Wealth of two nations:
The U.S. racial wealth gap, 1860-2020[*]

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Abstract

The racial wealth gap is the largest of the economic disparities between Black and white Americans, with a white-to-Black per capita wealth ratio of 6 to 1. It is also among the most persistent. In this paper, we construct the first continuous series on white-to-Black per capita wealth ratios from 1860 to 2020, drawing on historical census data, early state tax records, and historical waves of the Survey of Consumer Finances, among other sources. Incorporating these data into a parsimonious model of wealth accumulation for each racial group, we document the role played by initial conditions, income growth, savings behavior, and capital returns in the evolution of the gap. Given vastly different starting conditions under slavery, racial wealth convergence would remain a distant scenario, even if wealth-accumulating conditions had been equal across the two groups since Emancipation. Relative to this equal-conditions benchmark, we find that observed convergence has followed an even slower path over the last 150 years, with convergence stalling after 1950. Since the 1980s, the wealth gap has widened again as capital gains have predominantly benefited white households, and convergence via income growth and savings has come to a halt.

"Thus, the efforts to provide the freedman with land and tools ended, and by 1870 he was left to shift for himself amid new and dangerous social surroundings. No such curious and reckless experiment in emancipation has been made in modern times."

- W.E.B. Du Bois (1901), *The Negro Landholder of Georgia.*

1   Introduction

In a speech to Congress in 1920, U.S. Senator Selden Spencer (R-MO) lauded the amount of wealth accumulated by Black Americans since the Civil War, stating that it "surpassed any progress under any like circumstances in the history of the world."[1] One hundred years after this sanguine assessment, however, the racial wealth gap remains the largest of the economic gaps between Black and white Americans. In 2019, Black Americans held just 17 cents on average for every white dollar of wealth. By comparison, the income gap is 50 cents to the dollar.[2] What's more, the racial wealth gap has shown remarkable stability over the last several decades, with little indication of further convergence. Although there is a large literature on the contemporary racial wealth gap, much less is known about the evolution of the wealth gap over the full post-Emancipation period.

To address this lack of information, we introduce the first continuous time series of white-to-Black per capita wealth ratios in the U.S. over the past 160 years. Our large-scale data collection and harmonization effort fills in about 100 years of missing data on the national racial wealth gap, from the 1880s to the 1980s, when most modern wealth surveys with information on race begin. We do this by building a national time series of Black wealth in the US and combining it with aggregate wealth. We extend 1860 and 1870 estimates of Black wealth by digitizing 60 years of data on Black wealth, from the 1860s through the 1920s, from southern state tax reports and estimating Black wealth growth rates from the data. We extend this time series through the 1930s using historical estimates of total Black and national wealth, verified using the census of agriculture and population and household survey data. Finally, we draw on newly compiled data from historical and modern waves of the Survey of Consumer Finances to complete our coverage from 1949 to 2019 (the SCF+, see Kuhn, Schularick, and Steins (2020)). Our new series of white-to-Black per capita wealth and wealth ratios is now publicly available.[3]

Our data show that the most dramatic episode of racial wealth convergence occurred in the first 50 years after Emancipation. This initially rapid convergence gave way to much slower declines in the wealth gap in the second half of the 20th century. From a starting point of nearly 60 to

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[1]From Senator Spencer's statement in favor of a commission on racial issues discussed during the 66th Congress (see Spencer (1920)).

[2]Authors' calculations using the Survey of Consumer Finances.

[3]The data and our full replication archive can be accessed at www.elloraderenoncourt.com/us-inequality-data. Note, we define white wealth as the difference between total wealth and Black wealth given historical data constraints. In per capita terms, non-Black wealth and white wealth are extremely close over this full historical period. For simplicity, we refer to this non-Black-to-Black wealth gap as the racial wealth gap or the gap between white and Black Americans.

1, the white-to-Black per capita wealth ratio fell to 10 to 1 by 1920, and to 7 to 1 by the 1950s. 70 years later the wealth gap remains at a similar magnitude of 6 to 1. We demonstrate that both this "hockey-stick" pattern of convergence and the large enduring gap today can be broadly rationalized by a parsimonious model of wealth accumulation for each racial group, where savings from income and capital gains are the drivers of wealth growth. Even under equal conditions for wealth accumulation after slavery, in other words, identical savings rates and capital gains rates across the two groups, our convergence model portends a racial wealth gap of 3 to 1 today. The main reason for such a large and lasting gap is the enormous difference in initial wealth between Black and white Americans on the eve of the Civil War.

Compared to this equal-conditions benchmark, wealth convergence has progressed more slowly between 1870 and the present. We use our model to quantify the average racial gaps in savings rates and capital gains rates consistent with the observed speed of convergence over this 150-year period. Slower savings-induced wealth accumulation by Black Americans can explain the convergence dynamics over most of the past 150 years. More recently, however, racial differences in capital gains rates have played a larger role in shaping the wealth gap. Should existing differences in wealth-accumulating conditions persist, racial wealth convergence will not only stop altogether, but will even reverse course.

Our data allow us to document patterns in the speed of convergence over time. We compare observed growth rates of the wealth gap to growth rates derived from our equal-conditions benchmark, in which Black and white Americans enjoy equal savings rates and capital gains rates. Although Black wealth growth outpaced that of white Americans' between 1870 and 1930, the rate of convergence in these years lags far behind what would be expected had the two groups enjoyed equal conditions for wealth accumulation. Indeed, the historical record is rife with instances of expropriation of Black wealth, exclusion of Black Americans from the political process, and legally sanctioned segregation and discrimination in land, labor, and capital markets. All of these factors likely contributed to sluggish convergence over this period.

During the 1960s through the 1980s, convergence regains speed, exceeding what would be predicted by our equal-conditions benchmark. The dismantling of Jim Crow through Black activism and civil rights legislation, expansions of the social safety net, and improved labor standards during this period may have boosted wealth-accumulating conditions for Black Americans. Although the wealth gap remained sizable in these decades, it remained on track to converge. From today's vantage point, however, these gains were short-lived. Starting in the 1980s, we document a racial gap in capital gains as well as a complete stalling of income and savings-induced convergence. These forces have caused the wealth gap to leave the convergence path altogether and to start increasing again.

We shed light on mechanisms behind the recent re-divergence of the wealth gap using the SCF+, which covers the entire post-World War II period. In line with the macroeconomic dynamics of the wealth distribution, we find that the combination of high wealth-to-income ratios and portfolio

differences between Black and white Americans has played a key role in the dynamics of the racial wealth gap since the 1980s (Kuhn, Schularick, and Steins, 2020). For example, Black households hold nearly two thirds of their wealth in housing and very little in equity. While housing wealth has appreciated since 1950, stock equity has appreciated by five times as much. These large price increases in equity markets have led to disproportionate capital gains for the wealthiest Americans, a group that is almost exclusively white. Gains for wealthy white households have caused average white wealth to rise relative to average Black wealth, linking the evolution of the racial wealth gap to the overall rise in wealth inequality in the U.S.

Our long-run view of the racial wealth gap underscores the importance of slavery and post-slavery institutions for the persistence of the wealth gap. Until the 1860s, the vast majority of Black Americans were enslaved – contributing to building the nation's wealth while being legally barred from accumulating wealth themselves. As a result, at the time of Emancipation, Black Americans embarked on freedom with extremely low levels of wealth compared to white Americans. Furthermore, post-slavery wealth accumulation by Black Americans occurred under highly unequal circumstances. Growth in Black wealth lagged behind the benchmark in which Black and white Americans faced equal opportunities for wealth accumulation, consistent with nearly 100 years of explicit capital and labor market exclusion after slavery. Our data and simulation exercises show that erasing these traces of initial gaps and more than 100 years of differences in wealth-accumulating conditions would take more than 100 years in the future. Since the 1980s, meanwhile, higher capital gains and savings for white households and high wealth-to-income ratios for both groups have instead led the wealth gap to widen again.

Our findings contribute to a robust discussion of what policies can close the racial wealth gap. Several studies have emphasized the importance of racial income convergence, housing policies, or financial inclusion in closing the racial wealth gap (Aliprantis, Carroll, and Young, 2021; Gupta, Hansman, and Mabille, 2021; Kermani and Wong, 2021; Boerma and Karabarbounis, 2021).[4] Others discuss the role of financial regulation, assistance to families with children, and reparations for slavery in mitigating racial wealth inequality (Palladino, 2022; Nam, Famighetti, and Hamilton, 2021; Darity Jr. and Mullen, 2020; Zewde, 2020). Our study emphasizes the outsized role played by initial conditions under slavery in determining the speed of convergence between Black and white wealth. In light of these findings, we conclude that policies that redistribute large stocks of wealth, like reparations, lead to immediate reductions in racial wealth inequality while policies targeting portfolio composition can return us to a convergence path, but one that could take hundreds of years to play out. Nevertheless, we argue these approaches are complementary, as policies that redistribute stocks of wealth without addressing racial gaps in savings and capital gains have but a transient effect on the wealth gap.

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[4]Boerma and Karabarbounis (2021) conclude that entrepreneurship subsidies are more effective than reparations because of pessimistic beliefs caused by historical discrimination in the financial sector. Kermani and Wong (2021) document substantial racial disparities in housing returns arising from distressed home sales, such as foreclosures, which particular forms of loan modification and mortgage restructuring could mitigate.

Previous literature: Our paper contributes to two strands of the existing literature on the racial wealth gap in the U.S. Our long-run national series complements work on racial wealth disparities in the South in the immediate post-Emancipation decades that relied mainly on state-level tax records (e.g., Margo (1984)). We summarize this literature in detail in Section 2. A much larger literature focuses on the modern racial wealth gap from the 1980s onwards.[5] This work has documented the role of marriage and family structure, income and demographics, differences in permanent income, inheritance, life-cycle effects, and the role of the Great Recession in shaping the gap in recent decades. Our long-run perspective contributes to this body of work by placing today's stagnant racial wealth gap in context: stalled convergence follows from initial conditions in the wealth gap and long-standing racial differences in the drivers of wealth accumulation.

We also contribute to the growing literature on the long-run dynamics of wealth inequality by bringing to light starkly different trajectories of wealth accumulation across racial groups within a country. Dray, Landais, and Stantcheva (2023) draw on similar tax records to construct estimates of national, state, and county-level wealth in the US from the 1800s to the 1930s, documenting substantial regional persistence in wealth after the Civil War. Several studies have documented patterns in overall wealth inequality in various countries from the 18th to 21st centuries (Piketty, 2013; Piketty and Zucman, 2014; Saez and Zucman, 2016; Kuhn, Schularick, and Steins, 2020; Assouad, 2021; Garbinti, Goupille-Lebret, and Piketty, 2021; Smith et al., 2019; Saez and Zucman, 2020; Alvaredo, Atkinson, and Morelli, 2018; Artola Blanco, Bauluz, and Martınez-Toledano, 2021; Waldenström, 2017; Waldenström, 2016; Bartels and Morelli, 2021; Madsen, 2019). We adapt the accounting framework of wealth accumulation prevalent in this literature to racial groups in the U.S. who have faced vastly different historical institutions that have cast a long shadow on their respective wealth trajectories. We believe this framework can be applied to many post-slavery or post-colonial societies where certain groups faced severe limitations on their ability to accumulate wealth, thus shaping wealth trajectories for centuries to come.

The rest of our paper is structured as follows. We provide historical background on the racial wealth gap in Section 2. Section 3 describes the construction of our long-run series on per capita white-to-Black wealth ratios and presents the final series. In Section 4, we introduce a framework for wealth accumulation by racial group and use this to interpret trends in the wealth gap since Emancipation, focusing particularly on the role of savings-induced versus capital-gains-induced wealth accumulation. Section 5 then concludes. An appendix with additional details on data construction, supplemental results, and extensive sensitivity analyses follows.

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[5]An incomplete list of such works includes Meschede et al. (2016), Pfeffer and Killewald (2019), Altonji, Doraszelski, and Segal (2000), Altonji and Doraszelski (2005), Barsky et al. (2002), Blau and Graham (1990), Charles and Hurst (2002), Chiteji and Stafford (1999), Gittleman and Wolff (2004), and Wolff (2001).

2 Historical background on the racial wealth gap

On the eve of the U.S. Civil War, nearly 4 million out of a total population of 4.4 million Black Americans were enslaved. Relegated to the status of property themselves, the enslaved had no legal right to acquire or hold property or to earn or save from the fruits of their labor. What wealth that can be attributed to the Black population at the time was concentrated in the hands of a small number of free Black Americans. These property holders were distributed between a planter class in the Lower South, craftsmen and entrepreneurs in the Upper South, and merchants and real estate owners in the North (Schweninger, 1989; 1990; Walker 1983; Berlin 1975). The Civil War induced a shift in the composition of southern Black wealth holders away from planters and towards an emergent class of emancipated farmers, skilled artisans, and small business owners (Gatewood, 1988; Du Bois, 1899, 1901).

Studies of Black wealth accumulation and racial wealth gaps in the decades after Emancipation paint a picture of remarkable progress by Black Americans against a backdrop of equally remarkable hostility (Work, 1912; Martin, 1913; Du Bois, 1901). After the repeated failure of Reconstruction-era proposals for land provision to freed persons, the vast majority of the formerly enslaved embarked on freedom "landless, homeless... without money or tools" and in circumstances where "starvation or practical reenslavement awaited them" (Du Bois, 1901). Drawing on taxation reports from Georgia, the state with the largest Black population at the time, Du Bois (1901) notes that, nevertheless, the majority of counties in the state witnessed increases in Black property holding. Margo (1984) uses similar data from Louisiana, North Carolina, Virginia, and Kentucky and likewise finds sustained increases in Black wealth in all five states.[6] The higher growth rate in Black wealth compared to white led to declines in the per capita racial wealth gap in these areas (Higgs, 1982; Margo, 1984). A study by Canaday (2008) matches individual property holders from tax lists for Calhoun County, South Carolina to complete-count census data and finds that both Black men and women experience faster wealth accumulation than white individuals between 1910 and 1919. This convergence occurred not only in the absence of federal redistributive policy but in the context of a proliferation of Jim Crow laws throughout the South.

