The intergenerational effects of a large wealth shock: White Southerners after the Civil War

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Abstract: The nullification of slave wealth after the U.S. Civil War (1861-65) was one of the largest episodes of wealth compression in history. We document that white Southern households that owned more slaves in 1860 lost substantially more wealth by 1870, relative to Southern households that had been equally wealthy before the war. Yet, their sons almost entirely recovered from this wealth shock by 1900, and their grandsons completely converged by 1940. Marriage networks and connections to other elite families may have aided in recovery, whereas transmission of entrepreneurship and skills appear less central.

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I. Introduction

Wealth concentration in the hands of a small but powerful elite contributes to underdevelopment (Engerman and Sokoloff, 1997; 2002). Although wealth inequality is highly persistent, it can dissipate during times of war, revolution or catastrophe (Clark, 2014; Atkinson, Piketty and Saez, 2011; Piketty, 2014; Scheidel, 2017). Are these sudden changes to the distribution of resources long lasting, or do the families that started out ahead before an upheaval return to the top? The answer depends on whether the observed correlations of wealth between parents and children are generated through direct transfers of monetary resources or through correlated inputs, like human and social capital (Becker, Kominers, Murphy and Spenkuch, 2018).

We study this question in the aftermath of the American Civil War (1861-65), a conflict that led to the formal abolition of slavery in the U.S. South. On the eve of the War, the South was a highly unequal society. One metric of wealth inequality, the 90-50 wealth ratio, was 15-1 for white Southerners in 1860, compared to 9-1 in the North.[1] This ratio stands at 12-1 in the U.S. today (Kuhn, Schularick and Steins, 2017). About half of antebellum Southern wealth was held in enslaved persons, although only 21 percent of white Southern households owned any slaves in 1860 and less than 0.5 percent owned more than 50 slaves (Soltow, 1975). Emancipation led to the total nullification of all slave wealth. As one Georgia planter bemoaned at the war's end, "by our defeat, we have lost […] millions in the emancipation of our slaves, we have virtually lost [everything]" (Bryant, 1996, p. 113). From 1860 to 1870, the wealth of white Southern households declined by 60 percent at the median and by 74 percent at the 90th percentile, leading the 90-50 ratio to fall to 10-1 by 1870.

A simple model of intergenerational wealth transmission suggests that the loss of parental resources will dampen investment in children, lowering wealth in the next generation (e.g., Becker and Tomes, 1986).[2] Moreover, family resources should be particularly important in economies that have poorly functioning credit markets, like the post-War U.S. South. War and emancipation

[1] Authors' calculation from the 1860 and 1870 complete-count Census data.

[2] Contemporary studies find that direct transfers of monetary resources in the form of gifts and bequests can account for a large portion of the correlation in wealth between parents and children (Black, Devereux, Lundborg and Majlesi, 2020; Boserup, Kopczuk and Kreiner, 2016; Fagereng, Mogstad and Ronning, 2018; Adermon, Lindahl and Waldenstrom, 2018). Bowles and Gintis (2002) and Black and Devereaux (2011) review the broader literature on the effect of family resources (often income) on children. Kearl and Pope (1986) and Charles and Hurst (2003) contain estimates of intergenerational wealth elasticities for the past and the present, respectively.

"virtually wiped out credit markets," which had been heavily dependent on slave collateral (Ransom, 2005, p. 371; Kilbourne, Jr., 1995; González, Marshall and Naidu, 2017).[3]

We compare slaveholding households that held equal amounts of total wealth in 1860 but owned different numbers of slaves. By 1870, five years after the war, households that owned more slaves in 1860 reported substantially lower wealth levels than households who had been equally wealthy before the war. Yet, the sons of these slaveholding families almost entirely recovered in occupation-based wealth by 1900 and their grandsons completely recovered in annual earnings by 1940 (the Census does not include individual wealth data after 1870). Emancipation resulted in the loss of material resources, without disrupting other potential advantages, such as specific skills and training, social networks or political connections. The recovery of the descendants of slaveholders suggests a remarkable persistence of these other advantages even in the face of large declines in financial wealth. In this way, our results are consistent with Bleakley and Ferrie (2016), who find no intergenerational transmission of financial wealth acquired by random lottery in the 1832 Georgia land allocation.

Although slaveholder families recovered their economic status in the South within three generations, the Southern region as a whole fell behind the North after the war and continued to lag behind the North in 1940. This regional divergence was driven by a decline in Southern agriculture and a manufacturing expansion in the North. Indeed, we find that Southern households in our sample fell behind Northern counterparts who had been equally wealthy before the war. This disadvantage diminished but was not completely erased by 1940. Yet families who (likely) owned slaves before the war did not fare worse than other, equally wealthy Southern households in this regional comparison by 1900.

Our analysis is based on complete-count digitized Census data, which allows us to follow hundreds of thousands of household heads across Census waves. We first observe white Southern household heads in 1860, on the eve of the Civil War. We then apply Census record linking to follow their children and grandchildren to 1900 and 1940. With this information in hand, we develop two measures of household slaveholding. First, we directly link as many household heads as possible to the slave schedule of the 1860 Census, which allows us to count the number of slaves

[3] Martin (2010) collected more than 8,000 mortgages in Louisiana, South Carolina and Virginia before the Civil War. 41 percent of these mortgages included slave collateral, and these raised 63 percent of capital.

owned by each matched slaveholding household. Second, we develop a proxy for slaveholder status that can be applied to the full matched sample. Our proxy measure is based on average slaveholding by surname within the South. We demonstrate that holding a high slaveholder surname *was not* associated with wealth dynamics in the North, where slaveholding was illegal, suggesting that we are likely not picking up other aspects of surnames (e.g., ethnicity or higher social status).

Our main findings are based on a comparison of equally wealthy households who owned different numbers of slaves. In all specifications, we control for the exact percentile in the national wealth distribution in 1860 in order to compare households with identical wealth levels in 1860, but different portfolio allocation between slave and non-slave wealth. Central to our analysis is the existence of unique questions on household wealth holdings in the Censuses of 1850-1870.

To establish a baseline, we start by considering the decade before the Civil War, following equally wealthy households that owned more/fewer slaves in 1850 forward to 1860.[4] In the pre-war decade, households that owned more slaves in 1850 accumulated *more* wealth by 1860 than their equally wealthy counterparts. This pattern is consistent with rapidly growing slave prices in this decade, which more than doubled, appreciating twice as fast as the price of land (Calomiris and Pritchett, 2016).

An entirely different wealth pattern emerges in the decade of the war. Households that owned more slaves in 1860 lost more wealth by 1870 than their equally wealthy counterparts in 1860, suggesting that the wealth decline in the war decade was indeed due to emancipation and not some other attribute associated with large slaveholders. However, little of this wealth shock was transmitted to the next generation. Relative to households with only one slave, households with up to eight slaves held 8-25 log points less wealth in 1870; yet their sons had completely recovered by 1900. Households with nine or more slaves faced even larger wealth losses by 1870 (up to 49 log points), but their sons substantially recovered by 1900 and their grandsons recovered completely by 1940.[5]

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[4] Comparison households likely owned more land, livestock, buildings and structures, agricultural implements, or, in urban areas, merchant and manufacturing capital.

[5] Feigenbaum, Lee and Mezzanotti (2018) find that farm values declined by 20 percent in the counties on Sherman's path and then rebounded, an aggregate pattern of wealth loss and recovery very similar to our individual level analysis. In contrast, Martins, Cilliers, and Fourie (2019) find

This rapid recovery suggests that slaveholding households held some input – beyond monetary resources – that contributed to their descendants' ability to accumulate wealth. We consider various explanations in turn using a mixture of quantitative and qualitative sources. We conclude that inherited ability, entrepreneurial skills, or specific human capital are unlikely to explain the recovery of slaveholders' sons. First, results are unchanged when including surname fixed effects to control for extended family networks and other (unobservable) differences between families, including inherited ability. Second, we find the strongest recovery of slaveholder sons in urban areas, where comparably wealthy households were more likely to hold merchant or manufacturing capital, suggesting that, if anything, the sons of larger slaveholders did not hold an entrepreneurial advantage in this sub-sample. Third, the skills needed to oversee slave teams were not the same as those needed for contracting with tenant farmers (Shlomowitz, 1979; Alston and Higgs, 1982). Indeed, sons of the very largest slaveholders were the *slowest* to recover during this transition from a slave-based to a free labor system. Furthermore, we find that recovery was slower in counties that specialized in the cultivation of cotton, where tenant farming was the most prevalent.

Instead, we find suggestive evidence that slaveholder sons used social networks to aid their recovery. First, social history suggests that close social ties between slaveholding families facilitated investments in new ventures or shifts into clerical or merchant positions (Billings, 1982; Bryant, 1996). Second, we document that the sons of slaveholders married spouses from other former slaveholding families, particularly families that did not experience wealth losses as large as their own during the war period. Third, we find that slaveholders who had surname-based connections to the most elite families (those with 100 or more slaves) recovered most quickly, which is most consistent with transfers of resources within family networks. Notably, connections to Reconstruction-era politicians who were in power immediately after the Civil War did not confer advantages in son recovery, supporting the idea that the planter elite largely restored political control after the withdrawal of federal troops from the South in 1877 and the ending of the short-lived Reconstruction period (Foner, 1988; Acemoglu and Robinson, 2008a; Ager, 2013).

