WHEN COERCIVE ECONOMIES FAIL:
THE POLITICAL ECONOMY OF THE US SOUTH AFTER THE BOLL WEEVIL

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ABSTRACT

How do coercive societies respond to negative economic shocks? We explore this question in the early 20th-Century United States South. Since before the nation's founding, cotton cultivation formed the politics and institutions in the South, including the development of slavery, the lack of democratic institutions, and intergroup relations between whites and blacks. We leverage the natural experiment generated by the boll weevil infestation from 1892-1922, which disrupted cotton production in the region. Panel difference-in-differences results provide evidence that Southern society became less violent and repressive in response to this shock with fewer lynchings and less Confederate monument construction. Cross-sectional results leveraging spatial variation in the infestation and historical cotton specialization show that affected counties had less KKK activity, higher non-white voter registration, and were less likely to experience contentious politics in the form of protests during the 1960s. To assess mechanisms, we show that the reductions in coercion were responses to African American out-migration. Even in a context of antidemocratic institutions, ordinary people can retain political power through the ability to ``vote with their feet.''

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1 Introduction

Coercive labor institutions feature prominently in many countries' histories. The United States, for much of its history, relied on either slave labor or systems of labor repression like the postbellum black codes to maintain high levels of cotton production and low wages. Great Britain relied extensively on coercive contract enforcement through Master and Servant Laws as well as debt peonage (Naidu and Yuchtman 2013). Colonial experiences of forced labor and slavery across Africa and Latin America have been shown to have enduring impacts that persist today (Nunn 2008; Dell 2010; Nunn and Wantchekon 2011; Acemoglu et al. 2012; Lowes and Montero 2018). A long line of research in economics demonstrates why these coercive institutions arise; yet, fewer studies explore what happens when these institutions decline. In this paper, we ask whether negative shocks to the underlying economic foundations of these institutions lead them to increase or moderate their repression.

To answer this question, we study the U.S. South during the late 19th- and early 20th-Century. This period, prominently known as "Jim Crow" arose in the wake of the failures (and some successes) of Reconstruction to fundamentally alter the political economy structures and power relations of the U.S. South (Foner 1988; Du Bois 2014; Logan 2018). Most notably, the Jim Crow South had all of the essential ingredients of a labor coercive society. African Americans, the primary source of labor in the Southern agricultural economy, faced geographic mobility restrictions, denial of public goods such as schooling, and lived under constant threat of violence by both white mobs and the planter elites. All of these components evolved precisely to maintain the dominance of the cotton economy in the domestic and international political economy (Wright 1996; Beckert 2015).[1] The difficulty of Southern life for African Americans ultimately led many of them to move to northern states, a

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[1]While cotton was not the only important southern crop in the period of our study, we focus on it rather than similarly repressive labor regimes around sugar or other crops for two reasons. First, cotton was clearly the most important crop in the south. For instance, estimates from the 1890 Agricultural Census suggest that the plurality of crop acreage and production was in cotton. Second, the boll weevil infestation, which greatly reduced infested areas cotton productivity and suitability, enables us to identify with geographic and temporal precision the decline of King Cotton.

process known as the Great Migration. This movement threatened the economic interests of Southern planters who stood to lose members of a formerly captive workforce.

How might we expect a negative shock to this coercive economy to affect repression? Several studies on repression and violence suggest that negative economic shocks should increase repression especially in non-democratic societies (Besley and Persson 2009, 2011). This is consistent with a wider literature that argues that negative economic shocks lead to more violence and less social order (Miguel et al. 2004a; Mitra and Ray 2014). Given the U.S. South's autocratic nature (Mickey 2015), one might expect similar dynamics in this context. At the same time, other studies show that negative shocks can actually induce positive changes in the underlying political structures (Hornbeck and Naidu 2014; Karadja and Prawitz 2019). These sets of findings suggest that such shocks can engender institutions to become more inclusive depending on the ability of groups to exert "exit power" through out-migration (Hirschman 1970). We address this empirical discrepancy using a powerful natural experiment generated by the arrival of the boll weevil infestation.

The boll weevil infestation is an attractive source of plausibly exogenous variation in the strength of the underlying coercive economy for three reasons. First, the spread of the boll weevil plague from its entry point near Brownsville, Texas in 1892 was primarily based on wind patterns and geographic distance, rather than political or cultural factors (Higgs 1976; Lange et al. 2009; Ager et al. 2017; Bloome et al. 2017). Second, since the boll weevil fed nearly exclusively on cotton, we are able to better isolate migration shocks in a coercive sector of the economy. Third and importantly for our preferred mechanism, historical sources indicate that the boll weevil's arrival in Southern counties prompted many workers to migrate as they sought to avoid the economic damage it caused (Giesen 2004).

Using a panel difference-in-differences framework that leverages the timing of spread of the boll weevil throughout the South, we find that this negative shock led to *less repression* instead of more. Counties that experienced greater exposure to the boll weevil infestation were less likely to lynch African Americans and less likely to put up Confeder-

ate memorials—two behavioral proxies for the Jim Crow system of violence against African Americans. Moreover, we show in cross-sectional regressions that leverage the spatial variation in the infestation and cotton specialization that these same counties had less Ku Klux Klan activity, higher non-white voter registration, and fewer instances of contentious collective action during the Civil Rights Movement. To assess mechanisms, we also show using a panel design that this positive change to Southern society seems to have been driven the ability of workers to "vote with their feet," exit Jim Crow society, and move to the North. Our work thus relates to a number of studies on migration in response to undesirable conditions, both in the US South and other contexts (Margo 1991; Hirschman 1970; Wilkerson 2011; Karadja and Prawitz 2019; Ferrara and Fishback 2020). Overall, our findings suggest that even in the context of societies marked by large degrees of repression and racial animus, negative shocks can create positive change in conditions on the ground when individuals have "exit power." In contrast, we do not find evidence for broader changes in the political economy of the South: political competition does not increase and Southern congressional support for civil rights grows even weaker.

A rich literature on coercive labor institutions has outlined the causes and consequences of these institutions, both in developing and former colonial countries, as well as in the US and other nations. Much of this scholarship focuses on, for good reason, the ways in which exploitative colonial labor arrangements arose from economic fundamentals (Sokoloff and Engerman 2000; Acemoglu et al. 2001) and affected long-run economic and political development (Nunn 2008; Dell 2010; Nunn and Wantchekon 2011; Acemoglu et al. 2012). Work on chattel slavery in the United States has argued that slavery impeded southern economic development, placing the antebellum south among the "middling countries of that era" and "locat[ing] the roots of postbellum regional backwardness firmly in the antebellum period," (Wright 2013). Naidu and Yuchtman (2013) explore the rise and fall of labor coercive arrangements in Great Britain as a result of Master and Servant Laws. Our context, in contrast to Naidu and Yuchtman (2013), also has an important racial and ethnic dimension

to it that is common to many coercive societies. Despite the vast literature showing that ethnic and racial divisions lead to powerful groups oppressing the powerless, our study shows that, even in the face of these identity-based challenges, the workers still retain a very basic form of political voice through the threat of voting with their feet.

Moreover, our findings also speak to the literature on American economic history. Too voluminous to review in depth, we note a few works that relate to our study of the political economy effects of the cotton economy and the legacy of slavery. Logan (2015) argues that economic roles in the South were intertwined with racial identity, which pushes us to consider the arrival of the boll weevil as a potentially important shock to both the racial and economic system of the South. On the interaction of racial violence and politics, Jones et al. (2017) show the negative effects on black voter turnout after local lynchings while Williams (2017) traces the correlation between lynching and voter turnout to today.[2] During Reconstruction, black political efficacy led to violence against black elected officials (Logan 2019). Cook et al. (2017) connect patterns of rural and urban segregation with lynching.[3] Many studies have traced the role convict labor and incarceration played in coercing black labor throughout the South, including Adamson (1983); Blackmon (2009); Muller (2018). Our study also provides an important foil to Acharya et al. (2018) who document the persistence of racial prejudice resultant from local legacies of slavery; instead, we show that the behavioral implications of these legacies such as racialized violence seem to respond to economic fundamentals as well. Despite the deep legacies of slavery and violence against African Americans in the region, we document how the repression of African Americans ebbed and flowed in response to the underlying economic incentives for African Americans to vote with their feet.

We also contribute to the scholarship on the ways in which environmental disasters can, under some conditions, shift societies into more preferable equilibria. A growing literature

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[2]Chacon and Jensen (2018) show how the monopoly of violence mattered to public finance in the postbellum south, documenting increased taxation in regions patrolled by the Union Army during Reconstruction. After Reconstruction, the Southern whites regained control over state and extrajudicial violence.

[3]Cook (2012) also is assembling a more complete database of lynchings in the United States. We hope future work in this area draws on these types of data to better characterize racial violence in the United States.

in economics shows that in societies who are trapped in a "bad" growth equilibrium, natural and environmental disasters can help to "shock" these societies into "good" equilibrium (Hornbeck and Naidu 2014; Hornbeck and Keniston 2017).[4] A recent set of studies specifically on the boll weevil demonstrates that this infestation had a markedly negative impact on the Southern economy (Lange et al. 2009; Ager et al. 2017) leading to a reduction in child labor and a later ages of marriage (Eriksson et al. Decemeber 2018; Bloome et al. 2017). Muller and Schrage (2019) also examine the effects of the boll weevil on social control, documenting that as Georgia counties were exposed to the infestation, rates of black incarceration *rose*. But incarceration—or the threat of incarceration—is only one dimension of coercion. Our study, in contrast, shows that the boll weevil shock led to less racial violence, symbolic white supremacy, and voter registration suppression as the incentives to maintain a highly coercive society decreased.

Our paper proceeds as follows. In Section 2 we describe the historical context of the Southern cotton-dependent economy and the role of the boll weevil in disrupting it. In Section 3 we describe our data and how we use the boll weevil's spread leads to our econometric strategy. In Section 4 we document the economic impacts of the boll weevil on the Southern economy. In Section 5 we present our main results of the boll weevil's effects on repression. We discuss potential mechanisms in Section 6 and conclude in Section 7.

2   Historical Background: A Brief History of "King Cotton"

Cotton, for much of the history of the US South, has held a privileged position as the region's primary commodity and an important engine for its economic growth (Wright 2013). The crop also shaped the political and social institutions of the South, from the colonial period to the Civil War via slavery and afterwards around tenant farming and Jim Crow.

The United States was the dominant producer of cotton on world markets in the antebellum period, accounting for 77 percent of Britain's cotton consumption, 90 percent of

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[4]Of course, natural and environmental disasters do not always lead better equilibria. Hornbeck (2012) shows how the Dust Bowl-affected areas have had a persistent negative impact on growth trajectories.

France's consumption, 60 percent of German consumption, and nearly 92 percent of Russia's consumption (Beckert 2004). American production of cotton was almost entirely a Southern enterprise, thanks in part to Southern soils and climate. But maintaining such a large and profitable network of cotton production required more than well-suited soil and climate. The South also needed prodigious amounts of cheap labor. To supply plantation workers, the white Southern planter elite primarily relied on the system of chattel slavery where millions of slaves taken from Africa were forced to pick cotton under brutal working conditions.[5]

[Figure 1 about here.]