Several scholars have modeled and empirically tested the role of Civil-War-era policy choices and discrimination in the dynamics of racial wealth inequality in this period and beyond. Miller (2020) studies the impact of land grants to Black families in the Cherokee Nation after Emancipation and finds subsequent reductions in the racial wealth gap in the Nation relative to the rest of the South. Using property tax data from Virginia, Spriggs (1984) examines the pace of Black wealth accumulation in that state, noting that discrimination in land and labor markets inhibited racial wealth convergence in the decades after the Civil War.[7] DeCanio (1979) uses a theoretical model

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[6]Margo (1984) argues that part of this growth may be due to discriminatory over-assessment of Black-owned property for tax purposes – a pattern that has been documented in tax assessment today (Avenancio-León and Howard, 2019).

[7]Collins, Holtkamp, and Wanamaker (2022) and Collins and Wanamaker (Forthcoming) also document substantial racial gaps in intergenerational transmission of wealth and land-ownership after Emancipation.

to show that the redistribution of "40 acres and a mule" to Black families would have substantially improved their relative position, but in the best-case scenario would have only allowed Black families to eventually achieve half of per capita white wealth.

Evidence on racial wealth dynamics beyond the early 20th century tends to come from studies of housing or real estate wealth, given the lack of data on other property by demographic group during this time period. Akbar et al. (2019) document how neighborhood racial transition in ten northern cities during the first Great Migration led to changes in rental and house prices that eroded the value of Black homes and thus posed a barrier to Black wealth accumulation in the early to mid-20th century. Collins and Margo (2011) trace the evolution of the national racial homeownership gap from 1870 to 2007. However, this measure of housing inequality does not incorporate the self-reported value of homes, available starting in 1930.[8] Francis et al. (2022) estimate Black land loss from 1920 to 2017 by combining information on declines in acreage owned by Black farmers with compounded land values over time. The loss they estimate is significant, equal to about $326 billion in today's dollars.

Additional evidence on mid-20th century racial wealth gaps can be found in Kuhn, Schularick, and Steins (2020). The authors harmonize the historical and modern files of the Survey of Consumer Finances (SCF), creating a new dataset of household level wealth and income information for the U.S. from 1949 to 2019. Although primarily focused on the role of asset prices and portfolio composition in wealth dynamics in the postwar period, the authors also provide a brief analysis of the racial wealth gap confirming stability and persistence of this gap over the postwar period.

This body of prior work provides important insights into racial wealth inequality for time periods not covered in modern survey data. Yet data constraints for the historical period limit coverage to specific states, regions, or counties; specific time periods; or specific types of property. What has been lacking is a unified picture of white-to-Black wealth gaps in the nation as a whole, from the pre-Civil-War era to the present. The value of this long-run, national perspective is that it places existing snapshots of the racial wealth gap in context. The picture that emerges from the new long-run series we build in this paper is a highly regular trajectory of wealth convergence that can be rationalized by a standard wealth accumulation model. In the next section, we describe our data sources and the construction of our series in detail.

3 Construction of the long-run racial wealth gap series and results

We build our long-run series of white-to-Black per capita wealth ratios by drawing on numerous sources. For the period from 1860 to 1930, we use a combination of complete-count census data, state property tax data, and national wealth reports and estimates. For the 1930s, we rely on estimates for aggregate Black wealth from Monroe Nathan Work's *Negro Year Book*, in combination with estimates of national wealth for these years. We supplement these estimates with others based

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[8]We extend Collins and Margo (2011) and provide a time series of the housing wealth gap in Appendix H.

on the censuses of population and agriculture and survey data from the 1930s. For 1950 onwards, we rely on historical and modern waves of the SCF (SCF+). Table A.1 provides a period-by-racial-group breakdown of the sources underlying our baseline series. A full description of these data sources is in Appendix A and additional details of the construction are in Appendix B.

3.1 Construction of the data series

Based on the available data, we construct racial wealth gap estimates decadally from 1860 to 1900, for the years 1904, 1912, 1922, 1926, 1930, and 1936; and every four years on average from 1950 to 2020. Below we describe how we construct wealth gap estimates for the different time periods and then discuss the results from the final data series.

3.1.1 1860 and 1870: the full count census and national wealth reports

Our series begins in 1860 as the 1850 census only recorded real property.[9] For 1860, we calculate wealth as the sum of real and personal property values reported by individuals in the census.[10] To compute per capita wealth for the Black population, we include the enslaved and assume zero wealth for this group.[11] For the count of the enslaved in 1860 we aggregate county-level statistics from Haines (2010) and confirm that these match the number for the enslaved from the U.S. Census's Black population report covering 1790 to 1915 (Cummings and Hill, 1918): a total of 3,953,760 enslaved Black individuals (89% of the total Black population). We also assign zero wealth to all observations missing wealth data. For top-coded observations, we impute wealth using the distribution of wealth at the top in 1913 from Saez and Zucman (2016), the earliest year for which such an estimate is available. Details on the imputation are provided in Appendix B.1. Using these data, we compute per capita wealth for the non-Black and Black populations and take the ratio as our estimate for the racial wealth gap in 1860.

We proceed similarly for our estimates of wealth in 1870, but there are two differences worth noting. First, the formerly enslaved were enumerated in the population census for the first time, so we are able to measure per capita Black wealth directly using census data.[12] Second, enumerators

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[9]We estimate that personal property made up 58% of total wealth in 1860. Assuming that the ratio of real to total property was the same in 1850, we compute a racial wealth gap in 1850 that is extremely similar to the gap in 1860 (56.51 in 1850 compared to 56.19 in 1860).

[10]The 1850, 1860, and 1870 censuses are the only censuses that recorded wealth of the population. In 1850, enumerators collected information on real estate wealth only. In 1860 and 1870, questions on personal property were added to the census. According to census enumerator questionnaire instructions in 1860, personal property valuations were to include "the value of bonds, mortgages, notes, slaves, live stock, plate, jewels, or furniture; in fine, the value of whatever constitutes the personal wealth of individuals." See https://usa.ipums.org/usa-action/variables/PERSPROP. The 1870 instructions regarding personal property were similar, but as this census was taken after abolition of slavery, they no longer referenced slave wealth.

[11]This is a conservative assumption in that we do not take into account the debt implied by a lifetime in bondage.

[12]Economic historians have pointed out that the 1870 census appears to have suffered from a severe undercount of the Black population. According to Sutch (2017), 'Because many of those excluded were young children and the very poorest of adults the likelihood of a serious bias is reduced. If anything, the rich with their substantial dwelling units and their social prominence are likely to have been relatively well counted.' Ransom and Sutch (1975) estimate

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were instructed to record personal property values for those with at least $100 in personal property. Thus, in addition to top-coding, the 1870 Census also exhibits censoring from below. We check the significance of this bottom-censoring for our estimates by imputing average personal property below the $100 threshold for 1870 (see Appendix B.2 for details). The effects of the imputation are very minor as we estimate that most households below the threshold indeed had no wealth at all. To address top-coding, we apply the same approach we use for 1860. To calculate non-Black wealth, we turn to the census report "Wealth, Public Debt, and Taxation" (hereafter "census wealth report"), which was published in 1922 and contains estimates of total taxable national wealth from 1860 to 1922. We subtract Black wealth from these measures to obtain total non-Black wealth.[13] Dividing Black and non-Black wealth by the populations for each and taking the ratio, we arrive at our racial wealth gap estimate for 1870.

3.1.2   1880-1926: state tax data and national wealth estimates

Between 1870 and 1950, microdata on wealth are not readily available. For the period from 1870 to 1929, we extrapolate aggregate Black wealth in 1870 using growth rates estimated from state-level data on assessed property and tax payments. An intricate system of real and personal property taxation existed in every US state in the 19th and early 20th centuries. State auditor, treasurer, or comptroller offices regularly published reports on the finances of their state, including assessed property, taxes, and revenue collected. These data on assessed property can be used to construct wealth estimates for the relevant populations (Dray, Landais, and Stantcheva, 2023). We digitized reports on assessed property and taxation for the states of Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia, as these were the only states that tabulated property or taxes separately by racial group (hereafter "tax data states").[14]

We also digitized assessment ratios for these states – the ratio of the assessed to market value of wealth from the census wealth report – and corroborated our digitization with data kindly shared by Dray, Landais, and Stantcheva (2023). It is important to collect information on assessment ratios as changes in assessed wealth over time may reflect changes in assessment ratios rather than true wealth dynamics. A further consideration is the likely over-assessment of Black taxpayers during this period (see Margo, 1984). Estimates of the latter are sparse, but we use what information is available to evaluate how changes in over-assessment might affect our estimates of Black wealth growth.

Our first step is to estimate the growth rate of aggregate Black wealth in the six tax data states by regressing log wealth on a time trend and state fixed effects. Appendix B.3 provides our

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that the undercount of the Black population was as much as 6.6%. Thus, assuming uncounted Black individuals had zero wealth, we estimate an upper bound for the wealth gap in 1870 of 24.5 (23×1.066).

[13]We calculate total wealth in 1870 using the wealth report instead of the census because total wealth in the report exceeds aggregate wealth in the census. Nevertheless, if we estimate white wealth using census instead, the resulting racial gap is only slightly lower than when using the wealth report – 21 to 1 as opposed to 23 to 1.

[14]Reports from southern states with wealth breakdowns by racial group were used in Du Bois (1901), Higgs (1982), and Margo (1984), discussed in Section 2.

regression equation and a comparison of raw and predicted wealth in Appendix Figure B.1. The prediction and raw data align closely, supporting a linear prediction of log wealth over this time period. Our estimated coefficient on the time trend, 0.0534, serves as our measure of the growth rate of Black wealth after 1870. We use this measure to extrapolate aggregate Black wealth levels between 1870 and 1929. We stop in 1929 because we expect wealth dynamics during the Great Depression to look very different, both relative to before the Depression and in the states with data during this time period versus the rest of the US.[15]

We construct non-Black wealth as before, as the difference between national wealth and the wealth of the Black population. Our national wealth estimates come from the census wealth report and Saez and Zucman (2016). Estimates of total taxable US wealth are available from the census wealth report for 1880, 1890, 1900, 1904, 1912, and 1922. Our 1926 estimate of the wealth gap combines our estimate of Black wealth for the year 1926 with data on national private wealth from Saez and Zucman (2016) averaged over the 1923 to 1929 period. Results are not sensitive to the particular year chosen for the late 1920s period. Per capita wealth by group is constructed by dividing each group's total wealth by their estimated population from census (linearly interpolated for the intercensal years). Using these estimates for per capita wealth, we calculate the racial wealth gap as before.

Our extrapolation of Black wealth using this approach relies on two key assumptions, each of which we consider in turn. First, we must assume that the growth rate of Black wealth in the six tax data states can be taken as a proxy for the national growth rate of Black wealth. Second, we must take a stance on how changes in assessment ratios and potential dynamics in Black over-assessment affect our estimated growth rate for Black wealth. We address these questions in detail in Appendix B.3, but we briefly summarize the main takeaways below.

Representativeness of southern states for Black national wealth growth   It is first important to note that southern states were home to the vast majority of the U.S. Black population until the early 20th century. As of 1900, 41% of the Black population lived in the tax data states. Although this share declined as a result of northward migration during and after World War I, what is relevant for the representativeness of the growth rate we estimate is how much the share of aggregate Black wealth located in these six states changed over this period. If by the late 1920s, the share of aggregate Black wealth located in these states fell substantially from what it was in 1870, that would imply faster growth rates in the remaining states.[16]

Thus, as a first check, we examine how much the share of aggregate Black wealth located in the tax data states changed between 1870 and 1950, when we can measure aggregate Black wealth by region in the census and the SCF+, respectively. In 1870, the share of Black wealth located in

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[15]After 1925, only data from Georgia and North Carolina are available.

[16]Appendix B.3.2 provides a formal decomposition of the national Black wealth growth rate into the wealth-share-weighted average of growth rates in southern states versus the rest of the U.S. Stability in wealth shares implies that the southern growth rate and non-southern growth rates are equal to each other and to the national growth rate.

the tax data states was 25%. By 1950, the share was virtually the same, at 24%. Focusing on real property only, we can assess how much the share changed by 1930 and 1940, using real property measures in the 1870 census and home values from the census in the latter years.[17] We find that the share of Black real wealth in the tax data states also remained very stable: falling from 25% to 20% in 1930, possibly due to regionally heterogeneous effects of the Depression, but rising back to 26% in 1940 (see Appendix Figure B.3a). Assuming the total wealth share of the tax states declined similarly and that this decline occurred entirely between 1870 and the late 1920s rather than during the Depression, we would understate national wealth growth by just 0.23 basis points annually, a growth rate of 0.0536 compared to our baseline of 0.0534. All of the above bolsters our confidence in using wealth growth rates in these six states to measure Black growth rates in the nation overall.

As a second check, however, we provide an alternative growth rate estimate based on the evolution of Black church property values over roughly the same period. Because Black churches were formed by Black congregations buying buildings or plots of land and fundraising within the community for building improvements and other purchases, the value of the church's property reflected the prosperity of the local community. Additionally, Black churches were present wherever there was a sizable Black community, including in northern states and states not covered by our tax data. We measure Black church property values using data from the census of religious bodies. The time trend in church wealth over this period is 0.0549, very close to the growth rates we estimate using the tax data. Details, including additional historical background on Black churches and our estimation approach, are provided in Appendix Section B.3.3.

Finally, when we present robustness checks on our estimate of the wealth gap for this period, we also report confidence intervals in the wealth gap that reflect the uncertainty from our Black wealth growth rate estimate. In other words, we use the standard errors on our estimated growth rate to compute upper and lower bounds for the wealth gap during these years. We discuss the results from these and other checks in Section 3.3.