Our results suggest that the families of slaveholders regained their relative economic status in the South within a generation, despite significant losses of monetary resources. War may be a

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that the sons of slaveholders in the British Cape Colony (present day South Africa) that received less compensation for the loss of their slave wealth had shorter life spans.

"great leveler," one of the only forces strong enough to reshape the wealth distribution in the short term (Scheidel, 2017), but, in this context, established families were able to quickly return to prominence in peacetime. Our results also have important implications for our understanding of American history, undermining the classic view that the Civil War was a major rupture to the Southern elite, and instead providing new and comprehensive evidence of elite resilience (the classic view is due to Woodward, 1951; for revisionist social history, see Wiener, 1975, 1978).[6]

II. Historical background

A. The slave-based southern economy

Before the Civil War, the Southern economy was largely agricultural. The region's most fertile soil was dedicated to the cash crops of cotton, tobacco, sugar, and rice, often grown on large plantations using slave labor.[7] The upcountry was instead home to many small subsistence farmers. Slaveholding was reserved for the top echelon of white households. In 1860, 21 percent of white Southern households owned at least one slave and 0.5 percent owned 50 or more slaves (Soltow, 1975). Slave wealth also served as an easily collateralized asset, facilitating the opening of new businesses in urban settings (González, Marshall and Naidu, 2017).

Slave prices increased steadily from 1850 to 1860, betraying no signs that market participants anticipated the coming emancipation.[8] In general, some traders believed that the country would not resort to violence; others that the South would easily win the war; and still

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[6] We emphasize that our results contribute to our understanding of the "economic reconstruction" of the post-War South, not to the historiography on political reconstruction (Woodman, 1977). See Foner (1982, p. 84) and Ransom (2005, p. 364-65) on the scholarly shifts from the classic view that political reconstruction was northern "vengeance against a 'prostrate' South" to the mid-century revision that Reconstruction was a "bold [and welcome] effort to create an integrated society" to the post-revisionists who "questioned whether much of importance happened at all."

[7] Larger plantations took advantage of economies of scale to achieve efficient production (Fogel and Engerman, 1974, 1977). Fogel and Engerman (1974, p. 203) describe the slave workforce on large plantations as "rigidly organized as in a factory," with teams separated by task and following an "assembly line" structure from plowing to planting (Metzer, 1975; Fogel and Engerman, 1977; Toman, 2005).

[8] Slave prices peaked in the summer of 1860, falling first with the nomination of Abraham Lincoln as a presidential candidate and then with the outbreak of war activities in April 1861. Calomiris and Pritchett (2016) argue that the decline in slave prices through early 1861 reflected concerns about wartime disruption and taxation, rather than fears about the expropriation of slave property; they rest their argument on the fact that they find no differential price decline for slave children, who would only have become profitable if owned for many years.

others that a northern victory would be followed by compensated emancipation (as happened for British slaveholders and for slaveholders in the North).[9]

Enslaved people throughout the South were freed over the course of the Civil War. With few exceptions, Southerners were not compensated for the forfeiture of their slave wealth.[10] Public debate contained a series of proposals to confiscate and redistribute the land of former Confederates, such as the famous "40 acres and a mule" proposal. Even Andrew Johnson, whose presidency was later known for its "amazing leniency" toward former rebels, initially talked of "confiscating the large estates" (Foner, 1988, p. 183, 190). But, by 1866, the window of opportunity for land reform had closed and most Southerners retained their land after the war (Oubre, 1978; Miller, 2020).

Some historians argue that Southern planters remained equally wealthy after the war because their labor costs held steady, despite losing official title to slave ownership (e.g., Blackmon, 2009). In this view, sharecropping contracts or wage payments were equivalent to slave owners' previous expenses for feeding and housing enslaved workers. We find this reading of history unlikely because former slave owners were unable to fully restrict the mobility of former slaves, despite introducing anti-enticements and vagrancy laws after the war (Naidu, 2010). As a result, and given that "harsher methods of coercion [were] now no longer available" (Shlomowitz 1979, p. 573), planters had to offer more attractive contract terms to encourage sharecroppers to supply effort (Higgs 1973; Wright, 1986). Furthermore, even if labor costs remained at the low levels that pertained under slavery, losing title to slave-based wealth would have limited access to credit for slaveholders and their sons by eliminating an important source of collateral.

Consistent with an increase in labor costs or decline in agricultural productivity, land prices fell by 60 percent in the Deep South and by 15 percent in the rest of the South by 1870 (see

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[9] The Slavery Abolition Act of 1833 in the UK raised 20 million pounds to compensate slaveholders in the British Empire. In the northern states, gradual emancipation plans freed children born into slavery after 25-30 years, far past the age where slave children had compensated their masters for the cost of their upbringing (Goldin, 1973; Fogel and Engerman, 1974).

[10] The cost of national emancipation through compensation, rather than through war, would have been very high; the estimated value of all slave wealth was $2.7 billion in 1860, more than 50 percent of the annual GDP (Goldin, 1973). Despite these high costs, moderate abolitionists proposed the idea of compensated emancipation many times before the Civil War, only to be rebuffed (Fladeland, 1976). Southerners may have been playing a war of attrition game, holding out for a more attractive deal. Goldin (1973) argues that the North likely chose war over a negotiated settlement because they underestimated the financial and human cost of combat.

Appendix Figure 1a).[11] Total agricultural output per capita fell by nearly 40 percent in the South from 1860 to 1870 (Engerman, 1966; Engerman, 2000, p. 356-361).[12] The decline in southern agricultural productivity was due in large part to the shift from the supervised gang labor under slavery to tenant farming (Reid, 1973; Ransom and Sutch, 1975; Higgs, 1977).[13]

B. Southern wealth distribution

In the aggregate, the Civil War and its aftermath led to a major compression of the wealth distribution in the South. Table 1 presents descriptive statistics for the wealth holdings of all white male household heads in 1860 and 1870 by region. Before the war, white households in the South were wealthier than their counterparts in the North at every point in the distribution. Wealth holdings in the South were 20 percent higher at the median and were 100 percent higher at the 90th percentile. Wealth in the South fell substantially at every percentile from 1860 to 1870, while remaining steady or falling slightly in the North, primarily due to price deflation (Martin, 2017). Thus, by 1870, the southern wealth advantage had become a wealth penalty. Wealth declines in the South were largest for the rich, leading to a major compression of the wealth distribution. The

[11] We define the Deep South to be the five major cotton producing states of Alabama, Georgia, Louisiana, Mississippi, and South Carolina.

[12] Cotton production was around 20 percent below pre-war levels circa 1870 (Appendix Figure 1b). As a result, the world price of cotton was high in 1870 (Wright, 1974, 1978). Responding to this price incentive, the share of acres planted in cotton expanded over the 1870s. By the mid-1870s, the total cotton harvest had completely recovered and began expanding (Olmstead and Rhode, 2008). Cotton yields per acre remained unchanged until the 1930s; instead, the growth in cotton production was entirely driven by extensive margin increases in acreage (Appendix Figure 1c).

[13] The institution of sharecropping was the outcome of a protracted negotiation during the late 1860s between freedmen, who wanted to cultivate and own their land, and planters, who "sought to preserve the plantation as a centralized productive unit, worked by laborers in gangs" (Wiener, 1978, p. 35). On their side, freedmen held out by refusing to sign contracts, withholding their labor and organizing politically (see Logan, 2018 on the efficacy of black politicians during Reconstruction). On the other side, planters lobbied for the passage of laws to restrict black mobility and bargaining power (the "Black Codes"), and some also enlisted the Ku Klux Klan and other vigilante groups to terrorize black workers (see Naidu, 2010 on vagrancy and anti-enticement laws and Stagg, 1974 and Fitzgerald, 1997 on the Klan). Wiener (1978, p. 66) concludes that the abandonment of gang labor in favor of sharecropping "was a major concession to the freedmen." In the five major cotton states, the percent of land in plantation-sized farms (500+ acres) fell from one-third to just 11 percent from 1860 to 1870 (Ransom and Sutch, 1977, p. 71).

90-50 ratio of wealth holdings fell from 15-to-1 in 1860 to 10-to-1 in 1870, while the 90-50 ratio in the North remained unchanged at around 9-to-1.