Slavery in the American South came to an end with the Union's victory in the American Civil War, rocking the cotton economy. In the postbellum period, the Southern economy, which relied on cheap black labor, collapsed (Ransom 1989; Foner 1988).[6] While the abolition of slavery reduced the ability of the white planter elite to benefit from unpaid labor, slaves were also an important financial asset to the Southern economy thereby making the collapse of slavery even more salient to the South after the Civil War (Wright 2013; González et al. 2017).

While the South temporarily lost economic ascendancy in cotton markets after the Civil War, it again rose to be the leader in cotton production on world markets (Beckert 2004), a rise closely tied to the re-imposition of a coercive labor regime. Though the abolition of chattel slavery made African American laborers in the South legally free to supply labor to the market, the white Southern planter elite attempted to recreate patterns of slavery through coercive labor contracts and pernicious systems of convict labor (Alston and Ferrie 1985; Wright 1996; Blackmon 2009).[7] Forms of sharecropping and tenant farming were

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[5]Not only did slavery debilitate the individuals who were forced to move to the United States, but it also stalled economic growth and eroded trust in the societies that "exported" slaves (Nunn 2008; Nunn and Wantchekon 2011).

[6]War-time destruction also played some role in the postwar southern economic troubles (Feigenbaum et al. 2018), as did changes in global cotton demand and supply (Wright 1996).

[7]Shlomowitz (1979) describes some of the financial difficulties among planters attempting to pay wages to farm labor in the postbellum period as sharecropping and tenant farming developed. Traditional wage labor contracts were tried but share cropping and tenant farming soon grew dominant, especially after the withdrawal of Union troops for the unreconstructed South (Foner 1988).

among the most common coercive agricultural labor market institutions implemented in the postbellum period (Fite 1984).[8]

Maintaining a system of massive labor coercion of African Americans in the South necessitated de jure and de facto political institutions to maintain the racial order that came to be known colloquially as Jim Crow. Much of this relied on voter suppression aimed at the de facto disenfranchisement of African Americans (Key 1949). At an even more extreme level, whites managed racial subordination through extra-legal violence and terrorism including lynchings and organizations such as the Ku Klux Klan. The racialized systems of labor coercion needed to maintain Southern economic dominance in the cotton market were predicated on the use of political institutions aimed at widespread black disenfranchisement and the consent (and participation) of whites to uphold the existence of these "authoritarian enclaves" (Mickey 2015).

One significant disruption to the South's cotton economy, however, came in the form of a slow-moving natural disaster. In 1892, a cotton pest named the boll weevil crossed into Texas from Mexico (Lange et al. 2009). Female weevils lay their eggs inside cotton fruits or "bolls" and the developing insects feed on the plant, ultimately destroying the cotton fiber. Farmers whose crops were infected thus faced with the destruction of their crop or, at best, an intensive process of manually removing the best plant-by-plant. Damage was widespread with counties losing a majority of their crop in the worst years. Various schemes to prevent the pest's spread failed and the boll weevil slowly spread across the South, ultimately reaching most cotton-producing areas by the early 1920s (Giesen 2004).

How did the boll weevil affect the (mostly black) agricultural labor force of the South? Sharecropping tenants received little governmental or other support when hit by the pest. When combined with the other hardships they faced, many unsurprisingly chose to migrate. A number of scholars argue that the agronomic insecurity the pest's arrival precipitated

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[8]Tolnay (1999) enumerates three primary forms of tenants. First, cash tenants rented land in cash. Second, share tenants rented land but paid with a share of crop yield. Third, sharecroppers rented land as well as farm equipment and farm animals, paid with a (larger) share of crop yield.

played an important role in "pushing" migrants north. Southern planters, however, were not content to see their workforce leave and considered a variety of legal and extralegal schemes to induce or force them to stay. Theoretically, planters could either retain their workers through coercive measures, such as harsh vagrancy laws, or through more positive inducements, such as discouraging racial violence. Which type of response dominated, however, is an open question (Tolnay and Beck 1990).

3 Research Design: Data and Methods

How did disruptions to the cotton economy affect labor markets, institutions, politics, and white and black behavior and attitudes? To explore these relationships, we combine several different data sources that capture economic conditions, race relations, and protesting behavior in the U.S. South with an identification strategy that leverages the negative shock to the cotton economy from the boll weevil. For outcomes we observe during the infestation— including economic and demographic outcomes from the census but also lynchings—we estimate panel models that use the combination of the cross-sectional and over-time variation in the destruction of the cotton economy by the boll weevil. For other outcomes for which we only have post-period cross-sectional data, we take advantage of the timing of the spread of the boll weevil combined with pre-existing dependence on cotton for identification.

3.1 Data

We compile data that allows us to characterize the politics and society of the Cotton South—and the post-Cotton South—across a number of dimensions, measuring racial violence and repression, black political protest, and migration patterns, as well as economic measures of cotton production, farm ownership, and labor arrangements. We also document our procedure for standardizing counties throughout our sample period to properly account for shifting county borders in the South.

Economic disruption: As an implicit first stage, we also estimate the effects of the boll weevil on cotton production and the southern agricultural economy. To measure this,

we draw data from Haines and Preston (1997) and the complete count decennial censuses on acres planted in cotton, black farm ownership rates, and black child labor rates.

Racial violence: To measure racial violence in the Jim Crow period, we study lynchings. 83% of documented lynching victims were black and the spatial variation in lynching captures the degree to which whites engaged in extra-judicial policing of black communities.[9] To measure this feature of Southern politics, we use data from Bailey et al. (2008), which documents detailed information on all known lynching victims in the South from 1877 onward.[10] We aggregate the number of lynchings perpetrated against black victims to the county-level and we can measure lynchings before and after the arrival of the boll weevil. Figure 2 displays the spatial variation in lynching.

[Figure 2 about here.]

We also supplement in our analysis of racial violence through lynching by investigating the impact on the erection of Confederate statues. We collect data on statue location and dates from the Southern Poverty Law Center (2019). The construction of Confederate statues taps into the more psychological ways in which white southerners express a commitment to racist Jim Crow ideology.

Political Repression and Resistance: Using additional cross-sectional data, we also measure important features of political repression and resistance beyond lynchings and Confederate statues. First, we transcribe county-level data on voter registration by race using from the first report by the US Commission on Civil Rights (United States Commission on Civil Rights 1959). We interpret this variable as a measure of voter suppression since it measures black electoral participation *prior* to the Voting Rights Act. We also measure the organizational strength of hate groups using data on the presence and number of Ku Klux Klan (KKK) chapters. To measure KKK chapters (commonly referred to as Klaverns), we draw data from Mazumder (2018) who transcribes the location of chapters from contempo-

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[9]Based on the authors' own calculations using data from Bailey et al. (2008).
[10]See Cook (2012) for a description of ongoing efforts to generate a national lynching database.

rary reports created by the House Un-American Activities Commission. This data provides a snap-shot of the spatial distribution of the KKK

The existence of black insurgency during the Civil Rights Movement captures one way in which African Americans could have responded to labor coercion. Though this certainly does not capture all resistance to existing political economy structures, protest and collective action measures did lead to institutional changes, notably the Civil Rights Act (1964) and the Voting Rights Acts (1965). Data comes from the Dynamics of Collective Action dataset, which records demonstrations of collective action by African Americans based on reporting in *New York Times* articles.[11] We geocode each protest event to match its respective county in the South. Figure 3 shows a map of counties recorded as having a Civil Rights protest.

[Figure 3 about here.]

Finally, we supplement data on black protest with data on the formation of black political organizations as proxied by the presence and number of National Association for the Advancement of Colored People (NAACP) Chapters from 1924-1964 collapsed to the county-level.[12] We rely on this measure since the NAACP was one of the main organizations fighting for black civil rights at the time (Francis 2014). We use data collected by Gregory (2019) based on NAACP archival reports.

Formal politics: Finally, we also consider the way in which elite politics might have also changed in response to the boll weevil. To do so, we compute measure of political competition for elected offices for the President, House of Representatives, and the Senate, which is the negative absolute value of the distance between the Democrats' vote share and 0.5 in line with Besley et al. (2010). Thus, higher values indicate more political competition. We also consider the ways in which legislator ideology on racial issues might be shifting in response this shock. For this analysis, we use data on legislator ideal points on civil rights

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[11]The raw data is available at `http://web.stanford.edu/group/collectiveaction/cgi-bin/drupal/`.

[12]Unfortunately, the timing of the boll weevil exposure comes right before the start of the dataset. Thus, we are unable to estimate effects within a panel framework.

estimated by Bateman et al. (2017).[13] While traditional scores of legislator ideology tend to use the second dimension of DW-Nominate as a measure of civil rights scores, Bateman et al. (2017) demonstrate that this measure is not valid since the agenda also shifts throughout congresses thereby making votes made in each incomparable. To fix this issue, Bateman et al. (2017) estimate ideal points for each legislator fixing the agenda to only consider voting on civil rights-related bills. In our main analysis, we use this score, but we also show that the results are robust to using the second dimension of DW-Nominate instead.

Our main independent variable is the interaction of historical cotton production and boll weevil infestation status. While the boll weevil wrecked cotton growing in all counties it entered, these effects were much more serious in counties specialized in cotton cultivation; a pest ruin cotton harvests is unlikely to matter much in counties specialized in rice or sugar. Because contemporaneous cotton specialization is obviously endogenous to the boll weevil, we measure the intensity with the log of cotton bales per acre produced in a given county in 1890 before the boll weevil entered the United States. To track the movement of the boll weevil through the south, digitized USDA maps like the one shown data shown in Figure 4.

[Figure 4 about here.]

To account for pre-existing differences prior to the arrival of the boll weevil, we collect data at the county level on a number of covariates. We include data on population and improved acres in 1890 as well as measures of cotton, tobacco, and wheat suitability. 1890 covariate data come from Haines and Preston (1997) and the suitability data comes from the Food and Agricultural Organization of the United Nations (FAO).[14]

As county borders shift slightly over our time period, we follow the literature in standardizing them. As in Hornbeck (2012) and other papers analyzing county-level data across

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[13]Ideal points are constructed for each legislator by scaling each legislators votes on a set of bills to the same space. In this sense, ideal points are essentially just a factor decomposition method to summarize high-dimensional information on votes to one or two ideal point, ideology spaces. Standard practice is to interpret lower scores on a given dimension as more liberal on that dimension.

[14]The data on crop suitability can be accessed at `http://www.fao.org/nr/gaez/en/`.

censuses, we intersect county boundaries in 1920 with all other decennial boundaries, draw-
ing on county maps from NHGIS. Using these intersected county polygons, we aggregate up
to standardized 1920 borders, with a uniform distribution of our variables of interest over
space.

3.2 Empirical Strategy

To understand the effects of the decline of the cotton economy on institutions, we would
want to experimentally produce negative shocks to local cotton production. To approximate
this experimental setup, we use the negative exogenous shock resulting from the boll weevil
infestation of cotton crops during the time period 1892-1922 to identify the causal effect of
this negative shock to cotton production on the nature of labor coercion in the U.S. South.
This is important since cotton production during this historical time period could have been
endogenous to political institutions and elite behavior.

