

Was Freedom Road a Dead End?

Political and socio-economic effects of Reconstruction in the American South

Jeffry Frieden
Harvard University

Richard S. Grossman
Wesleyan University

Daniel Lowery
Harvard University

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Abstract

We investigate how Reconstruction affected Black political participation and socio-economic advancement after the American Civil War. We use the location of federal troops and Freedmen's Bureau offices to indicate more intensive federal enforcement of civil rights. We find that Black people made greater socio-economic advances where Reconstruction was more rigorously enforced, and that those effects persisted at least until the early twentieth century, although these advances were weaker in cotton-plantation zones. We suggest a mechanism leading from greater Black political power to higher local property taxes, through to higher levels of Black schooling and greater Black socio-economic achievement.

Reconstruction in the American South was an extraordinary social revolution. Federal troops occupied the defeated Confederacy, accompanied by a civilian army of Northerners intent on remaking the South. Once Congress overcame the resistance of a more conservative president, constitutional amendments and federal legislation extended civil and political rights to former slaves. These four million freed people soon capitalized on the new social and political reality. Soon a combination of freedmen, Southern loyalists, and Northern sympathizers ruled the South, with the planter elite largely in disarray. Reconstruction federal, state, and local governments oversaw massive investments in education and a range of public goods ignored or underfunded by the antebellum slaveocracy.

Within a few decades, white supremacists reversed the political gains made by Black people and their white allies with a combination of extra-legal terror, legal manipulation, and fraud. Nonetheless, Reconstruction lasted more than ten years, and it was not until the 1890s and early 1900s that white supremacists were able to fully retake control of the South. In this paper, we ask to what extent Black people in the South were able to take advantage of Reconstruction and its aftermath to improve their political, social, and economic positions. And we ask whether this impact persisted even after Reconstruction ended.

We focus on how Reconstruction affected the socio-economic fortunes of freed people in the South. A substantial and growing literature on the impact of

Reconstruction on Black political power explains how it emerged and was subsequently repressed by white supremacists. We are particularly interested in the *socio-economic*, rather than purely political, impact of Reconstruction. This includes the degree to which Black Southerners were able to use enfranchisement, and their ensuing—if temporary -- political power, combined with increased federal military and civilian presence, to advance their economic opportunities. Finally, we are interested in whether Reconstruction had a longer-lasting effect on Black socio-economic outcomes.

We assess these possibilities by evaluating the impact of the presence of federal authorities—namely, federal troops and Freedmen’s Bureau offices -- on social and economic outcomes. We start from the common finding (confirmed in our Appendix) that a greater federal presence in a county was associated with higher rates of Black voter registration, Republican voting, and a greater likelihood of the election of Black local officials. Building on this, we find that a stronger federal presence was associated with a wide variety of indicators of Black social and economic progress – school attendance, farm and home ownership, and occupational status. We similarly find that, even accounting for the direct impact of occupation, greater Black political engagement and empowerment were strongly associated with more socio-economic development. Delving more deeply into the mechanism, we demonstrate that a stronger federal presence was associated with higher levels of Black political engagement and success, reflected in higher local tax rates and greater expenditure on local public goods,

especially schools, and in turn with more Black economic advances. The positive effects of increased federal presence were substantially reduced in counties dominated by cotton, the most common plantation crop, suggesting the enduring political influence of an entrenched planter elite committed to opposing Black political and socio-economic advancement.

Southern Black voting and political power declined dramatically as white supremacists succeeded in disenfranchising almost all Blacks in the 1890s and early 1900s, but Black socio-economic achievements persisted during the late nineteenth and early twentieth centuries. Counties that had experienced more intensive federal presence and greater Black political empowerment before disenfranchisement continued to exhibit higher levels of socio-economic accomplishments. In these counties, Black farmers were more likely to own their farms and less likely to be sharecroppers and tenants; there were more Black individuals in high-earning and high-prestige occupations; and more Black families owned their own homes. Other socio-economic indicators tell a similar story. We believe that the mechanism we explore – relating Black political power to substantially more funding for public education – provides a plausible explanation for the persistence of these effects.

These results speak to a broader discussion about the impact of institutions on economic growth and development. Our results suggest that changes in political institutions – even if imposed from outside – can have a powerful effect on broader

categories of social and economic development. In this instance the institutions imposed were strongly favored by a very large portion of the local population – a fact which may itself be relevant to broader comparisons. Thus, the experience may be seen as an example of franchise expansion, although unlike in most other cases it was not implemented voluntarily by the governing class. Crucially, cotton plantation agriculture moderated both political empowerment and socio-economic development, which suggests that political-institutional change may be limited by the nature of the underlying economic structure. Similarly, it is important to note that the institutional change itself – equality under the law – was not enough; it required the force, often military, of state power to have effect.

Section 1 describes the general context of Reconstruction and its aftermath. Section 2 presents our research questions and our analytical expectations in the context of the existing theoretical and related work. Section 3 describes the data. Section 4 expands this to the social and economic impact of Reconstruction. Section 5 explores the extent to which these effects persisted into the twentieth century. Section 6 suggests a mechanism which explains how increased political representation may have led to greater socio-economic achievement. Section 7 concludes.

1. Reconstruction and Black achievement

The Civil War led to the emancipation of over four million Black Americans after more than 200 years of chattel slavery. As the war ended conservative Tennessean

Andrew Johnson, who succeeded to the presidency after the assassination of Abraham Lincoln, moved to conciliate with Southern elites, who attempted to subject freed people to renewed subjugation. Johnson was opposed by “Radical Republicans” who insisted on full political and civil rights for Black Americans. When the Republicans, led by the radicals, swept Congressional elections in 1866 they enacted more forceful measures to empower the formerly enslaved.¹

Radical Republican leaders in Congress and President Ulysses Grant (1869-1877) committed the federal government to a comprehensive attempt to install democratic rule in the former Confederacy. The ten states being “reconstructed” (Tennessee had been readmitted under President Johnson) were occupied by an initial force of about 20,000 troops. Congress created a Bureau of Refugees, Freedmen, and Abandoned Lands, also known as the Freedmen’s Bureau, with offices throughout the region, to assist former slaves with their transition to freedom; the Bureau operated until 1872. Charitable, religious, and other aid groups sent thousands of volunteers south, especially as teachers for the new schools established to educate Black people. After Congress passed the first Reconstruction Act over Johnson’s veto in March 1867, Black men throughout the South rushed to register to vote.

The federal government mandated that states craft new constitutions guaranteeing civil and political rights before being readmitted to the Union and reestablishing civilian self-government. Delegates—and, later, elected officials -- were

overwhelmingly Republican, dominated by southern whites (“scalawags”), northerners (“carpetbaggers”), and Blacks, who constituted more than one-third of the total. For most of the rest of Reconstruction Republicans dominated much of the former Confederacy, although the Democrats gradually regained political power by both legal and extra-legal means. Substantial segments of southern white society – especially poorer farmers outside the Black Belt plantation area – had opposed secession and supported (even fought for) the Union. Although some of these people may have had little inherent sympathy for the cause of Black civil rights, they recognized that Republican political success depended upon Black votes. As W.E.B. Du Bois (2018) observed, “the granting of the ballot to the black man was...the only method of compelling the South to accept the results of the war.” Whether for principled or partisan reasons, the Republican Party was a strong supporter of measures to empower freed people and ensure their voting rights.²

As a wave of political organization and activity swept through the Black population of the South, Black men voted in extremely high numbers. Black votes helped Grant to victory in the presidential election of 1868, but the full electoral impact of freedmen was not felt until 1870 and 1872 with the first elections held after the passage of the Fifteenth Amendment, which guaranteed universal male suffrage. Hundreds of thousands of new voters allowed the Republicans to dominate presidential and congressional voting in the South. This Republican tide receded

somewhat in 1874 and 1876, due in part to voter suppression and in part to broader political trends. Nonetheless, Black voters remained an essential part of the national and southern Republican Party. This was reflected the successes of southern Republicans in federal, state, and local elections and in the election of well over a thousand Black officials in the former Confederacy (Foner 1993).

Black senators and congressmen may have been prominent at the national level, but for most freed people it was probably more important to have Black local officials to help secure their rights and represent their interests when raising taxes and allocating money for local public goods and enforcing the law. White Republican officials, too, could hardly ignore the concerns of a community that was essential to their electoral success.

White supremacists fought the democratic revolution. The Ku Klux Klan's campaign of terror had some early success, but it was countered by a combination of Black resistance and federal reaction. The Republicans in Washington created the Department of Justice in 1870, and passed the 1870 and 1871 Enforcement Acts, largely to attack the Klan. By 1872 the Klan had been suppressed. However, especially after disenfranchised Confederates were amnestied in 1872, the Democratic Party rebuilt itself in the South and redoubled its attack on Black political power and Republican rule.

The contested presidential election of 1876 led to the “Hayes-Tilden Agreement” that limited the role of federal troops. Over the next twenty years, Black political influence and Republican electoral success were eroded by a combination of terror, intimidation, and legal manipulation (Perman 2001). Especially in the Black Belt cotton plantation areas, landowners exercised such social and economic control over sharecroppers and farm laborers that they could count on massive local Democratic majorities – by legal or illegal means. The Fifteenth Amendment made it impossible for states legally to restrict the franchise on racial grounds, and substantial numbers of Black men were still voting in the 1890s – the last southern Black congressman served until 1901. To cement white supremacy, Democrats called conventions in the 1890s and early 1900s to rewrite their state constitutions, instituting voting requirements that in effect disenfranchised most Black men – and many poor white men as well.³

The promise of Reconstruction was extraordinary – the Civil Rights Act of 1875 was a model for the Civil Rights Act of 1964 (Kousser 2000) – but the justice it promised was ultimately denied, especially after the Supreme Court overturned the 1875 Act in 1883. Nonetheless, during Reconstruction and its aftermath, hundreds of thousands of former slaves actively participated in politics; they constituted a crucial constituency for thousands of elected officials both Black and white. The fact that it took over twenty years for white supremacists to almost completely disenfranchise Black voters suggests that the episode was more than fleeting and may have had a lasting impact, allowing

the previously powerless to use new political rights to seize economic opportunities and social achievements.

2. Military power, electoral politics, and economic advance

Reconstruction brought about a massive change in the political institutions of the South. Political institutions affect political behavior and outcomes; political outcomes affect policies; policies have socio-economic consequences. We trace this process from the democratic revolution that was Reconstruction, through Black political empowerment, to Black socio-economic accomplishments that endured into the early twentieth century. Each step in this process raises important theoretical issues.