Although the South as a whole experienced substantial wealth compression after the war, the Civil War's impact on the Southern planter elite remains an active debate. The classic view of the postwar South is that emancipation was a major rupture to the region's wealthy elite. C. Vann Woodward, the leading mid-century historian of the postwar South, argued that "no ruling class of our history ever found itself so completely stripped of its economic foundations as did that of the South in this period…[including] the leading financial, commercial, and industrial families of the region" (Woodward, 1951, p. 29). As evidence, Woodward (1951, p. 152) cites Mitchell's (1921) study of 254 Southern industrialists in the late nineteenth century, which concludes that "about eighty per cent [of new wealth in the South] came of non-slave-owning parentage."[14] In related recent work, Dupont and Rosenbloom (2018) link wealthy households in the 1870 Census back to 1860. They find substantially more turnover at the top of the wealth distribution in the South than in the North over the war decade.

In contrast to Woodward, other historical studies argue that slaveholding families recovered quickly, often by joining the industrial and merchant elite. Our broad analysis of white households throughout the U.S. South complements these small-scale studies of specific locations. For example, Wiener (1975, 1978) follows more than 200 wealthy planters in western Alabama across Census waves. He finds no difference in the probability that a family remained in the local elite in the decades before and after the war and concludes that "what occurred… was not the 'downfall' or 'destruction' of the old planter class, but rather its persistence and metamorphosis" into planter-merchants who subdivided their land and extended credit to tenant farmers.[15]

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[14] Later on, historians suggested that Woodward meant that planters did not survive the war *as a class*, rather than as *individual families*. Wright (1986), for example, emphasizes that southern planters transformed "from laborlords into landlords," a transition that required major shifts in their class interests even if the same families were participating in the post-War economy. Yet, Woodward himself seems to have meant quite literally that large slaveholding families lost their prominent place after the Civil War.

[15] Further studies with similar findings on the persistence of landownership are, for example, Shugg (1937), Huffman (1974), and Billings (1982). More recent studies also show that the old planter class successfully maintained their political influence after the Civil War (Ager, 2013; Bellani, Hager and Maurer, 2020).

III. Creating matched samples and defining slaveholding

We provide new evidence on Southern households before and after the Civil War based on complete-count historical Census data. Our dataset consists of household heads and their sons observed in the 1860 Census, on the eve of the Civil War, who are then linked either to the 1870 Census (household heads) or to the 1900 Census (sons). We also link the male children of matched sons observed in 1900 forward to 1940 to compile a sample of the grandsons of 1860 household heads. For a subset of our sample, we can observe slaveholding *directly* via matches to the 1860 slave schedule. We also create a proxy measure of likely slaveholder status for the full sample by associating household heads with the average slaveholding for their surname in the 1860 slave schedule. We define comparison groups based on a household's exact percentile in the 1860 national wealth distribution. We then estimate the effect of exposure to the Civil War wealth shock on the 1870 wealth of a household head, on a proxy for the 1900 wealth levels of sons based on occupation and county of residence, and on annual earnings for grandsons in 1940.

A. Census linking

Our main linked sample is created by matching the complete-count digitized Census of 1860 to the Censuses of 1870 (household heads) and 1900 (sons). We use the iterative matching procedure pioneered by Ferrie (1996) and fully automated by Abramitzky, Boustan, and Eriksson (2012, 2014) but we also consider robustness to alternative algorithms. Links are based on the Census Linking Project (www.censuslinkingproject.org) and rely on the most updated versions of the historical Census files.[16]

We start with the complete Census of 1860, which includes records for around 1.32 million white Southern household heads age 18 or older, and 1.77 million of their sons aged 0 to 18. Matches are conducted by first name, last name, age, state of birth and race; we exclude cases with only a first initial. We match 227,683 household heads forward to the 1870 Census and 298,631 sons to the 1900 Census. We then follow 112,883 sons observed in our linked 1900 households to the 1940 Census (grandsons of the original 1860 household heads). Our final analysis sample is smaller because we focus on households above the median of the 1860 wealth distribution who

[16] Our working paper (Ager, Boustan and Eriksson, 2019) was based on an earlier release of Census data in 1860 and 1870 that did not have cleaned information on some of our core variables, including age, birthplace and wealth.

had enough wealth to have plausibly purchased one slave. The average price of one slave in 1860 was $800, or the equivalent of around $25,000 today (Williamson and Cain, 2019). Wealth holdings of $800 would have placed a household at the 55th percentile of the national wealth distribution in 1860.

Our match rates – 17.3 percent between 1860 and 1870 and 16.8 percent between 1860 and 1900 – are standard for Census-based linking in the nineteenth century, due to factors like mortality, common names, incomplete names (e.g., the widespread use of first initials), and old-fashioned handwriting that can lead to transcription errors in the digitization process. Abramitzky, et al. (Forthcoming) document that, even when conducting an internal match with the most modernized 1940 Census files, the maximum match rate is around 50 percent, particularly due to the prevalence of common names.

One concern with Census linking is that individuals may be matched to the wrong person with similar attributes. We present results using a more conservative matching strategy that requires individuals to be unique by name and state of birth within a five-year age band. Another concern with Census linking is that unique matches are more likely to be made between two Census points for men who have an uncommon name or who were numerate and were thus able to report an accurate age on the Census form. Men with these characteristics may have higher socio-economic status than the general population. Appendix Table 1 compares men in our matched sample to white southern household heads in the 1860 Census who cannot be matched forward. Men in the linked sample were 8.6 percentage points (17 percent) more likely to be farmers in 1860 and 5.7 percentile ranks higher in the 1860 wealth distribution. To improve external validity to the full population, our main results are reweighted by these baseline characteristics. Column 3 in Appendix Table 1 demonstrates that the reweighting procedure substantially balances the matched and unmatched segments of the population on observable attributes.[17] We report unweighted results in the appendix.

A concern specific to this context is that all matched individuals must have survived the Civil War. Most soldiers were between the ages of 18 and 39, but it has been reported that children

[17] Coefficients in column 3 are weighted by the propensity of being matched $P_i(M_i = 1|X_i)$, which is calculated from a probit of match status on the covariates (e.g., age, farm status). Observations are reweighted by $(1 - P_i(M_i = 1|X_i))/P_i(M_i = 1|X_i) \times q/(1 - q)$, where q is the proportion of records linked.

as young as 12 participated in the war. The typical father in the data was 40 years old in 1860 and the typical son was 13 years old by 1865, suggesting that most fathers were too old to have served in the war and most sons were too young.[18] Results are robust to excluding the youngest fathers and oldest sons who are most likely to have served, as reported in the appendix.

B. Measuring slaveholder status

We classify a household's slaveholding status in two ways. Our first measure directly matches individual household heads to the relevant slave schedule (1850 or 1860). Our second measure is an indicator of "likely slaveholding" that can be calculated for the full linked sample.

Our first measure of slaveholding is based on direct links from the Population Census to the slave schedule, a Census supplement that recorded the number of slaves owned by each slaveholder. We establish links by first name, last name, and current county of residence, screening out matches to household heads that do not report a plausible amount of wealth of the population schedule to sustain slave ownership.[19] Linking is challenging in this context because the slave schedule often contained only first initials, rather than complete first names, and did not contain other personal characteristics (e.g., ages, other household members) that could be used to confirm matches. Despite the fact that the population and slave schedules were collected at the same time (and often by the same enumerator), we are only able to match 42 percent of the full slave schedule to the population Census in 1860. In that year, we find 175,083 of the 421,700 slaveholders in the full 1860 population Census; of these, 37,129 are in our 1860 to 1870 linked dataset.[20] We note

[18] Hall, Huff and Kuriwaki (2019) find that men who owned slaves in 1850 were more likely to have sons that served in the Civil War, which they speculate is due to greater identification with the Confederate cause.

[19] In particular, we block on county and first letter of each name and calculate Jaro Winkler string distances between the population and slave schedules for each possible match. To find an actual match, we exclude any possibilities with a Jaro Winkler score below 0.15. We also exclude as implausible any matches in which personal wealth in the Census of Population is less than $400 x the number of slaves in the slave schedule. If we are then left with a unique match, we consider the observation to be linked. We describe the process in more detail in the Data Appendix. Data Appendix Table 2 enumerates the reasons for non-matches, including transcription error, the wealth requirement and so on.

[20] We supplement these automated links with a hand-constructed dataset of the richest slaveholders linked to the 1860 slave schedule compiled by Ager (2013) to address the fact that the largest slaveholders often held slaves in multiple counties. Results are robust to excluding these cases from our linked samples (less than 1 percent of our sample).

that unmatched households may be true non-slaveholders (who would not be expected to appear on the slave schedule). Alternatively, unmatched households may be true slaveholders that cannot be linked. Because we cannot assume that "non-matches" are "non-slaveholders," we are unable to consider the extensive margin here (the difference between slaveholders and non-slaveholders).

Our second measure of slaveholding status is a proxy based on an individual's surname. We define "slaveholder surnames" as any surname *j* whose average slaveholding in the 1860 slave schedule was above the median value for the South (N_j > median).[21] Appendix Figure 2 presents the distribution of average slaveholding by surname throughout the South. The median surname was associated with ownership of less than one slave. There is a long right tail above the median, reflecting the skewed distribution of slaveholding.