One of the advantages of using the boll weevil infestation is that both the introduction
and spread of the infestation were orthogonal to the potential outcomes of political economy
factors in the South. As Figure 4 shows, the boll weevil first entered from Mexico through
Brownsville, Texas and then rapidly spread all throughout the South. Existing studies of the
economic effects of the boll weevil infestation on the cotton economy highlight the massive
degree of crop destruction brought on by the boll weevil, which lead to the persistent decline
in the size of the cotton economy in the areas hit hardest by the boll weevil (Lange et al.
2009; Ager et al. 2017). Importantly, the boll weevil could only travel short amounts at a
time and mainly followed wind pattern trajectories. Thus, the arrival and spread of the boll
weevil can be seen as haphazard and plausibly exogenous.

In our main empirical strategy, we estimate equations of the following form via OLS:

$$Y_{cst} = \beta [\text{BWExposure}]_{cst} \times [\text{CottonFraction}]_{c,1890} + \gamma_c + \gamma_t + \eta_{cst} \qquad (1)$$

In this panel framework, we operationalize the size of the shock created by the boll

weevil infestation in each county c in state s with the interaction term $[\text{BWExposure}]_{cst} \times [\text{CottonFraction}]_{c,1890}$. $[\text{BWExposure}]_{cst}$ is a term equal to 1 if the boll weevil was present in county c at time t. $[\text{CottonFraction}]_{c,1890}$ is the fraction is improved farm acreage devoted to cotton in the 1890 pre-period. The interaction term captures that the importance of the shock created by the boll weevil should depend on the intensity of cotton production to the county. We compare changes in county level outcomes within counties by including county fixed effects, γ_c, and within census waves by including year fixed effects, γ_t. County fixed effects will purge any confounding factors at the county level for which we are unable to control.

Our key parameter of interest is β, the effect of boll weevil exposure for increasingly more cotton-dependent counties. The variable Y_{cst} represents our different outcomes of interest. β is identified off of *within* county changes netting out global time trends. Throughout the paper, we also show estimates that allow for time trends in cotton specialization and we estimate models with a lagged dependent variable $Y_{cs,t-1}$ to capture autoregressive processes. Although the latter can be subject to Nickell bias in short panels (Nickell 1981), we consider this bias less worrisome than the omission of county fixed effects and results are generally similar across multiple specifications. We cluster standard errors at the county level.

While the panel specification increases our confidence that we are identifying the effects of the boll weevil on various outcomes, we are limited to questions with available data contemporaneous to the infestation. To estimate the effects of the boll weevil on outcomes that are only observed after the boll weevil—effects that might be longer-run—we turn to a cross-sectional specification.

Making use of the fact that earlier boll weevil exposure would have led to longer periods for slow-moving institutional adjustments, we compute treatment as the number of years exposed to the boll weevil interacted with county-level cotton specialization in the pre-infestation period. We control for both measures—years with the boll weevil and cotton specialization in 1890—and so only retain the plausibly exogenous spatial variation that

comes from the interaction. Although certain economic effects from the infestation would likely have taken place rapidly, it is unlikely that social or political institutions would be able to immediately adjust; any shift to a new equilibrium would have required a significant amount of time. Figure 5 provides some empirical support for this point, showing that the boll weevil's effects on violence increased with longer exposure. As before, counties with more intense cotton production would also have been more affected. We thus estimate the following equation:

$$Y_{cs} = \beta_1 \text{Years of Boll Weevil Exposure}_c \times \text{Share Cotton Acres 1890}_c$$

$$+ \beta_2 \text{Years of Boll Weevil Exposure}_c$$

$$+ \beta_3 \text{Share Cotton Acres 1890}_c + \alpha X_{cs} + \gamma_s + \eta_{cs} \quad (2)$$

Similar to our panel results β is our key parameter of interest—the causal effect of most years of boll weevil exposure as a county's historical dependence on cotton increases. The term Y_{cs} represents our outcome of interest in county c in state s. For assessing the politics of coercion, we use data on pre-VRA voter registration, KKK membership, Civil Rights protests, and NAACP chapters, all measured cross-sectionally in years as dictated by the data sources. We include state fixed effects, γ_s, so that our effects are identified off of within state differences. While our measure of boll weevil exposure is balanced on most observables, there are a few that have slight imbalances such as manufacturing and population. We include these as controls X_{cs} though inclusion of them does not affect our results. We use robust standard errors in the cross section.

4 The Boll Weevil Disrupted the Coercive Southern Economy

How did the Cotton South adjust to the post-boll weevil economy? Lange et al. (2009) document the adjustment of planters moving away from cotton to other crops and Ager et al. (2017) show a reduction in farm labor wages, farm tenancy, and sharecropping. In this

section, we replicate and extend these economic and agricultural results, showing that the boll weevil did indeed reshape the coercive southern economy.

Following the boll weevil infestation, we see that acreage in cotton fell dramatically, as reported in Panel A of Table 1. Using the estimate from column (1), an average southern county which had 25% of its farmland in cotton in 1890 would have seen its post-boll weevil acreage fall by roughly 10 percentage points, with larger estimated in other columns. These results are robust to including—or not—lagged values of the dependent variable or time trends in historical cotton share. The move away from cotton also led to more general economic restructuring as tenant farming (Panel B) and child labor (Panel C) decreased significantly as well.

[Table 1 about here.]

The declines in child labor, as we show in Panel C, echo results in the economic history literature. As Baker (2015) documents, examining the annual spread of the infestation across Georgia, the decline in demand for child labor in the cotton fields led to increases in black child enrollment in school. Baker et al. (2018) trace the effect boll weevil effects on education forward in time, linking children affected by the infestation to their adult-selves in 1940 and showing that both black and white men hit by the boll weevil as children had more years of education.

The arrival of the boll weevil precipitated reductions in the most negative aspects of the old cotton regime. After the Civil War, tenant farming and sharecropping formed the basis of Southern elites' control over their black labor force. Although former slaves had significantly more autonomy as sharecroppers, planters retained much of their authority in their position as landlords. This power was reinforced by white resistance to black landownership, laws restricting wage competition, and laws against "vagrancy" applied against workers seeking alternate employment (Foner 1988). Combined, the social and legal framework of the South gave white planters monopsonistic power and limited avenues of social mobility for black farmers. It is thus striking that the boll weevil prompts an increase in black farm ownership

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(Panel B) and improves working conditions as suggested by the decrease in black child labor (Panel C).

Did the weakening of the cotton economy, which we document in this section, change social and political repression in the South? We explore the boll weevil's effects on such outcomes next.

5   The Boll Weevil Reduced Sociopolitical Repression

We find consistently strong evidence that the negative shock to the cotton industry significantly reduced the degree of economic and political coercion in the United States South despite deep racial enmity towards African Americans by whites. We show both short and long run effects of the boll weevil on racial violence, political protest, and minority group collective action.

5.1   Effects of the Boll Weevil on Violence and Repression in the Short Run

A key component of coercion is the use and threat of violence (Acemoglu and Wolitzky 2011; Chwe 1990). But what happens when the economic rationale for coercion collapses? Does the use and threat of violence recede?

In the U.S. South, we argue that the boll weevil's shock to the cotton economy might lead to a decrease in violence against African Americans, particularly if the costs of violence and repression—to the planter elite—exceeds the new lower value of the cotton harvest. The historical record offers mixed predictions on this topic. On the one hand, since at least Reconstruction, Southern states implemented "anti-vagrancy" and anti-inducement laws designed to limit the ability of African Americans to search for better employment opportunities (Foner 1988). Departing black workers also had reason to fear violent reprisals from white planters (Giesen 2004; Wilkerson 2011). Thus, increased migration desire could plausibly have resulted in increased coercion from whites hoping to retain their labor force. On the other hand, Tolnay and Beck (1990) argue that white elites strategically reduced levels of coercion to induce black workers to remain in the South.

We assess these theories using the same panel design described previously but with the number of lynchings in a given county in a given year as a measure of racial violence as the outcome. While underlying racial tension in the U.S. South was high throughout this period, we see robust evidence that the degree of violence and repression by whites against African Americans responds to changes in the cotton economy.[15] Table 2 Panel A shows that lynchings decrease following the boll weevil's arrival. The estimate in column (1) implies the average county sees a reduction of 0.04 lynchings per year, a substantial reduction roughly equal to the whole sample's mean.

[Table 2 about here.]

The timing of the response of lynching to the boll weevil's arrival underscores our argument that the weakening of the cotton economy resulted in less racial violence. We leverage the annual data on lynching and boll weevil arrival in Figure 5, presenting an event study of the number of lynchings on years to or since boll weevil arrival in a county. We group each annual observation into five-year bins, setting 1 to 5 years before the boll weevil as the reference period and include year and county fixed effects. We cluster at the county level. Though the effects of infestation on lynching is negative and insignificant in the year of arrival through 4 years later, in the years farther out we see a substantial and statistically significant reduction in lynchings. As the cotton economy's grip on these counties fade after the boll weevil's arrival, racial violence decreases. The data show little evidence of a pretrend as lynchings were not significantly more or less likely in these counties before the boll weevil arrived.

[Figure 5 about here.]

Symbolic assertions of racial hierarchy also lessened upon the boll weevil's arrival. In Table 2 Panel B we show results on the construction of statues which memorialized Con-

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[15]Our lynching results echo an older strand of literature on the interaction between cotton prices and production and racial violence. As Tolnay and Beck (1995) have shown, when cotton prices are low, lynchings tend to spike. Christian (2017) confirmed the original Tolnay and Beck findings with more recent methods.

federate figures. Data are drawn from the Southern Poverty Law Center (2019). We find that post-weevil construction is lower by about 0.003 statues per county year, roughly equal to half the sample mean.[16] Defending the "lost cause" of the Confederacy was often a way to reject the equalizing aims of the Civil War and Reconstruction (Strother et al. 2017/ed; Foner 2017). Consequently, our results suggest that the South's desire to publicly assert such attitudes fell in response to the threat of black migration and the reduced importance of the cotton economy.

5.2 Effects of the Boll Weevil on Violence and Repression in the Long Run

We argue that the boll weevil reshaped the political economy of the south in the long run as well. Turning to our cross-section specification, where we leverage variation in both the timing of boll weevil infestation and the specialization in cotton historically, we show more black voter registration, less KKK membership, and fewer Civil Rights Protests in response to larger boll weevil treatments in Table 3.

Our conclusions in this section are necessarily more speculative as our empirical strategy is weaker. Rather than leverage the sharp changes in timing as the boll weevil spread throughout the South, we instead define treatment as the interaction of historical specialization in cotton—measured by the share of acres in cotton in 1890 before the infestation—with how long a county was exposed the boll weevil. For our longer run outcomes measured in the 1940s to 1960s, we consider counties heavily specialized in cotton and hit by the boll weevil for longer to be more strongly treated.

[Table 3 about here.]

We find evidence suggesting that the boll weevil shock increased black voter registration in the South. Despite the promise of the Fifteenth Amendment to the Constitution guaranteeing voting rights irrespective of race, disenfranchisement of African Americans was strikingly common especially before the passage of the Voting Rights Act in 1965. In our

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[16]With more precision, the sample mean is 0.00632.

sample, blacks are 17 percentage points less likely than whites to be registered to vote and, even when registered, would have faced many informal barriers to actually casting a ballot. Low rates of black voter registration were maintained through selectively applied formal barriers such as the required literacy tests and poll taxes (Ogden 1958) as well as social censure and political violence (Foner 1988). Ultimately, the lack of democratic rights enabled African Americans' educational and economic exclusion (Naidu 2012).