The political reforms of Reconstruction amounted to an expansion of the franchise to Black men. Black voting affected electoral outcomes since roughly a third of the South's population was Black, and Black voters constituted a majority in several states and many counties. This was reflected in increased voting for the Republican Party, which supported Reconstruction and Black civil rights. Black enfranchisement resulted in the election of politicians sympathetic to this cause, and to the election of Black politicians.⁴

We expect that these political changes led to policies more in line with the interests of the newly empowered Black constituencies, and that political empowerment affected Black economic opportunity. Reconstruction-era officials committed to enforcing rights provided a more favorable environment for Black people to get an

education through greater taxation and spending on schools; to buy and hold farmland and other real estate; to establish businesses; and more generally to enhance their economic position. We expect Reconstruction-era increases in Black political influence to be reflected in Black economic advance.

How can we assess the impact of Reconstruction, given that it was imposed on the entirety of the former Confederacy? Our approach, like that of Chacón and Jensen (2020), Chacón et al (2021), and Stewart and Kitchens (2021), is to use the location and number of federal troops and Freedmen's Bureau offices as an indicator of the intensity of Reconstruction policy. Our presumption is that in areas where there were Bureau offices and that were more accessible to a larger number of federal troops, Reconstruction-era policies would have been applied and enforced more rigorously. We find substantial evidence of this in the eyewitness and secondary literature.⁵ For example, one freedman recalled his experience as a child, in an environment of white hostility in the aftermath of the murder of a local Black man:

They [the freed people] were in the midst of their troubles when a detachment of Union soldiers was quartered among them. This was a very great event. They made friends with the Negro people and with the few white loyalists. They represented the Union government in preserving law and order and in the adjustment of the labor relations of the former masters and slaves.... Another important event was the opening of a Freedmen's school in the Negro church.

Sergeant Smith and Private Davenport were detailed to the work of teaching the little black children their first lessons. The school was crowded with eager pupils from the beginning.... The bugle call for afternoon drill and parade was heard for miles around and was the first and sweetest music the freed people had ever heard. Have they heard any sweeter since? I doubt it.⁶

As a Freedmen's Bureau commissioner put it more pithily, "The wrongs increase just in proportion to the distance from the United States authorities."⁷ We expect, then, that Black voter registration, voting, political influence, and economic advancement rose in counties with Freedmen's Bureau offices and greater access to federal troops.

There are two closely related mechanisms by which Reconstruction might have facilitated Black economic advance. One is direct: the use of federal military and judicial power to protect and enforce the rights of freedmen. Another, less direct, runs through Black political empowerment: the Black community used its political power, facilitated by federal force, to defend Black economic interests and fund local public goods that enhanced Black economic opportunities. As we have some data on one important policy under local control – local taxation for local public goods, especially schooling – we can evaluate this channel in some detail (see section 6).

Political institutions exist within a socio-economic context, and this context varied widely throughout the South. Where the planter elite was particularly well entrenched and maintained economic and social power after the Civil War, we expect it

was much more difficult for freed people to achieve economic autonomy. In most such areas, planters continued to own the land and parcel it out to sharecroppers or tenants. Sharecroppers were in a particularly subordinate relationship, typically without control of the land or the means of production and obligated to provide much of the output to the landowner.

Each plantation crop had a different production system, which affected the degree of socio-political and economic power of planters over freed people who worked on their lands. Cotton was a plantation crop, characterized by generally dependent labor relations. We expect that where “cotton was King,” federal occupation had less of an impact. Rice plantations generally operated on a “task system” that gave workers more autonomy and more free time to cultivate their own crops.⁸ Sugar was distinguished by the extraordinary sensitivity of the harvest and processing to timing, which gave sugar workers bargaining power inasmuch as withholding labor threatened the value of the entire crop.⁹ Tobacco,¹⁰ wheat, corn, and other crops were not generally associated with the extreme socio-economic power disparities that characterized cotton. We therefore expect the federal presence to have been less effective at overcoming white-supremacist opposition in the cotton regions of the South.

Although white supremacists were eventually able to disenfranchise most freedmen and eviscerate Black political power in the South, we believe that other effects of Reconstruction were harder to reverse. It took nearly three decades to revoke the

voting rights of enfranchised citizens, and then required terror, legal manipulation, and subterfuge. We surmise that it would have been more difficult to reverse some of the other advances freed people achieved during and after Reconstruction. Those who gained an education could hardly have it taken away from them. This also applied to those who received a higher and professional education from the new Black colleges and universities, including those established by the Freedmen's Bureau (Howard, Fisk, and Hampton). By 1888, there were 15,000 Black schoolteachers in the South, more than half of them trained at Freedmen's Bureau-founded "normal schools."¹¹

We expect that in areas where Black residents were better able to achieve socio-economic advancement under Reconstruction, they found it easier to maintain, and perhaps expand it, over time. Where freed people were better educated, more likely to own land and other property, and more likely to have higher-earning and higher-status occupations in the 1870s, we expect those advantages to have continued and been passed along to their descendants. In other words, we expect the socio-economic achievements of Black southerners to have persisted for decades even after Reconstruction was reversed.

This study builds on a long line of analyses of Reconstruction and its impact. Du Bois' classic 1935 work stood almost alone for decades; Foner 1988 launched the modern study of the period, with Hahn 2003 a major contribution.¹² In recent years scholars have subjected the period to sophisticated quantitative analyses. Most of these studies

explore the political impact of Reconstruction, often using (as we do) the presence of federal troops as an indicator for the intensity of Reconstruction. Military occupation has been shown to be associated with increased Black political representation and higher taxation; conclusions about the impact on political murders by white supremacists vary (Chacón and Jensen 2020, Chacón et al. 2021, Stewart and Kitchens 2021).¹³ The election of Black politicians was associated with higher tax revenues and higher Black literacy rates and land tenancy (Logan 2020, Suryanarayan and White 2021).¹⁴ Our analysis of the impact of a federal presence on Black political participation simply confirms the existing literature, so we do not repeat it here and summarize it in the Appendix (see Appendix Tables B1 and B2).

We make several contributions to this line of research. First, we look at both federal troops and the Freedmen's Bureau; and, in the case of troops, we construct a composite measure that takes into account the number of troops, the length of time in the area, and the ease of their access to surrounding areas (given cavalry, roads, and railroads). Second, we focus on the socio-economic impact of Reconstruction, looking at such outcomes as school attendance, literacy, professionalization, position on the agricultural ladder, and land and home ownership. Third, we identify and emphasize a mechanism by which political engagement could affect socio-economic development: greater Black and Republican political success was associated with higher local (property) taxation, primarily for schools, and thence with higher rates of school

attendance and literacy, and thence economic advancement. Fourth, we emphasize that these positive effects were mitigated in areas dominated by cotton plantations, we surmise due to the enduring power of the planter elite. Finally, we establish that the socio-economic outcomes we explore during and immediately after Reconstruction persisted for decades thereafter, at least up until World War One and the beginning of the Great Migration.

Our analysis is relevant to broader theoretical issues in the study of the political economy of development. A region's endowments affect its economic development, but the path is hardly clear. Ample natural resources may – or may not – retard development; most plausible explanations run through politics and government policy.¹⁵ More to our point, scholars have established clear developmental differences between regions associated with plantation crops, on the one hand, and those characterized by smallholder (family) farming. Again, the explanatory path runs from endowments through politics: historically, plantation agriculture leads to high levels of inequality, authoritarian political regimes, the under-provision of public goods, and hostility to broad-based economic development.¹⁶ At the same time, scholars have recognized the powerful impact that political institutions can play in affecting developmental paths, by foreclosing or facilitating access to economic opportunities.¹⁷

The study of Reconstruction allows us to investigate in more detail how the institutional changes of the period affected political and economic behavior and

outcomes. The most important institutional change was the enfranchisement of Black men. Reconstruction gives us an opportunity to see how expanding the franchise affected politics and policy.

Analyzing Reconstruction also allows us to explore the impact of the region's endowments and the economic activities and structures associated with them; the role of plantation-based agriculture is particularly important. We explore how these socio-economic realities affected the impact of the federal presence during Reconstruction, focusing on the impact of the region's main crop, cotton. Inasmuch as prevailing technologies dictated production relations – and subsequent social relations – we can analyze the impact of differences in agrarian structure on both politics and other socio-economic outcomes.

Another potential connection is to the literature on post-conflict settlements and state-building. Scholars have studied whether and how the aftermath of war, especially civil war, leads to disparate outcomes: further conflict or enduring peace, democracy or authoritarianism, development or stagnation. Much of the focus is on whether the post-war authorities can build a state with the capacity to both govern and include the population – issues of clear significance to America's efforts at Reconstruction.¹⁸

3. The data

Our principal indicators for the intensity of Reconstruction are the presence of federal troops and of an office of the Freedmen's Bureau, which was established in 1865

and was active in assisting the transition to freedom of formerly enslaved people until Congress ceased to fund it in 1872. At the height of the Bureau's activities there were about 900 Freedmen's Bureau agents in the former Confederacy. The impact of the Bureau's branches, in the form of registered Black voters and schools, is likely to have extended well beyond 1872. Our preferred measure of military occupation is a cumulative monthly average of the total number of troops with ready access to a county. We follow Downs 2015 in computing "occupation zones" based on the spatial coverage of a garrison that considers troop type (infantry vs. cavalry) and railroad networks.¹⁹ We consider average monthly garrison size from May 1865 until December of the relevant year of analysis to take account of cumulative exposure to military occupation.²⁰ Details on all measures are in the Appendix.

We cannot confidently argue that troop deployments were exogeneous: the assignment of troops, to which forts and how many, may have been established for reasons correlated with our outcome variables (see Chacón et. al 2021, 334). As a check we regressed our troops variable on a variety of potential pre-treatment (1860) confounders; it is significantly associated with the existence of a rail connection and with the share of the population that was urban, and not significantly related to cotton suitability, the Black population share in 1860, or the total population in 1860 (see Appendix tables C1 and E1). This is not surprising as forts and garrisons were typically sited in towns and near railroad connections for logistical reasons, primarily ease of

transport and communication.²¹ Troop presence is not associated with cotton suitability or the share of the population that was Black in 1860. The presence of a Freedmen's Bureau office was associated with urban centers; unlike troop presence, it is associated with the share of the population Black in 1860, which is not surprising as the Bureau's remit was explicitly to work with that population. Although we do not think that this association of the troop and Freedmen's Bureau variables with towns invalidates our conclusions, in our empirical analysis of socio-economic outcomes we control for the share of the county population in urban areas. In Appendix C we present statistical analyses that inform our assertion of a reasonable degree of exogeneity of troop presence, recognizing that we cannot definitively or ultimately rule out endogeneity.