Our proxy measure has two main benefits: it can be defined for the full southern sample and it allows us to create a placebo measure based on slaveholder surnames in the North. But these advantages come at some cost of measurement error and so we validate our surname measure in various ways. Appendix Figure 3 documents that household heads with slaveholder surnames – especially those with higher 1860 wealth – are much more likely to match to the 1860 slave schedule (Panel A). Moreover, men with slaveholder surnames reported a greater share of total wealth in 1860 made up of "personal property," a category which includes the value of slaves (Panel B).

We also collected detailed wealth data from the one Southern state – Texas – which recorded wealth at the individual level for tax purposes and for which detailed registers for (almost) all counties in 1859 survived.[22] Appendix Figure 4 shows that men with slaveholder surnames – particularly those above the 70th percentile of the wealth distribution – held more of their wealth portfolio in slaves, relative to other men in the same decile of the wealth distribution, and likewise held less of their wealth in other forms of personal property including horses, cattle, and money at

[21] Average slave ownership by surname (*N*) is derived from two components in the data: (a) n_j is the mean number of slaves for surname *j*, conditional on being a slaveholder, which we calculate directly from the slaveholder schedule, and (b) p_j is the probability of being a slaveholder, which is defined as the ratio of households with surname *j* in the slave schedule and the population Census.

[22] For every county, we digitized one completely randomized page of the tax register in 1859. Data Appendix Figure 1 provides one such example image for Angelina county in 1859.

interest. The share of portfolio held in land was not related to slaveholder surname. We report mean wealth values by surname type unadjusted for total wealth in Appendix Table 3.

C. Outcome variables

Our main outcome variables are 1870 household wealth (for fathers) and 1900 occupation-based wealth (for sons). For grandsons, we consider annual earnings as well as completed years of schooling. Summary statistics for these outcome measures are presented in Appendix Table 2. Data Appendix Table 1 provides more detail on the wealth or income variables available in every Census year in the study (1850-1870, 1900, 1940).

The 1870 Census was the last Census to ask all household heads to report two aspects of wealth holding: total dollar value of real estate and total dollar value of all other personal wealth. One concern with the 1870 wealth data is the extent of non-reporting and the fact that blanks cannot be distinguished from true zeroes (Steckel, 1994). Appendix Figure 5 shows that the probability of reporting blank/zero wealth in 1870 declines linearly with previous wealth (in 1860) until the 60th percentile. Beyond the 60th percentile, the probability of reporting blank/zero wealth remains flat at 10 percent. We read this pattern as suggesting that blank wealth fields in 1870 primarily represent true zeroes for households that were poorer in 1860. The share of true zeroes then seem to decline from low wealth levels up to the 60th percentile of the 1860 distribution. Thereafter, we suspect that blank wealth fields are primarily non-reports; otherwise, surely the probability of true zeroes would continue falling with 1860 wealth levels above the 60th percentile. Our reading is consistent with Sutch (2017), who documents that many individuals with blank wealth fields in the 1870 Census do have reported wealth in state wealth tax records. Because our focus is on slaveholders with sons above the 55th wealth percentile in 1860, we drop all observations with blank wealth fields (likely non-reporters) from the main analysis (11 percent of the data). We show results that instead treat blank wealth fields as zeroes in the appendix.

For sons in 1900, we follow Collins and Zimran (2018) in creating a wealth proxy based on occupation and county/state of residence. In particular, we match agricultural occupations to median 1870 wealth by occupation-county cell and non-agricultural occupations to occupation-state cell. We validate this measure in the appendix using our father sample in 1870, for which we have both individual wealth data and this occupation-based wealth proxy. One benefit of occupation-based wealth is that it is a reasonable proxy for average lifetime wealth, rather than

wealth at a particular age or in a single year. For grandsons in 1940, we use individual-level annual earnings for any wage and salary worker. The self-employed (which includes many farmers), were not asked to report income on the 1940 Census. For this group, we substitute a predicted income measure that is based on occupation, county of residence, and age (see Abramitzky, Boustan, Jacome and Perez, 2021).

Later in the paper, we also use a proxy for the likely family background of a son's spouse (for those who are married with spouse present in 1900). Following Olivetti and Paserman (2015), we link sons to their likely father-in-laws by calculating the characteristics of fathers who had daughters of a given first name, state of birth, and cohort of birth (in five-year bands) living in their household in either 1860 (before the war) or 1870 (after the war). These attributes are then assigned to wives with the same name and year/state of birth in the 1900 data. The social position of sons' spouses is captured by three aspects of father-in-law's wealth: share of estate made up of personal property in 1860 (a measure of likely slaveholding); logarithm of wealth in 1860 (wealth holdings before the war); and logarithm of wealth in 1870 (wealth holdings after the war). We use these three wealth-based measures of the father-in-law's social status to evaluate the importance of social networks in sons' recovery from the emancipation wealth shock.

IV. Transmission of the Civil War wealth shock for known slaveholders

Our goal is to estimate the effect of the wealth shock associated with slaveholding on the subsequent socio-economic status of white Southern households across three generations. We begin by analyzing the subset of our sample that can be linked to the 1860 slave schedule directly. All of the men in this sample owned at least one slave, and so we cannot study the extensive margin between owning slaves or not. Instead, we look at the intensive margin, comparing households with the same wealth levels in 1860 who owned more/fewer slaves. For these known slaveholders, we estimate:

$$Y_{isp} = \alpha_s + \eta_p + \mathrm{I}(SLAVE_COUNT1860_i)\,\Pi + \mathrm{X_i}\Theta + \varepsilon_{isp} \qquad (1),$$

for household i living in state s in 1860 in wealth percentile p. Y_{isp} is the logarithm of father wealth in 1870, son occupation-based wealth in 1900, or grandson income in 1940. Our main right-hand side variables of interest, denoted I(*SLAVE_COUNT1860*), are indicators for numbers of slaves

owned in 1860. The omitted category is ownership of one slave, which represents the 25th percentile of the slave-owning distribution. Beyond that, we consider ownership of 2-3 slaves, 4-5 slaves, 6-8 slaves or 9-17 slaves. The largest category – 18 or more slaves – represents 4.2 percent of the known slaveholder sample and corresponds to the "plantation-style" agriculture that is stereotypically associated with the South (Fogel and Engerman, 1974). We control for the main effect of 1860 wealth with a set of dummy variables for the exact percentile in the wealth distribution (η_p). Because slaveholding was more common in some Southern states, we include a set of state fixed effects (α_s). We also control for a quadratic in own age for fathers, quadratics in own age and father's age in 1860 for sons, and quadratics in own age in 1900 and father's and grandfather's age in 1860 for grandsons (X_i).

To establish a baseline for our postwar wealth analysis, we begin by considering the relationship between slaveholding and wealth creation in the 1850s, the decade before the Civil War. Slave prices doubled during this decade, rising faster than other assets, and so we expect here to see that households with more slaves in 1850 accumulated more wealth by 1860 than their otherwise similarly-wealthy counterparts.[23] Figure 1 documents a positive and monotonically rising relationship between slaveholding in 1850 and total wealth by 1860. Households with 2-3 slaves in 1850 held 30 log points more wealth by 1860 than similarly-wealthy households with only one slave in their portfolio. The wealth advantage rises up to households with 18+ slaves who more than tripled their wealth by 1860 relative to comparable households.

The pattern of wealth creation is entirely different in the decade of the Civil War. Figure 2 (Panel A) documents that fathers who owned more slaves in 1860 experienced larger wealth losses during the war. Compared to similarly-wealthy households with only one slave, fathers that owned up to eight slaves in 1860 held around 20 log points less wealth by 1870 and fathers with 9+ slaves held around 40 log points less wealth by 1870.[24] Yet, by 1900, sons of larger slaveholding families had substantially or completely recovered (Panel B). Sons whose fathers held up to 8 slaves faced *no* occupation-based wealth disparity relative to the sons of smaller slaveholders, despite the

[23] Our percentile bin wealth controls in 1850 (η_p) are based on real estate wealth, which was the only wealth category included in the 1850 Census.

[24] Appendix Figure 6 subdivides father wealth losses into real estate value and personal property. Both wealth categories declined by 1870. Larger slaveholders saw their personal property (a category that includes slave wealth) declined by 23-31 log points more than similarly-wealth smaller slaveholders.

wealth losses in the previous generation. Sons of larger slaveholders (9+ slaves) substantially rebounded, retaining around a 10 log point gap in occupation-based wealth. By 1940, the recovery process was complete, with grandsons' income entirely unrelated to the slaveholding patterns of their grandfathers (Panel C). Coefficients underlying these figures are presented in Appendix Table 4.

Occupational choice was more persistent than wealth or income. The largest slaveholders, for instance, were 22 percentage points more likely to be farmers in 1870 (Appendix Figure 7a). This disparity fell in magnitude but was still present in the son generation (11 points) and the grandson generation (5 points). The higher probability of reporting a farm occupation was primarily counterbalanced by a lower probability of reporting a merchant occupation (Appendix Figure 7b). Yet grandsons faced no disparities in educational attainment, enjoying a similar likelihood of attending school in childhood (in the 1900 Census),[25] and thus of completing high school or college as reported in adulthood in the 1940 Census (Appendix Figure 8).