Exposure to the boll weevil increased black voter registration as shown in Columns 1 and 2 of Table 3, Panel A. We measure black voter registration prior to the VRA using data collected for the first report by the US Commission on Civil Rights (United States Commission on Civil Rights 1959). On average, these effects indicate that among places with the median amount of cotton dependence, an additional year of the BW increased black voter registration by half a percentage point and the black-white gap by approximately one percentage point. The increase was both absolute (Column 1) and relative to white voter registration (Column 2). Since the primary reasons for low rates of black registration were externally imposed barriers, we interpret these effects as indicating a relaxation of repressive barriers in the South's democratic processes.[17]

We also find evidence, though less precisely estimated, that membership in a racist terrorist organization like the KKK fell in response to the boll weevil (Column 3). Data on KKK chapters comes from Mazumder (2018) who transcribes data on the location of KKK chapters from reports created by the House Un-American Activities Commission. Collective action played a major role in the South's transition out of Jim Crow (McAdam 1999; Mickey 2015; Mazumder 2018). Thus, we explore the boll weevil's role in explaining variation in overall patterns of collective action—both for and against the Civil Rights Movement—in the final two columns of Table 3. We estimate the effects of the boll weevil on the log number of pro-Civil Rights protests (using data from the Dynamics of Collective Action

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[17]Naidu (2012) documents the effects of poll taxes and literacy tests in reducing electoral turnout and increasing Democratic vote share in the Jim Crow South, while Jones et al. (2012) estimate large effects of both formal laws and informal modes of voter suppression.

dataset geocoded to counties) and the log number of NAACP chapters in a given county (Gregory 2019). There were approximately 10% fewer pro Civil Rights protests in counties more treated by the boll weevil, which we define as counties with both more years under the infestation and more cotton specialization in 1890 (Column 4).[18] We also explore the role of black organizing against Jim Crow as proxied by the number of NAACP Chapters (Gregory 2019) in Column 5. Our results indicate that counties with greater exposure to the cotton economy also experienced less civil rights organizing through the NAACP with the arrival of the boll weevil, though the effects are statistically insignificant. Our evidence suggests that the decreased violence documented in Section 5 decreased incentives to engage in collective action—a result consistent with grievance models of collective action.

6 Mechanisms: Foot-Voting or Formal Politics?

In this section we explore potential mechanisms for the reduced violence in southern counties following the boll weevil's arrival. Consistent with earlier work, we present evidence that the increased willingness of African Americans to migrate led to white concessions in the form of reduced coercion (Margo 1991; Tolnay and Beck 1990). In the early 20th century South, coercion and in particular the mob violence of lynchings were a major reason for black outmigration (Wilkerson 2011). Because the arrival of the boll weevil made many of these families more willing to migrate, planters had a larger incentive to practice restraint. Black families were thus able to "vote with their feet" not simply in the sense of leaving with adverse conditions, but in actually influencing society with their actions. Migration thus had political implications in the sense of the "voice" and "exit" of Hirschman (1970). We consider and find little evidence for other mechanisms, including formal political channels.

6.1 Foot-Voting: African Americans Fled the South and the Boll Weevil

As the southern cotton economy shifted in response to the boll weevil, did southerners leave the region to escape the economic shock? Table 4 presents results on migration. In

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[18]We find little evidence of an impact on anti-civil rights protesting by whites of the boll weevil.

Panel A, we see that an average southern county's black share of the population falls about 1.4 percentage points. Unsurprisingly, this is driven primarily by outmigration of African-Americans; most specifications in Panel B show that the size of the black population shrinks in response to the boll weevil in counties with historical specialization in cotton.[19]

[Table 4 about here.]

As we have shown, the negative shock to the cotton economy caused by the boll weevil induced out-migration of African Americans and changes to the southern cotton economy. These results are consistent with our framework, which posits that negative shocks to coercive industries should *reduce* the amount of labor coercion. By reducing the value of their inside option, the arrival of the boll weevil thus increased the potency of "exit" by African Americans, many of whom worked as sharecroppers. Southern planters thus faced two barriers in using coercion to maintain their economic and social status. First, as cotton declined in importance and the economy diversified, labor coercion became less economically meaningful. Second, coercion could backfire if it caused workers to simply leave in response. Thus, African-Americans in the South had gained a measure of political power through the threat of voting with their feet.

6.2 Alternative Mechanisms: Selective Migration or Income Shocks

We have argued that the economic shock of the boll weevil induced African-American out migration and that the exit—and threat of exit—resulted in positive changes on the ground in the South, namely fewer lynchings and a decline in the construction of monuments to white supremacy, as well as increased black farm ownership and decreased black child labor. In this subsection, we show why our story is inconsistent with two plausible alternative mechanisms—selective migration or income shocks—that do not work though exit as in Hirschman (1970).

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[19]We find no evidence of white out-migration in response to the boll weevil infestation. If anything, the boll weevil may have induced white in-migration to infested counties but these results were specification dependent.

6.2.1 No Evidence of Selective Migration

The vast majority of lynching victims in the South were black men (Bailey and Tolnay 2015). If men were more likely than women to out-migrate in response to the boll weevil's infestation, the reduction in the population at risk of racial violence could explain why lynchings fell (Table 2). However, when we break the migration results in Table 4 down by sex in Table 5, we find the both black men and black women fled southern counties hit by the boll weevil in similar numbers. Panels A and B replicate the change in log population analysis from Table 4 Panel B, but calculating changes of men (A) and women (B). Here, we see slightly more negative point estimates for the change in female population in two specifications but slightly more negative point estimates for the change in male population in two other specifications. The differences between male and female outcomes within specification are all fairly small and not statistically significant. We conclude, based on Table 5, that there is no clear evidence for selective out-migration based on risk of being a victim of racial violence.

[Table 5 about here.]

6.2.2 Income Shocks

We have argued that the arrival of the boll weevil weakened the labor coercive regime built around cotton in the South. But the infestation was also a simple income shock. In areas heavily specialized in cotton agriculture, a pest that decimated cotton output would lower incomes for farmers, sharecroppers, and farm laborers and likely spillover to the rest of the county. Even without the political economy mechanisms we trace from outmigration, such a large income shock could have large downstream effects.

However, the pattern of our results is not consistent with a simple income shock story. A vast literature has found that economic shocks can lead to more violence and conflict (Miguel et al. 2004b), though Dube and Vargas (2013) distinguish between price shocks that could increase the opportunity cost of violence or the potential gains from violent appropriation.

Economic shocks may lead to increases in minority persecution, as Jedwab et al. (2019) find with pogroms against Jews after the Black Death.[20] Within the southern context, Christian (2017) links temporary shocks, like fluctuations in cotton prices, to racial violence. However, as we show in Table 2, lynchings *fall* in counties exposed to the boll weevil. Further, the causes for racial violence were diverse and not solely connected to one sector of the economy or solely to the economy in general (Cook 2012; Troesken and Walsh 2017). All this leads us to conclude that the story is not a simple one running from a negative economic shock to violence against a racial minority.[21]

7   Effects of the Boll Weevil on Formal Politics

The boll weevil reduced everyday violence and repression, but were these changes accompanied—and even made more durable—by shifts in political power or formal politics in the South? In this section we examine interparty competition and politician roll call voting and find that this is not the case.

After the Civil War and emancipation, a major threat to the political power of the white planter elite was a political realignment to competition divided by class rather than race.[22] As the boll weevil reshaped the southern economy, the planter elite had to balance this complicated political economy to retain power. Reducing racial violence and repression may have reduced black outmigration, but what of the poor white farmers and sharecroppers also hurt by the arrival of the boll weevil? Despite changes on the ground, our results in this section suggest that white elites still held fast to power and solidified their all-white

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[20]Anderson et al. (2018) document that recent economic shocks increase anti-black sentiment in the United States. Economic shocks leading to hostility towards immigrants is also well documented in the literature, for example Mayda (2006).

[21]Our results on Confederate statues and monuments is more consistent with the classic income shock story. Monuments are expensive and not economically productive, exactly the kinds of expenditures we would expect to fall in response to an income shock. At the same time, we also show in Figure A.2 that the impact on monument creation is persistent into the 1940s and 50s despite the Boll Weevil shock being transitory in its effect on the overall economy and actually increasing the incomes of whites (Clay et al. 2019). In addition, that we find outmigration in response to the shock is consistent with past literature showing people fleeing natural disasters (Hornbeck 2012; Hornbeck and Naidu 2014).

[22]Both during Reconstruction and after, such coalitions did indeed form. Famously, the (poor, white) Populist Party in North Carolina "fused" with the (black) Republicans in the 1890s, winning the state legislature in 1894 and 1896 and the governor's mansion in 1896 (Edmonds 2013; Ali 2010).

racial alliance as the dominance of the Democratic Party increased and Southern members of Congress were even more strongly opposed to Civil Rights legislation after the boll weevil.[23]

We see little evidence that the boll weevil's arrival fostered new political competition in the Solid South where the Democratic party was dominant and all-white(Mickey 2015; Caughey and Warshaw 2018). Table 6 reports the impact of the boll weevil on an index of political competition. Following (Besley et al. 2010) we define competition as $-|d_{ct} - 0.5|$ where d_{ct} is the fraction of total votes won by the South's dominant party, the Democrats, in county c in year t. Across presidential, house, and senate elections and most specifications, the boll weevil seems to reduce competition with a median effect of 1.8 percentage points on the average county.[24] While the boll weevil fostered social change in many arenas, the findings in Table 6 suggest that the pest did not open the formal political system. Thus, political openness is unlikely to account for the reductions of violence we showed previously.

[Table 6 about here.]

The boll weevil infestation changed civil rights positioning among Southern politicians in Congress. While few Southern representatives were strong advocates for the Civil Rights Movement, there was some variation in the degree of opposition. Table 7 shows that the boll weevil affected relative support and opposition in Congress, measuring positions on civil rights in two ways. First, we use newly constructed data by Bateman et al. (2017) (BCL), which documents congressional legislator ideologies specifically on racial issues. Second, we use the second dimension of DW-NOMINATE scores for members the US House of Representative, generally understood to measure the left-to-right orientation of representatives' social views respectively (Poole and Rosenthal 1997). In the Appendix, we show the effects of the boll weevil on the first (economic) dimension of DW-Nominate (Table A.2). For each

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[23]We also examined the effect of the boll weevil on voting for the two major Dixiecrat presidential candidates, Strom Thurmond in 1948 and George Wallace in 1968. While we see no effects of the boll weevil on Thurmond's vote share, in 1968, after the Civil Rights Act and the Voting Rights Act, we do see counties more substantially treated by the boll weevil—with treatment measured as the number of years with the boll weevil infestation interacted with the cotton specialization of the county in 1890—had lower vote shares for Wallace. We present these results in Appendix Table A.1.

[24]25% cotton usage $\times$ a median coefficient of -0.072.

county, we average the scores of the county's Congressional representatives to compute a final score. The boll weevil led to a large rightward shift in both the BCL scores as well as the second dimension of DW-NOMINATE. This change would, if anything, suggest that elected representatives became less progressive on issues of civil rights. Thus, impacts on formal politics are unlikely to explain the reductions in violence seen in earlier results.

[Table 7 about here.]

