Figure 2B than in 2A, with the highest intergenerational mobility into ownership in the West, West South Central, and East South Central. For the Black sample, the Midwest and West South Central states were most conducive to intergenerational mobility into home ownership.

[33] In our regional categorization, "East South Central" is Tennessee, Alabama, and Mississippi; we place Kentucky in the Border state group with Delaware, Maryland, West Virginia, Washington DC, and Missouri. The Border states were not part of the Confederacy—a meaningful distinction in this paper's context. "West South Central" is Arkansas, Texas, and Louisiana. There are very few Black observations in the intergenerational sample in the West in 1870.

*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. For reference, Appendix Table 1 reports summary statistics. Since 96 percent of Black men, 18-40, reported owning no real estate in 1870's census, this segment of the mobility matrix is of particular interest. Column 1's specification is parsimonious—it measures the differential likelihood of moving into home ownership for Black men in cotton-intensive counties relative to others, controlling only for the individual's age. Column 2 adds regional fixed effects, so that the estimate of $\beta_1$ is based on within region differences. In both columns 1 and 2, Black men had far lower chances for moving into home ownership if residing in cotton-intensive areas in 1870, by about 12 percentage points.[34] Regional differences are also notable. Relatively few Black men lived in the Midwest (3 percent), where mobility into ownership was highest, but a sizable number resided in the West South Central (15 percent), the next highest region.

Column 3 adds a long list of county- and individual-level characteristics to the regression ($L_c$ and $X_i$). Column 4's specification is identical, but the sample is restricted the states of the former Confederacy. The additional variables likely entail "bad controls"; for instance, low rates of local literacy or schooling may be a result of intense cotton agriculture rather than something one would want to "control for" if seeking the full "effect of cotton." But the idea at this point is to see whether the large cross-place differences in mobility, as revealed in columns 1 and 2, were underpinned by differences in readily observable economic and political characteristics. They were not—the estimates of $\beta_1$ hover around -0.12. Black men who reported positive personal wealth in 1870 were more likely than others to ascend to home ownership by 1900, whereas those working as farm laborers or residing in urban areas (or in counties with high rates of urbanization) were less likely to do so. But in each regression, the sizable difference between cotton-intensive and other places persists.

The results in columns 3 and 4 shed some light on the empirical relevance of other major themes in the literature, at least as they pertain to Black gains in property ownership. In column 4 (Confederacy only), there is no evidence that men in places with a military presence in 1870 or higher voting rates for Ulysses S. Grant in 1872 had higher mobility-into-ownership than in other

[34] 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.

places. The same is true if we replace census-based counts of men with military occupations (baseline) 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 (results not shown in table). Thus, any short-term protection of the Black population's rights and exercise of political power during Reconstruction left little detectable legacy in terms of home ownership in 1900.

There is, on the other hand, some evidence that literate Black men fared better, *ceteris paribus*, by about 4 pp (columns 3 and 4). This suggests some advantages associated with human capital, even when the regression includes indicators for broad 1870 occupational categories such as "farmer" and "farm laborer" and when the sample is restricted to states of the former Confederacy.

In sum, the finding of a significant deficit in upward mobility for Black men in cotton-intensive regions relative to Black men in other areas (column 1) is not driven by differential literacy, personal wealth circa 1870, federal troop presence, or 1872 voting patterns. Nor does the finding depend on comparisons across the North and South. That is, the pattern is apparent within the former Confederacy, even when fixed effects for southern sub-regions are included.

*What was it about cotton-intensive places that may have impeded Black movement into property ownership?* From the vantage point of 1900, it is clear that Black men who resided in cotton-intensive areas in 1870 followed quite different occupational trajectories than those elsewhere. The most striking difference between Black men from cotton-intensive counties and those from other counties in the former Confederacy is the large share who, in 1900, were "farmers" but not "home owners" (44 percent versus 22 percent in the intragenerational analysis). The difference across high- and low-cotton-intensity counties in the share of Black men who were farmers and owned homes was small (21 vs 18 percent), as was the difference in the share who worked as agricultural laborers (14 vs 13 percent). In sum, Black men who resided in cotton-intensive counties in 1870 were far more likely to work in agricultural occupations in 1900 than men from elsewhere *and* nearly all the "extras" were likely sharecroppers or tenant farmers (i.e., farmers who did not own their homes).[35] In this sense, the size and organization of the agricultural sector in cotton-intensive areas were distinct and closely related to the lack of Black gains in home ownership.

[35] 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 clearly identify sharecroppers. We rely on the combination of information from the occupation and home ownership variables.

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

To go beyond this observation of the proximate differences in occupational patterns across cotton-intensive and other areas, we explored four simple economic interpretations for Black men's low mobility into ownership. First, it is possible that land was relatively valuable in these areas and therefore difficult to acquire. Second, it is possible that landholdings in such areas were relatively concentrated. If so, and with Ransom and Sutch's argument in mind (quoted above), a small number of potential sellers might more effectively collude to keep local land out of the hands of potential Black buyers. Third, perhaps geographic mobility from such areas was more difficult, and perhaps this impeded Black men's movement to areas where land was easier to obtain. Fourth, one can sketch a simple model of land prices faced by potential Black buyers, in which all land is initially owned by white households with varying degrees of discriminatory sentiment (i.e., they would have to be paid a premium to sell land to Black buyers).[36] If so, Black households in places with a large number of potential Black buyers relative to the number of less-discriminatory sellers might face relatively high prices. Some land might change hands, but a large share of the Black population would find it too costly.

We constructed four variables to help evaluate these interpretations. From the census of agriculture, we calculated the county-level average value of farmland per acre in 1870. We added this to the regressions from columns 3 and 4 as a series of indicator variables for quartiles of land value. From the census of population microdata for 1870, we calculated the share of real estate wealth held by the top 10 percent of each county's male population. For each individual, we constructed an indicator variable for interstate migration between 1870 and 1900. Finally, for each county we calculated the Black share of the population using the full count 1870 census data (entered into

[36] This is akin to a Becker model in which a large supply of Black workers relative to the number non-discriminatory employers leads to Black-white wage gaps. Note that the model posited in the text does not align well with Higgs's reading of the historical record (1977, p. 52), but it is worth exploring.

regressions in quartic form). The addition of these variables (not shown in table), however, only slightly diminishes the regression estimate of $\beta_1$ (-0.11). We will explore this further in future work.