Patterns of wealth losses hold using alternative measures of father's wealth. Appendix Figure 9 measures percentile rank in the national wealth distribution, following Chetty, Hendren, Kline and Saez (2014). Fathers with 4-8 slaves in 1860 lost 2-3 rank points in the distribution by 1870 and fathers with 9+ slaves lost 6-9 rank points, relative to similarly-wealthy households with only one slave. As above, sons of slaveholders with 4-8 slaves recover, despite their father's wealth losses. Sons of larger slaveholders make up some ground but leave complete recovery to the grandson generation. Appendix Figure 10 replaces father's individual wealth in 1870 with our occupation-based proxy of 1870 wealth. We find a similar pattern, whereby wealth losses by 1870 rise with the number of slaves owned before the war.

V. Transmission of the Civil War wealth shock for likely slaveholders

We now turn to our proxy measure of slaveholding: men with surnames that were associated with more/less slave ownership in the South in 1860. This approach allows us to use the full sample of Southern households and to add a contrast with households living outside the South. Using a national sample of linked households, we estimate the following regression:

[25] At the time of writing, IPUMS suggested for the 1900 full count records to construct school attendance based on the variable "months in school".

$$Y_{ijp} = \eta_p + [(\text{Slaveholder Surname}_j) \times VENTILE1860_i]\,\Gamma + [(\text{South}_i \times VENTILE1860_i)]\,\Psi_1 + [(\text{South}_i \times \text{Slaveholder Surname}_j \text{ x } VENTILE1860_i)]\,\Psi_2 + X_i\Delta + \varepsilon_{ijp} \quad (2)$$

for household i with surname j in percentile p of the 1860 national wealth distribution. As before, the outcome variables Y_{ijp} include the logarithm of father wealth, son occupation-based wealth or grandson income. The vector η_p controls for a household's initial percentile in the national wealth distribution.[26]

We include three interactions on the right-hand side. We first interact having a slaveholder surname (anywhere in the country) and the corresponding ventile dummies of the 1860 wealth distribution. The coefficients Γ display potential wealth differences of similarly-wealthy households with and without slaveholder surnames in the North. We would not expect to find differences by surname in this region where slaveholding was illegal, unless families with slaveholder surnames were systematically different than other families (e.g., different ethnicity or higher social status). Second, we interact living in the South and the 1860 wealth ventile dummies. The coefficients Ψ_1 capture general wealth losses in the South after the Civil War by segment of the pre-war wealth distribution. Third, and most of interest, we create a triple interaction between living in the South, having a slaveholder surname, and the 1860 wealth ventile dummies. The coefficients Ψ_2 reveal whether there were larger wealth losses for southern households with slaveholder surnames. In the appendix, we also estimate region-specific versions of equation (2) that drop the interactions with the region indicators (e.g., South x *VENTILE1860*) and allow us to include state fixed effects in the analysis.

The first panel of Figure 3 documents the substantial wealth losses in the South associated with the loss of the Civil War by percentile in the national wealth distribution, from the median of the distribution (bottom of figure) to the 95th percentile (top of figure). For men at the median in 1860, non-slaveholding households in the South held 58 log points less wealth by 1870 than their northern counterparts (blue triangles). Losses were even larger for men who had been wealthier in 1860, rising to 114 log points above the 95th percentile. These wealth losses were primarily driven by declines in Southern agricultural productivity, especially relative to the wealth gains associated with expanding industrialization in the North. Wealth losses were around 20 log points larger for men with slaveholder surnames in the South (yellow circles), reflecting the emancipation wealth

[26] Note that the ventile interactions fully span the main effect of having a slaveholder surname and so we do not include a main effect for having a slaveholder surname.

losses previously seen in Figure 2. Reassuringly, we see no difference in 1870 wealth of Northern households with slaveholder surnames (black squares) relative to the omitted category of Northern households without slaveholder surnames. Coefficients underlying these figures are presented in Appendix Table 5.

Southern sons and grandsons made up some ground but remnants of the regional wealth divergence remained, even by 1940. In 1900, Southern sons retained occupation-based wealth losses of around 40-50 log points and, by 1940, Southern grandsons continued to earn 30-35 log points less than their Northern counterparts. This pattern is consistent with the well-known slow convergence of income between the South and other regions (Barro and Sala-i-Martin, 1992; Caselli and Coleman, 2001). Yet the additional disadvantage faced by the families of likely slaveholders in Figure 3 is not persistent (triangles versus circles), closing substantially in the sons' generation and then dissipating by the grandsons' generation. The remaining son gap between likely slaveholding and non-slaveholding families reflects differential geography. Former slaveholding families were more likely to live in the Deep South. Indeed, the observed gap in 1900 between the sons with slaveholder and non-slaveholder surnames mostly disappears in the South when we control for state fixed effects (Appendix Figure 11).[27]

VI. Possible mechanisms for wealth recovery

Standard models of intergenerational transmission suggest that, in an economy with limited access to credit, like the postbellum South, the economic outcomes of sons could be influenced by the material resources of their fathers (Becker and Tomes, 1986). Yet, we find that the sons of slaveholders were able to readily recover by 1900, which implies that slaveholding families were able to draw on other correlated inputs to transmit their advantages, despite the loss of monetary resources (Becker, Kominers, Murphy and Spenkuch, 2018). Although we cannot pinpoint the relevant factors with certainty, we discuss possible mechanisms for recovery in this section. We first consider the possibility that slaveholders transferred ability, entrepreneurial acumen, or specific labor management skills to their sons. We then point to the most likely scenario: sons of slaveholders benefited from being embedded in social networks that provided access capital and employment opportunities in the aftermath of the war.

[27] We continue to find a null effect of slaveholder surname on wealth outcomes for men in the North when we control for state fixed effects (Appendix Figure 12).

A. Ability, entrepreneurship and specific skills

The first explanation for rapid recovery is that families with larger slaveholdings (conditional on total wealth) were simply endowed with higher ability, which their children then inherited. For example, Barth, Papageorge and Thom (2020) find a strong association between genetic endowment and household wealth at retirement, even after controlling for education and income. Clark (2014) documents persistent wealth associations within dynasties, as measured by surname, which he partially attributes to genetic heritability. Yet, our results hold even after controlling for surname fixed effects, which capture any characteristics that are shared within extended families, including genetic endowment (Appendix Figure 13).

A second possibility is that household heads that accumulated more slave wealth were more entrepreneurial and passed along their commercial acumen. In urban areas, building up non-slave assets such as industrial or merchant capital, would have required entrepreneurial activity, suggesting that the sons of slaveholders may have encountered some entrepreneurial *disadvantage* in cities.[28] Figure 4 reports separate results for urban and rural areas.[29] We find similar wealth losses by 1870 for larger slaveholders in urban and rural areas, ranging from 22-43 log points relative to men with only one slave (Panel A and C). Yet, sons of larger slaveholders who were raised in urban areas completely recover, except at the very top (Panel B), while sons of the largest slaveholders in rural areas remain somewhat behind by 1900 (Panel D), which is contrary to the entrepreneurship hypothesis.

A third explanation for son recovery is that former slave owners developed labor coercion and management skills that may have been transferrable, if imperfectly, to the system of sharecropping that emerged after the Civil War. We find this possibility unlikely for three reasons. First, it is not clear that the skills needed for slaveholding would transfer to designing and implementing sharecropping contracts. As historians explain, "former masters […] lacked the experience and knowledge necessary to deal with free labor" and had to "learn to be employers"

[28] For example, Lockley (2014) documents occupations of slaveholders in Savannah. Only 7 percent report farmer or planter. Instead, 50 percent report either an administrative, trade or artisanal craftsman occupation.

[29] Following the Census, we classify a county as urban if it contained at least one town of 2,500 residents or more in 1860. Our sample is 85 percent rural and 15 percent urban by this definition.

(Woodman, 1977, p. 550). Former slaves did not necessarily continue to work in large numbers on the land of their previous owners; rather, newly freed black workers moved readily to search for better tenancy contracts (Higgs, 1973; Wright, 1986, p. 65).[30] Second, to the extent that former owners would be able to use non-wage compensation like housing or protection from violence to attract croppers on good terms (Alston and Ferrie, 1999), these advantages would belong to the slaveholders with plantation-style farms. Yet, we find that sons of the largest slaveholders were the slowest to recover (Figure 2). Third, Figure 5 documents that the most rapid recovery occurred in less cotton dependent counties. In these areas, marked with yellow circles, father wealth losses were larger than in high cotton areas (blue squares), and yet sons completely recovered. Cotton was often cultivated by sharecroppers, but other crops were less reliant on tenant farming. Slaveholders in these less cotton dependent counties were thus *less likely* to rely on sharecropping arrangements, and yet their sons experienced almost full recovery.