8 Conclusion

How do economic structures shape political behavior in contexts marred by intergroup animus? In this paper, we explore this question in the context of the U.S. South using the arrival of the boll weevil cotton pest as an exogenous shock to a coercive economy. Using a panel difference-in-difference, we find that the boll weevil reduces both tangible and symbolic coercion in terms of anti-black lynchings and Confederate monument construction. Our cross-sectional analysis indicated long-run effects on other outcomes as well: counties more exposed to the boll weevil have higher rates of black voter registration and suggestively lower rates of membership in the Ku Klux Klan (KKK).

We argue that the lessening repression stemmed from black workers "voting with their feet" in the style of Hirschman (1970), a result which parallels the role of migration in other political changes (Karadja and Prawitz 2019; Margo 1991). We rule out several other potential explanations, notably that these changes were instituted at the behest of elected representatives. Overall, the results imply that while African Americans were routinely silenced within the formal political system, they nonetheless retained an influential measure of voice within the American South.
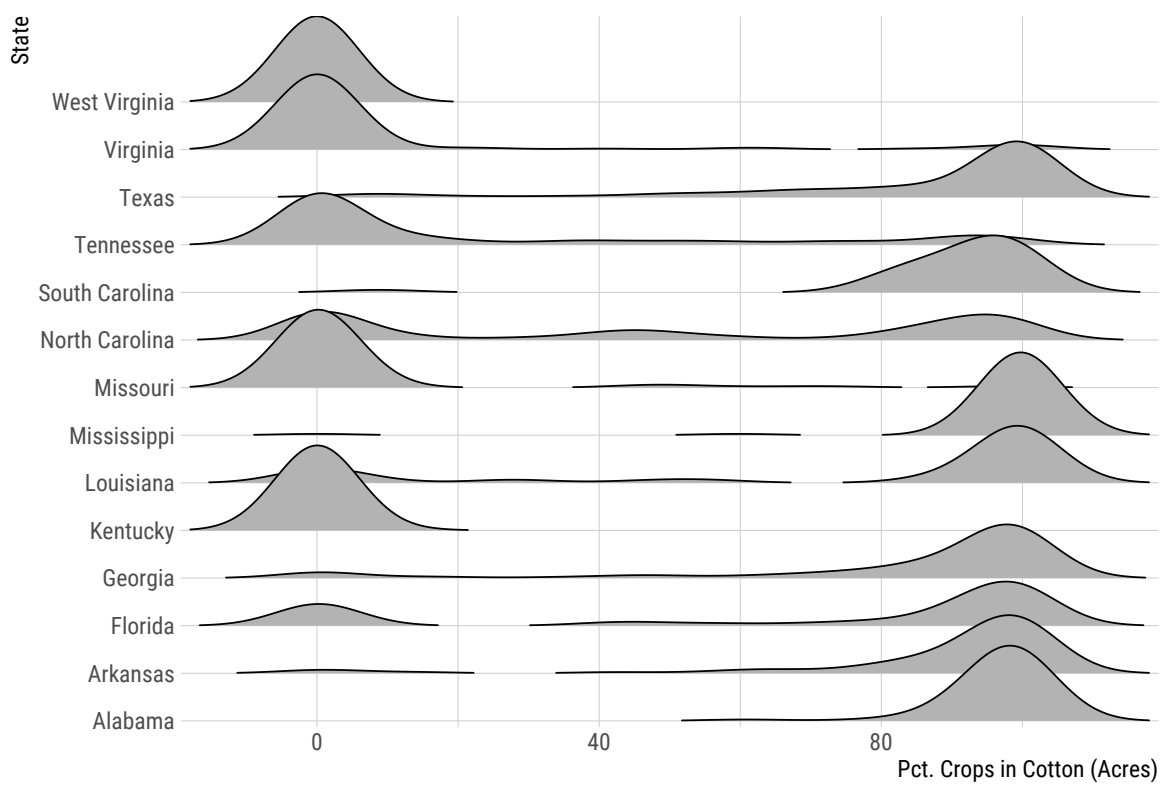
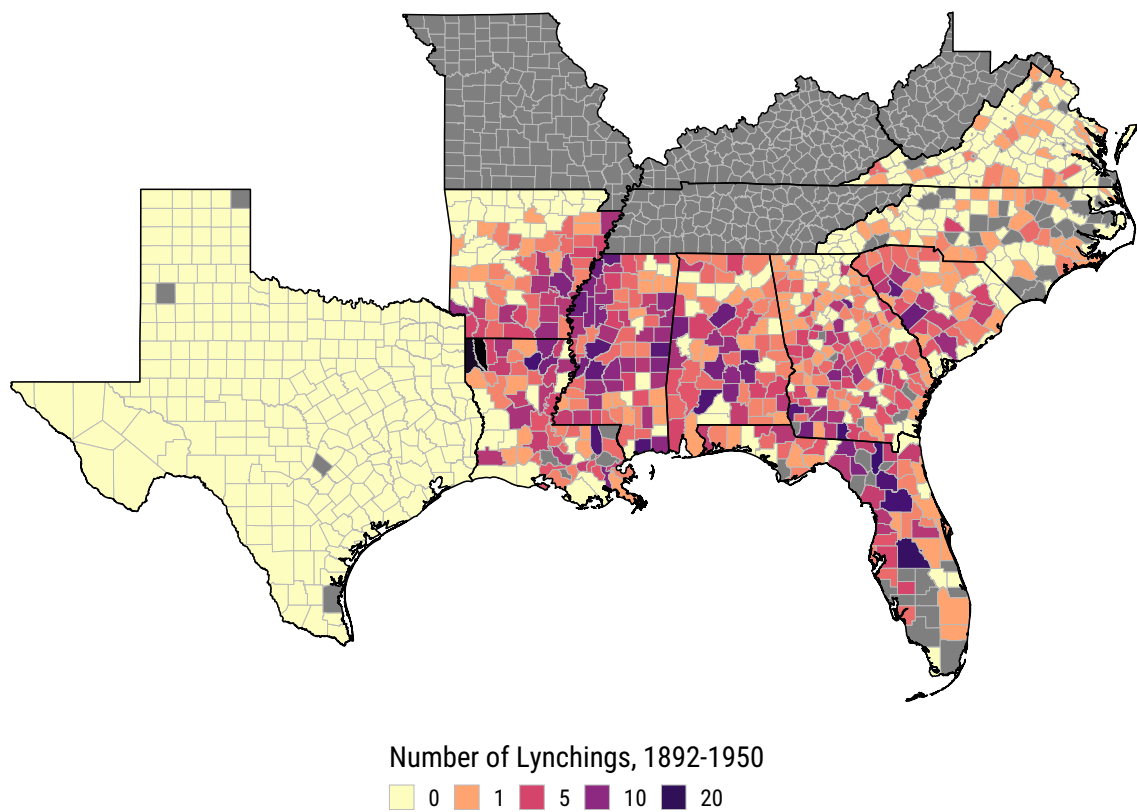**Figure 1:** Importance of Cotton across the U.S. South in 1890
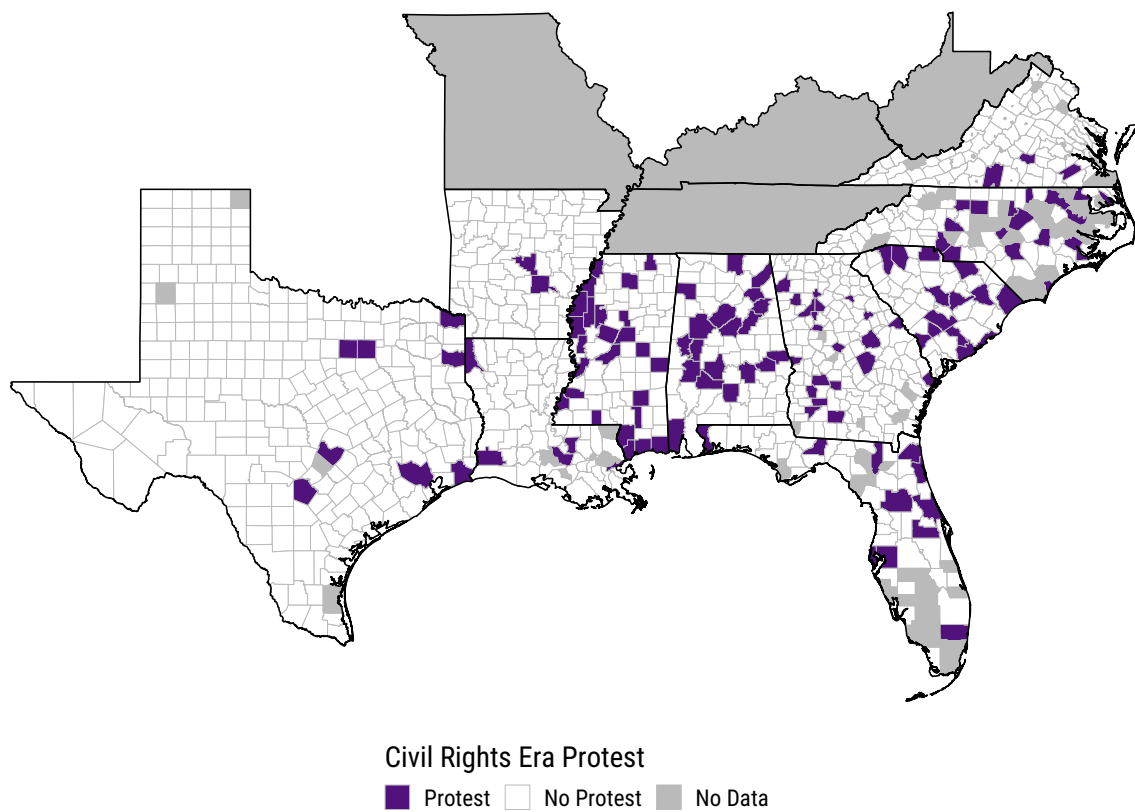
Number of Lynchings, 1892-1950

0　1　5　10　20

Figure 2: Map of Lynchings, 1892-1950

Figure 3: Map of Civil Rights Protests, 1960-1965
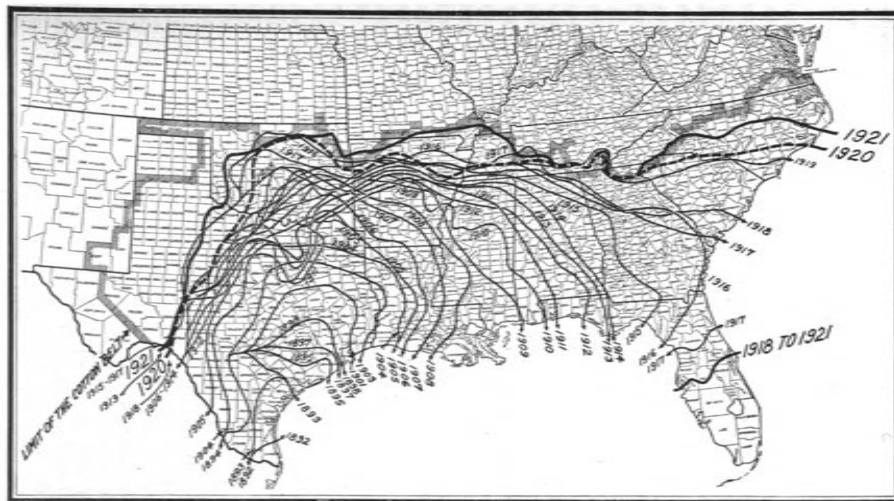
The Boll-Weevil Problem.