Our principal measure of Black political engagement and achievement is Republican voting. This is an imperfect proxy for Black voting. First, not all Black voters voted for the Republicans, whether out of choice or due to coercion and/or social pressure from elites. Second, many white people voted Republican, whether out of conviction or political expedience. We also examine the implications of the election of Black officeholders, using the comprehensive compendium put together by Eric Foner of some 1500 Black officeholders during Reconstruction (Foner 1993).

Our interest in the role of economic structure leads us to look at local crops. Our preferred source of such data is the Food and Agriculture Organization's measure of Global Agro-Ecological Zones, which are very plausibly exogenous to socio-economic

or political factors that might affect agricultural activity.²² This measure may not be fully appropriate for economic analysis, as it does not consider relative prices and price movements. However, we find that the cotton suitability measure yields results nearly identical to those for other measures which are less plausibly exogenous, such as cotton output and sown acreage (See Appendix tables D3 and D4). We have also investigated the role of a plantation economy, as designated by the Census Bureau and augmented by Mandle (1978). This turns out to be correlated with cotton suitability and yields very similar results.

We evaluate the impact of Reconstruction on Black socio-economic achievements using two sets of potential explanatory variables: the impact of Black and Republican political power, and the impact of federal troops and Freedmen's Bureau presence. We expect that where Blacks and their Republican allies were more powerful, they acted to enforce and protect Black access to economic opportunity. We also expect that troops and Bureau agents helped enforce and protect Black political, economic, and legal rights. In the first instance we use as potential explanations our indicators of the political engagement and success of Black voters; in the second we use the same federal presence variables as above.

We use several measures to gauge Black ability to take advantage of economic opportunities. These include such indicators of socio-economic advancement as school attendance, literacy, occupation, and property ownership. They also include data on

position on the agricultural ladder, with laborer lowest followed by sharecropper, tenant, and owner.²³ We used a composite measure of occupational status to identify high pay/high status occupations, which includes most individuals categorized as professionals, managers, and skilled craftsmen, along with some others.²⁴

4. Federal presence and Black socio-economic achievement

As noted, analyses by other scholars have established that Federal presence increased Black political engagement and achievement. We have confirmed the findings that, controlling for socio-economic and racial characteristics, areas with a more consistent federal presence had higher Black voter registration rates, Republican voting, and Black officeholders. We do not present this work here, but a summary is in Appendix Section B. These outcomes are nonetheless central to our analysis, as our argument that a more intensive federal presence had an impact on socio-economic outcomes relies upon the expectation that this presence affected Black political power, which translated into favorable local policies and conditions.

On this basis, we ask: Did Reconstruction affect the ability of freed people--and southern Black people more generally-- to take advantage of newly available economic opportunities? We assess two channels by which Reconstruction might have had an impact. We assess whether Black political participation – along with the participation of white Republican supporters – allowed Black southerners to take advantage of economic opportunities in agriculture, business, the professions, and elsewhere. The

second channel is the direct impact of a federal presence on the ability of Black southerners to avail themselves of economic opportunities. The secondary literature suggests that the presence of Freedmen's Bureau offices and federal troops could provide support and protection for Black citizens as they attempted to buy land, start businesses, enforce contracts, and otherwise advance socio-economically. As a result, in the analyses that follow we typically look at both channels separately, and then together. We understand that the latter approach – including *both* federal presence and Black political engagement – raises questions of endogeneity, since the latter is strongly affected by the former. However, we include both in the interest of suggesting that *both* channels operated – the federal presence affected outcomes both through its impact on Black political success *and* through its more direct impact on Black socio-economic opportunities. The presence of troops and the Freedmen's Bureau might, for example, both increase Black voting – hence local government support for schooling – and help with the provision and protection of schools and schoolteachers.

It is worth noting that virtually all freed people emerged from the Civil War with few or no assets and little or no education, so their conditions were roughly equivalent. Southern "Free Blacks," who tended to be better educated and to own assets, were an exception. Indeed, Logan (2020) uses their numbers as an instrument for subsequent Black officeholders, on the principle that a disproportionate share of such politicians had been free before the Civil War. Free Blacks were concentrated in relatively few

counties and made up only two percent of the total 1860 population of the South; in three-quarters of southern counties they made up less than one percent of the population. Since the presence of a substantial pre-War free Black population would be expected to be associated with higher levels of socio-economic achievement, we control for these numbers in our analysis. The variable (not reported) is sometimes significant, but typically has little or no impact on other factors.

One of the first orders of business for freed people was to redress the forced illiteracy of the slavery era. Thousands of schools were built by a combination of local governments and residents, the Freedmen's Bureau, and northern charities. It took substantial effort to raise sufficient local taxes, establish and staff schools – especially when local white citizens, and perhaps some layers of government, were not sympathetic. Where Republicans had greater political power, we expect higher levels of school attendance; we also expect that the proximity of federal troops and the Freedmen's Bureau will assist in expanding access to schooling.²⁵

The first column of Table 1 shows that Black political participation – as reflected in Republican voting in the 1876 presidential election – had a positive impact on school attendance by Black children between the ages of 6 and 16 in 1880. The election of Black officeholders in the county had a similar effect (not reported). As elsewhere, we include controls for the Black share of the county population, and for the share of the Black population in the county that was urban.²⁶ More heavily Black counties show less

progress – perhaps due to the greater poverty of such counties – while counties with a larger Black urban population show more progress, presumably due to the generally higher incomes of urban areas.

The federal presence also had a powerful impact on Black schooling – in this case, especially the Freedmen’s Bureau, one of whose principal tasks was in fact to establish and staff schools. The second column of Table 1 demonstrates that both the presence of a Freedmen’s Bureau office and federal troop presence were associated with increased school attendance. (We include a control for the total population of the county to account for the possibility that more populous counties would have larger garrisons.) Note that there is undoubtedly some collinearity between the two federal measures, as forts—hence troops-- and Bureau offices were sometimes co-located (correlation coefficient 0.27). In column 3, both Black political participation and federal presence are included in the analysis and each has an impact on schooling.

We expect both political reform and federal presence to have less effect in areas where the cotton planter elite retained its influence. We explore this in the fourth column, adding indicators of cotton suitability to the basic models previously discussed. Being in a cotton region reduced the impact of both Black political participation and federal presence on Black educational advancement.

Apart from the statistical significance of these effects, we evaluate their substantive importance. Drawing from the full model in column 4 of Table 1, a one

standard deviation increase in Republican voting in a county (from a mean of 34 to 54 percent) was associated with a 2.2 percentage point increase in the percent of Black children in school (from 20.7 to 22.9 percent). The presence of the Freedmen's Bureau in a county was associated with a 2.0 percentage point increase in school attendance, while a 100-troop increase in average presence (a bit more than a standard deviation) is associated with a 0.8 percentage point increase in school attendance. And a one standard deviation increase in cotton suitability was associated with a 1.4 percentage point decline in school attendance. These numbers strike us as meaningful in the context of an educational system built almost from nothing, and given the difficulties faced by freed people in gaining access to educational opportunities in the face of widespread hostility from local white supremacists. We return in more detail to the schooling issue in section 6 below.

Basic education was one step on the socio-economic ladder. Other important steps include professionalization, whether through higher education or technical training, and the acquisition of property. Given the strongly agricultural nature of the region, it was particularly important for Black farmers to move up the agricultural ladder, away from the highly dependent status of laborers and sharecroppers and toward the more independent ranks of tenants and owner-operators. We evaluate the impact of Black political engagement, and federal presence, on these indicators of socio-economic advance with a series of interrelated measures.

We assess Black progress in occupational attainment and status by looking at both high status/pay occupations, such as professional (e.g., clergymen, doctors, dentists, and lawyers) and technical occupations (e.g., engineers, teachers, scientists). At the other end of the occupational ladder, we look at the share of Black workers who were occupied as farm laborers, typically the lowest status and earning occupation in the region.

Table 2 shows the effects of the same set of explanatory variables that we used for education in Table 1 on these occupational and earnings measures for Black males in the South; columns 4 and 5, respectively, show the impact of the full range of explanatory variables on the share of Black workers in higher pay/status occupations and as farm laborers. The tables illustrate a similar relationship to that of education and literacy. Both Black political engagement and federal presence are associated with substantially higher occupational achievements by Black men. As expected, the impact of our explanatory variables is reversed in relation to the proportion of the Black population working as farm laborers. The positive effects are significantly reduced in the South's cotton plantation regions – increased in the case of farm labor. Results (not reported here) are analogous for the difference between white and Black males in the region.

The presence of a Freedmen's Bureau office was associated with an increase in the share of Black men in higher-level occupations of about 1.3 percent, from a mean of

6.1 percent, while the positive effect of Republican voting of about 0.6 percentage points; together these two were associated with nearly a one-third increase in the share of the Black population in higher-status occupations. Cotton suitability reduced the share by about 0.7 percent. On the other hand, an analogous increase in Republican voting was associated with a 3.3 percentage point *reduction* in the share of Black males who were farm laborers (from a mean of 34.9 percent of Black workers), the presence of the Freedmen's Bureau troop presence with a 2.2 percentage point reduction. Although these are not enormous numbers, they are substantial, given that they are measured barely three years after Reconstruction ended.

We believe the evidence supports the view that both Black enfranchisement and political activity, and the presence of federal troops and the Freedmen's Bureau, had a positive impact on the schooling of Black children, and on Black occupational and professional advancement.

5. Persistence

Did Black socio-economic advances in the Reconstruction era persist in subsequent decades as white supremacists disenfranchised Black men? We can take advantage of richer data included in the census starting in 1900 to address this question, especially as reflected in Black achievements in the farm sector, which dominated the Southern economy.

Columns 1-4 of Table 3 look at factors affecting Black farm ownership in 1900—more than 20 years after the end of Reconstruction. Most Black farmers were laborers, sharecroppers, or tenants, but a substantial number were able to obtain land in the decades after Emancipation. There is strong reason to believe that Black political power, as well as federal presence, was important to this process. To purchase and hold land typically required legal support to establish title and may have required official support in the event of challenges to title. Several thousand Black farmers took advantage of homesteading possibilities, which could be legally and politically complex. There is evidence that in some areas where white farmers resisted Black land ownership, which would have made political power and federal support particularly important. For example, an Army lieutenant in Florida who had enforced the right of a group of freed people to homestead there reported that local planters “will do all in their power to keep [land] out of the hands of the Freedmen. Although they will probably commit no overt act as long as there is a show of Military force in the state.”²⁷ There is little doubt that the cotton planter elite strongly favored sharecropping and tenancy and resisted anything that would have broken up large estates.