Assessment ratios and Black over-assessment   The ratio between assessed to the market value of wealth over this time period was typically well below 1 (Dray, Landais, and Stantcheva, 2023). Additionally, there are documented differences in the assessment rates of Black taxpayers compared to white, both in the historical and contemporaneous period (Higgs, 1982; Margo, 1984; Avenancio-León and Howard, 2019). These issues alone do not give rise to bias in our estimated growth rates. What affects the growth rate estimate is any dynamics in assessment ratios and Black over-assessment.

Using the data we digitized from census wealth reports on assessment ratios for our sample of southern states, we estimate the overall change in assessment ratios using an identical equation to the one used to estimate Black wealth growth rates. We regress log assessment ratios on state fixed effects and a time trend. We estimate a 3 basis point decline in assessment ratios over the 1870-

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[17]In 1930, the census started collecting information on home values of owner-occupied homes. We use this as our proxy for real property in 1930 and 1940.

1929 time period, which matches national trends in assessment ratios for this period. Revising our growth rate estimates to account for this decline would result in a growth rate of 0.0564 as opposed to 0.0534. However, this assumes that assessment ratios fell equally for white and Black taxpayers. Historical evidence suggests that Black taxpayers faced higher assessment ratios compared to white taxpayers. Part of this could be simply driven by the differential geographic distribution of Black taxpayers and their tendency to live in counties with higher assessment ratios, such as the Black belt and more urban counties (Margo, 1984). Given that Jim Crow regimes of political and economic suppression of Black southerners tightened over this period, there's reason to believe that Black taxpayers did not see the benefit of falling assessment ratios during this time period or even saw their assessment ratios increase relative to white taxpayers.

In Section 3.3, we compute alternative estimates of the wealth gap that take changes in assessment ratios and Black over-assessment into account. As these two forces work in opposite directions in terms of the bias they generate, our alternative estimates typically fall within the confidence intervals of our baseline estimate. Only by imposing extreme assumptions (no decline in assessment with large increases in Black over-assessment or declines in assessment but no increase in Black over-assessment) give us wealth growth estimates at the upper and lower bound of our original confidence intervals.

For these reasons, and given the difficulty in calculating race-specific assessment ratios over time, we take the middle approach for our baseline estimate and assume that the small decline in assessment ratios was offset by slightly worsening Black over-assessment over this period, or equivalently, that Black taxpayers did not enjoy the gains from falling assessment ratios. We nevertheless provide a range of alternative estimates that combine different assumptions about Black over-assessment (high, medium, versus low growth) and assessment ratios (fully applying the decline to Black taxpayers, partially applying the decline, or having the decline more than offset by rising Black over-assessment). We corroborate our baseline estimate using data from an early 20th-century publication that reported Black and white per capita wealth levels in 1900 (Martin, 1913). These alternative estimates are discussed in Section 3.3.

3.1.3 1930 and 1936: The *Negro Year Book* and national wealth estimates

For the years between 1930 and 1940, we build our baseline estimate using measures of aggregate Black wealth from Monroe Nathan Work's *The Negro Year Book*, a series of annual reports on Black economic progress covering topics such as business, education, wealth, politics, and social organizations. Estimates of Black wealth are available for 1930 and 1936 from these reports. Earlier reports include national wealth estimates from 1863 to the 1920s. Although the methodology used to generate these estimates is not explicitly described in these reports, we were able to reconstruct Work's estimates from raw sources. Our reconstruction suggests that while Work's early estimates understated Black wealth, his picture of contemporaneous dynamics lines up well with other available data for the time period. We discuss Work's data, our reconstruction, and our adjustment of

the data in detail in Appendix B.5 and briefly summarize here.

In every section reporting national wealth estimates, Work referenced Black real and personal property valuations from Georgia, North Carolina, and Virginia auditor reports. Using our raw data from these reports as well as population statistics from census, we are able to closely reconstruct Work's estimates of national Black wealth levels.

Work's initial estimates of Black wealth in 1870 are lower compared to the census, and we believe this is because Work started with Georgia's wealth levels and scaled by Georgia's share of the Black population rather than Georgia's share of Black wealth. Applying a combination of population share adjustments and Black wealth growth rates for Georgia, North Carolina, and Virginia to Work's initial levels of national wealth results in a series that almost exactly matches that of Work's (see Appendix Figure B.6). We conclude that Work's information on Black wealth levels was more accurate for the 1930s than for 1870 and that his estimation of the dynamics during the Depression might be particularly insightful given his position as a contemporaneous researcher.

We thus use the time series variation implied by Work's 1930s estimates to compute Black wealth during the Great Depression. Our approach is to make a level adjustment to the estimates from Work using our preferred estimates from the late 1920s (see Section 3.1.2) and the 1950s from SCF+ (see 3.1.4). We combine these adjusted estimates with national wealth estimates from Saez and Zucman (2016) used to construct the level of wealth of the white population. As before, we subtract Black wealth from total wealth and divide non-Black and Black wealth by the populations for each respective group to arrive at per capita wealth estimates. We then adjust the level of these estimates using our wealth gap estimates in the 1920s and in the 1950s from the SCF+. Details are provided in Appendix B.5.

Given the greater degree of uncertainty surrounding these Depression-era estimates of the wealth gap, we supplement with two other approaches that use completely different data and estimation methods. First, we calculate Black and non-Black housing and farm wealth in 1930 and 1940 from the censuses of population and agriculture, the latter of which reported farm ownership and value statistics separately by race between 1900 and 1940. We construct the white-to-Black ratio in farm and housing wealth using this approach. Second, we use the 1936 Study of Consumer Purchases conducted by the Bureau of Labor Statistics. The survey provides individual-level data on business and non-dwelling rental income as well as farm and home values. We use the capitalization approach of Saez and Zucman (2016) to derive wealth stock estimates from the various income flows and add this to farm and housing wealth. All three approaches yield highly consistent estimates of the wealth gap during the Great Depression.

3.1.4   1950-2020: SCF+

For the period starting in 1950, we rely on data from the SCF+, which contains measures of assets – including liquid assets, housing and other real estate, bonds, stocks, and corporate and non-corporate equity – and liabilities. We focus on marketable net wealth as our measure of wealth and

investigate the role of debt in Section 3.3. To increase precision, we calculate three-wave moving averages of Black and non-Black household average wealth and household sizes over time. We compute the time series of average per capita wealth by dividing these smoothed average household wealth estimates by the number of household members. Based on these per capita estimates of wealth for the Black and non-Black populations, we construct the racial wealth gap from 1950 to the present.

3.2 The evolution of the racial wealth gap from 1860-2020

Figure 1 presents our final time series of the white-to-Black per capita wealth gap starting from 1860 to 2020. Overall, we observe a hockey-stick shape of convergence, where the pace of convergence was fast in the early decades after Emancipation, then slowed down considerably afterwards. In 1860, before Emancipation, the white-to-Black per capita wealth ratio was 56:1, corresponding to the average Black American owning less than 2 cents for every white dollar of wealth. This large wealth gap can be explained by the fact that 89% of the Black population was enslaved in 1860 and thus legally barred from any form of wealth holding. We then observe a steep drop in the racial wealth gap between 1860 and 1870, the first post-Emancipation census, with the gap falling to a level of 23:1, or a more than a 50% decrease relative to 1860.

The Civil War eliminated what wealth slaveholders held in enslaved individuals through the abolition of slavery. It also resulted in the depreciation of southern land values and afforded the formerly enslaved an opportunity to accumulate wealth for the first time. How much of the decrease in the wealth gap in the decade of the Civil War can be attributed solely to the elimination of slave wealth versus these other factors? Using an estimate of total slave wealth from the Historical Statistics of the United States (Sutch, 1988), we calculate that slave wealth made up around 15% of total wealth in 1860.[18] If we subtract slave wealth from white wealth in 1860, the wealth gap falls from 56:1 to 47:1. Thus, all else equal, eliminating slave wealth would reduce the gap by 9, or 27% of the total drop of 33 (from 56 to 23). In other words, the elimination of slave wealth alone cannot account for the entire reduction in the wealth gap from 1860 to 1870. In addition, land prices dropped dramatically in the South with the abolition of slavery and the destruction from the war (Ager, Boustan, and Eriksson, 2021). At the same time, and at least in part facilitated by low land prices, newly emancipated Black southerners began to rapidly accumulate property. The resulting higher relative growth rate of Black wealth during this period drove wealth convergence.[19]

Greater relative growth in Black wealth continues in the late 19th and early 20th century, but at a slower pace. In the 50 years after 1870, the gap fell by 50% again, to 11 to 1 in 1922. This continued convergence occurred in a period that saw initial enforcement of the Black Americans'

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[18]Data on slave wealth are available at: https://hsus.cambridge.org/HSUSWeb/toc/showTable.do?id=Bb209-218.

[19]According to census, Black per capita wealth tripled between 1860 and 1870, from approximately $13 per person to $39 per person, while white wealth increased by just 7%. Thus, Black wealth grew 3.0 times faster than white wealth over this decade.

rights during Reconstruction give way to a retrenchment of the racial order by the end of the 19th century. The Union Army withdrew from the South in 1877, and the former slave-holding elite recovered their positions at the helm of southern politics and society. Starting in the 1890s, former Confederate states passed numerous Jim Crow laws greatly curtailing the newly won social, political, and economic rights of Black Americans, and the early 1920s saw a revival of the Ku Klux Klan. Yet even as the Jim Crow regime reached a crescendo, the racial wealth gap continued to fall, declining a further 10% to 9 to 1 by 1930.[20]

During the decade of the Great Depression, we estimate a relatively stable gap of about 9 to 1 despite the fact that New Deal era relief and social insurance policy tended to exclude regions or sectors with a large representation of Black workers (Katznelson, 2005). The 1940s through the 1970s saw dramatic changes in the landscape of racial progress and discrimination, as well as an acceleration of Black migration from the South to the North during the Great Migration. Yet such changes, notable for their influence on racial income gaps, appear to have had little impact on racial wealth convergence from a long-run point of view. Indeed, the last 70 years are instead characterized by stagnation in the gap, at a level between 5 and 7, and, in the most recent decades, the wealth gap has actually widened rather than continue to close.[21]

3.3   Robustness of long-run wealth gap series and sensitivity checks

The extremely regular shape of convergence that emerges from the data begs the question of what could be the drivers of racial wealth differences in the post-Emancipation era. Before answering this question, we describe a range of sensitivity checks we perform on our new long-run series. Our conclusion from these checks is that our baseline estimates are consistent with the alternative data that can be used to validate the level and trend of the racial wealth gap over the last 150 years. We also demonstrate the robustness of our findings to different estimation approaches, wherever applicable.

Alternative estimates for the historical period (1870-1940)   We provide a range of estimates of the wealth gap from 1870 to 1940 to assess the plausibility of our baseline estimates for this period. Figure 2 presents the full range of our alternative estimates.

First, we present in dashed lines the confidence intervals for our baseline wealth gap estimates for 1880 to 1926, which rely on our extrapolation of 1870 Black wealth using growth rates from the southern state tax data. We also show a range of estimates based on alternative growth rates

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[20]For a history of the Reconstruction and post-Reconstruction periods, see, e.g., Du Bois (1935), Woodward (1957), Kousser (1974), and Foner (1988).

[21]While our paper provides the first long-run analysis of the white-to Black wealth gap, a large literature examines the long-run patterns in other dimensions of racial inequality, such as income, life expectancy, and education. According to Margo (2016), the income gap experienced its fastest convergence during World War II and the civil rights era, rather than after Emancipation. By contrast, the racial literacy gap and the health gap experienced the fastest convergence in the aftermath of Emancipation, thus exhibiting dynamics similar to those of the wealth gap (Costa, 2015; Margo, 2016). Like the wealth gap, many of these gaps have stagnated in recent decades.

that take into account declining assessment ratios as well as increases in Black over-assessment. For the most part, these alternative assumptions on Black over-assessment and their interaction with slightly declining assessment ratios produce wealth gap estimates within our confidence intervals. Though estimates of the wealth gap during this period are difficult to come by in existing literature, Martin (1913) studied the wealth gap in Kansas City, MO in 1911. He provided context for the wealth gap in Kansas City by citing information on Black and white per capita wealth nationally, from which it is possible to construct an estimate of the nation-wide racial wealth gap at this time. Martin (1913) reports an estimate for Black per capita wealth in 1900 of \$\$90 (originally from Thomas (1901)) and a white per capita estimate of \$\$1,000, in nominal terms.[22] This yields a wealth gap of 11.1 to 1 for 1900, extremely similar to our baseline estimate of 11.4.

We also provide an alternative measure of the wealth gap in 1930, 1936, and 1940, the period for which we draw on estimates from Monroe Work's *The Negro Year Book* in our baseline series. For 1930 and 1940, we produce an alternative estimate of the wealth gap by combining data on housing wealth from the census of population and farm wealth from the census of agriculture. The wealth gap we obtain from combining farm and housing wealth is close to that of our benchmark series: for example, in 1930, we estimate a gap of 8.8 if including farm and housing wealth while our benchmark estimate is a gap of 9.1.

We generate alternative estimates for 1930 and 1936 by applying growth rates estimated from various sources to our 1929 extrapolation of Black wealth. Using the change in log Black church property from 1926 to 1936 as an alternative growth rate, for example, we estimate a wealth gap of 9.1 and 9.7 in 1930 and 1936, respectively. Using the tax data from Georgia and North Carolina to estimate growth rates between 1926-1936, we estimate a wealth gap of 9.2 and 10.6 in 1930 and 1936, respectively.