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FIG. 1.—Map showing spread of the boll weevil in the United States from 1892 to 1921, inclusive.
NOTE: The outer limits of the cotton belt advance or recede slightly from year to year, and ▮▮▮▮▮ as shown on the map are not entirely accurate for 1921.

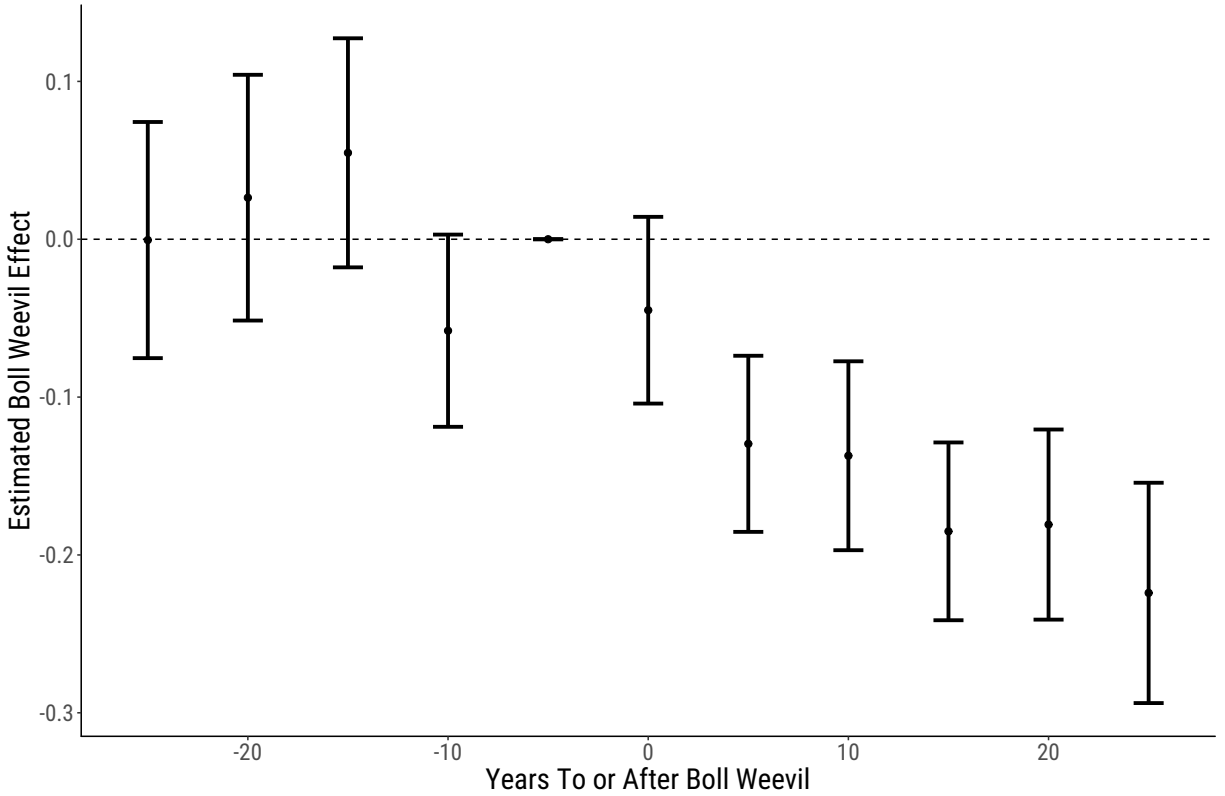**Figure 4:** Map of USDA Map of Boll Weevil Exposure

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Figure 5: Event Study Effect of Boll Weevil on Lynchings, 1892-1950. Combining annual data on lynchings with the year of the boll weevil's arrival in each infested county, we estimate an event study. Because lynchings are relatively rare, we aggregate the timing of treatment into five year bins. As in the main specifications, treatment is defined as the boll weevil infestation interacted with the 1890 cotton intensity in the county. The 0-bin indicates the average effect of the boll weevil on lynchings from the year of arrival to four years after; the 5-bin indicates the average effect of the boll weevil on lynchings from five years after to nine years after. We include county fixed effects, year fixed effects, years until the boll weevil fixed effects, and cluster standard errors at the county level. All estimates are relative to the effect of 1890 cotton intensity in the 5 years to 1 year before the arrival of the boll weevil.

Table 1: The Effect of the Boll Weevil on the Southern Cotton Economy

	Panel A. Acres Planted in Cotton			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.651**	−2.028***	−2.294***	−0.871***
	(0.300)	(0.141)	(0.188)	(0.201)
Lagged Outcome		0.318***		0.323***
		(0.011)		(0.011)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	6609	5803	6609	5803
Y Mean	8.27	8.98	8.27	8.98
	Panel B. Black Farm Ownership Rate			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	18.620***	23.981***	3.474*	11.101***
	(2.231)	(3.097)	(2.061)	(3.107)
Lagged Outcome		−0.112***		−0.224***
		(0.019)		(0.020)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	4466	3638	4466	3638
Y Mean	25.45	24.68	25.45	24.68
	Panel C. Black Child Labor			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−20.695***	−24.950***	−3.666	−11.751***
	(2.621)	(2.627)	(2.916)	(2.653)
Lagged Outcome		−0.108***		−0.146***
		(0.020)		(0.019)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	3772	2961	3772	2961
Y Mean	26.74	23.61	26.74	23.61

Note: Standard errors clustered by county.

Table 2: The Effect of the Boll Weevil on Racial Violence and Confederate Memorials

	Panel A. Lynchings			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.157***	−0.156***	−0.072***	−0.068***
	(0.020)	(0.011)	(0.023)	(0.016)
Lagged Outcome		0.025***		0.024***
		(0.004)		(0.004)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	67090	66286	67090	66286
Y Mean	0.04	0.04	0.04	0.04
	Panel B. Confederate Statues			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.011***	−0.011***	−0.017**	−0.017***
	(0.004)	(0.003)	(0.008)	(0.005)
Lagged Outcome		−0.015***		−0.015***
		(0.004)		(0.004)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	72172	71368	72172	71368
Y Mean	0.01	0.01	0.01	0.01

Note: Standard errors clustered by county.

Table 3: The Effect of the Boll Weevil on Repression and Collective Action in the Long Run

	Pre-VRA Voter Registration		KKK	Pro Civil Rights	NAACP
	Black	Black-White Gap	Membership	Protests	Chapters
	(1)	(2)	(3)	(4)	(5)
Years with BW × Share Cotton Acres 1890	2.276***	4.962***	−0.019	−0.100**	−0.037
	(0.687)	(0.987)	(0.014)	(0.044)	(0.025)
Years with BW	0.212	−0.812***	−0.001	−0.012	−0.011
	(0.202)	(0.286)	(0.004)	(0.013)	(0.007)
Share Cotton Acres 1890	−75.227***	−76.033***	0.422**	1.298*	−0.362
	(10.382)	(14.791)	(0.209)	(0.667)	(0.372)
State FEs	Yes	Yes	Yes	Yes	Yes
1890 Controls	Yes	Yes	Yes	Yes	Yes
Observations	956	871	960	961	962
Y Mean	28.19	-16.64	0.29	-1.81	0.64

Note: Standard errors clustered by county.

Table 4: The Effect of the Boll Weevil on Black Net Migration

	Panel A. Population Fraction Black			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−5.465***	−6.283***	−2.384***	−3.922***
	(1.461)	(0.420)	(0.869)	(0.592)
Lagged Outcome		0.801***		0.797***
		(0.008)		(0.008)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	7401	6595	7401	6595
Y Mean	32.02	31.63	32.02	31.63

	Panel B. Change in Log Black Population			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.019***	−0.019***	−0.016**	−0.009
	(0.006)	(0.005)	(0.007)	(0.008)
Lagged Outcome		−0.030***		−0.030***
		(0.001)		(0.001)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	6595	6595	6595	6595
Y Mean	0.01	0.01	0.01	0.01

	Panel C. Log Black Population			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.224	−0.188***	0.052	−0.086
	(0.179)	(0.054)	(0.095)	(0.076)
Lagged Outcome		0.698***		0.698***
		(0.009)		(0.009)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	7401	6595	7401	6595
Y Mean	7.96	8.02	7.96	8.02

Note: Standard errors clustered by county.

Table 5: The Effect of the Boll Weevil on Black Net Migration by Sex

	Panel A. Change in Log Black Male Population			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.013**	−0.018***	−0.017**	−0.010
	(0.006)	(0.005)	(0.007)	(0.008)
Lagged Outcome		−0.029***		−0.029***
		(0.001)		(0.001)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	6838	6838	6838	6838
Y Mean	0.01	0.01	0.01	0.01
	Panel B. Change in Log Black Female Population			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.015***	−0.020***	−0.011*	−0.005
	(0.005)	(0.005)	(0.007)	(0.007)
Lagged Outcome		−0.025***		−0.025***
		(0.001)		(0.001)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	6838	6838	6838	6838
Y Mean	0.01	0.01	0.01	0.01

Note: Standard errors clustered by county.

Table 6: The Effect of the Boll Weevil on Political Competition

	Panel A. Presidential Election Competition			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.085***	−0.017**	−0.121***	−0.063***
	(0.015)	(0.008)	(0.014)	(0.011)
Lagged Outcome		0.381***		0.379***
		(0.008)		(0.008)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	15910	14957	15910	14957
Y Mean	-0.23	-0.23	-0.23	-0.23
	Panel B. US House Election Competition			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.008	−0.011	−0.048***	−0.050***
	(0.016)	(0.008)	(0.018)	(0.012)
Lagged Outcome		0.279***		0.278***
		(0.007)		(0.007)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	24592	21500	24592	21500
Y Mean	-0.36	-0.36	-0.36	-0.36
	Panel C. US Senate Election Competition			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.133***	−0.088	−0.140***	−0.087
	(0.034)	(0.067)	(0.034)	(0.067)
Lagged Outcome		0.041***		0.040***
		(0.015)		(0.015)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	8536	6172	8536	6172
Y Mean	-0.35	-0.34	-0.35	-0.34

Note: Standard errors clustered by county.

Table 7: The Effect of the Boll Weevil on Politician Ideology

	Panel A. Bateman et al Civil Rights Scores			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	0.685***	0.206***	0.389***	0.157***
	(0.061)	(0.019)	(0.071)	(0.031)
Lagged Outcome		0.730***		0.729***
		(0.004)		(0.004)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	27801	25235	27801	25235
Y Mean	1.29	1.31	1.29	1.31
	Panel B. DW-Nominate Dimension 2			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	0.304***	0.131***	0.299***	0.126***
	(0.032)	(0.011)	(0.040)	(0.016)
Lagged Outcome		0.608***		0.608***
		(0.004)		(0.004)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	35316	34291	35316	34291
Y Mean	0.39	0.39	0.39	0.39

Note: Standard errors clustered by county. In the Appendix, we show the effects of the boll weevil on the first (economic) dimension of DW-Nominate (Table A.2).

References

Acemoglu, Daron, Camilo García-Jimeno, and James A. Robinson. 2012. "Finding Eldorado: Slavery and Long-Run Development in Colombia." *Journal of Comparative Economics* 40:534–564.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91:1369–1401.

Acemoglu, Daron and Alexander Wolitzky. 2011. "The Economics of Labor Coercion." *Econometrica* 79:555–600.