*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 by 1900. Again, since in 1870 more than 90 percent of Black males aged 0 to 18 lived with household heads who did not own property, this type of upward mobility is of central interest.

In general, the findings echo those from the intragenerational analysis.[37] There is a strong and consistent negative association between this measure of upward mobility and residing in a cotton-intensive area in 1870. Once region fixed effects are included, the gap is typically around 5 to 6 percentage points (relative to a sample mean of 18 percent). In column 2, the West South Central again appears to be relatively conducive to Black mobility into ownership. In columns 3 and 4, there is no evidence that the presence of military in 1870 or voting for Ulysses S. Grant in 1872 supported higher mobility rates. Those who attended school in 1870 fared somewhat better than others in terms of gaining home ownership (0.02), though the coefficients are not precisely estimated. There is no evidence that having a literate household head or residing in a place with higher adult literacy rates was associated with higher mobility into ownership, *ceteris paribus*. Sons of farm laborers and those in urban areas fared somewhat worse than others. But, again, the most striking correlation is the deficit in home ownership in 1900 for those who were raised in cotton-intensive areas, regardless of whether the sample is restricted to those residing in the former Confederacy and with or without conditioning on all else.

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 above the cutoff for the top quartile of southern counties in cotton output per capita (whereas the baseline "high" intensity variable uses the median cutoff). 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

[37] 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 inter-generational rate, presumably because sons observed in 1900 were still relatively young (30-47) compared to men in the intragenerational analysis.

in the cotton belt, by about 9 pp in the intra-generational analysis and 6 pp in the intergenerational analysis.[38]

*Correlates of intra- and intergenerational mobility: White men*

Table 4 shows that white men who did not own real estate and resided in cotton-intensive counties in 1870 had roughly similar rates of mobility into home ownership by 1900 as white men elsewhere in the US and within the Confederacy. In column 1, the most parsimonious regression, the coefficient is positive. Once regional fixed effects are added in column 2, the point estimate of $\beta_1$ is consistently between 0 and -0.03 across the remaining columns.[39] The Republican vote share and presence of military were weakly correlated with white intra-generational mobility into ownership. One's own literacy was strongly positively correlated with upward mobility, even more so than in the Black sample, but relatively few white men were illiterate at this time. Residence in the Northeast or counties with high urban shares in 1870 was least conducive to white men's mobility into home ownership.

Table 5 reports inter-generational mobility results for the white population. Although white children were on average *more* likely to move into ownership in cotton-intensive areas than elsewhere in the US (by 10 pp in column 1), the coefficient is greatly reduced when relying on within-region variation (column 2) and is of negligible size in columns 3 and 4. Within the former Confederacy (column 4), the coefficient on military presence is negative but imprecise and the coefficient on Republican votes in 1872 is small. One's own school attendance and household head's literacy were positively associated with white intergenerational mobility into ownership (with coefficients around 0.02). White sons of farmers who did not own land in 1870 were more likely to be homeowners in 1900 than others.

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 far lower chances of gaining ownership if they started in such places compared to Black men elsewhere, white men in these areas faced no substantial mobility deficit relative to white men elsewhere. Thus, there was a race-specific aspect of mobility in cotton-intensive areas that impeded Black home ownership gains. Moreover, because most of the Black population resided in cotton-

[38] These results are from regressions that control only for regional indicators.
[39] Restricting the sample to men who were not living with relatives results in only a small change in the coefficient on cotton intensity.

intensive counties, the low mobility rates there are empirically and historically important. The next section uses a basic decomposition of Black-white mobility differences to clarify this point.

*Decomposing the Black-white mobility gap*

We use a simple Blinder-Oaxaca decomposition to measure the extent to which the Black-white gaps in mobility into home ownership at the national level can be attributed to Black-white differences in various observable characteristics, including geographic distribution. As with the regressions above, the decompositions are descriptive but useful for putting together information from the mobility regressions and population characteristics to summarize the proximate underpinnings of the mobility gap.[40] We start by emphasizing decompositions that are based on coefficients from the Black mobility regressions (intra- and intergenerational in turn). This corresponds to a thought experiment that asks how different Black outcomes might have been in 1900 if the 1870 Black population had had the white population's geographic distribution, literacy rate, and so on, while retaining the same patterns of conditional mobility, as captured by the Black regression coefficients. This is, of course, a question that is (purposely) disconnected from the economic and social reality of the late nineteenth century. But it does yield empirical perspective on the magnitude of the Black-white mobility gap and, especially, how little of it is easily "explained" even in a superficial sense by "differences in X's."

The upshot from the decomposition of the Black-white intra-generational mobility gap is that only 9 of the 24 pp overall gap in mobility can be accounted for by differences in observables. The concentration of Black households in areas with high cotton intensity is by far the most important element, accounting for 7 pp, reflecting the low rates of mobility in such places (for Black men). Differences in literacy and 1870 occupation, especially the agricultural laborer category, account for small but non-trivial amounts the mobility gap (about 2 pp each). Not surprisingly, shifting the analysis to rely on mobility coefficients estimated from the white sample yields a different perspective. Because local cotton intensity had a weak association with upward mobility for white men, this decomposition would attribute only a small portion of the mobility gap to Black-white differences in concentration in cotton intensive areas (1.5 pp). A larger amount is attributed to Black-white differences in literacy (5 pp), reflecting the stronger association of literacy and mobility in the white sample.

[40] We implement this in Stata relying on Jann (2008) and the *oaxaca* command. The underlying regressions are similar to those described earlier but, to simplify interpretation, omit county-level measures of literacy, schooling, and urban share, while including the individual-level measures of the same.

The Black-white intergenerational mobility gap is smaller at 9 pp. Again, the single largest explanatory element is the Black population's concentration in cotton-intensive areas (3 pp).[41] Other Black-white differences in characteristics can account for little of the overall gap and, in combination, tend to offset the contribution from the cotton-intensity element. When we switch to a decomposition based on the white mobility coefficients, essentially none of the mobility gap is accounted for because cotton intensity had almost no association with white intergenerational mobility.