Finally, we generate an alternative estimate of the wealth gap in 1936 using data from the "Study of Consumer Purchases," a survey conducted by the Bureau of Labor Statistics. This nationally representative survey contains information on households' rental income, business income, home values, and farm values. To construct estimates of Black and white wealth from these data, we apply the capitalization approach of Saez and Zucman (2016) to the various income sources and add housing and farm wealth.[23] Using this approach, we estimate a wealth gap of 9.1. The similarity between this estimate of the wealth gap, which uses an entirely different data source and approach, to our baseline estimate of 8.8, gives us confidence in our measure of the racial wealth gap in these

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[22]On p. 32, Martin (1913) writes "Mr. H. H. Thomas... places the individual average accumulation throughout the South at the present day at \$90.00 per capita, but this is evidently an estimate of the total, rather than the assessed valuation. The \$80.61 per capita wealth of the Kansas City Negro, while \$28.01 above the first estimate for the Negroes of the whole United States, seems, of course, very small when compared with the \$667.96 per capita owned by the whites of Kansas City, or with the \$1,000 for the whole United States." Thomas (1901) was actually providing an estimate for the whole Black population (see p. 76 of Thomas (1901)), so we take this as the national estimate. The estimate of \$1,000 for white per capita wealth in the U.S. overall seems reasonable and compares well to the estimate from Piketty and Zucman (2014) of \$1,024.

[23]Here, we only include the value of homeowners' dwelling as our capitalization of rental income captures other sources of housing wealth.

interwar years. Appendix C.2 provides a detailed description of the data and our methodology.

Although there is naturally a degree of uncertainty in our historical estimates of the wealth gap, we believe we provide reasonable baseline estimates as well as ranges for the wealth gap at this time. The resulting collection of estimates suggests substantial convergence from 1870 levels as well as continued convergence until 1950, after which convergence stagnates.

Definition of white Our baseline series measures the ratio between per capita wealth of the non-Black population and the Black population, which we call the white-to-Black per capita wealth gap. Historically, the non-Black, non-white share of the population in the U.S. was small, but today's non-Black non-white population is much larger. To the extent that non-Black, non-white populations have lower wealth than white Americans, we understate the white-to-Black wealth gap by including these groups. We produce an alternative series that directly measures per capita white wealth in 1860, 1870, and from 1950-2020 (see Appendix Figure D.2). As expected, this alternative measure of the wealth gap is almost identical to our baseline measure up to the modern period. Using white per capita wealth as opposed to non-Black per capita wealth does not alter our estimate of the wealth gap between 1870 and 1970. The post-1970 wealth gap is larger when restricting to white individuals for the non-Black population. Thus, if anything, our baseline series understates the white-to-Black wealth ratio in the more recent period.

Gross wealth vs. net wealth Prior to 1950, we are unable to consistently measure and subtract debt from our measures of wealth, thus these estimates of the wealth gap reflect gaps in gross wealth or total assets as opposed to net wealth. After 1950, we are able to construct measures of net wealth. Historically, access to credit was highly restricted. We estimate that household debt made up 33% of GDP while the debt-to-GDP ratio today exceeds 100%. In the early 20th century, Black homeowners were less likely to have mortgages than white, due to their concentration in the South where mortgage rates were lower than in other regions of the country. As southern financial institutions developed, and Black emigration from the region increased, however, mortgage holding rates among homeowners equalized across the two groups (Collins and Margo, 2001).

We check the sensitivity of our wealth gap estimates to the inclusion of debt in two ways. First, we provide a lower bound wealth gap estimate for 1870 that assigns our estimates of total national debt entirely to the non-Black population, bringing the total wealth gap down from 23 to 20 (see Appendix Figure D.3).[24] Second, we present an alternative series that focuses only on assets and ignores debt in the post-1950 period as well (see Appendix Figure D.4). The asset gap is lower than the total gap. This measure of the gap, however, ignores greater debt levels among Black individuals, of whom a greater proportion have negative net worth compared to white. We discuss

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[24]Information on debt-holding by race is unavailable for this period. We also conduct an additional exercise using the distribution of home-mortgage holding across Black and white households in 1900 to assign national debt to the two groups, assuming an equal allocation of debt, conditional on having a home mortgage. Using this approach, we arrive at a wealth gap for 1870 that is almost identical to our original estimate.

the distribution of debt holding in greater detail in Section 4.4.

Role of household size   Fluctuations in the per capita wealth gap could stem from differences in fertility and household size across the two groups. In particular, if Black households are smaller than white households on average, the per capita wealth gap will be smaller than the per household gap. On the other hand, if Black households are larger, the opposite is true. We assess this by first examining differences in household size between the two groups from 1870 to the present (see Appendix Figure D.5). From 1880 to 1950, average household size for the two groups was nearly identical. In 1870, Black households were smaller than white households on average, and larger between 1940 and 2000. At the peak of these differences in 1960, Black households had on average one additional person compared to white households.

We then construct the per household racial wealth gap (see Appendix Figure D.6). Differences in the per capita and per household gap follow the trend of the differences in household size. The per household wealth gap is slightly smaller than the per capita wealth gap between 1950 and 1990, after which it is slightly larger. Nevertheless, we conclude that the role of household size in the full evolution of the wealth gap has been limited.

3.4   Additional statistics and measures of the racial wealth inequality

We provide alternative measures of racial wealth inequality over the historical period in a series of appendices, which we briefly describe here.

Inverse wealth gap and Black share of national wealth   In Appendix G, we provide two additional data series to document the evolution of Black wealth in the United States over time. First, we present the Black-to-white per capita wealth gap (the inverse of our baseline gap) in Appendix Figure G.1. This view of the wealth gap provides a more detailed view of early convergence patterns and confirms our finding that convergence occurs until 1980 and reaches a standstill or even reverses thereafter. Second, we show estimates of the Black population's share of national wealth, along with the Black population share (see Appendix Figures G.2 and G.3). Throughout history, Black Americans' share of national wealth has been substantially lower than their share of the population. The wealth share started at below 0.5% of national wealth in 1860 and stands at 2.5% today while the population share is 12.4%.

Homeownership and housing wealth gaps   In Appendix H, we construct white-to-Black home-ownership and housing wealth gaps for the whole 150-year period using the census, the American Community Survey (ACS), and SCF+. Convergence in housing wealth by race has followed a similar pattern of convergence as overall wealth (see Appendix Figures H.1 and H.2).

Distributional racial wealth gaps Our primary focus is the per capita or mean wealth gap as we can consistently measure this over the full historical period.[25] However, the SCF+ microdata allow us to dissect the evolution of racial disparities along the household wealth distribution, at least after 1950. In Appendix K, we contrast the mean racial wealth gap to the racial wealth gap at the median and the 90th percentile for the seven decades from 1950 to today (see Appendix Figure K.1). While the wealth gap at the 90th largely follows the levels and trend of the mean wealth gap, the median wealth gap is higher throughout the whole period. The median wealth gap starts at very high levels in 1950, converges dramatically between 1950 and 1970, and stalls after 1980. Today, the median wealth gap today remains at 10:1, equivalent to the typical Black household holding just 10 cents for every dollar the typical white household holds.

In addition, we provide evidence on the racial rank gap in wealth through 2020, updating previous estimates from Kuhn, Schularick, and Steins (2020). We define the racial rank gap in wealth following Bayer and Charles (2018), who document Black-white income rank gaps. We measure the position a particular Black household holds in the white household wealth distribution. We measure this gap in rank for households at the median and 90th percentile of the Black household wealth distribution and find that despite reductions in the rank gap over time, gaps remain sizable. The median Black household falls below the 30th percentile in the white household wealth distribution while the 90th percentile Black household falls below the 75th percentile of the white wealth distribution (see Appendix Figure K.2).

Per capita Black and non-Black wealth series, 1860-2020 Although our primary contribution is a time series of national white-to-Black wealth ratios, a secondary contribution is a dataset of Black and non-Black wealth levels in the US from 1860 to 2020. We view our wealth gap estimates as the primary contribution because we are able to validate these estimates more systematically than Black per capita estimates alone. Nevertheless, we present our per capita estimates of Black and non-Black wealth in Appendix D.1 in Appendix Figure D.8 (Appendix Figure D.9 presents these series in logs). In addition, we separately present the real per capita Black wealth series, together with various robustness checks in Figure D.10.

The conditional racial wealth gap A large literature explores demographic and socioeconomic determinants of Black-white wealth gaps using Blinder-Oaxaca-Kitagawa regression decomposition methods (Kitagawa, 1964; Blinder, 1973; Oaxaca, 1973). This literature broadly concludes that a large portion of the wealth gap cannot be explained by observable characteristics, due to a weaker mapping from observables to wealth among the Black population. The focus of our paper is on the historical determinants of the unconditional racial wealth gap. Nevertheless, in Appendix E, we contribute to the literature on the conditional wealth gap by leveraging the long timespan of our SCF+ data and asking specifically whether the explanatory power of socio-demographic

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[25]In years where we lack microdata, we are still able to estimate or collect data on total wealth for each racial group and divide by their respective populations.

characteristics has changed over time. We conduct a regression decomposition analysis, where we control for (i) income, (ii) educational attainment, (iii) family characteristics, and (iv) labor market characteristics. Consistent with the literature, we find much lower explanatory power of these characteristics when estimated on the Black population compared to the white, but that this explanatory power is greater today than compared with the pre-1980 period.

4   Conceptual framework for racial wealth convergence: 1870-2020

The gap in per capita wealth between Black and white Americans has followed a hockey-stick pattern over the long run. Rapid convergence in the post-slavery and Jim Crow era gave way to much slower gains during periods of known racial progress, such as World War II and the civil rights era. In this section, we develop a stylized theoretical framework of wealth accumulation to rationalize the shape of convergence from Emancipation onwards, i.e., from the point from which most Black Americans were able to accumulate wealth. The framework emphasizes three distinct factors: (i) initial conditions, (ii) savings-induced wealth accumulation, and (iii) capital gains. We use this framework to understand the drivers of wealth convergence depicted in our long-run series (Figure 1).

We model wealth accumulation dynamics following Saez and Zucman (2016) but apply these wealth accumulation functions to Black and white Americans separately. Average wealth for each group evolves according to the below equation:

$$W_{t+1}^j = (1 + q^j)\left[W_t^j + s^j Y_t^j\right], \text{ with } Y_t^j = (1 + g^j)Y_{t-1}^j, \tag{1}$$

and $j = \{b, w\}$ represents the two racial groups (b for Black, and w for white), and W_t^j denotes the real per capita wealth of group j at time t. Wealth accumulation is governed by two key flow parameters: the capital gains rate, q^j, and saving rates of individuals, s^j. Y_t^j is the per capita income of group j at time t, which grows at rate g^j.[26] We begin our discussion with the simplifying assumption of fixed q^j, s^j, and g^j over time.

Combining the law of motion for average Black and white wealth, we get the following law of motion for the white-to-Black wealth ratio (WR):

$$WR_{t+1} \equiv \frac{W_{t+1}^w}{W_{t+1}^b} = WR_t \times \frac{1 + q^w}{1 + q^b} \times \frac{1 + s^w \frac{Y_t^w}{W_t^w}}{1 + s^b \frac{Y_t^b}{W_t^b}}. \tag{2}$$

Taking logs, we can decompose the (log) growth rate of the racial wealth gap from t to $t+1$ as follows:

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[26]Note that income is total income, including labor and capital income.

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$$\log\left(\frac{WR_{t+1}}{WR_t}\right) \approx \underbrace{\left(q^w - q^b\right)}_{\text{Differences in capital gains rates}} + \underbrace{\left[s^w \frac{Y_t^w}{W_t^w} - s^b \frac{Y_t^b}{W_t^b}\right]}_{\text{Differences in savings}}. \qquad (3)$$

Equation 3 shows how two distinct components influence the evolution of the racial wealth gap: (i) racial differences in capital gains rates and (ii) racial differences in savings-induced wealth accumulation. Differences in capital gains rates between Black and white Americans have a one-to-one impact on the growth rate of the racial wealth gap. Hence, even if the savings-induced wealth accumulation of Black and white Americans were equal, any difference in capital gains rates in favor of white individuals would set the racial wealth gap on a diverging path. Compared to this, the effect of savings differences on the growth rate of the racial wealth gap is dampened by the level of wealth of each group. Therefore, differences in income growth rates will influence the savings-induced component of the wealth gap, but their effect is scaled by the stock of wealth to which savings flow.

4.1 Wealth convergence under equal q and s: the importance of initial conditions

We first use this framework to explore the role of initial conditions on the evolution of the wealth gap. Taking observed income convergence as given, we ask, "How would the racial wealth gap have evolved had Black and white Americans faced equal conditions for wealth accumulation, namely equal q and s"? Equal q and s would imply, for example, that Black and white households had equal access to financial markets and institutions and that both groups were equally able to transmit wealth across generations for the past 150 years. In this case, Equation 3 simplifies to:

$$\log\left(\frac{WR_{t+1}}{WR_t}\right) = s \cdot \left(\frac{Y_t^w}{W_t^w} - \frac{Y_t^b}{W_t^b}\right). \qquad (4)$$

It follows that the evolution of the racial wealth gap is then solely driven by (i) racial differences in initial income and wealth levels and (ii) differences in Black and white income growth rates. The higher wealth-to-income ratios are, the smaller the role income convergence and savings play in racial wealth convergence. By contrast, very low levels of wealth of the Black population at the outset of Emancipation imply very strong convergence from initial wealth accumulation.[27] The speed of convergence slows down once the wealth stock increases relative to income flows, such that savings out of income only lead to small changes in the wealth gap.

As mentioned above, when simulating the long-run wealth gap, we allow for heterogeneous income growth across the two racial groups. We derive annualized income growth rates from 1870-2020 using data on Black and white per capita income levels from Margo (2016) for 1870 and the

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[27]Spriggs (1984) documents a similar pattern when analyzing the racial wealth gap and Black wealth accumulation in post-Emancipation Virginia.

SCF+ for 2019. Over the full 150-year period, Black income per capita grew at a higher annualized rate than white (2.3% vs. 2%), indicating income convergence between the two groups over this period. For q and s, we plug in annualized averages of national estimates from Saez and Zucman (2016), which are $q = 1\%$ and $s = 5\%$. For initial values of the racial wealth gap, we use the 1870 white-to-Black per capita wealth ratio from our time series (23:1), and the income ratio (3.6:1) is constructed from historical estimates of Black and white per capita income from Margo (2016). We trace out the evolution of the white-to-Black per capita wealth ratio using Equation 1 and plug in the income growth rates, capital gains and savings rates, and starting conditions listed above.