Acharya, Avidit, Matthew Blackwell, and Maya Sen. 2018. *Deep Roots: How Slavery Still Shapes Southern Politics*. Princeton University Press.

Adamson, Christopher R. 1983. "Punishment after slavery: Southern state penal systems, 1865-1890." *Social Problems* 30:555–569.

Ager, Philipp, Markus Brueckner, and Benedikt Herz. 2017. "The Boll Weevil Plague and Its Effect on the Southern Agricultural Sector, 1889–1929." *Explorations in Economic History* 65:94–105. 00004.

Ali, Omar H. 2010. *In the Lion's Mouth: Black Populism in the New South, 1886-1900*. Univ. Press of Mississippi.

Alston, Lee J. and Joseph P. Ferrie. 1985. "Labor Costs, Paternalism, and Loyalty in Southern Agriculture: A Constraint on the Growth of the Welfare State." *The Journal of Economic History* 45:95–117.

Anderson, D Mark, Benjamin Crost, and Daniel I Rees. 2018. "Do Economic Downturns Fuel Racial Animus." Technical report, April 2018. Working paper.

Bailey, Amy Kate and Stewart E Tolnay. 2015. *Lynched: The victims of southern mob violence*. UNC Press Books.

Bailey, Amy Kate, Stewart E. Tolnay, E. M. Beck, Alison Renee Roberts, and Nicholas H. Wong. 2008. "Personalizing Lynch Victims: A New Database to Support the Study of Mob Violence." *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 41:47–64.

Baker, Richard B. 2015. "From the Field to the Classroom: The Boll Weevil's Impact on Education in Rural Georgia." *The Journal of Economic History* 75:1128–1160.

Baker, Richard B, John Blanchette, and Katherine Eriksson. 2018. "Long-Run Impacts of Agricultural Shocks on Educational Attainment: Evidence from the Boll Weevil." Working Paper 25400, National Bureau of Economic Research.

Bateman, David A., Joshua D. Clinton, and John S. Lapinski. 2017. "A House Divided? Roll Calls, Polarization, and Policy Differences in the U.S. House, 1877-2011." *American Journal of Political Science* 61:698–714.

Beckert, Sven. 2004. "Emancipation and Empire: Reconstructing the Worldwide Web of Cotton Production in the Age of the American Civil War." *The American Historical Review* 109:1405–1438.

Beckert, Sven. 2015. *Empire of Cotton: A Global History*. Vintage Books.

Besley, Timothy and Torsten Persson. 2009. "Repression or Civil War?" *American Economic Review: Papers & Proceedings* 99:292–297.

Besley, Timothy and Torsten Persson. 2011. "The Logic of Political Violence." *Quarterly Journal of Economics* 126:1411–1445.

Besley, Timothy, Torsten Persson, and Daniel M Sturm. 2010. "Political competition, policy and growth: theory and evidence from the US." *The Review of Economic Studies* 77:1329–1352.

Blackmon, Douglas A. 2009. *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*. Anchor Books.

Bloome, Deirdre, James Feigenbaum, and Christopher Muller. 2017. "Tenancy, Marriage, and the Boll Weevil Infestation, 1892–1930." *Demography* 54:1029–1049. 00003.

Caughey, Devin and Christopher Warshaw. 2018. "Policy Preferences and Policy Change: Dynamic Responsiveness in the American States, 1936–2014." *American Political Science Review* 112:249–266.

Chacon, Mario and Jeffrey L Jensen. 2018. "De Facto Power, Democracy, and Taxation: Evidence from Military Occupation during Reconstruction." *Available at SSRN 3092630* .

Christian, Cornelius. 2017. "Lynchings, Labour, and Cotton in the US South: A Reappraisal of Tolnay and Beck." *Explorations in Economic History* 66:106–116.

Chwe, Michael Suk-Young. 1990. "Why Were Workers Whipped? Pain in a Principal-Agent Model." *Economic Journal* pp. 1109–1121.

Clay, Karen, Ethan Schmick, and Werner Troesken. 2019. "Changes in Black-White Inequality: Evidence from the Boll Weevil." Working Paper.

Cook, Lisa, Trevon Logan, and John Parman. 2017. "Racial Segregation and Southern Lynching." Technical Report w23813, National Bureau of Economic Research, Cambridge, MA.

Cook, Lisa D. 2012. "Converging to a National Lynching Database: Recent Developments and the Way Forward." *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 45:55–63.

Dell, Melissa. 2010. "The Persistent Effects of Peru's Mining "Mita"." *Econometrica* 78:1863–1903.

Du Bois, W. E. B. 2014. "The African Roots of War." https://www.theatlantic.com/magazine/archive/2014/08/the-african-roots-of-war/373403/.

Dube, Oeindrila and Juan F. Vargas. 2013. "Commodity Price Shocks and Civil Conflict: Evidence from Colombia." *The Review of Economic Studies* 80:1384–1421.

Edmonds, Helen G. 2013. *The Negro and Fusion Politics in North Carolina, 1894-1901*. UNC Press Books.

Eriksson, Katherine, Baker Richard, and John Blanchette. Decemeber 2018. "Long-Run Impacts of Agricultural Shocks on Educational Attainment: Evidence from the Boll Weevil." .

Feigenbaum, James J, James Lee, and Filippo Mezzanotti. 2018. "Capital Destruction and Economic Growth: The Effects of Sherman's March, 1850-1920." Working Paper 25392, National Bureau of Economic Research.

Ferrara, Andreas and Price V Fishback. 2020. "Discrimination, Migration, and Economic Outcomes: Evidence from World War I." Technical report, National Bureau of Economic Research.

Fite, Gilbert C. 1984. *Cotton Fields No More: Southern Agriculture, 1865-1980*. Lexington, KY: University Press of Kentucky.

Foner, Eric. 1988. *Reconstruction: America's Unfinished Revolution, 1863-1877*. Harper and Row. OCLC: 16130460.

Foner, Eric. 2017. "Opinion — Confederate Statues and 'Our' History." *The New York Times* .

Francis, Megan Ming. 2014. *Civil Rights and the Making of the Modern American State*. Cambridge University Press.

Giesen, James Conrad. 2004. *The South's Greatest Enemy?* Ph.D., University of Georgia.

González, Felipe, Guillermo Marshall, and Suresh Naidu. 2017. "Start-up Nation? Slave Wealth and Entrepreneurship in Civil War Maryland." *The Journal of Economic History* 77:373–405.

Gregory, James N. 2019. "Mapping Social Movements." Technical report, University of Washington.

Haines, Michael R. and Samuel H. Preston. 1997. "The Use of the Census to Estimate Childhood Mortality: Comparisons from the 1900 and 1910 United States Census Public Use Samples." *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 30:77–96.

Higgs, Robert. 1976. "The Boll Weevil, the Cotton Economy, and Black Migration 1910-1930." *Agricultural History* 50:335–350.

Hirschman, Albert O. 1970. *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*, volume 25. Harvard university press.

Hornbeck, Richard. 2012. "The Enduring Impact of the American Dust Bowl: Short- and Long-Run Adjustments to Environmental Catastrophe." *American Economic Review* 102:1477–1507.

Hornbeck, Richard and Daniel Keniston. 2017. "Creative Destruction: Barriers to Urban Growth and the Great Boston Fire of 1872." *American Economic Review* 107:1365–1398.

Hornbeck, Richard and Suresh Naidu. 2014. "When the Levee Breaks: Black Migration and Economic Development in the American South." *American Economic Review* 104:963–990.

Jedwab, Remi, Noel D. Johnson, and Mark Koyama. 2019. "Negative Shocks and Mass Persecutions: Evidence from the Black Death." *Journal of Economic Growth* .

Jones, Daniel B, Werner Troesken, and Randall Walsh. 2012. "A Poll Tax by Any Other Name: The Political Economy of Disenfranchisement." Technical report, National Bureau of Economic Research.

Jones, Daniel B., Werner Troesken, and Randall Walsh. 2017. "Political Participation in a Violent Society: The Impact of Lynching on Voter Turnout in the Post-Reconstruction South." *Journal of Development Economics* 129:29–46. 00001.

Karadja, Mounir and Erik Prawitz. 2019. "Exit, Voice, and Political Change: Evidence from Swedish Mass Migration to the United States." *Journal of Political Economy* 127:1864–1925.

Key, V. O. 1949. *Southern Politics in State and Nation*. University of Tennessee Press. OCLC: 542025319.

Lange, Fabian, Alan L. Olmstead, and Paul W. Rhode. 2009. "The Impact of the Boll Weevil, 1892–1932." *The Journal of Economic History* 69:685.

Logan, Trevon. 2018. "Do Black Politicians Matter?" Technical Report w24190, National Bureau of Economic Research, Cambridge, MA. 00000.

Logan, Trevon D. 2015. "A Time (Not) Apart: A Lesson in Economic History from Cotton Picking Books." *The Review of Black Political Economy* 42:301–322.

Logan, Trevon D. 2019. "Whitelashing: Black Politicians, Taxes, and Violence." Technical report, National Bureau of Economic Research.

Lowes, Sara and Eduardo Montero. 2018. "Concessions, Violence, and Indirect Rule: Evidence from the Congo Free State."

Margo, Robert A. 1991. "Segregated schools and the mobility hypothesis: A model of local government discrimination." *The Quarterly Journal of Economics* 106:61–73.

Mayda, Anna Maria. 2006. "Who is against immigration? A cross-country investigation of individual attitudes toward immigrants." *The review of Economics and Statistics* 88:510–530.

Mazumder, Soumyajit. 2018. "The Persistent Effect of the U.S. Civil Rights Movement on Political Attitudes." *American Journal of Political Science* 62:922–935.

McAdam, Doug. 1999. *Political Process and the Development of Black Insurgency, 1930-1970*. University of Chicago Press, second edition edition.

Mickey, Robert. 2015. *Paths Out of Dixie: The Democratization of Authoritarian Enclaves in America's Deep South, 1944-1972*. Princeton University Press.

Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. 2004a. "Economic Shocks and Civil Conflict: An Instrumental Variables Approach." *Journal of Political Economy* 112:725–753.

Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. 2004b. "Economic Shocks and Civil Conflict: An Instrumental Variables Approach." *Journal of Political Economy* 112:725–753.

Mitra, Anirban and Debraj Ray. 2014. "Implications of an Economic Theory of Conflict: Hindu-Muslim Violence in India." *Journal of Political Economy* 122:719–765.

Muller, Christopher. 2018. "Freedom and Convict Leasing in the Postbellum South." *American Journal of Sociology* 124:367–405.

Muller, Christopher and Daniel Schrage. 2019. "The Political Economy of Incarceration in the U.S. South, 1910-1925." .

Naidu, Suresh. 2012. "Suffrage, Schooling, and Sorting in the Post-Bellum U.S. South." Technical Report w18129, National Bureau of Economic Research, Cambridge, MA. 00108.

Naidu, Suresh and Noam Yuchtman. 2013. "Coercive Contract Enforcement: Law and the Labor Market in Nineteenth Century Industrial Britain." *American Economic Review* 103:107–144.

Nickell, Stephen. 1981. "Biases in dynamic models with fixed effects." *Econometrica: Journal of the Econometric Society* pp. 1417–1426.

Nunn, Nathan. 2008. "The Long-Term Effects of Africa's Slave Trades." *The Quarterly Journal of Economics* 123:139–176.