Table 3 demonstrates that substantial Black progress up the agricultural ladder is associated with more intense enforcement of Reconstruction. Both Reconstruction-era Black political participation, as measured by Republican voting, and the presence of federal troops are strongly associated with higher levels of Black farm ownership. The

Reconstruction-era presence of a Freedmen's Bureau office is also so associated, although less strongly and without statistical significance. The impact is substantial: a one standard deviation increase in Republican voting in a county is associated with a 5.1 percentage point increase in the share of Black farmers who owned, from the mean of 33.7 percent; a 100-person increase in troops with a 4.4 percentage point increase, and a one-standard deviation increase in cotton suitability with a 4.7 percentage point decrease. The impact on sharecropping – in the opposite direction – was comparable: for example, increasing troops by 100 is associated with a 4.1 percentage point decrease in the share of Black farmers who were sharecroppers (from the mean of 38.7 percent); a one standard-deviation increase in Republican voting in 1876, with a 3.6 percentage point decrease. Cotton suitability, logically, was associated with a 3.6 percentage point increase in sharecropping.²⁸

Table 3 does not fully address the *persistence* of Reconstruction effects over time, since the measure used here of Black farm ownership is first available in 1900. However, it does indicate that the greater presence of Reconstruction-era institutions was reflected in greater Black economic advance in agriculture 25 years after Reconstruction ended. Remember, too, that the vast majority of freed people started from the same (very low) asset base, so that it is reasonable to assume that differences that arose during and after Reconstruction were not due to underlying differences at the start of the period. In the next section we evaluate the evolution of schooling and its

impact over a similarly long period of time, with specifications that address more directly a plausible mechanism by which the Reconstruction experience might have had long-lasting effects.

The data on progress up the agricultural ladder gives a more differentiated view of the simple picture we obtained with the 1880 results. We can assess the persistence of the occupational effects we documented in the previous section. The occupational data we evaluated in Table 2 are available every decade into the twentieth century, which allows us to see if the positive occupational success we detected in 1880 lasted after the reversal of Reconstruction and the disenfranchisement of Black men. Column 5 of Table 3 looks at our occupational index and shows persistent effects of Reconstruction-era trends. While the variable measuring Freedmen's Bureau offices does not have the expected effect, both Republican voting in 1876 and the presence of Federal troops through 1876 are associated with higher occupational status of Black men in the counties in question. Substantively, a one standard deviation increase in troop presence is associated with a 1.2 percentage point increase in the share of Black workers in high-status occupations (from the mean of 9.1%), a one standard deviation increase in cotton suitability with a 1.5 percentage point decrease. Because data on Black homeownership is not available until 1900, we include that (column 6) to indicate an enduring impact on property ownership even beyond that in the agricultural sector. This effect is substantial, with a one standard deviation in Republican voting associated with a 3.4

percentage point increase in Black homeownership (from its mean of 30.5%); the presence of a Freedmen's Bureau office is associated with a 4.5 percentage point increase, and a one-standard deviation increase in cotton suitability with a 1.1 percentage point decrease. All these results continue to hold for 1910 data. There is still an impact of our Reconstruction-era measures as late as 1920, but as would be expected it is smaller and weaker – by then World War One and the start of the Great Migration had intervened.

6. Local public taxation and local public goods

In this section we evaluate a plausible mechanism by which Black political activity and federal presence might have affected socio-economic conditions in the South after the Civil War. One of the most important goals of Black and Republican voters and politicians was to expand schooling, which had been non-existent or illegal for slaves and very limited for others. State and local taxation, which funded schooling, were hotly contested: taxes, almost exclusively on property, were primarily paid by the wealthy white elite while Reconstruction-era local government spending was targeted at poorer Black and white citizens. Much of the white mobilization against Reconstruction presented itself as an anti-tax movement (Thornton 1982; Chacón and Jensen 2020; Jensen et al. forthcoming). In these circumstances, state and local governments under Republican control typically raised tax rates to finance a wider

array of public goods, while the restoration of white supremacy under the Democrats led either to a decline in taxes or a diversion of the revenue to purposes in line with the white elite's needs, such as public universities (Jensen et al. forthcoming).

We expect county governments controlled by Republicans to raise local property taxes to expand local public goods, especially schooling. We anticipate that the expansion of schooling had both contemporaneous and lasting effects, allowing newly literate or better educated freed people access to previously unavailable economic opportunities. We have data on local taxes from the decennial census.²⁹ We focus on data from 1870, which reflect a period of substantial Republican political success. Ideally, we would have data from mid-decade, as 1880 data come after the restoration of Democratic predominance, however these data were only gathered for the decennial censuses. Because of this timing issue, we use voting behavior from the 1870 House of Representatives election, since the 1868 presidential election is too early, and the 1872 presidential too late, for our purposes.

Our first step is to confirm the association between federal presence and Republican voting, and to establish the impact of these voting data on the local tax rate. The results in Table 4, column 1 confirm the association of troop presence and the Freedmen's Bureau with higher levels of Republican voting. Substantively, a one standard deviation (about hundred-person) increase in troop presence is associated with a 1.6 percentage point increase in Republican voting; the presence of a Freedmen's

Bureau office, with a 2.6 percentage point increase (the average 1870 House Republican vote share was 39 percent). Republican voting is associated with a substantially higher local tax rate, as can be seen from columns 2 and 3 of Table 4. Inasmuch as the outcome variable is a county policy (local taxes were almost exclusively set at the county level),³⁰ we also show the impact of Republicans winning the vote in the county in the 1870 House election.³¹ (Counties with substantial – ten percent – Republican margins of victory yield even stronger results.) Although we do not have local voting data, we think it is safe to presume that counties which voted for Republican House members also elected Republican county governments. To get a sense of the actual importance of the relationship, the average local property tax was 0.77 mills (tax rate in dollars per thousand dollars of assessed property). Column 4 indicates that having a Republican plurality in the county was associated with a 0.25 mill increase, equivalent to about a one-third increase in the average local tax rate, a substantial increase.³²

We also confirm the particularly salient role of Black officeholders for this important policy. Table 5, columns 1 and 2, verify that a federal presence was associated with a higher probability of Black local officeholders, even controlling for Republican voting and a Republican plurality in the county. Column 3 indicates that counties with more Black officeholders also had higher local tax rates – even controlling for Republican control of the county. This confirms Logan’s (2020) conclusion that Black

politicians were especially likely to adopt policies seen as important by freed people.

Adding a wide variety of controls does not appreciably alter these results.³³

Our next step is to explore the effect of higher local taxes on the provision of local public goods, especially schooling. We do not have data on other local public goods, but public education was an overriding concern of freed people and Reconstruction governments more generally. It should also be noted that the Freedmen's Bureau was explicitly tasked with assisting in the creation of public schools for freed children (and for others as well), and that federal troops were often enlisted in the task of establishing and staffing elementary schools. In Table 6, column 1, we see that – not surprisingly – higher local taxes are associated with more Black children attending school.

Substantively, a one standard deviation increase in the local tax rate (again, about a one third increase in the average tax rate) is associated with a 0.12 standard deviation increase in school attendance – from about 7 to 8 percent. Again, given the central role of the Freedmen's Bureau in public education in this period, it is not surprising that the presence of a Bureau field office is associated with a 2.6 percentage point (i.e., more than one-third) increase in the school attendance rate.

We next turn to analyze the extent to which this increased investment in Black children's education had a lasting impact on the socio-economic achievements of future generations of Black citizens. Column 2 of Table 6 shows, again as expected, that higher levels of school attendance in 1870 are associated with a higher level of adult full

literacy in 1910 (results are analogous for 1880 and 1900; they are somewhat stronger when looking only at Black boys and men). So too is the Reconstruction-era presence of a Freedmen's Bureau office; we can speculate that this indicates a greater likelihood that more schools were established in the area at that time. The effects are not huge, but neither are they trivial, especially given that this is an outcome forty years after the initial "treatment." A one standard deviation increase in Black child 1870 school attendance is associated with a 0.1 standard deviation increase in Black adult full literacy, equivalent to about a 1.4 percentage point increase (over the 59.1 percent mean); the Freedman's Bureau dummy leads to a similar 1.7 percentage point increase. Other indicators of socio-economic achievement show a similar pattern: the impact of Reconstruction-era tax and schooling policy on school enrollment had a long-term effect on occupational and agricultural advancement. This is indicated in columns 3, 4, and 5. Column 3 uses our indicator of higher-status occupation, showing that higher levels of school attendance in 1870 are associated with more Black people in higher-status occupations, more Black farmers who are owners, and fewer Black farmers who are tenants.³⁴ Cotton mitigates the positive impact and exacerbates the negative one. Substantively, a one standard deviation increase in school attendance is associated with a 0.13 standard deviation increase in occupational status; it is associated with nearly a 0.2 standard deviation increase in farm ownership and decrease in tenancy, equivalent to a five percentage point increase in ownership and decrease in tenancy. We obtain

similar results for other measures of socio-economic advancement, such as particular occupations and homeownership. The results are robust to the inclusion of all relevant controls; in almost all cases, they are substantially reduced in cotton plantation regions.

In this section, we have suggested a mechanism by which Black political engagement and federal presence improved the position of freed people during Reconstruction and had an enduring impact. Black political power was greater where there was a federal presence, of troops or the Freedmen's Bureau or both; that greater political power was commonly employed to raise taxes on local (largely wealthy white) property owners to fund local public goods; higher taxes allowed for more extensive educational facilities, more Black children in school, and higher levels of Black literacy. The greater local educational advantages obtained by people in these areas were reflected in greater occupational, social, and economic achievements over subsequent decades. These effects persisted at least until 1910.

7. Conclusion

The evidence presented here strongly suggests that the major institutional changes put in place during Reconstruction had many of the positive effects intended by their architects. Reconstruction facilitated, for a time at least, Black political empowerment. Combined with a strong federal presence, political empowerment had important and lasting socio-economic effects. Black people and their allies in the former Confederacy were able to expand massively the access of Black children to education,

and to facilitate access to occupational and professional opportunities from which they had previously been excluded. Although white supremacists eventually reversed the enfranchisement of most Black men, the socio-economic impact of the advances achieved during and after Reconstruction endured for decades.

Although the achievements of the Reconstruction period and its aftermath are impressive and encouraging, the fact that they persisted may have ambiguous implications. On the one hand, it is significant that areas and people that had done better during and after Reconstruction were able to maintain their accomplishments. On the other hand, it is disheartening to acknowledge that this implies that areas that had fallen behind earlier did not close the gap in the later nineteenth and early twentieth centuries despite substantial general national and regional socio-economic progress. This is, however, consistent with findings, such as those in Althoff and Reichardt 2022 and Collins et al. 2022, that the white supremacist restrictions imposed in the Jim Crow era that began in the 1890s dramatically limited Black socio-economic advancement/progress such that unequal development as of 1880 was perpetuated subsequently.