**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 material compensation, they worked primarily as laborers and sharecroppers on farms owned by white southerners. This fact, combined with the era's weak protections for Black Americans' lives, property, and civil rights, are the foundation of the postbellum Black-wealth wealth gap that has persisted through each generation up to today. Against this backdrop, many Black households did succeed in attaining home ownership between 1870 and 1900, albeit at far lower rates than white households who held no real property in 1870, a mobility gap with enormous implications. A simple assessment of the Black and white transition matrices reveals that the Black-white 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. In practice, the Black-white homeownership gap in the United States has never been that small (Collins and Margo 2011).

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. This finding is not driven by comparisons of Black men in the cotton belt and Black men outside the South, of which there were relatively few. Even within the states of the former Confederacy, the

[41] As expected, the intergenerational gap is larger when the sample is restricted to older sons (10-18 in 1870 instead of 0-18). The overall gap is then 14 pp of which 5 pp is attributed to differences in concentration in cotton-intensive areas when using the Black regression coefficients.

cotton-intensive areas stand out for their lack of Black mobility into home ownership. It is striking that white men in the cotton belt faced no such mobility deficit.

Our digging into this result yields several secondary findings. There is no correlational evidence suggesting that the presence of federal military power in the years of Reconstruction had a significant long-run influence on Black access to property ownership.[42] Nor is there evidence consistent with Black voting power during Reconstruction having a lasting positive association with gains in property ownership. Our preliminary interpretation is that the post-Reconstruction reversal of power was so complete (Du Bois 1935, Foner 1988, Logan 2020), that the local benefits of any such protections for Black Americans were quickly eroded. We also find that within the Black population, literacy was only weakly correlated with mobility into ownership for adult men (intra-generational), and school attendance was only weakly correlated with intergenerational mobility for children. Finally, differences in the value of farmland, the concentration of real estate wealth, men's interstate migration rates after 1870, and the Black share of the local population cannot account for cotton-intensive counties' low rates of Black mobility into home ownership.

One feature of the cotton-intensive areas that stands out, circa 1900, is the large share of Black men who were farmers but not homeowners. Surely, the prevalence of sharecropping in cotton agriculture is part of the story for why Black mobility into home ownership was so low. For many Black men sharecropping was not an intermediate rung on a tenure ladder that led to ownership but instead was more akin to a dead-end job with little chance of advancing. In addition, it is notable that Black men who resided in cotton-intensive areas in 1870 and did *not* work in agriculture in 1900 still had lower mobility-into-ownership than Black men who started elsewhere in the former Confederacy. In this sense, exposure to cotton-intensive areas left a lasting imprint on the lifetime trajectories of young Black men.

Shifting focus to the overall Black-white mobility gap, decompositions indicate that the concentration of Black men in cotton-intensive areas in 1870 was empirically important to underpinning the national-level gap. About two-thirds of Black males in our linked samples resided in these low-mobility areas in 1870, a direct result of the geographic concentration of slavery-based agricultural production before the Civil War.[43] And yet most of the overall Black-white mobility gap

[42] A convincing causal assessment of the effects of federal military presence would require a persuasive instrumental variable for troop placement, given that troop placement was not random.
[43] By later in the twentieth century, it is interesting that the places with low upward mobility in terms of income for Black children were concentrated in the industrial belt of the upper Midwest. The Southeast, on the other hand, had emerged as an especially low mobility region for white children (Chetty *et al*. 2019).

after 1870 is attributable to differences in upward mobility rates conditional on observables. This reflects sharp limits on Black economic opportunity that were pervasive in the wake of the Civil War and throughout the late nineteenth century.[44] Although we cannot observe transfers of wealth directly, the mobility gap may also reflect white men's higher likelihood of receiving assistance from parents or other relatives even when conditioning on all observables. That said, in the intergenerational analysis we can control directly for recorded parental wealth (and age, literacy, location, etc.), and the Black-white mobility gap remains sizable.

The results reported in this paper are preliminary. Next steps include assessing the robustness of the findings to different linkage techniques, incorporating additional results,[45] and perhaps expanding the intergenerational analysis to later census years for a more complete picture of that generation's outcomes.

[44] It is important to keep in mind that differences in observables circa 1870 are directly attributable to the history of slavery and discrimination. We are not attempting to separate "discrimination" from "observables" in these analyses; rather, every difference we see here relates in some way to slavery and discrimination. We are attempting to emphasize the empirical importance of differences in "mobility patterns" (i.e., mobility conditional on observables).

[45] For instance, preliminary results show that adding an "1860 link" variable—indicating that we can link an individual back to 1860—has no effect on the size of the coefficient on "high cotton intensity." Its coefficient is positive in intra-generational regressions, suggesting that pre-war free Black men had better chances of attaining home ownership than others, *ceteris paribus*.