The solid black line in Figure 3 presents the evolution of the simulated wealth gap with equal wealth accumulation conditions across Black and white individuals. As a comparison, we also plot our wealth gap series as dots. Overall, the simulated wealth gap follows a hockey-stick pattern, very similar to our estimated long-run time series of the racial wealth gap. Convergence is rapid immediately post-Emancipation until the early-to-mid 20th century, after which convergence slows down considerably. This shape is consistent with Black individuals starting from very low initial levels of wealth compared to their income and experiencing rising wealth-to-income ratios in the early years. White individuals started with much higher initial wealth in 1870, with a wealth-to-income ratio of 6.6 while Black individuals started with a wealth-to-income ratio of around one. Therefore, in this early period, the contribution of savings to wealth accumulation is extremely high for Black individuals (Equation 4). Yet as Black wealth grows, so do wealth-to-income ratios for Black Americans, and convergence slows down over time.

Our simulation implies that under equal wealth-accumulating conditions over the past 150 years, the wealth gap in 2020 would be 3:1. Thus, even in a stylized scenario with equal capital gains and savings rates across the two groups, the initial wealth difference in 1870 is so large that the gap does not fully disappear after 150 years. Indeed, our framework implies that even by the year 2200, by which time the racial income gap would have closed in our model, we would still have a wealth gap of 1.4.[28]

4.2 Estimating long-run mean differences in q and s

Relative to the equal-conditions benchmark of Section 4.1, observed convergence has unfolded more slowly, as can be seen in Figure 3. The convergence curve under the assumption of equal q and s falls below the historically observed data points. In the model, slower convergence can only stem from racial differences in savings and capital gains, because we have taken the third factor, the long-run path of income convergence, directly from the data.

There are good reasons to assume that our benchmark scenario of equal q and s is unrealistic.

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[28]We also run an alternative simulation, where the racial income gap reaches its 2020 level in 1870, in addition to q and s being equal across Black and white Americans. Despite much lower levels in the racial wealth gap today (1.8:1 instead of 3:1), the convergence path exhibits the same hockey-stick shape, where convergence stalls in the beginning of the 20th century. Even under immediate, full convergence in the income after Emancipation, the wealth gap would still take over 150 years to close.

Lower savings and capital gains for Black Americans may reflect their lower average income and wealth levels compared to white Americans, as well as their historical exclusion from land, housing, and capital markets. Systemic disadvantages in wealth accumulation faced by Black Americans are well documented for the immediate post-Emancipation era and beyond. Although the abolition of slavery signaled an end to the most extreme form of economic exploitation of Black Americans, barriers to Black economic progress were pervasive in the post-Reconstruction era.[29] For instance, in the decades after the Civil War, Black Americans were barred from equal access to financial institutions (Baradaran, 2017), frustrated in their attempts to purchase land (Ransom and Sutch, 2001), experienced violent destruction or expropriation of their property (Albright et al., 2021; Cook, 2014; Messer, Shriver, and Adams, 2018), and relegated to highly segregated housing markets (Akbar et al., 2019; Aaronson, Hartley, and Mazumder, 2020). Black Americans were also denied equal access to education and faced extreme labor market discrimination in the South (Margo, 2007; Wright, 1986), and the structure of southern agriculture led to pervasive indebtedness among Black farmers, potentially lowering the incentive to save (Ransom and Sutch, 2001). These conditions are likely to have hindered Black Americans' ability to transmit wealth to future generations, skewed the composition of their wealth towards lower return assets, and to have led to lower returns within asset classes, all of which would imply lower capital gains rates relative to white Americans. In addition, differences in labor market and educational opportunities could slow down income convergence and thus savings-induced wealth convergence.

Estimating q and s for Black and white Americans for the full 150-year period is impossible due to the lack of micro-level data for this period. Nevertheless, we can use our wealth convergence model to estimate the average racial difference in q and s that is consistent with the convergence path we observe in our wealth gap series. These estimated q and s gaps can be interpreted as follows: how much lower would average Black capital gains rates and savings rates need to be since 1870 for wealth convergence to follow the trend we observe in our data? We will show that the wealth accumulation framework described in Equation 1 does a good job fitting our wealth gap series once these average differences in q and s are taken into account.

To conduct this exercise, we fix white savings rates and capital gains at the national average (i.e., $q^w=1\%$ and $s^w=5\%$), and then use non-linear least squares to fit the observed path of the wealth gap with differential savings rates (s^b) and differential capital gains rates (q^b) for Black Americans. In essence, we ask which combination of savings rates and capital gains rates fits the observed data most closely, taking income growth and the path of wealth convergence as given. Full details on the estimation are provided in Appendix I. Figure 3 shows the regression curve for estimated values of

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[29]A large literature explores the role of post-slavery institutions in the Deep South in perpetuating racial inequality. Recent work in this area includes Baker (2022) and Althoff and Reichardt (2022). Althoff and Reichardt (2022), in particular, document the role of these institutions on persistent gaps in economic outcomes between Black descendants of the American enslaved versus descendants of those who were free before the Civil War. Although direct examination of the impact of historical institutions and episodes of racial violence on the racial wealth gap is beyond the scope of this paper, we provide an exploration of this relationship in Appendix F. In this appendix, we document the link between states' histories of slavery and Black wealth accumulation, the relationship between Jim Crow intensity and the racial wealth gap, and finally, episodes of racial violence on racial wealth inequality.

q^b and s^b.[30] Our best-fit estimates imply that the average savings rate and capital gains rates of Black Americans were 1.3 pp and 0.2 pp lower, respectively, compared to those of white Americans. Using these estimates for q^b and s^b, we can also calculate the savings-induced and capital-gains-induced wealth gap convergence rate, see Equation 3. Our calculations imply that during the past 150 years, the savings channel reduced the per capita white-to-Black wealth gap at a speed of 1.25% per year, while capital gains rates differences led to a slight divergence of about 0.2% per year. This result emphasizes the importance of the savings-induced channel, rather than capital gains, for the long-run convergence of the racial wealth gap.[31]

4.3 Time variation in the convergence process: q vs. s

The results in the previous section shed light on long-run average differences in savings and capital gains between Black and white Americans. Nevertheless, time-variation in wealth convergence rates and the dynamics in q and s gaps are also of interest. In this section, we take a closer look at the fluctuations in wealth convergence around the long-term trend to understand which time periods are associated with slower versus faster convergence and why.

To facilitate the discussion, we plot the racial wealth gap in logs in Figure 4a. The figure confirms the pattern described in Section 3.2. The most rapid decline in the wealth gap occurred in the first 30 years after Emancipation. Wealth convergence then slowed down in the first decades of the 20th century, resumed between 1930 and 1980, and stalled thereafter. A comparison of these convergence dynamics to our equal-conditions benchmark is illustrative. Figure 4b juxtaposes observed growth rates in the wealth gap to those from our baseline simulation for five time periods – 1870-1900, 1900-1930, 1930-1960, 1960-1980, and 1980-2020. These intervals align well with the patterns shown in Figure 4a.[32] During the first 60 years after Emancipation (1870-1930), wealth convergence was slightly slower than the expected path of convergence under equal capital gains and savings rates. From 1870-1900, the observed annual convergence rate was a little below 2.5% compared to close to 3% in our simulation. A larger difference opens up between 1900 and 1930. Observed wealth convergence essentially stalled at 0.3%, while according to our benchmark, it should have continued at a pace of 1.4%.

After 1930, racial wealth convergence speeds up again. The growth rate in the gap matches that

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[30]In Appendix I, we present similar results when using ordinary least squares to estimate the q^b and s^b that best fit the evolution of the log wealth gap.

[31]Here, we are referring to the importance of the savings-induced channel in a pure accounting sense, calculating what share of convergence is attributable to the savings term in Equation 3. In a micro-founded model of wealth accumulation, savings rates are endogenously determined, and capital gains rates will affect savings behavior. If lower capital gains rates are expected ex ante, Black households may save less and consume more via a substitution effect. Alternatively, if households are confronted with lower than expected capital gains rates ex post, this might induce higher savings to reach targeted wealth levels. In our framework, we abstract from such interplay between capital gains rates and saving rates.

[32]We also apply the backward Cumulative Sum (CUSUM) test of Otto and Breitung (2022) to identify structural breaks in the time series of the per capita white-to-Black wealth gap. The test gives us five sub-periods – 1870-1900, 1900-1920, 1920-1949, 1949-1983, and 1983-2019 – which aligns very well with the sub-samples that we analyze based on historical events.

predicted by the model with equal wealth accumulating conditions. From 1930 to 1960, Black and white wealth converged at an annual rate of around 1%, and from 1960 to 1980, we observe even higher convergence rates in the data of approximately 1.5% per year. Stronger convergence in the racial wealth gap during this period coincides with major events affecting Black economic progress and reductions in racial inequality. These include compression of wages and Black occupational upgrading during World War II (Aizer et al., 2020; Collins, 2000; Margo, 2016); the introduction of the Fair Employment Practice Committee in 1941, which represented early attempts to diminish discrimination in the labor market (Collins, 2001); and the Civil Rights Act of 1964, the Voting Rights Act of 1965, and minimum wage legislation in the 1960s (Donohue and Heckman, 1991; Brown, 1984; Aneja and Avenancio-Leon, 2019; Derenoncourt and Montialoux, 2021), which led to relative wage gains for Black workers. Finally, the Fair Housing Act of 1968 attempted to strike down barriers to home ownership for Black Americans, which may have led to relative improvements in housing outcomes. However, this episode of convergence ends by the 1980s, at which point the racial wealth gap stalls and, most recently, begins to diverge again—a phenomenon we return to in detail in Section 4.4.

Despite a rich literature on the drivers of different phases of racial economic convergence, confirming such dynamics with data for the whole 150-year period is not feasible, as prior to World War II, we do not have micro-level data to estimate Black and white saving rates or capital gains rates. However, after 1950, we can study the dynamics of savings- and capital gains-induced convergence in greater detail using the SCF+, which combines the "modern" Survey of Consumer Finances with archival survey waves (Kuhn, Schularick, and Steins, 2020).

We rely on the SCF+ data to estimate two key components of Equation 3. The first component is the difference in the white-Black savings rate, adjusted by wealth-to-income ratios, i.e., $s^w \frac{Y_t^w}{W_t^w} - s^b \frac{Y_t^b}{W_t^b}$. This captures the savings-induced component of wealth convergence. Wealth-to-income ratios are directly taken from the data while saving rates are estimated separately for Black and white households using the synthetic savings approach by Saez and Zucman (2016), which we apply to our SCF+ data. Saez and Zucman (2016) provide estimates of asset-specific capital gains rates (housing, business assets, bonds and deposits, and equity) that they estimate using information on aggregate changes in asset stocks and flows from US national accounts. By assuming that all households experience the same capital gains rates within an asset class, we can utilize the asset-specific capital gains rates together with the micro-level data of the SCF+ to estimate saving rates as the residual change in wealth by group not explained by capital gains. Full details of this approach are explained in Appendix J.

The second component of Equation 3 is the absolute difference between white and Black capital gains $(q^w - q^b)$, which has a one-to-one impact on the racial wealth gap convergence. We estimate capital gains on Black and white wealth portfolios following the method of Wolff (2017), Wolff (2018), Wolff (2022), and Xavier (2020). This approach assumes that Black and white households earn the same capital gains rates within the same asset class, thus racial differences in total capital

gains are solely coming from their differences in portfolio composition. Appendix J presents a full description of our estimation method of capital gains.

We report the results in Table 1. During 1950-1980, racial wealth gap convergence worked mainly through the savings-induced channel. Adjusted for wealth-to-income levels, white savings rates were lower by -1.82 percentage points than Black (adjusted) saving rates. This savings-induced convergence was much larger in absolute terms than the gap between white and Black capital gains rates (which led to 0.10 percentage point divergence per year), leading the wealth gap to fall over this period. However, the savings channel weakened substantially after 1980, contributing only -0.11 pp to convergence. In absolute terms, savings-induced convergence became smaller than the widening gap in capital gains rates. There are two main drivers for this turnaround. First, white-to-Black income convergence, which was robust in the period from 1950-1980, completely stalled after 1980 (Charles and Hurst, 2002). In addition, racial differences in (unadjusted) saving rates increased after 1980, in line with overall trends of decreasing saving rates at the bottom of the wealth distribution, where Black Americans are concentrated (Saez and Zucman, 2016; Mian, Straub, and Sufi, 2020; Bauluz, Novokmet, and Schularick, 2022). Although not the main focus of this paper, we explore these drivers of savings-induced wealth convergence in greater detail in Appendix J.2.1.

As savings-induced wealth convergence essentially came to a halt, racial differences in capital gains rates have begun to play the dominant role in racial wealth dynamics. Furthermore, while capital gains rates for white Americans have exceeded those of Black Americans since 1950, the racial difference in capital gains rates widened after 1980. According to our estimates, the return gap rose substantially after 1980 from about 10 to more than 30 basis point per year (column 2 of Table 1).[33]

We conclude this part by illustrating the importance of the capital gains channel for the end of racial wealth convergence in the post-1980 period. We plug the estimated values of savings rates and capital gains rates into our wealth accumulation model. For income growth rates, we use the observed income growth rates of Black and white Americans as estimated in the SCF+ and plug these into the model as well. Figure 5 presents our simulation, which demonstrates how differences in these key parameters influence the dynamics of the racial wealth gap. We present three scenarios: one where the racial wealth gap evolves with equal wealth accumulating conditions, one where there are differences in savings rates and capital gains rates (which we estimate from the data), and a

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[33]Note that during the housing boom from 2001-2007, Black Americans earned higher capital gains on their wealth portfolios as discussed by Wolff (2022). The major reason for this phenomenon is that Black households were highly leveraged on their housing assets, which increased their rate of return relative to whites. In Table J.3 in Appendix J we estimate capital gains on Black and white wealth portfolios for different sub-periods and show that there have been indeed periods of higher capital gains for Black. However, in the aftermath of the Global Financial Crisis and the reversal of the house price boom, Black Americans disproportionately experienced particularly high capital losses and foreclosures. Finally, our approach assumes homogeneous returns on assets across the racial groups, therefore likely providing a lower bound for the white-to-Black differences in capital gains rates as there is evidence that shows how Black Americans earned lower capital gains than white households (Avenancio-León and Howard, 2019; Boerma and Karabarbounis, 2021; Kermani and Wong, 2021; Kroeger and Wright, 2021).

third where there are only differences in savings rates. In all three scenarios, we use in the estimated post-1980 income growth rates of Black and white Americans.