It is nonetheless clear that Reconstruction had an important impact on Black political engagement and socio-economic achievement, and that the impact on socio-economic achievement persisted long after the civil rights advances were largely reversed. Counties with a greater presence of federal troops and the Freedmen's Bureau

had higher levels of Black political participation and Republican voting and were more likely to elect Black politicians to office. Greater Black political engagement and greater federal presence were also associated with greater school attendance by Black children, greater literacy among Black adults, and a larger share of Black workers in higher-status and higher-earnings occupations.

This analysis sheds light on a crucially important period in the troubled history of American race relations. It demonstrates that freedmen were often able to take advantage of opportunities for political participation and for social and economic achievement. It also demonstrates that the support of the federal military and bureaucracy was crucial in ensuring access to these opportunities. This makes the withdrawal of federal support for Black citizens and the rise of the Jim Crow regime in the 1890s and early 1900s all the more tragic, as it suggests that the loss of government support and the onset of systematic legalized racial oppression dramatically retarded further advances.

There are potential lessons beyond this specific case. Reconstruction policies -- extension of the franchise to Black men, extension of full rights of citizenship to freed people, and the presence of federal troops and officials as enforcers -- represented a major political-institutional change in the South. The post-Civil War experience appears akin to the imposition of new political institutions after military defeat -- a topic on which most analysts agree that success is unlikely (see Bueno de Mesquita and Downs

2007, and Downes 2021, for example). In Reconstruction, of course, the new institutions were strongly favored by a very large segment of the population; indeed, Reconstruction could be seen as an example of an (imposed) expansion of the franchise. A wide range of analyses typically find that these reforms lead to improvements in the socio-economic position of those to whom the franchise is extended.³⁵

The evidence presented here is very strongly in line with the proposition that political-institutional reforms to expand the franchise, especially to disadvantaged segments of the population, lead to improvements in the lot of those newly empowered. We have suggested at least one mechanism by which Reconstruction-era reforms may have led to increases in socio-economic advances, and more generally it seems fair to conclude that the Black educational and occupational achievements of the period were in large part the result of purposive efforts by Republican local and state governments.

An important implication of the Reconstruction experience, however, is that formal institutional change is not enough. At one level this is obvious, since the franchise was eventually stolen back by white supremacists. More to the point, the fact that the presence of federal troops and the Freedmen's Bureau had a powerful impact on political and socio-economic outcomes indicates the importance of organized state enforcement of the rights expanded by formal legal changes. This suggests an important amendment, even corrective, to a simple – perhaps naïve – focus on institutions and institutional change as in and of themselves catalysts of political and socio-economic

change. In the Reconstruction context, institutional reform required the support of military might and dedicated government officials.

Another important corrective to the purely institutional view is that the underlying economic structure of the region affected the impact of the institutional changes. Counties in the cotton plantation zone lagged well behind the rest of the South, so much so that in some of our analyses being in a cotton region negated the impact of Black political engagement and federal presence. This is consistent with much of the secondary literature, which typically characterizes cotton plantations as enclaves within which the planter elite could exercise major pressure on Black workers and could often manipulate local institutions to produce desired political results almost at will. The production structure affected social and political power and could in some instances overcome institutional change.

More work is needed to clarify our findings. Future research should look in more detail at the placement of federal forts prior to the Civil War and the stationing (and abandoning) of garrisons during the War and Reconstruction periods (as well as Freedmen's Bureau offices during Reconstruction) to try to evaluate the extent to which fort and/or troop placement was endogenous. It should also supplement the analysis of Black empowerment with more work on the converse—lynchings and other anti-Black violence. There were potentially important differences among states and military

districts that deserve further analysis, along with more detailed assessments of the role of entrenched elite power by examining inequality in relative landholdings.

Reconstruction brought revolutionary institutional change to the American South. Political enfranchisement was enacted legally, enforced militarily, and promoted administratively via troops and the Freedmen's Bureau. Enfranchisement allowed Black men to contribute to Republican victories at the federal level and to elect state and local officeholders sympathetic to their needs, including Black officeholders. Reconstruction and the federal presence had direct, important, and long-lasting positive effects on a whole range of Black socio-economic outcomes, including schooling, literacy, occupational status, and property ownership.

The evidence here demonstrates the profound and lasting impact that changes in political institutions can have on both political and socio-economic outcomes. However, it also suggests some cautionary notes. First, it makes clear that changing institutions – laws and rules – is not sufficient to overcome historical disadvantages and entrenched opposition. In the case of Reconstruction, it took the organized power of the state – including military power, in ways that mattered at the very local level -- to make meaningful and lasting change possible. Second, it makes clear that the underlying economic structure of an area can have a powerful impact on its susceptibility to reform. More specifically, the effects of political-institutional change can be stymied or blocked by entrenched interests, such as the cotton planter elite represented in the

South. We believe that all these lessons remain relevant, and are of profound interest and value, today.

Table 1
Federal presence and Black children's school attendance, 1880

VARIABLES	(1) Share of Black children (6-16) attending school 1880	(2) Share of Black children (6-16) attending school 1880	(3) Share of Black children (6-16) attending school 1880	(4) Share of Black children (6-16) attending school 1880
Republican Presidential votes 1876	0.136*** (0.0312)		0.126*** (0.0312)	0.111*** (0.0319)
Average occupying troops through 1876 (thousands)		.0934** (.0340)	.0782** (.0394)	.0861** (.03967)
Freedmen's Bureau office		0.0245*** (0.00859)	0.0212** (0.00850)	0.0200** (0.00846)
Percent population Black 1880	-0.0715*** (0.0268)	-0.0437** (0.0200)	-0.110*** (0.0261)	-0.0772*** (0.0288)
Percent Black population urban 1880	0.169*** (0.0387)	0.0779* (0.0469)	0.0796* (0.0464)	0.0870* (0.0479)
Total population 1880		1.71e-06*** (4.01e-07)	1.40e-06*** (3.73e-07)	1.35e-06*** (3.78e-07)
Cotton suitability				-0.000923*** (0.000303)
Constant	0.185*** (0.00942)	0.182*** (0.0101)	0.173*** (0.00990)	0.207*** (0.0157)
Observations	848	867	848	848
R-squared	0.065	0.064	0.088	0.097

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2
Federal presence and Black occupational advancement, 1880

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Percent of Black men in higher occupations 1880	Percent of Black men in higher occupations 1880	Percent of Black men in higher occupations 1880	Percent of Black men in higher occupations 1880	Percent of Black men farm laborers 1880
Republican Presidential votes 1876	0.0436*** (0.0157)		0.0393** (0.0157)	0.0315** (0.0158)	-0.152*** (0.0334)
Average occupying troops through 1876 (thousands)		0.0291 (0.0283)	0.0270 (0.0268)	0.0310 (0.0271)	-0.0496 (0.0793)
Freedmen's Bureau office		0.0152*** (0.00550)	0.0143*** (0.00551)	0.0137** (0.00546)	-0.0217* (0.0113)
Percent population Black 1880	-0.0385*** (0.0115)	-0.0413*** (0.00901)	-0.0563*** (0.0118)	-0.0398*** (0.0122)	0.133*** (0.0314)
Percent Black population urban 1880	0.219*** (0.0281)	0.189*** (0.0331)	0.188*** (0.0329)	0.192*** (0.0336)	-0.379*** (0.0277)
Total population 1880		3.65e-07 (2.49e-07)	3.48e-07 (2.46e-07)	3.20e-07 (2.48e-07)	1.19e-06*** (3.87e-07)
Cotton suitability				-0.000465** (0.000184)	-0.000137 (0.000389)
Constant	0.0545*** (0.00500)	0.0586*** (0.00561)	0.0512*** (0.00590)	0.0687*** (0.0103)	0.359*** (0.0193)
Observations	848	870	848	848	848
R-squared	0.156	0.149	0.168	0.176	0.133

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3
Federal presence and Black farm ownership, share tenancy, occupational advancement, and homeownership, 1900

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Percent of Black farmers who own 1900	Percent of Black farmers who own 1900	Percent of Black farmers who own 1900	Percent of Black farmers who are share tenants 1900	Percent of Black men in higher occupations 1900	Percent of Blacks who are homeowners 1900
Republican Presidential votes 1876	0.228*** (0.0407)		0.183*** (0.0418)	-0.178*** (0.0411)	0.0337* (0.0173)	0.166*** (0.0295)
Average occupying troops through 1876 (thousands)		0.326 ** (0.142)	0.325*** (0.123)	-0.423*** (0.0892)	0.0565*** (0.0214)	0.0976 (0.102)
Freedmen's Bureau office		0.0302* (0.0162)	0.0163 (0.0157)	0.0105 (0.0158)	-0.00506 (0.00464)	0.0448*** (0.0106)
Percent population Black 1900	-0.453*** (0.0309)	-0.357*** (0.0341)	-0.353*** (0.0374)	-0.221*** (0.0389)	-0.0673*** (0.0138)	-0.338*** (0.0269)
Percent Black population urban 1900	0.0112 (0.0531)	0.134** (0.0668)	0.171** (0.0666)	-0.185*** (0.0509)	0.208*** (0.0239)	0.0102 (0.0290)
Total population 1900		-3.46e-06*** (1.04e-06)	-3.56e-06*** (1.03e-06)	2.08e-06** (9.29e-07)	5.07e-07* (2.62e-07)	-2.09e-06*** (4.00e-07)
Cotton suitability			-0.00222*** (0.000569)	0.00239*** (0.000575)	-0.000774*** (0.000217)	-0.000717* (0.000373)
Constant	0.418*** (0.0187)	0.497*** (0.0208)	0.537*** (0.0299)	0.405*** (0.0290)	0.107*** (0.0110)	0.415*** (0.0186)
Observations	839	852	839	839	847	844
R-squared	0.158	0.176	0.223	0.134	0.261	0.245

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4
Federal presence and Republican House votes, 1870;
Republican votes 1870 and Local tax rates 1870

VARIABLES	(1) Republican House vote 1870	(2) Local tax rate 1870	(3) Local tax rate 1870
Troops until 1870 (1000)	.095046*** .0036015		
Freedmen's Bureau office	0.0261* (0.0150)		
%pop Black 1870	0.570*** (0.0411)	0.000107 (0.00174)	0.000485 (0.00199)
Cotton suitability	-0.00201*** (0.000572)	-1.17e-06 (1.62e-05)	-4.06e-06 (1.67e-05)
Republican HoR vote 1870		0.00514*** (0.00148)	
Repub HoR plurality 1870			0.00250*** (0.000577)
Constant	0.264*** (0.0267)	0.00491*** (0.00100)	0.00608*** (0.000801)
Observations	718	704	704
R-squared	0.303	0.022	0.024

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5
Federal presence, Republican voting, Black officeholders, and Local tax rates, 1870