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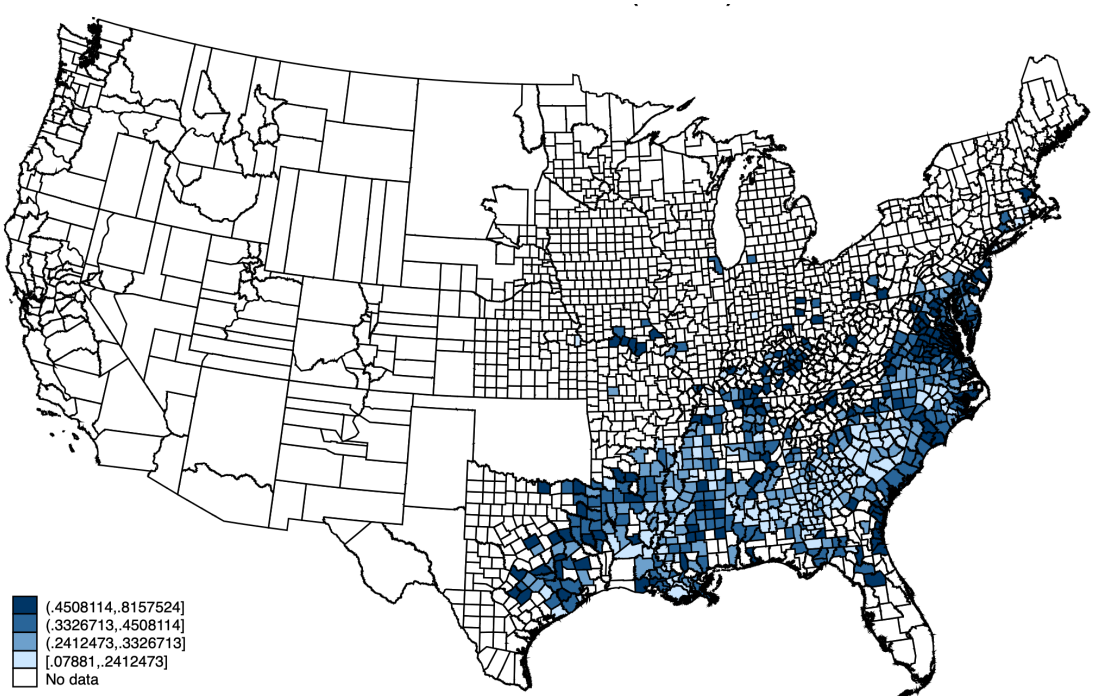
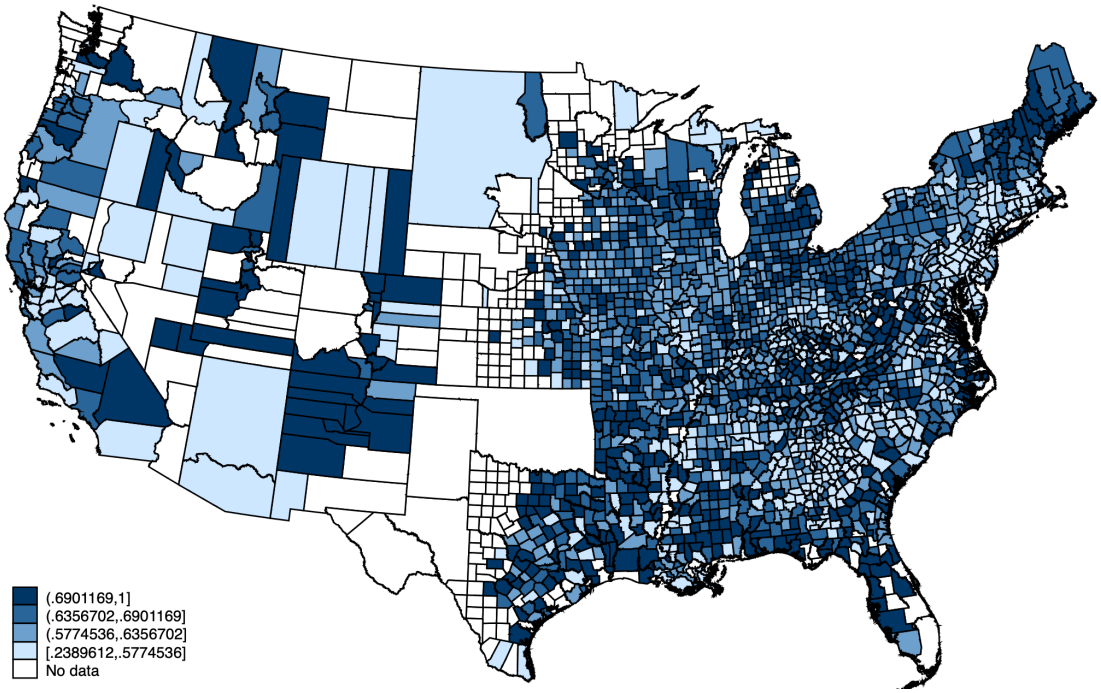
Figure 1A: Intra-generational Mobility Rates, by 1870 County of Origin