Nunn, Nathan and Leonard Wantchekon. 2011. "The Slave Trade and the Origins of Mistrust in Africa." *The American Economic Review* 101:3221–3252.

Ogden, Frederic D. 1958. *The poll tax in the south*. University of Alabama Press.

Poole, Keith T. and Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. Oxford University Press.

Ransom, Roger L. 1989. *Conflict and Compromise: The Political Economy of Slavery, Emancipation and the American Civil War*. Cambridge University Press.

Shlomowitz, Ralph. 1979. "The Origins of Southern Sharecropping." *Agricultural History* 53:557–575.

Sokoloff, Kenneth L. and Stanley L. Engerman. 2000. "History Lessons: Institutions, Factors Endowments, and Paths of Development in the New World." *The Journal of Economic Perspectives* 14:217–232.

Southern Poverty Law Center. 2019. "Whose Heritage? Public Symbols of the Confederacy." Technical report, Southern Poverty Law Center.

Strother, Logan, Spencer Piston, and Thomas Ogorzalek. 2017/ed. "PRIDE OR PREJ-UDICE?: Racial Prejudice, Southern Heritage, and White Support for the Confederate Battle Flag." *Du Bois Review: Social Science Research on Race* 14:295–323.

Tolnay, Stewart Emory. 1999. *The Bottom Rung: African American Family Life on Southern Farms*. University of Illinois Press.

Tolnay, Stewart E and Elwood M Beck. 1990. "Black flight: Lethal violence and the Great Migration, 1900-1930." *Social Science History* pp. 347–370.

Tolnay, Stewart Emory and E. M. Beck. 1995. *A Festival of Violence: An Analysis of Southern Lynchings, 1882-1930*. University of Illinois Press.

Troesken, Werner and Randall Walsh. 2017. "Collective action, white flight, and the origins of formal segregation laws." Technical report, National Bureau of Economic Research.

United States Commission on Civil Rights. 1959. "Report of the United States Commission on Civil Rights 1959." .

Wilkerson, Isabel. 2011. *The Warmth of Other Suns: The Epic Story of America's Great Migration*. Vintage Books.

Williams, Jhacova. 2017. "Historical lynchings and contemporary voting behavior of blacks." Technical report, Technical report, Louisiana State University.

Wright, Gavin. 1996. *Old South, New South Revolutions in the Southern Economy since the Civil War*. Baton Rouge: Louisiana State University Press. OCLC: 495302227.

Wright, Gavin. 2013. *Slavery and American Economic Development*. Baton Rouge: Louisiana State Univ Press. OCLC: 840267115.

A   For Online Publication: Additional Results

[Table A.1 about here.]

[Figure A.1 about here.]
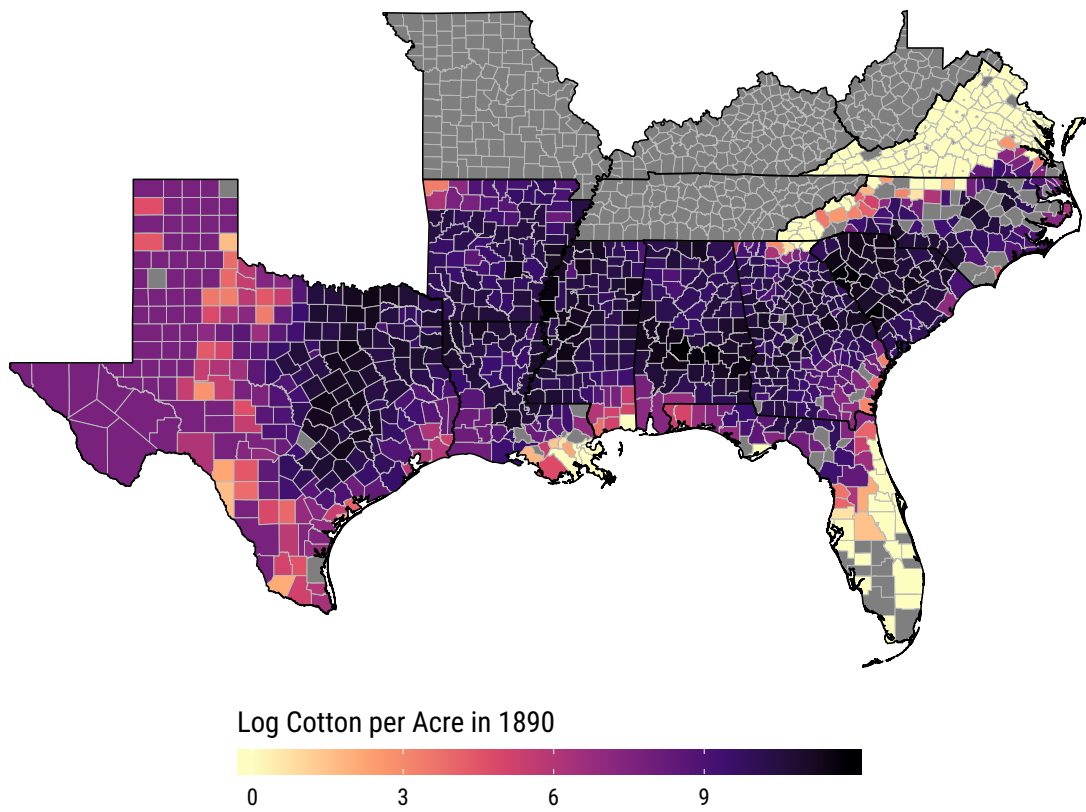
[Figure A.2 about here.]

[Table A.2 about here.]

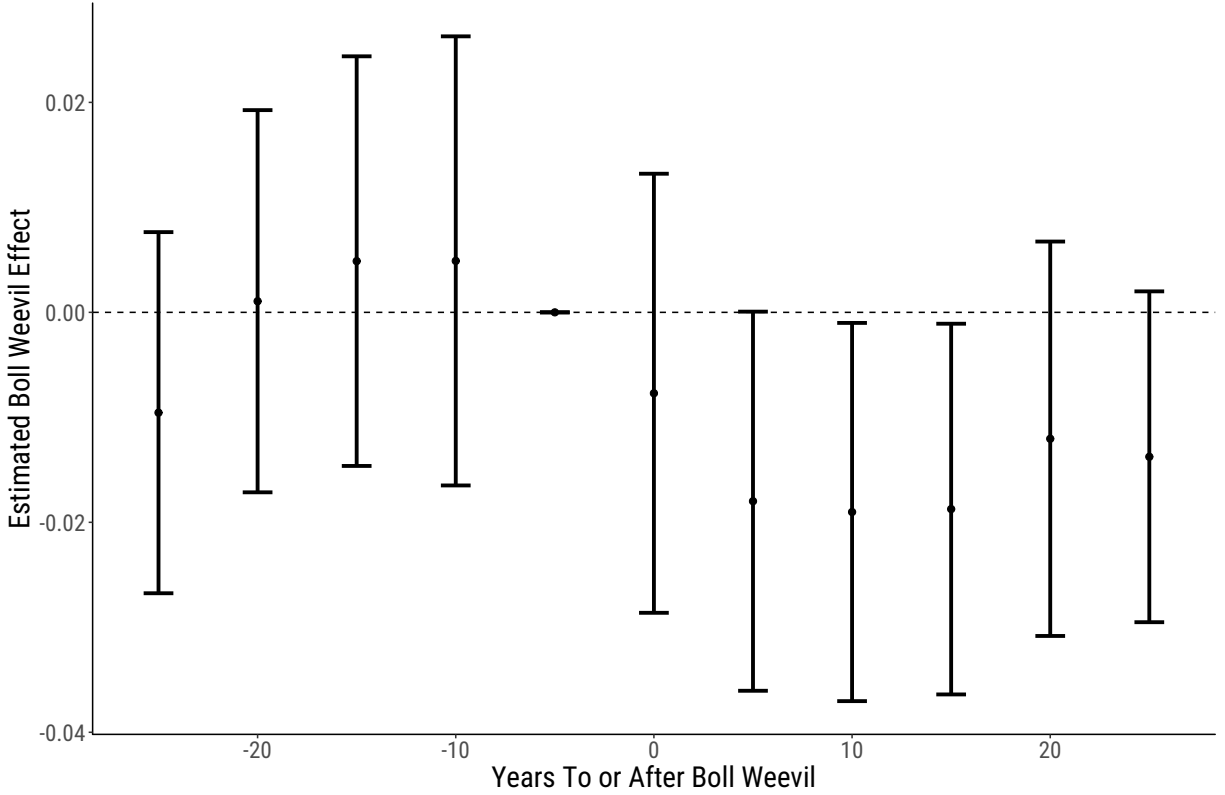**Figure A.1:** Map of Cotton Specialization in 1890

Figure A.2: Event Study Effect of Boll Weevil on Timing of Confederate Memorial Construction, 1892-1950. Combining annual data on the construction of Confederate memorials with the year of the boll weevil's arrival in each infested county, we estimate an event study. Because construction of memorials is relatively rare, we aggregate the timing of treatment into five year bins. As in the main specifications, treatment is defined as the boll weevil infestation interacted with the 1890 cotton intensity in the county. The 0-bin indicates the average effect of the boll weevil on lynchings from the year of arrival to four years after; the 5-bin indicates the average effect of the boll weevil on the creation of Confederate memorials from five years after to nine years after. We include county fixed effects, year fixed effects, years until the boll weevil fixed effects, and cluster standard errors at the county level. All estimates are relative to the effect of 1890 cotton intensity in the 5 years to 1 year before the arrival of the boll weevil.

Table A.1: The Effect of the Boll Weevil on Dixiecrat Presidential Vote Shares

	Thurmond in 1948		Wallace in 1968	
	(1)	(2)	(3)	(4)
Years with BW × Pct. Cotton Bales per Acre, 1890	0.004	0.001	−0.005	−0.011***
	(0.004)	(0.004)	(0.004)	(0.004)
Years with BW	0.002**	−0.001	0.002**	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Pct. Cotton Bales per Acre, 1890	0.245***	0.112*	0.182***	0.187***
	(0.055)	(0.058)	(0.057)	(0.060)
State FEs	Yes	Yes	Yes	Yes
1890 Controls	No	Yes	No	Yes
Observations	1017	960	1017	960
Y Mean	0.32	0.33	0.42	0.43

Note: Standard errors clustered by county.

Table A.2: The Effect of the Boll Weevil on Politician Ideology

	Panel A. DW-Nominate Dimension 1			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	−0.003	0.020***	0.031*	−0.010
	(0.018)	(0.007)	(0.019)	(0.011)
Lagged Outcome		0.475***		0.476***
		(0.005)		(0.005)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	35316	34291	35316	34291
Y Mean	-0.28	-0.29	-0.28	-0.29
	Panel B. DW-Nominate Dimension 2			
	(1)	(2)	(3)	(4)
Boll Weevil Infestation X Cotton	0.304***	0.131***	0.299***	0.126***
	(0.032)	(0.011)	(0.040)	(0.016)
Lagged Outcome		0.608***		0.608***
		(0.004)		(0.004)
Year FEs	Yes	Yes	Yes	Yes
County FEs	Yes	Yes	Yes	Yes
Cotton Time Trend	No	No	Yes	Yes
Observations	35316	34291	35316	34291
Y Mean	0.39	0.39	0.39	0.39

Note: Standard errors clustered by county.