A fourth possibility is that slaveholding households had fewer children after the war, and thus were able to partially compensate for their wealth losses by spreading their inheritance over fewer offspring. Appendix Figure 14 demonstrates that a fertility-based explanation for our results is unlikely. Point estimates suggest that, in the decade during and after the Civil War, households with two or more slaves in 1860 had fewer children than the baseline category of households with one slave, but fertility declines do not rise with slaveholdings in a manner that would mirror the losses in wealth seen in Figure 2. Furthermore, these disparities are economically small. Families with larger slaveholdings had around 0.02 fewer children after the war began, on a basis of around 5 children per family by 1870.

We also see no evidence in favor of the mechanism emphasized in the modern literature, whereby children of less wealthy parents receive fewer important human capital investments early in life. Appendix Figure 15 divides sons according to their age on the eve of the Civil War (age 0-7 in 1860/older than 7 in 1860). If father wealth losses prevented households from investing in early childhood health and education, we would expect the recovery process to be slower for sons who were young in 1860 and thus missed out on crucial investments. Yet, we find no difference

[30] Despite anti-enticement and vagrancy laws intended to reduce black mobility, Cohen (1991, p. 4) argues that "planters were rarely able to use their legal instruments effectively enough to interdict seriously black movement from one state to another. Throughout the period up to World War I, blacks in most parts of the South appear to have moved with relatively little interference when jobs were available."

in the extent of son recovery by age at the time of the shock, suggesting that the wealth losses did not diminish human capital acquisition in early childhood.

B. Social networks

After casting doubt on these alternative explanations, we argue that the most likely explanation for the recovery of slaveholders' sons is that slaveholding families were embedded in social networks that facilitated adjustments to wartime losses. We bring both qualitative and quantitative evidence to bear to support this claim.

First, historians argue that slaveholder families used social and marital connections to set up their children in the industrial or mercantile sectors, or as purveyors of credit in the slowly recovering Southern financial system. Billings (1982) documents that, in North Carolina, more than 60 percent of mill owners in the growing textile industry were from prominent planter or agrarian families. The transition from agriculture to industry occurred through social networks: Billings (1982, p. S59) argues that "these were not isolated individuals, but members of a social class bound together by common interests in plantation agriculture and by an extensive web of social relationships. Landed families were interconnected by marriage and united by business interests." Bryant's detailed study of Greene County, Georgia concurs that the "new men' who rose to prominence after the war "were new only in their occupations and generation, for most came from established leading families" (Bryant, 1996, p. 172). One such person, Edward A. Copelan, was a typical example. Copelan, the scion of a prosperous plantation family that "lost their slaves and much of their wealth," decided to leave farming, taking a position as a clerk, and eventually achieving "great success in the mercantile business" (Bryant, 1996, p. 172-173).

Second, we document that the sons of larger slaveholders were more likely to marry into other slaveholding families, further solidifying bonds within this elite social class. We link wives of slaveholder sons observed in the 1900 Census to their likely childhood household by first name, year of birth and state of birth (see section IIIc). Figure 6 demonstrates that the fathers-in-law of the sons of larger slaveholders were more likely to be slave-owners themselves, as proxied by the share of their total wealth held in the form of personal property in 1860 (Panel A). Fathers-in-law of the sons of larger slaveholders were also wealthier on the eve of the Civil War (Panel B). Although marrying other slaveholders might reinforce social ties, all members of this class also lost resources during the war, which might limit access to capital. Indeed, we find that, after the

war (1870), the fathers-in-law of the sons of large slaveholders were no wealthier than the in-laws of the sons of smaller slaveholders (Panel C). Comparing Panels B and C suggest that the likely fathers-in-law of the sons of the largest slaveholders lost 12 log points of wealth between 1860 and 1870. Yet, this sizeable wealth loss is substantially *smaller* than the losses experienced by these sons' own fathers (Figure 2), suggesting that slaveholding families were able to partially compensate for their losses by arranging advantageous marriages within their own circle.

Our finding of persisting marriage ties with slaveholding families is supported by the qualitative record. Beck (1987) writes of a persistent elite of former slaveholders in Rowan County, North Carolina after the war, supported by ties of marriage. "This class was built around a stable core of persisting families and a fringe of newer families," he writes. "The Henderson and the Boyden families were key elements of this stable core illustrating nicely the social network in which Rowan County's affluent families were typically enmeshed. Nathaniel A. Boyden, lawyer, politician, large landowner, and slaveholder, headed the Boyden family before the war. He married Jane Henderson, sister of Archibald Henderson, also a large landowner and slaveholder." Beck concludes that "The kin ties were more than lines on a genealogical chart; all of these families were socially intimate [...] many if not most local affluent families had at least some familial connection with other affluent families."

Third, we find that families who were connected to their state's largest slaveholders experienced more rapid recovery. We define elite slaveholders as those with 100 or more slaves (reflecting the top 1 percent of slaveholders, or the top 0.2 percent of southern households).[31] Men who share a surname with an elite slaveholder in their state of residence in 1860 are defined as "connected." Figure 7 documents that fathers with elite connections (yellow circles) experienced similar wealth losses to fathers without elite connections (blue squares) immediately after the war (Panel A). Yet, point estimates in Panel B suggest that the sons of connected fathers entirely recovered and might have even surpassed sons from comparable households by 1900, whereas sons without these connections retained small losses (confidence intervals are large enough that we cannot statistically distinguish these sons in all cases because the sample of men with elite connections is small).

[31] Elite slaveholder surnames are taken from Scarborough (2003) and the dataset compiled by Ager (2013).

Where did the funds for recovery likely come from? Some resources would have flowed from the very elite slaveholders themselves. Others seem to have been amassed by connected slaveholders without children (primarily older men whose children had already left home). Appendix Figure 16 considers household heads without children reported in the 1860 Census. Men without elite connections had similar wealth losses to the fathers in our sample. Yet men in the elite, or with elite connections, either did not experience wealth losses after the war, or quickly recovered by 1870. We see this figure as providing suggestive evidence that elite family networks did retain enough wealth after the war to provide funds to aid recovery for slaveholder sons (although, again, confidence intervals are wide because there are – by definition – few men with such elite connections).

It is historically notable that potential connections to a white southern Reconstruction-era politician – as defined by surname similarity – did *not* confer the same benefits: we see no such recovery advantage for sons with connections to Reconstruction politicians (yellow circles) relative to sons without such connections (blue squares) in Panels C and D.[32] The Reconstruction regime was short-lived (1865-77), and so these political connections did not aid in post-war recovery. Once the "old Southern regime" was restored and the pre-Civil war elite regained economic and political power, personal connections to the old slaveholder elite facilitated the recovery of sons especially of those from larger slaveholder families (Acemoglu and Robinson, 2008a).

VII. Robustness

Appendix Figures 17 through 20 document stability of the main results across a number of sensitivity checks. Appendix Figure 17 uses a more conservative linked sample, which requires all matched individuals to be unique by name and place of birth within a five-year age band. This sample is 40 percent smaller but less likely to suffer from false positive matches. Appendix Figure 18 presents unweighted results using the original sample. Appendix Figure 19 drops from the sample any fathers who are young enough (age ≤ 40 in 1860) or sons who are old enough (age ≥ 13 in 1860) to have been likely to have served in the Civil War. Appendix Figure 20 includes county fixed effects to adjust for geographic differences in the location of big plantations. The

[32] Surnames of white southern Reconstruction politicians are retrieved from Hume and Gough (2008).

direction and magnitude of the results are all very similar: in all specifications, we find that fathers with larger slaveholdings held 20-50 log points less wealth by 1870 than similarly-wealthy households who owned only one slave before the war; that sons of mid-sized slaveholders completely recovered and sons of the largest slaveholders retained a small portion of the wealth shock by 1900; and that grandsons of larger slaveholders recovered across the board by 1940.[33]

VIII. Conclusions

The aftermath of the American Civil War led to one of the largest wealth compressions in history. Following the abolition of slavery, former slave owners lost all wealth that had been held in the form of slaves, and civil and political rights were reassigned to the former enslaved population. In addition, Southern land holdings declined substantially in value, especially in areas that had relied heavily on slave labor.

Yet, despite these large wealth losses for white Southern households, we find that pre-Civil War wealth and social status persisted, particularly among slaveholder families. Our evidence is based on newly-digitized complete-count Census samples linked to the 1860 slave schedules and then linked forward to sons in 1900 and grandsons in 1940. In particular, we find that despite the fact that slaveholders experienced substantial wealth losses, their sons had substantially recovered in occupation-based wealth relative to similarly-wealthy Southern households by 1900, and their grandsons completely caught up in income by 1940. The combination of wealth losses and productivity declines in Southern agriculture was strong enough to persistently disadvantage wealthy Southerners relative to their Northern counterparts, but even this gap had substantially dissipated by 1940.