Black Men



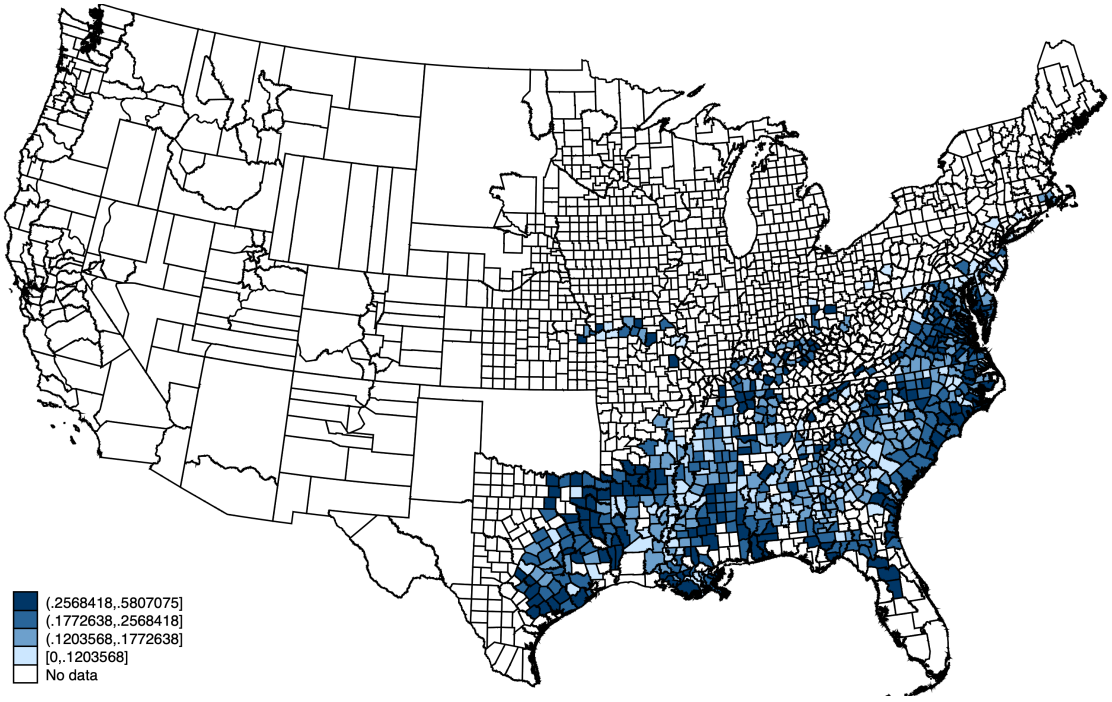

White Men



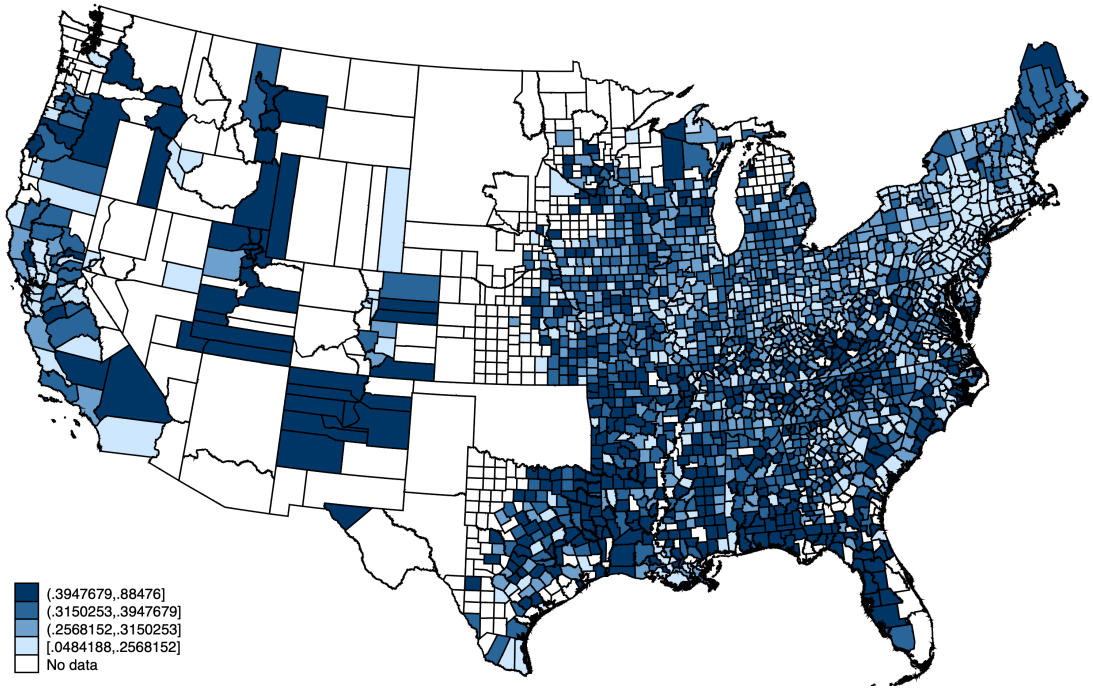

Notes: The maps are on different scales, with the white scale shifted higher. Counties are shaded only if we have at least 10 men in the linked sample for the relevant race category. Intra-generational mobility is movement into home ownership by 1900 conditional on owning no real property in 1870. See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

Figure 1B: Intergenerational Mobility Rates, by 1870 County of Origin

Black Men




White Men




Notes: The maps are on different scales, with the white 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. See notes to Table 1 for more details.

Figure 2A: Intra-generational Mobility into Home Ownership, by Race and Region, 1870-1900

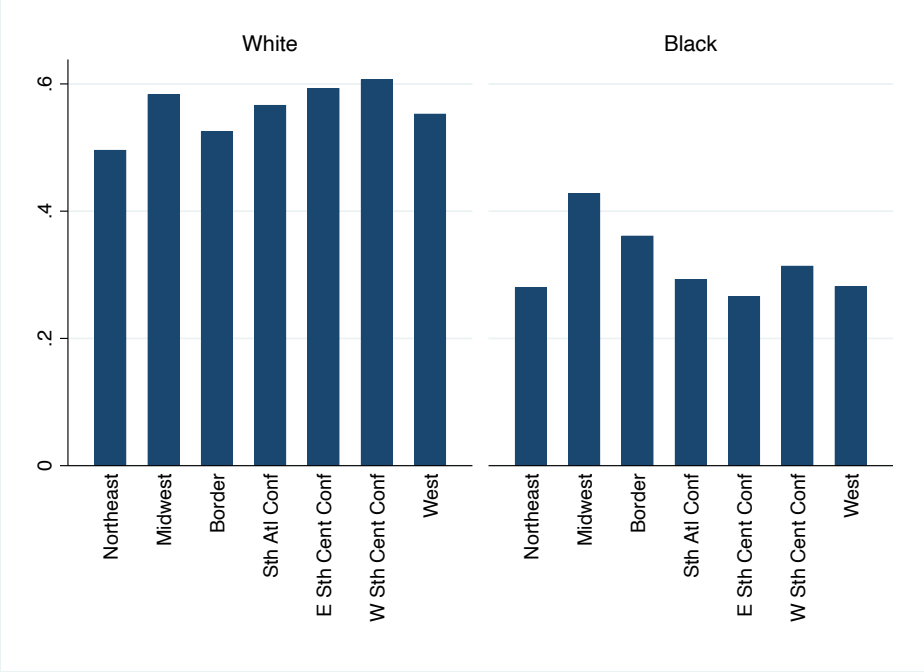
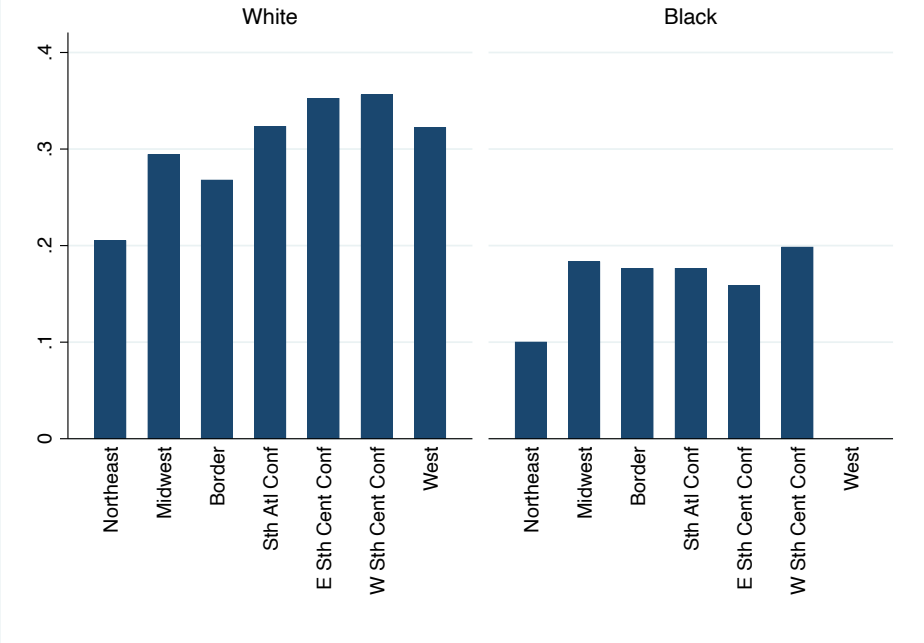



Figure 2B: Intergenerational Mobility into Home Ownership, by Race and Region, 1870-1900




Notes: Figures plot the share of men who moved from "no real property" in 1870 to "home owner" in 1900. "Intra-generational" pertains to men ages 18-40 in 1870. "Intergenerational" pertains to males age 0-18 and residing with a parent head of household in 1870. See notes to Table 1 for additional details.