VARIABLES	(1) Local Black officeholders 1870	(2) Local Black officeholders 1870	(3) Local tax rate 1870
Republican HoR vote 1870	0.206*** (0.0751)		
Troops until 1870 (1000)	.0518734 .0434309	.0525388 .0426008	.000097 .0001232
Freedmen's Bureau office	0.124*** (0.0370)	0.123*** (0.0361)	0.000477 (0.000514)
% pop Black 1870	0.274** (0.111)	0.238** (0.114)	-0.000655 (0.00200)
Cotton suitability	-0.00105 (0.00105)	-0.00104 (0.00100)	-2.64e-06 (1.67e-05)
Republican HoR plurality 1870		0.152** (0.0593)	0.00219*** (0.000573)
Local Black officeholders 1870			0.00162*** (0.000546)
Constant	-0.0993** (0.0421)	-0.0582* (0.0346)	0.00604*** (0.000823)
Observations	718	718	704
R-squared	0.064	0.070	0.044

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6
Federal presence and Black children's school attendance 1870;
Black adult literacy, occupational status, and agricultural status 1910

VARIABLES	(1) Black children attending school 1870	(2) Black adult literacy 1910	(3) Black males Higher occupations 1910	(4) Black farmowners % of total 1910	(5) Black tenant farmers % of total 1910
Local tax rate, 1870	1.321** (0.632)				
Freedmen's Bur. Office	0.0260*** (0.00749)	0.0175** (0.00684)			
%population Black 1870	-0.0115 (0.0201)				
Cotton suitability	-0.000523** (0.000218)	0.000847*** (0.000264)	-0.00126*** (0.000272)	-0.00373*** (0.000618)	0.00373*** (0.000626)
Black children school 1870		0.109* (0.0613)	0.132*** (0.0455)	0.488*** (0.0845)	-0.501*** (0.0864)
%population Black 1910		-0.237*** (0.0176)	-0.0644*** (0.0142)	-0.341*** (0.0387)	0.345*** (0.0391)
%Black pop urban 1910			0.144*** (0.0202)	-0.0348 (0.0498)	0.0276 (0.0506)
Constant	0.0772*** (0.00998)	0.616*** (0.0123)	0.136*** (0.0146)	0.656*** (0.0261)	0.341*** (0.0264)
Observations	825	846	844	837	837
R-squared	0.040	0.222	0.186	0.224	0.223

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

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Notes

¹ The essential sources are Du Bois 1935, Foner 1988, and Hahn 2003.

² See Heersink and Jenkins 2020, (especially Chapter 3).

³ Kousser 1974, updated and expanded by Perman 2001. We note that even where Blacks were enfranchised, this did not extend to women.

⁴ See section 6 and Logan 2020, Chacon and Jensen 2020, Jensen et al forthcoming, and Stewart and Kitchens 2021.

⁵ Many of the records of the Freedmen's Bureau have been transcribed and are available online through the National Archives, at <https://www.archives.gov/research/african-americans/freedmens-bureau>; see also <https://freedmen.umd.edu/sampdocs.htm>.

⁶ Sterling 1994, pages 10-11.

⁷ Quoted in White 2017, page 69. Thanks to Ken Shepsle for bringing this quote to our attention.

⁸ Foner 2007, Chapter 3 .

⁹ Rodrigue 2001, Hahn 2003 p. 346ff and p. 349ff.

¹⁰ Kerr-Ritchie 1999.

¹¹ Richardson 1986, page 119.

¹² Gates 2019 provides an excellent general survey.

¹³ Jensen et al., forthcoming, analyzes the South during 1820-1910 more generally, focusing on the impact of Black enfranchisement on state fiscal policies.

¹⁴ Logan (2020) focuses on whether electing Black politicians matters, over and above electing Republican politicians; in other words, focusing on the potential impact of *descriptive representation*. Although we have looked at the specific sources and effects of Black elected officials, controlling for Republican voting, we concentrate on the broader issue of Black/Republican voting and its impact.

¹⁵ See Ross 2015 and Savoia and Sen 2021.

¹⁶ See Sokoloff and Engerman 2000 and Engerman and Sokoloff 2011; see also the discussion of post-slavery sugar islands in Dippel et al. 2020.

¹⁷ Acemoglu and Robinson 2012, and Acemoglu et al. 2005.

¹⁸ On post-civil war settlements see the surveys in Cederman and Vogt 2017 and Fortna and Huang 2012; on post-war state-building see, for example, Williams and Sterio 2020. Byman 2021 looks explicitly at Reconstruction in the South as an exercise in the study of post-conflict political violence; Stewart and Kitchens 2021 see it as an example of revolutionary social transformation, with findings in line with ours.

¹⁹ See <https://www.mappingoccupation.org/>.

²⁰ We exclude four entities in West Texas (El Paso, Presidio, "Bexar District", and "Unorganized Territory of Young") and South Florida (Monroe), where the army was not involved in Reconstruction.

²¹ We consulted with several military historians in the U.S. Army, all of whom took this view, although none could provide concrete evidence for the Reconstruction time period. See, for example, Bradley 2015.

²² Available online at <https://gaez.fao.org/>. These zones are determined on “well-established land evaluation principles...based on plant eco-physiological characteristics, climatic and edaphic requirements of crops.”

²³ Census categories do not easily track the position of sharecroppers, apparently due to confusion among enumerators and others. Often they are classified as “share tenants,” but they are also sometimes simply included among tenants. This makes data about sharecropping hard to compare across decadal censuses; the distinction between laborers, tenants, and owners is clearer.

²⁴ Many such indices provide a rough sense of occupational ranking. We use the Occupational Income Score developed by IPUMS, “a constructed income score based on the relative economic standing of occupations in 1950” (See this site for details: <https://usa.ipums.org/usa/chapter4/chapter4.shtml>). As this uses 1950 standings, we built our own occupational index based on our understanding of late nineteenth-century conditions. The two indices are highly correlated (.72), and results using the IPUMS index are similar to those presented here, although many of the occupational categories were not relevant in the late nineteenth century.

²⁵ Other scholars' findings point in this direction: Logan 2020 found that more Black officeholders led to higher taxation and higher literacy; Chacón and Jensen 2020; and Jensen et al. forthcoming similarly find the Black political power was associated with higher levels of taxation.

²⁶ We note that when pre-treatment versions of these variables are used – percent of the population urban, percent enslaved, and other similar measures as of 1860 – the results are essentially identical.

²⁷ As quoted in Lanza 1999

²⁸ This is actually “share tenants” and is as close as we can get to sharecropping, as the census enumerators were not clear on the concept.

²⁹ We are deeply grateful to Jeffrey Jensen and Giuliana Pardelli for giving us access to these data.

³⁰ Some local taxes were set by municipalities, but there were very few such instances. We include municipality taxes in local taxes. See Chacón and Jensen 2020 and Jensen et al. forthcoming for more details.

³¹ Because there were occasional third candidates, we use a Republican plurality as the indicator of Republican victory.

³² We note that in ancillary analyses of determinants of the local tax rate, the interaction of a Republican plurality with the troops variable is positive and strongly significant,

reinforcing our point that both channels – political power and Federal presence – played a role in affecting outcomes.

³³ As is often the case, the proportion of free Blacks in the population as of 1860, and the share of Black people living in urban areas, sometimes has a positive effect on these outcomes, but their impact does not affect our results.

³⁴ The 1900 census distinguishes between “cash tenants” and “share tenants” but, apparently due to lack of clarity among enumerators, the 1910 census does not draw this distinction. Results are analogous, but both statistically and substantively stronger, for 1900 share tenants (sharecroppers).

³⁵ For an economic-development context see Brown and Hunter 1999; for an early American example see Ansolabehere et al. 2022.

Was Freedom Road a Dead End?

Political and socio-economic effects of Reconstruction in the American South

Supplementary Appendix

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A. Data: Variables and Sources

1. Troops and Freedmen's Bureau Offices

Freedmen's Bureau Offices: Our main variable for the Freedmen's Bureau is a dummy variable equal to 1 if the county had a Freedmen's Bureau Field Office within its (1870) borders.¹

Average Occupying Troops: Our preferred measure of military occupation is a cumulative monthly average of the total number of troops with ready access to a county. This measure averages the combined garrisons of all forts within all "occupation zones" within the county's borders from May 1865 until December of a given year (e.g., until 1869). These variables are available from 1866 until 1880.²

Occupation zones represent the area surrounding a fort, which a garrison could march in a single day. We follow Downs 2015 in constructing spatial occupation zones which account for railroad networks and whether the garrison had infantry or cavalry units (which can march farther). This measure includes both forts which are physically within a county's borders, as well as nearby forts outside the county's borders that are close enough that their troops can deploy into the county within a day. This average is then divided by 1,000 to increase the readability and interpretation of coefficient effects sizes.

2. Political Variables

Black Officeholders: We digitized Foner (1993)'s comprehensive compendium of over 1500 Black officeholders to give us data on Black officeholders at the national, state, and local levels. Table 5 uses these data, total number of local Black officeholders elected in county i during the 1870s, as outcomes for columns (1) and (2).³ Table B2 uses two variables for Black officeholders from Chacón and Jensen (2020), which are dummy indicators which equal 1 if a county had elected a local black officeholder sometime between (1) 1867 and 1870; and (2) 1867 and 1877.

Black Registered Voters: Our variable for Black registered voters is based on the State Constitutional Convention Voter Registrations (1867-1869).⁴ We divide the number of registered Black voters by the adult Black male population as our main outcome variable in Table B1 and use the percentage of Black registered voters as a share of all voters as an independent variable in Table B2.

Republican Voting: We use Republican vote share data from presidential and House of Representatives elections during the 1870s. These data have been used as is and to construct dummy variables which equal 1 if Republican votes constituted a plurality in county i in a given election.⁵

Taxation: We estimate local tax rates by dividing the combined county and local tax collections by county-level wealth assessments.⁶

3. Socioeconomic Variables

Farm Laborers: Percentage of Black males (over 16) who were coded as “farm laborers” in the census.

Farm Ownership and Tenancy: We have three main measures of farm ownership and tenancy: (1) percent of Black farmers who own their farm; (2) percent of Black farmers who were tenants (cash and share); (3) percent of Black farmers who were share tenants.⁷ Census enumerators were not consistent in distinguishing between share tenants (sharecroppers) and cash tenants, so we cannot use a consistent measure for share tenants.

High Occupational Status: We construct a measure of Black males over the age of 16 with professions we consider having high occupational status. Our measure includes three main groupings of occupations: professionals, managers, and skilled craftsmen.⁸

Home Ownership: Our variables for homeownership measure the percentage of Black families that own a home.⁹

Literacy: We construct the most restrictive measure of literacy possible with the census data, which codes individuals as “literate” only if they can both read and write.