Our results speak to the interpretation of intergenerational wealth correlations between parents and children. Material resources may matter in some contexts but, in our case, the substantial losses of slaveholder family wealth did not ultimately affect the fortunes of their sons and grandsons within the South. Sons of slaveholders were able to bounce back relative to other wealthy households in the South, perhaps through the transmission of other advantages, such as access to social networks. Our finding of elite recovery is in line with models that predict elite

[33] We continue to find wealth losses between 16 and 40 log points when including observations with blank/zero wealth (albeit with less precision; see Appendix Figure 21). Results are similar when using inverse hyperbolic sine instead of a logarithm transformation.

persistence despite fundamental changes in economic relations and political institutions (Acemoglu and Robinson, 2008b). Although every historical episode is specific, the loss of wealth of Southern slaveholders rivaled the losses of wealthy households in Germany after World War I; in the United States, the United Kingdom and France during the Great Depression; and even Chinese and Russian elites after the Communist revolutions. We find that, in the case of the U.S. South, such large wealth losses at the very top can be temporary, resulting in almost complete recovery within in the South in a single generation.

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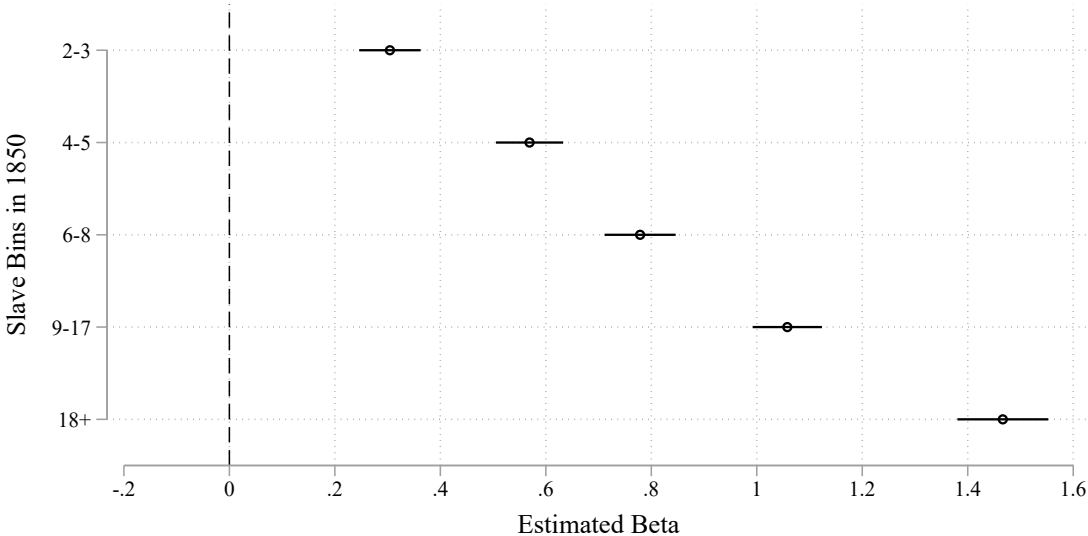
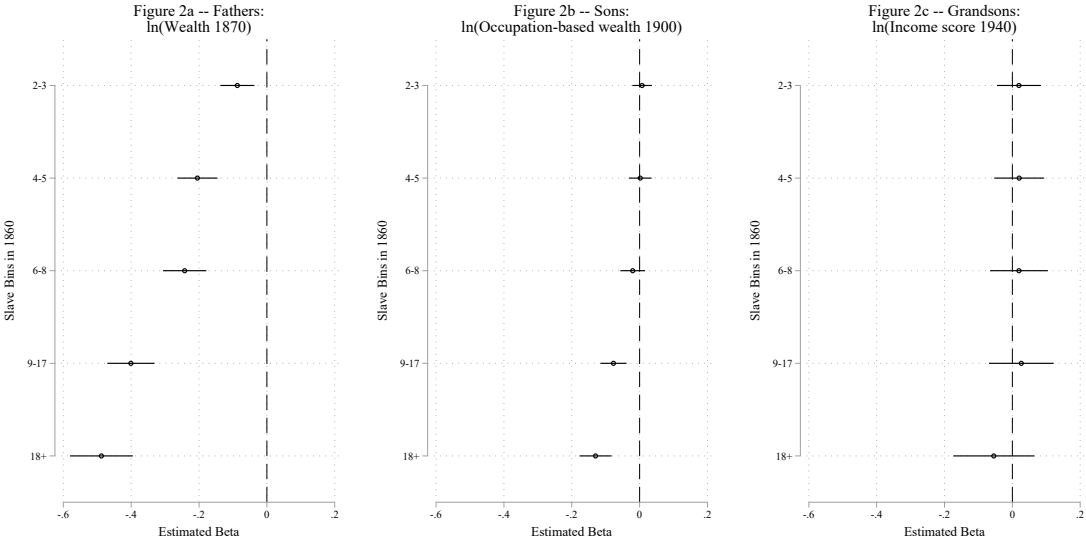
Figure 1:
The relationship of known slave property in 1850 and household wealth in 1860
ln(Wealth 1860)



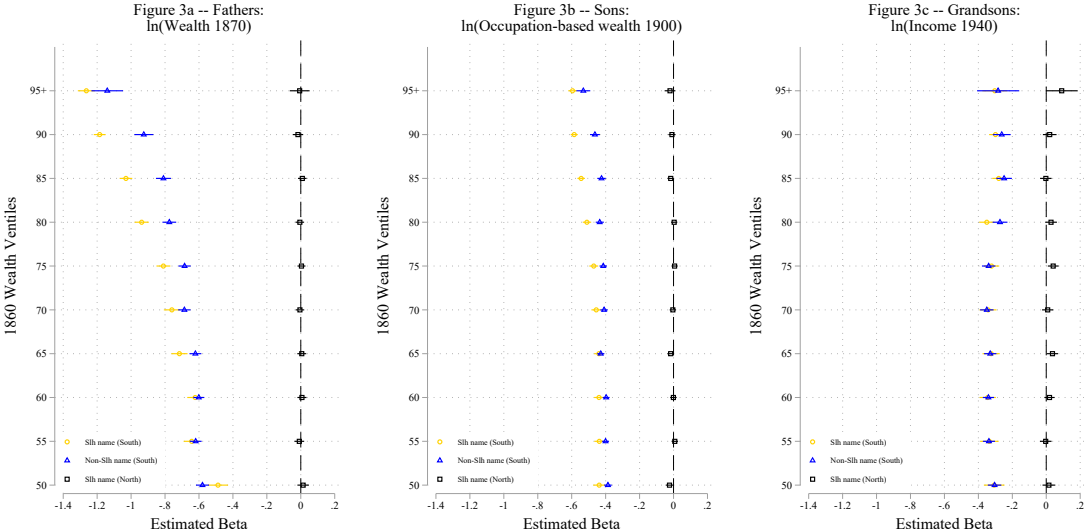
Notes: Figure 1 (N=22863) reports coefficients from equation (1). The dependent variable is ln wealth in 1860. Slaveholders with one slave are the (omitted) reference group. The specification controls for fixed effects for state of residence in 1850 and the 1850 wealth percentiles (based on real estate only), and a quadratic in age for the fathers in 1850. The displayed coefficients and their corresponding 95-percent level confidence intervals are for indicators of number of slaves owned in 1850.

Figure 2:
The relationship of known slave property in 1860 and household wealth/income over three generations



Notes: Figures 2a-c (N=21953/40581/14386) report coefficients from equation (1). The dependent variable is ln wealth in 1870 (Figure 2a); ln occupation-based wealth in 1900 (Figure 2b); and ln income score in 1940 (Figure 2c). Slaveholders with one slave are the (omitted) reference group. All specifications control for fixed effects for state of residence in 1860 and the 1860 wealth percentiles, and a quadratic in age for the fathers in 1860. We further include a quadratic in age for the sons in Figures 2b-c and for the grandsons in Figure 2c. The displayed coefficients and their corresponding 95-percent level confidence intervals are for indicators of number of slaves owned in 1860.