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

**Black, Intragenerational**

| | Not Owner1900 | Owner 1900 | Share 1870 | N |
|---|---|---|---|---|
| Not owner 1870 | 0.672 | 0.288 | 0.961 | 28731.0 |
| Owner 1870 | 0.018 | 0.021 | 0.039 | 1177.0 |

**Black, Intergenerational**

| | Not Owner 1900 | Owner 1900 | Share 1870 | N |
|---|---|---|---|---|
| Not owner 1870 | 0.750 | 0.158 | 0.908 | 34317.1 |
| Owner 1870 | 0.068 | 0.024 | 0.092 | 3468.9 |

**White, Intragenerational**

| | Not Owner 1900 | Owner 1900 | Share 1870 | N |
|---|---|---|---|---|
| Not owner 1870 | 0.329 | 0.393 | 0.722 | 364245.4 |
| Owner 1870 | 0.080 | 0.198 | 0.278 | 140107.6 |

**White, Intergenerational**

| | Not Owner 1900 | Owner 1900 | Share 1870 | N |
|---|---|---|---|---|
| Not owner 1870 | 0.270 | 0.099 | 0.369 | 296885.4 |
| Owner 1870 | 0.373 | 0.258 | 0.631 | 507716.6 |

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). “Share 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.

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

| | 1: All | 2: All | 3: All | 4: Confed. |
|---|---|---|---|---|
| **High cotton intensity** | -0.115 | -0.1179 | -0.1195 | -0.1161 |
| | (0.0095) | (0.0136) | (0.0126) | (0.0128) |
| **Regional indicators** | | | | |
| Northeast | | -0.0849 | -0.058 | |
| | | (0.0257) | (0.0628) | |
| Midwest | | 0.0581 | 0.0297 | |
| | | (0.0248) | (0.0593) | |
| Border | | 0.0165 | 0.0213 | |
| | | (0.0181) | (0.0469) | |
| West | | -0.1606 | -0.1719 | |
| | | (0.0646) | (0.0926) | |
| E Sth Cent, Conf. | | 0.0022 | -0.0056 | -0.0051 |
| | | (0.0110) | (0.0107) | (0.0108) |
| W Sth Cent., Conf. | | 0.0388 | 0.0227 | 0.0228 |
| | | (0.0167) | (0.0146) | (0.0147) |
| **County-level covariates** | | | | |
| Military presence circa 1870 | | | -0.077 | -0.011 |
| | | | (0.0227) | (0.0204) |
| Military x confederacy | | | 0.0696 | |
| | | | (0.0299) | |
| Republican share 1872 | | | -0.001 | -0.0008 |
| | | | (0.0009) | (0.0003) |
| Republican x confederacy | | | 0.0002 | |
| | | | (0.0009) | |
| Urban share | | | -0.106 | -0.12 |
| | | | (0.0319) | (0.0430) |
| In-school rate (ages 5 to 19) | | | 0.1561 | 0.1482 |
| | | | (0.0557) | (0.0714) |
| Adult literacy rate | | | -0.0248 | -0.0228 |
| | | | (0.0234) | (0.0251) |
| **Individual-level covariates** | | | | |
| Positive personal wealth | | | 0.0601 | 0.0543 |
| | | | (0.0096) | (0.0105) |
| Literate | | | 0.0358 | 0.0422 |
| | | | (0.0093) | (0.0107) |
| Urban | | | -0.035 | -0.0185 |
| | | | (0.0178) | (0.0239) |
| Farmer | | | 0.0157 | 0.0041 |
| | | | (0.0129) | (0.0140) |
| Farm laborer | | | -0.0405 | -0.0526 |
| | | | (0.0094) | (0.0106) |
| Constant | 0.376 | 0.3707 | 0.4339 | 0.441 |
| | (0.0077) | (0.0108) | (0.0186) | (0.0192) |
| Adj R-squared | 0.017 | 0.019 | 0.029 | 0.023 |
| N | 26689 | 26689 | 26689 | 22908 |

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. Men without occupations in 1870 are excluded. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. The county-level "school attendance" and "adult literacy" rates are race-specific. Covariates pertain to 1870. Standard errors are clustered at the county level. Clustering at the state level yields larger standard errors but the coefficient on cotton intensity is still highly statistically significant.

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

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **High cotton intensity** | -0.0351 | -0.0502 | -0.0525 | -0.0528 |
| | (0.0071) | (0.0100) | (0.0089) | (0.0091) |
| **Regional indicators** | | | | |
| Northeast | | -0.1057 | -0.0636 | |
| | | (0.0151) | (0.0501) | |
| Midwest | | -0.0203 | -0.0327 | |
| | | (0.0174) | (0.0454) | |
| Border | | -0.0163 | -0.0221 | |
| | | (0.0140) | (0.0353) | |
| West | | -0.210 | -0.1887 | |
| | | (0.0148) | (0.0583) | |
| E Sth Cent, Conf. | | -0.0051 | -0.0082 | -0.0073 |
| | | (0.0078) | (0.0076) | (0.0076) |
| W Sth Cent., Conf. | | 0.0365 | 0.0295 | 0.0298 |
| | | (0.0119) | (0.0107) | (0.0105) |
| **County-level covariates** | | | | |
| Military presence circa 1870 | | | -0.0823 | -0.0006 |
| | | | (0.0220) | (0.0128) |
| Military x confederacy | | | 0.0739 | |
| | | | (0.0232) | |
| Republican share 1872 | | | -0.0001 | -0.0003 |
| | | | (0.0007) | (0.0002) |
| Republican x confederacy | | | -0.0002 | |
| | | | (0.0007) | |
| Urban share | | | -0.0514 | -0.0788 |
| | | | (0.0257) | (0.0298) |
| In-school rate | | | 0.0221 | 0.0319 |
| | | | (0.0439) | (0.0526) |
| Adult literacy rate | | | -0.003 | -0.0019 |
| | | | (0.0180) | (0.0195) |
| **Individual-level covariates** | | | | |
| School attendance | | | 0.0186 | 0.0226 |
| | | | (0.0102) | (0.0120) |
| Urban | | | -0.0224 | -0.0229 |
| | | | (0.0130) | (0.0158) |
| Head pos. pers. wealth | | | 0.014 | 0.0084 |
| | | | (0.0060) | (0.0065) |
| Head literate | | | 0.002 | 0.007 |
| | | | (0.0070) | (0.0077) |
| Head female | | | -0.0155 | -0.0179 |
| | | | (0.0071) | (0.0074) |
| Head farmer | | | 0.0036 | 0.0025 |
| | | | (0.0095) | (0.0104) |
| Head farm laborer | | | -0.0244 | -0.026 |
| | | | (0.0068) | (0.0076) |
| Constant | 0.1994 | 0.2084 | 0.2415 | 0.2444 |
| | (0.0058) | (0.0080) | (0.0128) | (0.0132) |
| Adj R-squared | 0.021 | 0.024 | 0.027 | 0.025 |
| N | 33650 | 33650 | 33650 | 29811 |