Individuals who read but cannot write or vice versa are coded as illiterate. Our primary measure of literacy is thus the percentage of Black adults who can both read and write.

We also have measures of literacy by gender and for youths.¹⁰

School Attendance: Our main measure of school attendance is the percentage of Black children (aged 6-16) who had attended school at some point during the census year. We also have measures disaggregated by gender.¹¹

4. Additional Controls

Black Population: Our main controls for population are Black population share computed from the full census data. We also use the percentage of Blacks in county i coded as living in urban areas by census. We have computed these variables for each available census wave from 1860-1910.

Cotton Suitability: We use the FAO cotton suitability index.¹²

B. Political Outcomes

Tables B1 and B2 consider the effect of federal troops garrisoned in (or within a day's march) of a county and the location of a Freedmen's Bureau office within a county on several measures of Black political engagement, including Republican voting and Black voter registration. We focus on presidential rather than congressional elections because the candidates were uniform across districts. Correlation between Republican presidential and congressional voting was high across counties in the elections of 1872 and 1876 ($\rho > 0.9$). We recognize that this is an indirect method of assessing Black political engagement. Although former slaves were not the only Republican voters, once

enfranchised they voted overwhelmingly for the party of Lincoln. Hence, Republican voting should reflect, at least in part, Black political engagement.

The first four columns in Table B1 present regression results on the proportion of a county's Black population that was registered to vote for state conventions during 1867-69 as a percentage of 1870 population. In all four specifications, the rate of Black voter registration increases with the percentage of the population that was Black. Including a dummy variable indicating whether the county had a Freedmen's Bureau office in columns (2) and (4) increases the share of the Black population registered to vote by about 0.8 percent—equivalent to nearly 2 percent of the median registration rate of about 43 percent. The average number of occupying troops in the area until 1869 (column 4) has a positive estimated coefficient, although the effect is not statistically significant when a Freedmen's Bureau dummy is included. Both cotton areas and percent Black that are urban have negative coefficients but are not significantly different from zero.

Columns 5-7 present an analysis of Republican presidential voting patterns in the presidential election of 1872. The estimated coefficient on the percent of the population that is Black is positive and significant at the .01 level in all three specifications. We hypothesize that the presence of federal troops and a Freedman's Bureau office made it easier for Black men to vote despite local hostility and, hence, increased Republican vote share. The coefficients on the average number of troops (measured in thousands)

until 1870 (columns 6-7) is positive and significantly different from zero, as is the coefficient on the presence of a Freedman's Bureau office (column 7). The estimated coefficients on occupation troops range from 0.105 to 0.0856, suggesting that an additional 100 troops (a bit more than one standard deviation) might have increased the Republican share of the vote by about a percent—and a Freedman's Bureau office by nearly 5 percent. Given the relatively tight margins in Virginia, where Grant won by one percent, and Tennessee, where he lost by 2.2 percent, the effect of troops might have been important. Finally, we add a variable representing an index of the suitability of the land in the county for cotton production in columns 5-7, which we interpret as a measure of the strength of the incumbent plantation elite. The estimated coefficient on this variable is negative and significantly different from zero at the 0.01 level.

Table B2 presents our analysis of the effects of Reconstruction on the election of Black politicians to local and state office. Probits in columns 1-3 look at the period 1867-70 and columns 4-6 look at the period 1867-77. During both periods, the presence of the Freedmen's Bureau has a positive and significant effect on the likelihood of having a Black elected local official at the 0.01 or 0.05 level. Estimated coefficients on troops are positive and significant at the 0.05 level. The estimated coefficient on cotton suitability is negative throughout and significant at the 0.05 level. The results suggest that an increased federal presence—either in terms of Freedmen's Bureaus or troop presence--bolstered Black political empowerment, as measured by voter registration, Republican

voting, and Black office holding, and that this empowerment effect was reduced in cotton growing areas.

Table B1: Federal presence and Black political empowerment

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Black registered voters as a share of adult male Black population, 1870				Republican presidential vote share, 1872		
Percent population Black, 1870	0.302*** (0.00586)	0.294*** (0.00714)	0.302*** (0.00586)	0.294*** (0.00717)	0.604*** (0.0325)	0.602*** (0.0321)	0.559*** (0.0341)
Freedman's Bureau dummy		0.00868*** (0.00300)		0.00830*** (0.00306)			0.0473*** (0.0129)
Average occupation troops until 1869 (000's)				0.00828 (0.00592)			
Cotton	-6.90e-05 (6.69e-05)	-5.71e-05 (6.63e-05)	-6.90e-05 (6.69e-05)	-6.24e-05 (6.66e-05)	-0.00319*** (0.000479)	-0.00324*** (0.000478)	-0.00318*** (0.000476)
Black percent urban, 1870	0.00298 (0.0201)	-0.000438 (0.0200)	0.00298 (0.0201)	-0.00480 (0.0203)	-0.0360 (0.0716)	-0.0676 (0.0738)	-0.0809 (0.0711)
Total population, 1870	5.49e-08 (1.59e-07)	-1.13e-08 (1.79e-07)	5.49e-08 (1.59e-07)	-7.61e-09 (1.85e-07)	1.85e-06** (9.23e-07)	1.82e-06** (8.75e-07)	1.44e-06* (7.91e-07)
Average occupation troops until 1872 (000)						0.105*** (0.0341)	0.0856** (0.0332)
Constant	0.00694** (0.00297)	0.00621** (0.00295)	0.00694** (0.00297)	0.00601** (0.00297)	0.366*** (0.0237)	0.365*** (0.0236)	0.362*** (0.0235)
Observations	736	736	736	736	836	836	836
R-squared	0.833	0.835	0.833	0.836	0.377	0.380	0.389

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table B2: Federal presence and election of Black local official during 1867-70 or 1866-77 (probit)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Election of a Black official, 1867-70			Election of a Black official, 1867-77		
Black registered voters as share of all voters, 1867-69	3.402*** (0.420)	3.136*** (0.439)	3.199*** (0.446)	3.631*** (0.389)	3.418*** (0.401)	3.454*** (0.404)
Cotton	-0.0138** (0.00614)	-0.0136** (0.00630)	-0.0136** (0.00642)	-0.0126** (0.00568)	-0.0124** (0.00573)	-0.0123** (0.00579)
Freedmen's Bureau dummy		0.646*** (0.187)	0.591*** (0.189)		0.455*** (0.163)	0.413** (0.165)
Average occupation troops until 1870			0.000837** (0.000361)			0.000708** (0.000313)
Percent of Blacks urban, 1870	0.732 (0.710)	0.456 (0.681)	-0.416 (0.712)	0.201 (0.703)	0.0123 (0.679)	-0.684 (0.709)
Total population, 1870	6.29e-05*** (9.79e-06)	5.85e-05*** (9.97e-06)	5.70e-05*** (1.02e-05)	6.14e-05*** (9.75e-06)	5.69e-05*** (9.83e-06)	5.55e-05*** (9.99e-06)
Constant	-3.157*** (0.338)	-3.415*** (0.371)	-3.443*** (0.381)	-3.086*** (0.297)	-3.221*** (0.309)	-3.238*** (0.314)
Observations	735	735	735	735	735	735
Pseudo R2	0.351	0.374	0.385	0.349	0.362	0.369

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

C. Fort and Troop Placement

In Table C1, we present a tentative test checking the relationship between federal garrisons and the main control variables used in the analysis. Model (1) regresses pre-treatment controls for population demographics and cotton suitability on our main troop measure (which is a continuous variable) used throughout the analysis. Here we find that cotton suitability and two out of the three demographic variables are uncorrelated with the average garrison sizes (from May 1865 until December 1876).

Table C1

VARIABLES	(1) Avg. troops through 1876 (thousands)	(2) Avg. troops through 1876 (thousands) (dummy if > 0)	(3) Avg. troops through 1876 (thousands) (dummy if above mean)
Cotton	0.000283 (0.000187)	0.00340*** (0.00110)	0.000757 (0.000890)
Percent population Black 1860	0.0148 (0.0188)	0.468*** (0.0672)	0.322*** (0.0789)
Percent population urban 1860	0.151** (0.0730)	0.206*** (0.0495)	0.498*** (0.161)
Total population 1860	2.39e-07 (5.73e-07)	3.04e-06** (1.33e-06)	4.90e-06*** (1.89e-06)
Constant	0.00779 (0.00636)	0.431*** (0.0503)	0.0240 (0.0383)
Observations	848	848	848
R-squared	0.072	0.129	0.094

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Using an alternative measure of federal garrisons, Model (2) repeats this test but instead used a dummy variable of our main troop variable (essentially capturing whether a county had any federal troops within its borders or within a day's march between May 1865 and December 1876). And model (3) repeats this procedure but converts the primary troop measure into a dummy variable equal to 1 (over the mean value) and 0 (below mean value). Here we see that cotton suitability and demographic variables are correlated with the binary status of military occupation versus no military occupation (2), as well as above average-sized garrisons versus below average-sized garrisons (3). This indicates a correlation between troop deployments and the main control variables used throughout the analysis, which we believe helps further validate the use of such controls.

D. Robustness and Alternative Specifications

1. Pre-Treatment Controls

In our main results we control for covariates measured contemporaneously (or as close to contemporaneously as possible) with the outcome variable. For example, when studying the effects of federal troops and the Freedmen's Bureau on the share of Black children attending school in 1880, we control for the Black population share in 1880. We use contemporaneously measured variables in our main specifications because of their

higher relevance. However, we recognize the danger posed by post-treatment bias and present our main results using pre-treatment covariates measured in 1860 below.

The results presented in **Table D1 and Table D2** confirm those in **Table 2** and **Table 3** from the main text. Not only are the results robust to the use of pre-treatment covariates but they are even stronger than those presented in the main text.