In contrast to the scenario with equal wealth accumulating conditions (light dashed line), the data show no convergence over this period. If we only accounted for the estimated racial differences in saving rates, without accounting for differences in capital gains rates, the wealth gap would still be on a path to convergence (solid line). However, if we take into account both lower savings rates and lower capital gains rates for Black Americans after 1980, our simulation reproduces the recent divergence in the wealth gap that we observe in the data (dark dashed line). In the next section, we discuss the drivers of this recent divergence in greater detail.

4.4   Divergence post-1980: the importance of portfolio composition

Starting in the 1980s, booming asset markets and rising wealth-to-income ratios have given greater prominence to capital gains over savings flows in the dynamics of the wealth distribution (Piketty, 2013; Piketty and Zucman, 2014; Saez and Zucman, 2016; Kuhn, Schularick, and Steins, 2020). Under these conditions, the portfolio composition of households plays an ever-increasing role in wealth accumulation. In this section, we show that racial differences in portfolio composition combined with asset price dynamics account in large part for the post-1980 evolution of the wealth gap.

In Table 2, we present the average portfolio composition of Black and white households from 1983 to 2019 using SCF+ data. Not only do white households hold far more assets on average, the composition of wealth differs starkly across the two groups. Housing and other non-financial assets make up almost 70% of the total assets of Black households whereas business wealth amounts to 8% and equity (both direct and indirect holdings in form of mutual funds and DC pension) make up just 9%. For white households, housing and other non-financial assets make up a much smaller share of their total assets – 43% – while business and stock equity account for 19% and 18%, respectively. Hence, over this full time period, portfolios for white households have been more diversified than those of Black households.[34]

The bottom panel of Table 2 explores the distribution of liabilities across asset class and racial

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[34]A rich literature explores the drivers of racial differences in portfolio composition. Black Americans have on average lower income and educational attainment compared to white Americans, and both of these characteristics are associated with lower investment in high-return-yielding assets (Dynan, Skinner, and Zeldes, 2004; Cole and Shastry, 2009; Van Rooij, Lusardi, and Alessie, 2011; Bucher-Koenen and Ziegelmeyer, 2014; Blau and Graham, 1990). Second, Black Americans are exposed to greater risk over the life cycle, which may lower their optimal investment in risky assets. For instance, the literature shows that Black Americans have lower life expectancy (Costa, 2015; Alsan and Wanamaker, 2018; Boen, Keister, and Aronson, 2020); they have larger family sizes, poorer family members, and greater divorce probabilities (Chiteji and Hamilton, 2002; Keister, 2004); they experience lower complementarity in wealth accumulation after marriage (Fagereng, Guiso, and Pistaferri, 2022); and they are also exposed to higher labor market risk (Altonji and Doraszelski, 2005). Such high risk exposure would reduce investment in risky assets. Finally, a history of discrimination and expropriation may be a further explanation for lower equity investment. The failure of the Freedman's Saving Bank in the 1870s led to huge losses of Black Americans' wealth in the aftermath of Emancipation, leading to less trust in the financial markets (Célérier and Tak, 2022; Traweek and Wardlaw, n.d.). Boerma and Karabarbounis (2021) show using Michigan Survey data that Black households are today more pessimistic than white households with regard to risky returns, potentially influencing their portfolio choices.

group.[35] Strikingly, despite having less than a fifth of the assets of white households, Black household debt is about half the debt of the average white household. This implies that Black households are substantially more leveraged. Debt makes up 28% of total asset values for Black Americans, but just 12% of asset value of white households. Examining housing debt specifically, we see that Black households have higher housing debt than white households, namely 34% of housing value versus 24%. Higher levels of leverage in housing imply that Black households' wealth is more exposed to changes in house prices. A given change in housing prices leads to larger fluctuations in home equity for Black compared to white households (Kermani and Wong, 2021; Wolff, 2022). In the final row of Table 2, we show differences in educational debt. Compared to housing debt, educational debt makes up a much smaller portion of overall debt, yet racial differences in educational debt holding are striking. For Black households, about 10% of total household debt is education debt while for white households, education debt makes up less than 5% of total debt. Furthermore, the average Black household holds more education debt than the average white—the white-to-Black education debt ratio is 0.77:1.[36]

Such pronounced portfolio differences between Black and white households mean that asset price changes will affect the dynamics of the racial wealth gap. If housing prices boom (holding everything constant), Black households will benefit more due to their higher exposure to this asset class, and the racial wealth gap will decrease. By contrast, a booming stock market will increase the racial wealth gap as Black households benefit substantially less from rising stock prices and the associated capital gains.[37] We illustrate these dynamics by simulating what the racial gap would have been had there been capital gains only in the stock market versus only in the housing market.

We start our counterfactual simulation in the year 1983, the first post-1980 year available in SCF+. For simplicity, we fix initial wealth portfolios and levels in this year and consider the impact of solely changing asset prices, ignoring the contribution of savings and portfolio adjustments to the racial wealth gap over time. The first counterfactual, W_t^{equity}, shows the evolution of wealth if there had been only capital gains in equity markets. The second counterfactual, $W_t^{housing}$, considers the scenario where only housing market capital gains occurred. We also construct W_t^{cg}, which allows for capital gains in both markets. We construct counterfactual wealth series for each racial group

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[35]For a detailed analysis of the debt composition of U.S. households overall, see Bartscher, Kuhn, Schularick, and Steins (2020).

[36]These stark differences in education debt holding likely have implications for debates on student loan forgiveness and the racial incidence of college debt—an important area for further research.

[37]Relatedly, Bartscher, Kuhn, Schularick, and Wachtel (2021) show how different responses of asset prices following monetary policy shocks affect racial differences in total capital gains.

as follows[38]:

$$W_t^{equity} = W_{1983} + \sum_{t=1984}^{2019} q_{t,t-1}^{equity} \cdot A_{t-1}^{equity}$$

$$W_t^{housing} = W_{1983} + \sum_{t=1984}^{2019} q_{t,t-1}^{housing} \cdot A_{t-1}^{housing}$$

$$W_t^{cg} = W_{1983} + \sum_{t=1984}^{2019} q_{t,t-1}^{equity} \cdot A_{t-1}^{equity} + \sum_{t=1984}^{2019} q_{t,t-1}^{housing} \cdot A_{t-1}^{housing}, \tag{5}$$

where W_{1983} is mean wealth of the respective group in 1983, while A^{equity} and $A^{housing}$ are the mean values of equity and housing. Because we concentrate on just the contribution of capital gains to wealth accumulation, $A_t^{\text{asset}} = A_{1983}^{\text{asset}} \prod_{t=2019}^{t} (1 + q_{t,t-1}^{\text{asset}})$ for each asset $\in \{equity, housing\}$. Therefore, our counterfactual simulation illustrates how the racial wealth gap would have evolved if Black and white households had only accumulated capital gains on their 1983 wealth portfolios. Finally, we define the capital gains rate in equity and housing markets as $q_{t,t-1}^{equity} = \frac{P_t^{equity}}{P_{t-1}^{equity}} - 1$ and $q_{t,t-1}^{housing} = \frac{P_t^{housing}}{P_{t-1}^{housing}} - 1$, respectively, where P represents the average real price of each asset type. Note that both asset prices are deflated with the CPI with 2019 as the base year. Based on these equations, we construct W_t^{equity}, $W_t^{housing}$, and W_t^{cg} separately for Black and white households and simulate the white-to-Black wealth gap under each scenario.

Figure 6 presents the results for the time period from 1983 to 2019. These simulations highlight the contributions of asset price changes in stock versus housing markets to the evolution of the racial wealth gap. Figure 6a shows the scenario with just stock market gains (W_t^{equity}). We find that capital gains in the stock market contributed to a substantial widening in the racial wealth gap after 1980. Fixing portfolios to their 1983 composition and only allowing capital gains in the stock market to influence the wealth gap, the white-to-Black wealth gap would have increased by 40% between 1983 and 2019 to a level of 8. This exceeds the observed wealth gap by about 20%. By contrast, if there had only been capital gains in the housing market, then the racial wealth gap would have continued to converge. Under this scenario, the wealth gap would be 4.7 today, compared to the observed gap of 6.6, a decrease of 18%. Figure 6b combines the two counterfactual developments and looks at the total effect of housing and stock price developments on the racial wealth gap. We make two observations. First, the counterfactual evolution of the wealth gap under this scenario closely matches the dynamics in the observed wealth gap between 1983 and 2019. The counterfactual series shows a stronger increase for years 1990 and 2010, a period of turbulent movements in asset markets with booms and busts, but tracks the observed wealth gap almost exactly in the period between 2010 and 2019. Overall, our simulation of the wealth gap under housing and stock capital gains increases alone suggests that white households benefited more on net from secular asset price increases since 1980 and that this is due to their greater exposure to

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[38]We apply the same equation to both groups therefore we suppress the subscripts for racial group at this time.

equity markets.

4.5 The future of the racial wealth gap

The long-run picture of the racial wealth gap brings to light how stark differences in initial conditions for Black and white Americans in the aftermath of slavery affected the path of wealth inequality until today. Furthermore, the growing and racially disparate role played by capital gains in wealth accumulation potentially paints a sobering picture for the future of the wealth gap.Wealth concentration increased dramatically during the Covid-19 pandemic, reaching its highest level since World War II. The top 0.01% of households now own 36.1% of private wealth (Blanchet, Saez, and Zucman, 2022). The above analysis suggests this has implications for the racial wealth gap. In an environment of high wealth-to-income ratios, the importance of savings-induced wealth convergence decreases and the importance of capital gain differences increases. Moreover, as there are only very few Black households among the top-1%, continued growth in wealth at the top will bring about further increases in racial wealth inequality.

A large class of commonly discussed policies for reducing racial wealth inequality seeks to reduce gaps in income, savings, and capital gains. These include policies that encourage financial diversification or stock equity holdings among Black households; policies aimed at financial literacy and retirement or savings behavior; or policies aimed at improving educational and labor market outcomes of Black Americans through improved school quality or reductions in discrimination. Yet on a realistic note, our simulation in Section 4.1 shows that even if wealth accumulation conditions had been equal since 1870, the wealth gap would still be 3 to 1 today, and full convergence would be over 200 more years away. Put differently: to close the racial wealth gap in the immediate term via flow parameters, Black Americans would need a substantial positive lead over whites, not "just" more equality. To illustrate the magnitudes: to close the wealth gap by 2050, for example, Blacks would need more than double the capital gains rates of white Americans (7.5% compared to 2%), a savings rate of 37% (as opposed to a 4% savings rate for white), or annual real income growth of nearly 15% (as opposed to 1.5% for white).[39]

In contrast to flow-based policies, proponents of reparations argue for direct payments to Black Americans in recognition of the harms inflicted by slavery and post-slavery institutions. For instance, citing the wealth gap itself as a summary statistic of past harm, Darity Jr. and Mullen (2020) proposes a reparations payment of $267,000 per person for each American descendant of the enslaved, or an amount that would eliminate the average wealth gap between this group and white Americans. Such a transfer, applied to eligible Black Americans in the form of a helicopter drop, would reduce the overall white-to-Black wealth gap to 1.4.[40]

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[39]If racial differences in q, s, and g would remain by their post-1980 levels, then the racial wealth gap will diverge from 5.6 to a level of 5.8 in the year 2050.

[40]Per capita wealth equalization could also be achieved through taxes and transfers. In this case, payments of $166,460 to every Black American financed via a 9% tax on white wealth, would equalize white and Black per capita wealth (total payment amount is around $7.13 trillion). A 44% tax on the wealth of the top 0.1% of the wealth

Nevertheless, the evidence on the effects of large wealth shocks in the past offers a cautionary tale. The elimination of slave wealth had but a temporary effect on the wealthiest slave-holding families of the South. Through various mechanisms such as social networks and marriage, these families re-consolidated their position as economic elites one generation after the Civil War (Ager, Boustan, and Eriksson, 2021). The Chinese Communist and Cultural Revolutions greatly reduced wealth and income inequality in the mid-to-late 20th century; however, scholars have found that the pre-revolution elite have once again emerged on top (Alesina et al., 2020). Finally, scholars studying the impacts of large wealth transfers have also often found the effects to be transient (Bleakley and Ferrie, 2016). This evidence may speak to the evolution of wealth inequality when shocks to the original distribution of wealth do not fundamentally alter the accumulation process.[41]

By contrast, wealth shocks that influence gaps in wealth-accumulating conditions may lead to more persistent change. Miller (2020), which studies the impact of land and capital redistribution to the formerly enslaved in the Cherokee Nation, provides a useful case study.[42] Racial wealth gaps fell in the Nation relative to the rest of the South, and educational outcomes of the next generation also improved. Black farmers in the Cherokee Nation were more likely to plant fruit trees, a more lucrative crop choice than staples like corn, but which have a longer gestational period. This difference in investment choices is suggestive of their greater sense of secure property rights compared to farmers outside the Nation. The question that emerges from this body of evidence is whether reparations policy today would also influence white-Black gaps in savings rates, capital gains, and income, thus potentially reducing racial wealth inequality over a much longer time horizon.