Notes: The sample consists of men who were 0-18 in 1870 and resided 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. Sons of household heads without occupations in 1870 are excluded. The reference region consists of the states of the South Atlantic census region that joined the Confederacy. County-level "in-school" and "adult literacy" rates are race-specific. Covariates pertain to 1870.

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

| | 1: All | 2: All | 3: All | 4: Confed. |
|---|---|---|---|---|
| **High cotton intensity** | 0.0397 | -0.0114 | -0.0251 | -0.0309 |
| | (0.0078) | (0.0157) | (0.0087) | (0.0076) |
| **Regional indicators** | | | | |
| Northeast | | -0.0786 | -0.1092 | |
| | | (0.0150) | (0.0232) | |
| Midwest | | 0.0123 | -0.0748 | |
| | | (0.0102) | (0.0223) | |
| Border | | -0.0273 | -0.0976 | |
| | | (0.0125) | (0.0194) | |
| West | | -0.0649 | -0.1205 | |
| | | (0.0200) | (0.0248) | |
| E Sth Cent, Conf. | | 0.028 | 0.0126 | 0.0219 |
| | | (0.0091) | (0.0080) | (0.0080) |
| W Sth Cent., Conf. | | 0.0399 | 0.0363 | 0.0473 |
| | | (0.0272) | (0.0130) | (0.0111) |
| **County-level covariates** | | | | |
| Military presence circa 1870 | | | -0.0416 | -0.0223 |
| | | | (0.0110) | (0.0166) |
| Military x confederacy | | | -0.0158 | |
| | | | (0.0255) | |
| Republican share 1872 | | | 0.0007 | -0.0002 |
| | | | (0.0003) | (0.0002) |
| Republican x confederacy | | | -0.0009 | |
| | | | (0.0004) | |
| Urban share | | | -0.0374 | -0.1196 |
| | | | (0.0159) | (0.0494) |
| In-school rate | | | 0.0874 | -0.0186 |
| | | | (0.0192) | (0.0301) |
| Adult literacy rate | | | -0.0687 | -0.1042 |
| | | | (0.0151) | (0.0192) |
| **Individual-level covariates** | | | | |
| Positive personal wealth | | | 0.0277 | 0.0286 |
| | | | (0.0026) | (0.0067) |
| Literate | | | 0.0751 | 0.0903 |
| | | | (0.0043) | (0.0069) |
| Urban | | | -0.0554 | -0.054 |
| | | | (0.0041) | (0.0185) |
| Farmer | | | 0.0772 | 0.0379 |
| | | | (0.0035) | (0.0081) |
| Farm laborer | | | 0.0426 | 0.0137 |
| | | | (0.0033) | (0.0077) |
| Constant | 0.5405 | 0.5714 | 0.5252 | 0.5913 |
| | (0.0063) | (0.0094) | (0.0158) | (0.0180) |
| Adj R-squared | 0.002 | 0.008 | 0.025 | 0.016 |
| N | 297472 | 297472 | 297472 | 44354 |

Notes: See notes to table 2.

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

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **High cotton intensity** | 0.0993 | 0.0348 | 0.0072 | 0.001 |
| | (0.0087) | (0.0218) | (0.0086) | (0.0081) |
| **Regional indicators** | | | | |
| Northeast | | -0.1019 | -0.1123 | |
| | | (0.0133) | (0.0176) | |
| Midwest | | -0.0089 | -0.061 | |
| | | (0.0123) | (0.0172) | |
| Border | | -0.0206 | -0.073 | |
| | | (0.0155) | (0.0154) | |
| West | | -0.0638 | -0.0908 | |
| | | (0.0262) | (0.0193) | |
| E Sth Cent, Conf. | | 0.0249 | 0.0206 | 0.0231 |
| | | (0.0104) | (0.0086) | (0.0089) |
| W Sth Cent., Conf. | | 0.0268 | 0.0472 | 0.0519 |
| | | (0.0372) | (0.0131) | (0.0111) |
| **County-level covariates** | | | | |
| Military presence | | | -0.0261 | -0.025 |
| | | | (0.0099) | (0.0159) |
| Military x confederacy | | | -0.0373 | |
| | | | (0.0202) | |
| Republican share 1872 | | | 0.0006 | -0.0004 |
| | | | (0.0002) | (0.0002) |
| Republican x confederacy | | | -0.001 | |
| | | | (0.0003) | |
| Urban share | | | -0.0448 | -0.1272 |
| | | | (0.0120) | (0.0349) |
| In-school rate | | | 0.0026 | 0.0049 |
| | | | (0.0166) | (0.0364) |
| Adult literacy rate | | | -0.0644 | -0.0514 |
| | | | (0.0161) | (0.0236) |
| **Individual-level covariates** | | | | |
| School attendance | | | 0.0176 | 0.0188 |
| | | | (0.0027) | (0.0091) |
| Urban | | | -0.0292 | -0.0353 |
| | | | (0.0036) | (0.0193) |
| Head, pos. pers. wealth | | | -0.009 | -0.0117 |
| | | | (0.0024) | (0.0067) |
| Head literate | | | 0.0231 | 0.0212 |
| | | | (0.0034) | (0.0075) |
| Head female | | | 0.0315 | 0.0307 |
| | | | (0.0041) | (0.0093) |
| Head farmer | | | 0.0477 | 0.0341 |
| | | | (0.0033) | (0.0078) |
| Head farm laborer | | | 0.0089 | -0.0104 |
| | | | (0.0043) | (0.0099) |
| Constant | 0.2583 | 0.3054 | 0.3576 | 0.3661 |
| | (0.0064) | (0.0108) | (0.0163) | (0.0221) |
| Adj R-squared | 0.043 | 0.053 | 0.065 | 0.054 |
| N | 262225 | 262225 | 262225 | 41845 |

Notes: See notes to table 3.