Table D1: Pre-treatment controls (replicating Table 2)

VARIABLES	(1) Share of Black children (6-16) attending school 1880	(2) Percent of Black men in higher occupations 1880	(3) Percent of Black men farm laborers 1880
Republican presidential vote, 1876	0.103*** (0.0302)	0.0378** (0.0150)	-0.126*** (0.0319)
Average occupying troops through 1876 (thousands)	0.118*** (0.0348)	0.0637*** (0.0235)	-0.150** (0.0740)
Freemen's Bureau office	0.0232*** (0.00850)	0.0206*** (0.00548)	-0.0250** (0.0111)
Percent of population Black, 1860	-0.0961*** (0.0285)	-0.0785*** (0.0139)	0.140*** (0.0329)
Percent of population urban, 1860	0.0638** (0.0279)	0.150*** (0.0226)	-0.278*** (0.0279)
Total population, 1860	1.30e-06*** (4.39e-07)	9.44e-08 (2.43e-07)	1.84e-06*** (6.20e-07)
Cotton	-0.000826*** (0.000296)	-0.000296* (0.000177)	0.000124 (0.000384)
Constant	0.217*** (0.0153)	0.0752*** (0.00978)	0.331*** (0.0182)
Observations	840	840	840
R-squared	0.091	0.160	0.112

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table D2: Pre-treatment controls (replicating Table 3)

VARIABLES	(1) Percent of Black farmers who own 1900	(2) Percent of Black farmers who are share tenants 1900	(3) Percent of Black men in higher occupations 1900	(4) Percent of Blacks who are homeowners 1900
Republican presidential vote, 1876	0.144*** (0.0424)	-0.183*** (0.0408)	0.0475** (0.0187)	0.111*** (0.0310)
Average occupying troops 1876 (thousands)	0.332** (0.130)	-0.323*** (0.0798)	0.0625*** (0.0228)	0.174* (0.101)
Freedmen's Bureau Office	-0.000718 (0.0162)	0.0192 (0.0159)	0.00861 (0.00524)	0.0241** (0.0112)
Percent of population Black, 1860	-0.233*** (0.0501)	-0.234*** (0.0440)	-0.126*** (0.0172)	-0.199*** (0.0332)
Percent urban, 1860	0.167*** (0.0621)	-0.358*** (0.0380)	0.148*** (0.0225)	-0.00172 (0.0419)
Total population, 1860	-5.11e-06*** (1.86e-06)	2.72e-06** (1.31e-06)	-8.18e-08 (2.32e-07)	-2.77e-06*** (7.38e-07)
Cotton	-0.00353*** (0.000580)	0.00246*** (0.000563)	-0.000592*** (0.000228)	-0.00199*** (0.000393)
Constant	0.564*** (0.0312)	0.410*** (0.0288)	0.133*** (0.0120)	0.438*** (0.0199)
Observations	833	833	839	837
R-squared	0.178	0.143	0.166	0.153

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

2. Cotton

Table D3: Cotton Output (replicating Table 2)

VARIABLES	(1) Share of Black children (6-16) attending school 1880	(2) Percent of Black men in higher occupations 1880	(3) Percent of Black men farm laborers 1880
Republican presidential vote, 1876	0.105*** (0.0326)	0.00592 (0.0159)	-0.124*** (0.0340)
Average occupying troops through 1876 (thousands)	0.0718* (0.0397)	0.0167 (0.0223)	-0.0428 (0.0753)
Freemen's Bureau office	0.0202** (0.00849)	0.0126** (0.00529)	-0.0201* (0.0111)
Percent of population urban Black, 1880	0.0672 (0.0464)	0.168*** (0.0319)	-0.365*** (0.0289)
Percent of population Black, 1880	-0.0867*** (0.0282)	-0.0154 (0.0119)	0.0962*** (0.0290)
Total population, 1880	1.62e-06*** (4.05e-07)	7.04e-07*** (2.61e-07)	9.24e-07** (3.62e-07)
Cotton Output (log), 1880	-0.00368*** (0.00129)	-0.00596*** (0.000715)	0.00465*** (0.00159)
Constant	0.192*** (0.0123)	0.0832*** (0.00813)	0.329*** (0.0161)
Observations	848	848	848
R-squared	0.096	0.234	0.142

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table D3 and **Table D4** replicate **Table 2** and **Table 3** using cotton output from the 1880 Agricultural Census instead of the cotton suitability FAO data that has been critiqued by existing scholarship (Rhode 2024). These results are similar to those in the main text of the paper with a few small differences.

Table D4: Cotton Output (replicating Table 3)

VARIABLES	(1) Percent of Black farmers who own 1900	(2) Percent of Black farmers who are share tenants 1900	(3) Percent of Black men in higher occupations 1900	(4) Percent of Blacks who are homeowners 1900
Republican presidential vote, 1876	0.0463 (0.0402)	-0.0591 (0.0398)	0.0379** (0.0191)	0.0791** (0.0324)
Average occupying troops through 1876 (thousands)	0.226** (0.111)	-0.272*** (0.0809)	-0.0106 (0.0241)	0.118 (0.0804)
Freemen's Bureau office	0.0130 (0.0128)	0.0193 (0.0144)	0.00213 (0.00477)	0.0360*** (0.00959)
Percent of population urban Black, 1880	0.0851 (0.0890)	-0.220*** (0.0417)	0.228*** (0.0224)	-0.0645* (0.0367)
Percent of population Black, 1880	-0.174*** (0.0365)	-0.330*** (0.0373)	-0.092*** (0.0171)	-0.196*** (0.0304)
Total population, 1880	-2.54e-06*** (8.91e-07)	1.34e-06* (8.12e-07)	3.72e-07 (2.36e-07)	-1.05e-06*** (5.29e-07)
Cotton Output (log), 1880	-0.0371*** (0.00208)	0.0282*** (0.00271)	-0.00450*** (0.000868)	-0.0200*** (0.00174)
Constant	0.645*** (0.0214)	0.333*** (0.0211)	0.122*** (0.00838)	0.473*** (0.0152)
Observations	839	839	847	844
R-squared	0.434	0.275	0.234	0.328

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

E. Two-Stage Least-Squares

Here we present our two-stage least-squares analysis which attempts to causally identify the effects of military occupation on school attendance by Black children (ages 6-16) in 1880. Most of the forts used during Reconstruction predate the Civil War and were established due to conflicts between colonial powers or between the Native Americans and the US Government (or colonial powers). Their locations are thus plausibly exogenous. But the assignment of troops and the size of their garrisons in different forts is plausibly endogenous to the socioeconomic outcomes we are interested in. We provide a tentative attempt to deal with this by instrumenting our troops variable with the existence of a railroad in 1860.

Railroads plausibly satisfy the relevancy criteria for a valid instrument. Given the limitations of the road network in the 19th century, railroads were important for supplying and maintaining large garrisons and deploying them in times of emergency. This means that the presence of a railroad predicts treatment assignment (garrison size). As our primary troop measure utilizes railroad networks in computing occupation zones to which a garrison can march within a day, the existence of a railroad within 1860 county borders is partially incorporated in the treatment variable. Not surprisingly, the coefficients on the railroad dummy variable in **Table E1** are positive and statistically significant at the 0.001 level across all specifications: with Model (1) reporting the bivariate form, Model (2) controlling for cotton suitability and 1880s

demographic measures, and Model (3) controlling for cotton and the 1860 pre-treatment demographic controls.

Table E1: First Stage

VARIABLES	(1) Avg. troops through 1876 (thousands)	(2) Avg. troops through 1876 (thousands)	(3) Avg. troops through 1876 (thousands)
Railroad	0.0296*** (0.00579)	0.0200*** (0.00619)	0.0180*** (0.00660)
Cotton		0.000173 (0.000172)	0.000242 (0.000193)
Percent of population urban Black, 1880		0.193 (0.117)	
Percent of population Black, 1880		0.0118 (0.0122)	
Total population, 1880		-1.54e-07 (5.44e-07)	
Percent of population Black, 1860			0.00839 (0.0176)
Percent of population urban, 1860			0.146** (0.0738)
Total population, 1860			5.66e-09 (5.37e-07)
Constant	0.0241*** (0.00326)	0.0105* (0.00608)	0.00964 (0.00624)
Observations	869	866	848
R-squared	0.026	0.106	0.080

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table E2 reports the second-stage regressions of the same models used in the first-stage results presented in **Table E1**. With relevance demonstrated in **Table E1**, whether these results are causally identified hinges on the satisfaction of the exclusion restriction. The presence of a railroad in 1860 probably had consequences for broader socioeconomic outcomes for a county in 1880, but it is significantly less likely that 1860s railroad networks affected school attendance rates of Black children in the 1880s. Certainly there is little (or no) direct effect, since Black children would not have been using railroad connections to attend school. The indirect effects of railroads on school attendance rates through improvements in the local economy are unclear. On one hand, improved socioeconomic conditions may have improved the financial status of Black parents – reducing the need for their children to work. On the other hand, the increased availability of jobs and higher wages might have increased the opportunity cost for Black children to attend school rather than work.

Table E2: Second Stage

VARIABLES	(1) Share of Black children (6-16) attending school 1880	(2) Share of Black children (6-16) attending school 1880	(3) Share of Black children (6-16) attending school 1880
Average occupying troops Through 1876 (thousands)	1.538*** (0.403)	1.689** (0.679)	2.034** (0.860)
Cotton		-0.00167*** (0.000457)	-0.00163*** (0.000590)
Percent of population urban Black, 1880		-0.206 (0.251)	
Percent of population Black, 1880		-0.0191 (0.0291)	
Total population, 1880		1.61e-06* (9.26e-07)	
Percent of population urban, 1860			-0.0489 (0.0400)
Percent of population Black, 1860			-0.201 (0.219)
Total population, 1860			1.18e-06 (1.02e-06)
Constant	0.158*** (0.0149)	0.217*** (0.0183)	0.226*** (0.0200)
Observations	866	865	848

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The results from **Table E2** confirm earlier results in from the main analysis. We do not attempt to replicate the results of other socio-economic outcomes because they are much more likely to violate the exclusion restriction. The coefficient on our troops' variable remains positive and statistically significant at the 0.01 level after controlling for cotton suitability and population covariates in 1860 and 1880.

Notes

¹ The raw locational data for the Freedmen's Bureau Offices comes from (<https://mappingthefreedmensbureau.com/>) and was combined with a map of U.S. counties in 1870 to create our dummy indicators.

² The raw troop data comes from Downs (2015), who has digitized final monthly reports to the Adjunct General's Office.

³ Raw data comes from a digitization of Foner (1993) that we have geocoded and aggregated into county-level measurements.

⁴ We use Logan (2020)'s digitization of tables from Hume and Gough (2008).

⁵ Supplied by James Snyder, see Hirano and Snyder (2019).

⁶ Data comes from Haines and ICPSR (2010).

⁷ Data comes from Haines and ICPSR (2010).

⁸ These are based on the IPUMS OCC1950 occupational variables. For our first category of occupations (professionals), we use occ1950 values between 0 and 99; for the second category (managers) we use occ1950 values: 123-290 ,523 and 810; and for the third category (skilled craftsmen) we use occ1950 values: 300-334, 341-690 (excluding 430, 360, 523, 595, and 673), and 730-731.

⁹ Data comes from Haines and ICPSR (2010).

¹⁰ Data comes from Haines and ICPSR (2010).

¹¹ Data comes from Haines and ICPSR (2010).

¹² IIASA/FAO, 2012. Global Agro-ecological Zones (GAEZ v3.0). IIASA, Laxenburg, Austria and FAO, Rome, Italy.

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