5 Conclusion

Our prior understanding of racial wealth differences has relied on limited snapshots, focused either on particular geographies in the historical period or on recent decades when the gap has barely changed. To address the lack of a comprehensive account of white-Black wealth inequality in the U.S., we assembled a new historical series of white-to-Black per capita wealth ratios from 1860 to 2020. To do this, we drew on numerous data sources, including complete-count historical censuses, state tax data, and 70 years of Survey of Consumer Finances data. Our new long-run series exhibits a "hockey-stick" shape of racial wealth convergence. After a period of initial rapid convergence during the first 50 years after the abolition of slavery, racial wealth convergence slowed substantially and even reversed post-1980. The wealth gap in 2020 is effectively as large as it was in 1950.

We show that the path of wealth convergence can be explained by a simple wealth accumulation model that accounts for the initial wealth and income levels of Black and white Americans and the observed income convergence between the two groups. With very low levels of Black wealth at

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distribution (or 27% tax on the top 0.5% wealthiest Americans) would generate the same required revenue.

[41]According to our model, in the absence of changes in savings and capital gains gaps, such transfers would have but a transient effect on the wealth gap.

[42]Under an 1866 treaty with the U.S. government, the formerly enslaved in the Cherokee Nation had the right to claim land and were furnished with initial starting capital for their farms (Miller, 2020).

the time of Emancipation, even modest accumulation implied a high growth rate for Black wealth that greatly exceeds that of white wealth, thus generating rapid convergence initially. However, as the racial wealth gap decreases, convergence slows and differences in returns on wealth begin to matter more for the shape of convergence. Yet even under equal conditions, full wealth convergence remains a distant or even unattainable scenario if post-1980 trends continue. This is because in the past decades, capital gains on existing assets have become an important driver of racial wealth inequality. Portfolio differences between Black and white Americans are key to understand this new development. White households have a significant share of their wealth in equity and benefited from booming stock prices. For Black households, housing continues to be the most important asset, so they have been largely bypassed by the boom in equity prices.

Finally, our research underscores the challenges faced by policies aimed at equalizing wealth accumulation parameters, such as savings rates and capital gains rates. Closing the gap generated by Black Americans' exclusion from wealth-building with flow parameters alone does not promise to change the wealth gap over the time horizon of a generation or two. Reparations payments would equalize stocks of Black and white per capita wealth and undo the gap in initial wealth. However, if such a wealth transfer leaves the existing wealth accumulation parameters on the flow side intact, the wealth gap could also widen again. An important area for future research is an investigation into specific combinations of stock- and flow-based policies that hold promise to foster greater racial wealth equality in the future.

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Figure 1: White-Black per capita wealth ratios: 1860-2020
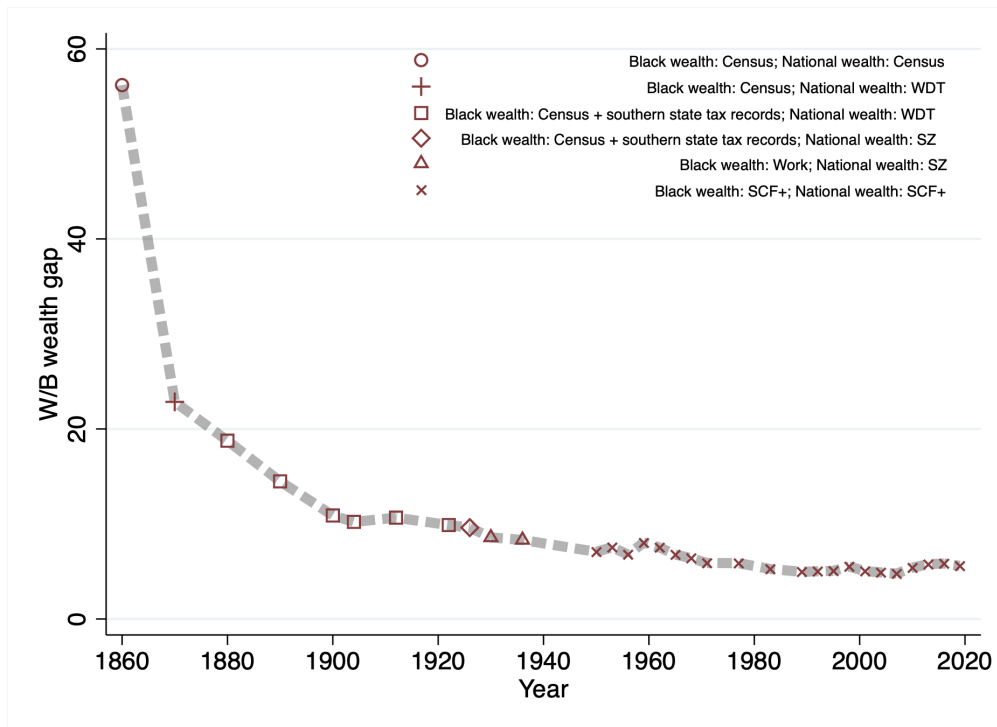
Notes: White-to-Black per capita wealth ratios from 1860 to 2020. Details on the construction of this series are available in Section 3 and Appendix B. Data sources: See figure legend. WDT is "Wealth, Public Debt, and Taxation" report; SZ is Saez and Zucman (2016). A full description of the data sources underlying the baseline series is described in Section 3 and Appendix A.

Figure 2: Robustness of historical wealth estimates: 1860-1940
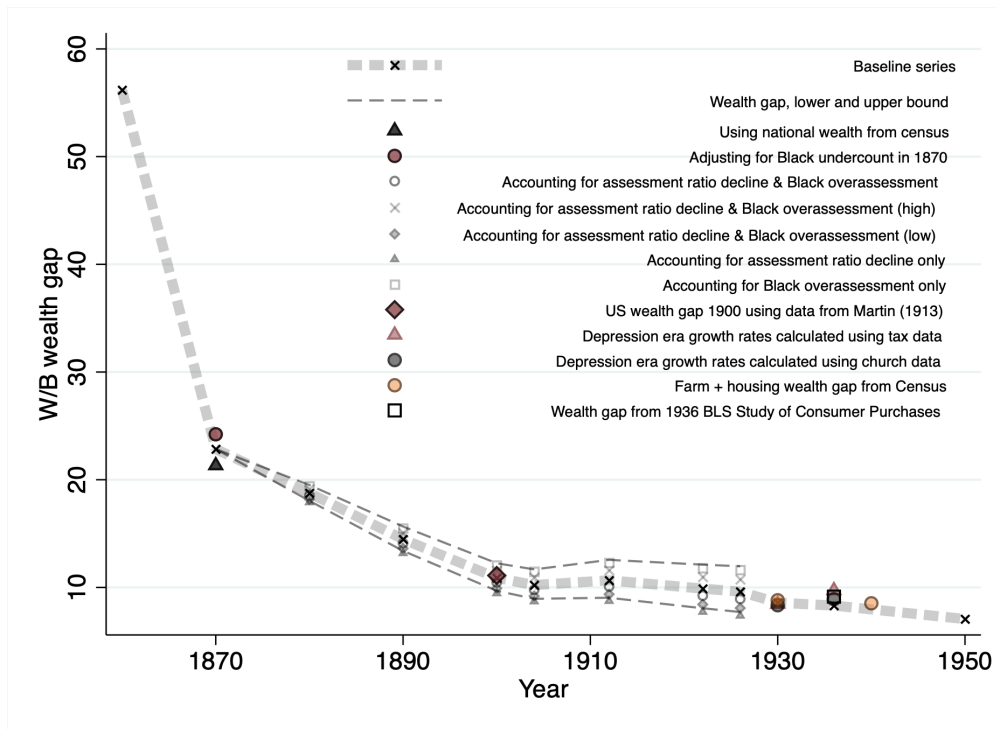
Notes: Robustness and alternative estimates for White-to-Black per capita wealth ratios from 1860 to 1940. Details on the construction of these estimates are available in Section 3 and Appendix B. Data sources: See figure legend. WDT is "Wealth, Public Debt, and Taxation" report; SZ is Saez and Zucman (2016). A full description of the data sources underlying the baseline series is described in Section 3 and Appendix A.

Figure 3: Simulation of the racial wealth gap: 1870-2020
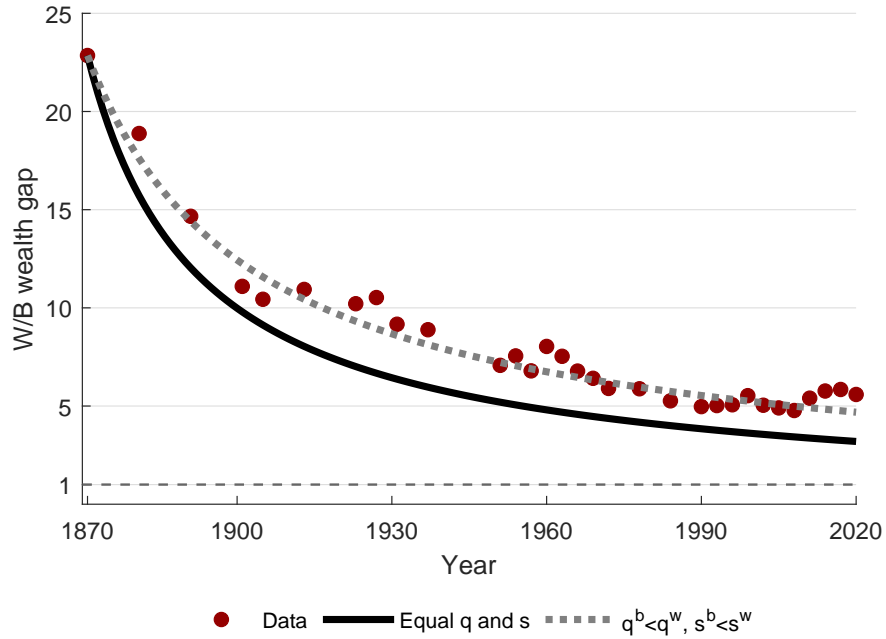
Notes: The solid line traces the path of the wealth gap from our simulation in Section 4, where we assume equal $q = 0.01$ and $s = 0.05$ for Black and white individuals throughout the post-1870 period. The dashed line presents the simulation result with q^b and s^b that gives us the best fit with the data. Our estimation yields $q^b = 0.0085$ and $s^b = 0.039$ (with $q^w = 0.01$ and $s^w = 0.052$). In both simulations, we let Black and white incomes grow according to their respective annualized growth rates calculated using data from Margo (2016) and the SCF+. The dots show the observed white-to-Black per capita wealth ratios from our series. Data sources: Various, described in Section 3 and Appendix A.

Figure 4: Dynamics of racial wealth convergence, 1870-2020
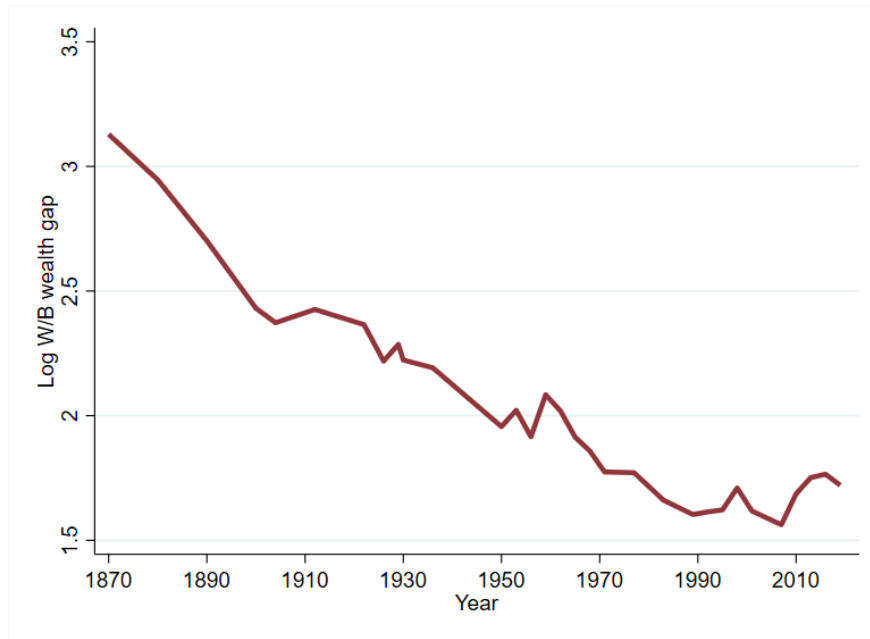
(a) Log wealth gap
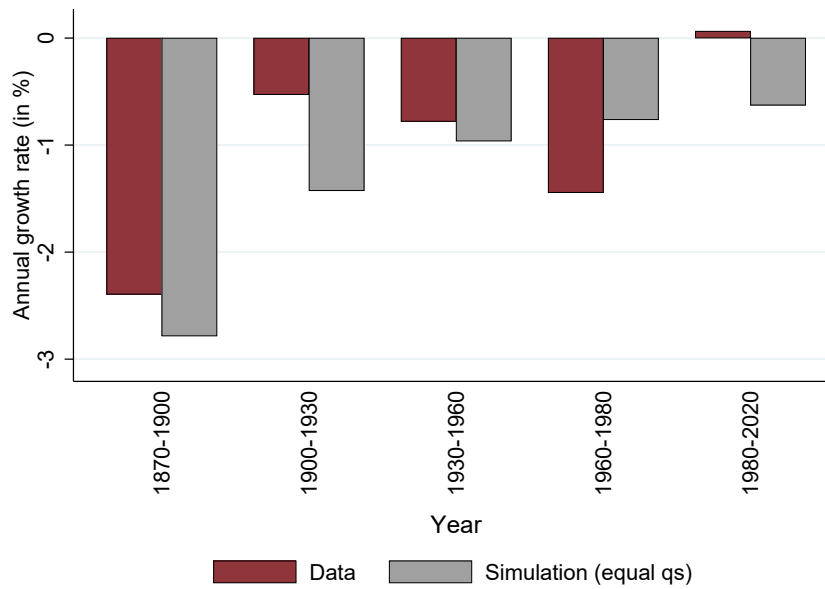

(b) Annual wealth gap growth rates

Notes: Panel (a) presents logs of white-to-Black per capita wealth ratios from 1860 to 2020. Panel (b) shows annual average growth rates of the racial wealth gap for five periods: 1870-1900, 1900-1930, 1930-1960, 1960-1980, and 1980-2020. Data sources: Various, described in Section 3 and Appendix A.