Appendix Table 1: Summary Statistics, Intra-generational Analyses

| | Black sample | | | White sample | | |
|---|---|---|---|---|---|---|
| Variable | Obs | Mean | Std. dev. | Obs | Mean | Std. dev. |
| Upward mobility | 26,689 | 0.302 | 0.459 | 297,472 | 0.544 | 0.498 |
| High cotton intensity | 26,689 | 0.648 | 0.478 | 297,472 | 0.101 | 0.302 |
| **Regional indicators** | | | | | | |
| Northeast | 26,689 | 0.026 | 0.159 | 297,472 | 0.360 | 0.480 |
| Midwest | 26,689 | 0.026 | 0.158 | 297,472 | 0.319 | 0.466 |
| Border | 26,689 | 0.100 | 0.300 | 297,472 | 0.127 | 0.333 |
| West | 26,689 | 0.001 | 0.027 | 297,472 | 0.014 | 0.117 |
| Sth Atl Conf. | 26,689 | 0.433 | 0.495 | 297,472 | 0.088 | 0.284 |
| E Sth Cent Conf. | 26,689 | 0.264 | 0.441 | 297,472 | 0.058 | 0.233 |
| W Sth Cent Conf. | 26,689 | 0.151 | 0.358 | 297,472 | 0.035 | 0.183 |
| **County-level variables** | | | | | | |
| In-school rate | 26,689 | 0.105 | 0.123 | 297,472 | 0.579 | 0.186 |
| Adult literacy | 26,689 | 0.171 | 0.205 | 297,472 | 0.860 | 0.132 |
| Military presence | 26,689 | 0.108 | 0.311 | 297,472 | 0.200 | 0.400 |
| Repub. Vote 1872 | 26,689 | 56.722 | 17.634 | 297,472 | 55.136 | 13.830 |
| Urban share | 26,689 | 0.086 | 0.206 | 297,472 | 0.231 | 0.307 |
| **Individual-level variables** | | | | | | |
| Positive pers. wealth | 26,689 | 0.127 | 0.333 | 297,472 | 0.296 | 0.456 |
| Literate | 26,689 | 0.176 | 0.381 | 297,472 | 0.903 | 0.296 |
| Urban | 26,689 | 0.078 | 0.269 | 297,472 | 0.218 | 0.413 |
| Farmer 1870 | 26,689 | 0.143 | 0.350 | 297,472 | 0.224 | 0.417 |
| Farm laborer 1870 | 26,689 | 0.620 | 0.486 | 297,472 | 0.314 | 0.464 |
| Age 1870 | 26,689 | 26.611 | 6.444 | 297,472 | 25.211 | 5.752 |

Appendix Table 2: Summary Statistics, Intergenerational Analysis

| | Black sample | | | White sample | | |
|---|---|---|---|---|---|---|
| Variable | Obs | Mean | Std. dev. | Obs | Mean | Std. dev. |
| Upward mobility | 33,650 | 0.176 | 0.380 | 262,225 | 0.268 | 0.443 |
| High cotton intensity | 33,650 | 0.679 | 0.467 | 262,225 | 0.102 | 0.302 |
| **Regional indicators** | | | | | | |
| Northeast | 33,650 | 0.018 | 0.132 | 262,225 | 0.361 | 0.480 |
| Midwest | 33,650 | 0.018 | 0.134 | 262,225 | 0.287 | 0.452 |
| Border | 33,650 | 0.086 | 0.281 | 262,225 | 0.140 | 0.347 |
| West | 33,650 | 0.000 | 0.022 | 262,225 | 0.019 | 0.137 |
| Sth Atl Conf. | 33,650 | 0.421 | 0.494 | 262,225 | 0.082 | 0.275 |
| E Sth Cent Conf. | 33,650 | 0.281 | 0.449 | 262,225 | 0.064 | 0.244 |
| W Sth Cent Conf. | 33,650 | 0.175 | 0.380 | 262,225 | 0.047 | 0.212 |
| **County-level variables** | | | | | | |
| In-school rate | 33,650 | 0.093 | 0.110 | 262,225 | 0.561 | 0.179 |
| Adult literacy | 33,650 | 0.161 | 0.198 | 262,225 | 0.854 | 0.135 |
| Military presence | 33,650 | 0.095 | 0.294 | 262,225 | 0.283 | 0.451 |
| Repub. Vote 1872 | 33,650 | 56.431 | 17.876 | 262,225 | 54.052 | 13.756 |
| Urban share | 33,650 | 0.071 | 0.187 | 262,225 | 0.297 | 0.356 |
| **Individual-level variables** | | | | | | |
| School attendance | 33,650 | 0.053 | 0.223 | 262,225 | 0.280 | 0.449 |
| Urban | 33,650 | 0.055 | 0.228 | 262,225 | 0.307 | 0.461 |
| Head pos. pers. wealth | 33,650 | 0.240 | 0.427 | 262,225 | 0.551 | 0.497 |
| Head literate | 33,650 | 0.143 | 0.350 | 262,225 | 0.848 | 0.359 |
| Head female | 33,650 | 0.124 | 0.330 | 262,225 | 0.070 | 0.255 |
| Head farmer 1870 | 33,650 | 0.222 | 0.415 | 262,225 | 0.286 | 0.452 |
| Head farm laborer 1870 | 33,650 | 0.515 | 0.500 | 262,225 | 0.104 | 0.305 |
| Age 1870 | 33,650 | 6.747 | 5.389 | 262,225 | 6.025 | 5.422 |