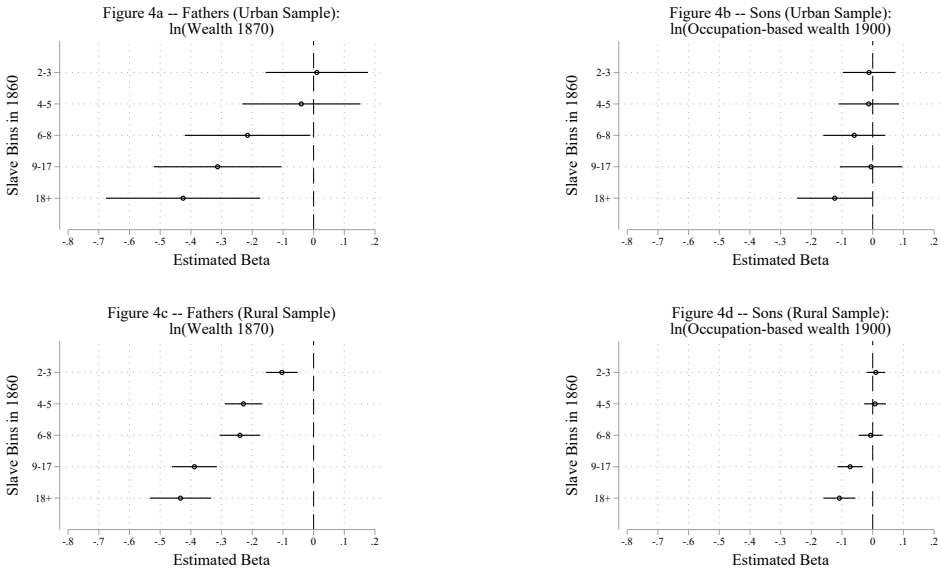
Figure 3:
North-South wealth/income gap over three generations



Notes: Figures 3a-c (N=315135/522053/148221) report the North-South wealth/income gap of affluent white households over three generations based on equation (2). The dependent variable is ln wealth in 1870 (Figure 3a); ln occupation-based wealth in 1900 (Figure 3b); and ln income score in 1940 (Figure 3c). The slaveholder surname coefficients by region show the effect of having a slaveholder surname (Northerners with a slaveholder surname) and the joint effect of living in the South in 1860 and having a slaveholder surname (Southerners with a slaveholder surname). The non-slaveholder surname coefficients display the effect of being in the South and having a non-slaveholder surname. Wealthy Northerners with a non-slaveholder surname are the (omitted) reference group. Estimates are reported with their corresponding 95-percent level confidence intervals.

Figure 4:
The relationship of known slave property in 1860 and household wealth in 1870/1900

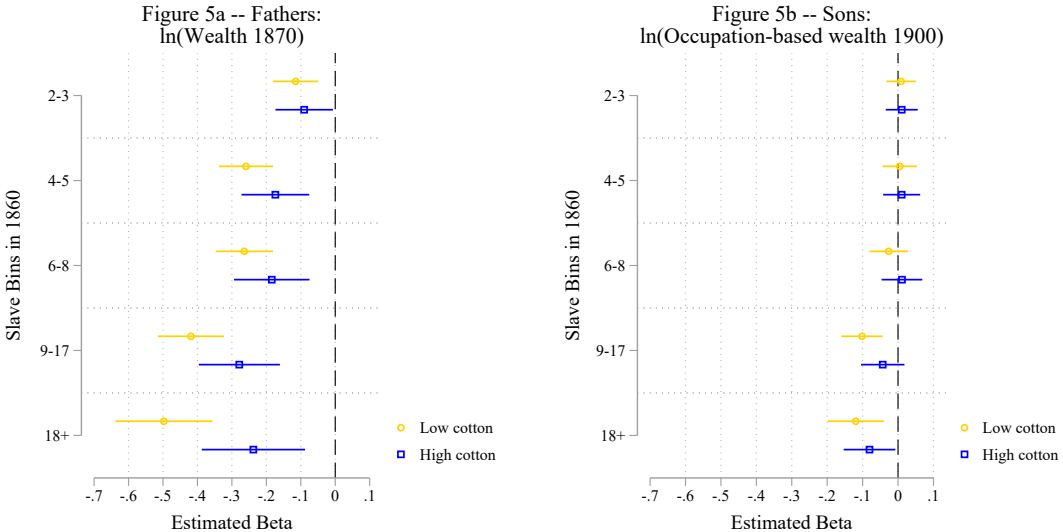
Sample split: urban/rural



Notes: Figures 4a-d (N=2774/5107/19176/35473) display the results for Figures 2a-b by rural/urban status; see notes to Figure 2 for further details. Slaveholders with one slave are the (omitted) reference group. Estimates are reported with their corresponding 95-percent level confidence intervals.

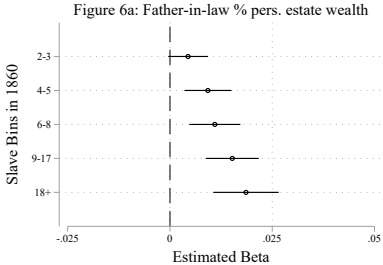
Figure 5:
The relationship of slave property and household wealth in 1870/1900

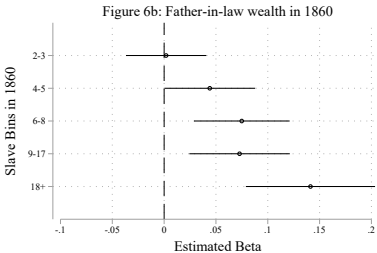
Sample split: below/above average cotton output share in 1860

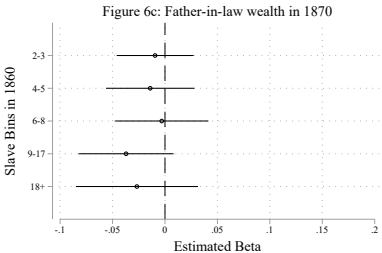


Notes: Figures 5a (N=10722/8451) and 5b (N=17613/17860) report for rural households a sample split of Figures 2a-b by below/above average cotton output share in 1860; see notes to Figure 2 for further details. Slaveholders with one slave are the (omitted) reference group. Estimates are reported with their corresponding 95-percent level confidence intervals.

Figure 6:
Likely father-in-law household wealth in 1860/1870



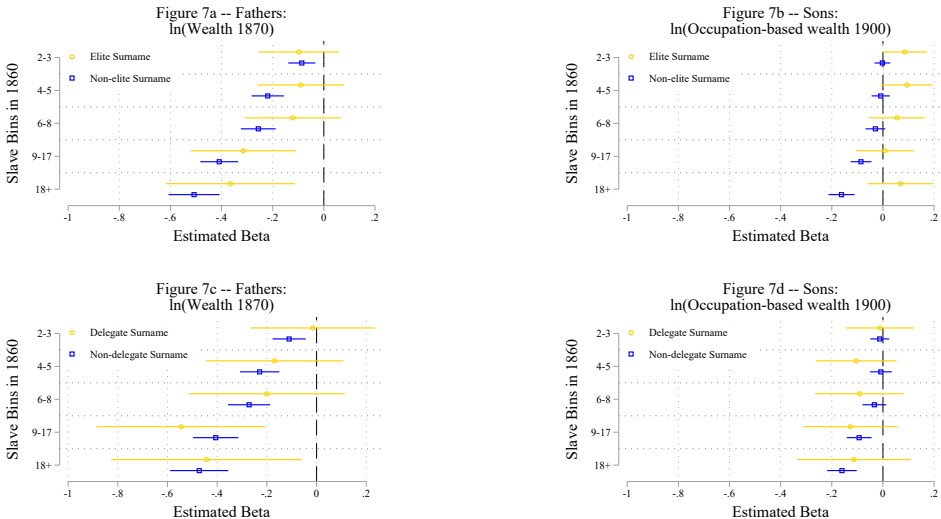




Notes: Figures 6a-c (N=32136/32279/26306) display results on the social network effects of slaveholder families. The dependent variable is likely father-in-law % personal estate, 1860 (Figure 6a); likely father-in-law wealth in 1860 (Figure 6b); and likely father-in-law wealth in 1870 (Figure 6c). Slaveholders with one slave are the (omitted) reference group. The reported coefficients are from equation (1); see notes to Figure 2 for further details. Estimates are reported with their corresponding 95-percent level confidence intervals.

Figure 7:
The relationship of known slave property in 1860 and household wealth in 1870/1900

Sample split by Elite and Delegate Surnames



Notes: Figures 7a (N=3010/18942) and 7b (N=5460/35121) report a sample split of Figures 2a-b by elite surname, whereas Figures 7c (N=1286/13379) and 7d (N=2194/26053) display a sample split by surnames of Reconstruction delegates. Slaveholders are considered to be connected to elite slaveholders (Figures 7a-b) or delegates (Figures 7c-d) if they have the same surname as elite slaveholders or delegates in the same state. The surnames are merged into the dataset via NYSIIS surname standardization. Slaveholders with one slave are the (omitted) reference group. Estimates are reported with their corresponding 95-percent level confidence intervals; see notes to Figure 2 for further details.

Table 1: Wealth distribution of white male household heads by region, 1860 and 1870

	N	p10	p25	p50	p75	p90	p99	90-50 Ratio
1860								
Northern States	3,343,347	0	3,040	20,368	76,000	182,400	836,000	8.96
Southern States	1,319,693	0	3,800	24,320	104,880	364,800	2,280,000	15.0
1870								
Northern States	4,364,020	0	1,940	19,400	69,840	169,983	814,800	8.76
Southern States	1,563,978	0	1,940	9,700	36,860	97,000	582,000	10.0

Note: This table reports wealth levels (in 2017 USD) at various percentiles of the wealth distributions for white male household heads by region and decade (1860 and 1870).
Source: Census complete count records 1860 and 1870 (IPUMS)