Figure 5: Wealth gap convergence since 1980
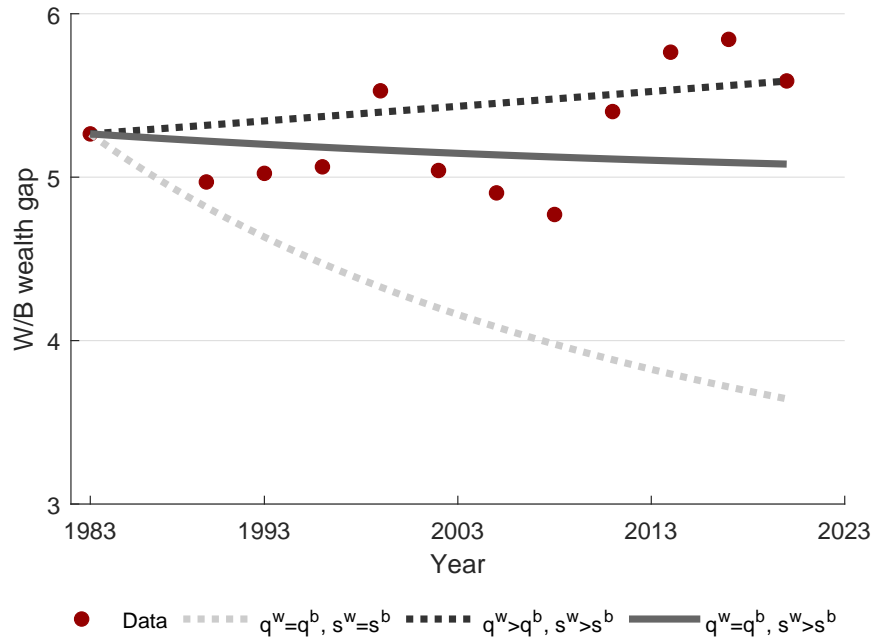
Notes: The simulated white-to-Black per capita wealth gap from 1980s to the present under three different scenarios. The light dashed line presents the convergence path under equal wealth-accumulating conditions (q and s). The solid line shows how the wealth gap would evolve under equal capital gains across Black and white households ($q^w = q^b$), but where white Americans have higher saving rates than Black Americans ($s^w > s^b$). Finally, the dark dashed line is our simulation using estimated values of q and s for Black and white households. Data sources: SCF+ and authors' simulations.

Figure 6: Contribution of capital gains to the racial wealth gap
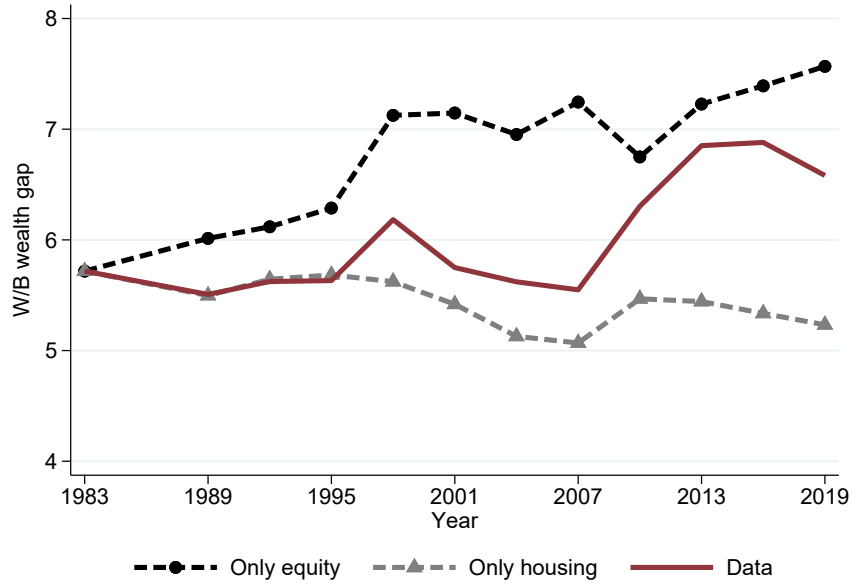
(a) Capital gains from equity and housing separately

(b) Total capital gains from equity and housing

Notes: First panel (a) presents counterfactual and observed white-to-Black per capita wealth gaps. The dashed line with dots shows the per capita wealth gap if there had been only capital gains in equity markets. The dashed line with triangles presents the per capita wealth gap if there had been only capital gains in the housing market. The solid line is the observed per capita white-to-Black wealth gap. In panel (b), the dashed line shows the counterfactual with both housing and equity capital gains while the solid line once again shows the observed wealth gap. Data sources: SCF+ and authors' simulations.

Table 1: Savings vs. capital gains-induced wealth convergence

	$s^w \frac{Y_t^w}{W_t^w} - s^b \frac{Y_t^b}{W_t^b}$	$q^w - q^b$
1950-1980	-1.82 p.p.	0.10 p.p.
1980-2020	-0.11 p.p.	0.32 p.p.
1950-2020	-0.96 p.p.	0.21 p.p.

Notes: Differences between white and Black saving rates (W-B), which are adjusted by their wealth-to-income ratios ($s^w \frac{Y_t^w}{W_t^w} - w^b \frac{Y_t^b}{W_t^b}$), and capital gains rates ($q^w - q^b$) during 1950-1980 and 1980-2020. Data sources: Various, described in Section 3 and Appendix A.

Table 2: Portfolio composition, 1983-2019

	Average value ($)		Total assets share		Debt-to-Value ratio	
	Black	White	Black	White	Black	White
Assets						
Housing	88,816	273,760	58%	39%		
Stocks	15,408	133,544	9%	18%		
Business	12,477	140,175	8%	19%		
Fixed income	24,414	138,493	16%	20%		
Other non fin. assets	12,492	29,032	9%	4%		
Liabilities						
Total debt	43,734	84,116			28%	12%
Housing debt	31,371	67,302			34%	24%
Educational debt	4,728	3,637				

Notes: Average portfolio shares of Black and white households over 1983-2019. Columns 1 and 2 presents the average value of assets and liabilities (in $2019); the next two columns present the share each asset class makes up of households' total net wealth value (not summing to 100%); and the next two columns present debt-to-value ratios, for Black and white households separately. The debt-to-value ratio for total debt represents the ratio of total debt to total assets while the debt-to-value ratio for housing debt represents the ratio of housing debt to total housing assets. Data sources: SCF+.

Online appendix for
"The racial wealth gap, 1860-2020"

Appendix A Data sources for historical racial wealth gap series

We draw on numerous sources to construct our baseline white-to Black per capita wealth gap series as well as our robustness checks. Table A.1 organizes sources for our baseline series by period and racial group. Below we introduce each source in turn before delving into additional details on newly digitized sources.

Complete-count US censuses of 1860 and 1870   We obtain our earliest measures of Black and non-Black wealth at the national level from the complete 1860 and 1870 census. All census data were obtained from Ruggles et al. (2021). Starting in 1860, census enumerators recorded the real property and personal property of every household member. Our measure of wealth is the sum of reported real and personal property. Census enumerators were provided with detailed instructions listing the kinds of items to be included in personal property; furthermore, the instructions explicitly stated that the personal property column was meant to encompass all wealth not captured in the real property column. Note that in 1870, enumerators were instructed to record personal property for those with at least $100 and real property for all. In Appendix B, we describe how we address both bottom censoring and top-coding in the census. We include the relevant portions of enumerator instructions from https://usa.ipums.org/usa-action/variables/REALPROP#questionnaire_text_section and https://usa.ipums.org/usa-action/variables/PERSPROP#questionnaire_text_section below.

Real property, 1860: "Value of Real Estate. – Under heading 8, insert the value of real estate owned by each individual enumerated. You are to obtain this information by personal inquiry of each head of a family, and are to insert the amount in dollars, be the estate located where it may. You are not to consider any question of lien or encumbrance it is simply your duty to enter the value as given by the respondent."

Real property, 1870: "Property. Column 8 will contain the value of all real estate owned by the person enumerated, without any deduction on account of mortgage or other incumbrance, whether within or without the census subdivision or the country. The value meant is the full market value, known or estimated."

Personal property, 1860: "Value of Personal Estate.– Under heading 9, insert (in dollars) the value of personal property or estate. Here you are to include the value of all the property, possessions, or wealth of each individual which is not embraced in the column previous, consist of what it may; the value of bonds, mortgages, notes, slaves, livestock, plate, jewels, or furniture; in fine, the value of whatever constitutes the personal wealth of individuals."

Personal property, 1870: "'Personal estate,' column 9, is to be inclusive of all bonds, stocks, mortgages, notes, live stock, plate, jewels, or furniture, but exclusive of wearing apparel. No report will be made when the personal property is under $100."

Southern state auditor reports, 1866-1929   Our estimates of Black wealth for the years 1880, 1890, 1904, 1912, 1922, and 1926 are constructed by estimating the growth rate of Black wealth from 1870 to 1929 using annual or biennial southern state auditor reports of Black wealth. These reports contained exhaustive accounts of state government finances, including – most importantly for our purposes – detailed information on property valuation and taxation at the county and state level. For some number of years, the following states reported such information separately by racial group: Georgia, Louisiana, North Carolina, Virginia, Kentucky, and Arkansas. We digitized property valuations and tax payments data for the relevant reports for these states to construct measures of Black and white wealth. A full description of these data and our digitization follows in Appendix A.1 below.

The *Negro Year Book*, 1930 and 1936   The *Negro Year Book* was a statistical encyclopedia on Black Americans published between 1913 and 1945 by Monroe Nathan Work (and collaborators after his death in 1945).

These books, edited by Monroe Nathan Work (1866-1945) contain historical and contemporaneous statistics on Black economic status, including estimates of aggregate Black wealth. We draw on these estimates for measures of Black wealth during the Great Depression. Estimates are available for 1930 and 1936 in these years. We describe our reconstruction of Work's approach for estimating national wealth and our subsequent adjustment of his estimates in Appendix B.5.

National wealth sources, 1870-1936   For the time period 1870-1936, we do not have separate information on national non-Black wealth. Therefore, we estimate non-Black wealth by subtracting total national wealth from our estimated Black wealth measures. We draw national wealth estimates for the period 1870-1922 from the U.S. Census Bureau's "Wealth, Public Debt, and Taxation" report covering national and state-level wealth from 1850 to 1922 (United States Bureau of the Census et al., 1924).[43] We use total taxable wealth as our measure of national wealth. Estimates are available for the following years: 1870, 1880, 1890, 1900, 1904, and 1922. For the years 1926, 1930, and 1936, we use national wealth estimates from Saez and Zucman (2016). The measure is net private wealth.

Historical and modern waves of the Survey of Consumer Finances (SCF+)   From 1949 to the present, we use harmonized waves of the Survey of Consumer Finances (the SCF+), which provides micro-level data on households' socioeconomic characteristics and wealth composition. The SCF+ is an extension of the Survey of Consumer Finances (SCF) provided by Kuhn, Schularick, and Steins (2020). Before the modern SCF, which the U.S. Federal Reserve Board has conducted every three years since 1983, the Survey Research Center of the University of Michigan gathered data on household income and wealth along with their demographics at an annual frequency from 1947 to 1971, and again in 1977. Kuhn, Schularick, and Steins (2020) extract this historical data

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[43]Early editions were titled "Wealth, Debt, and Taxation."

based on the original codebooks and match the variables across the historical and modern waves. The final dataset allows us to study the joint distribution of income and wealth consistently from 1949 to 2019.

Wealth in the SCF+ comprises marketable net wealth, which is the current value of all marketable assets net the current value of debts. Assets include liquid assets (certificate deposits, checking and savings accounts, call and money market accounts), housing and other real estate, bonds, stocks, corporate and non-corporate equity, and defined contribution retirement accounts. Total liabilities are the sum of housing debt, car loans, education loans, loans for consumer durables, credit card debt, and other non-housing debt. As we focus on marketable wealth, we exclude social security and defined benefit pension claims. We use these data to compute per capita wealth by racial group.

Table A.1: Period-by-racial-group schematic of wealth measures and data sources for baseline series

Year	Black		National	
	Measure	Source	Measure	Source
1860	Personal + real property	Census	Personal + real property	Census
1870	Personal + real property	Census	Estimated value of all taxable property	Wealth, Public Debt, and Taxation Report
1880, 1890, 1900, 1904, 1912, & 1922	$W_t = W_{1870} \cdot e^{(\text{estimated growth rate})(t-1870)}$; estimated growth rate is $\hat{\beta}$ from Log wealth$_{st}$ = $\alpha + \beta \cdot t + \delta_s + \varepsilon_{st}$, where Log wealth$_{st}$ is the log of Black wealth collected from auditor reports from states containing racial breakdowns of assessed wealth and tax payments	Southern state auditor reports	Estimated value of all taxable property	Wealth, Public Debt, and Taxation Report
1926	Same as for 1871-1922.	Same as for 1871-1922.	Net private household wealth (after 1922)	Saez & Zucman (2016)
1930 & 1936	Estimated wealth, levels adjusted	Work (1930; 1936)	Net private household wealth	Saez & Zucman (2016)
1950-2019	Net wealth	SCF+	Net wealth	SCF+

Notes: Measures of and sources for Black and national wealth in authors' baseline wealth gap series.

A.1   Southern state auditor reports, 1866-1936

Our primary data sources for estimating Black wealth in the late 19th and early 20th centuries are the annual or biennial auditor, treasurer, or comptroller reports for the states of Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia. These reports contained financial accounts that included government spending, revenue, and debts; audits on financial records; savings on state banks and pension funds; and, detailed information on property valuation and taxation.[44] For varying amounts of time, each of the six states listed above reported either property valuations or tax payments separately for their Black and white populations. Figure A.1 shows an excerpt from the 1903-1905 auditor report for the state of Virginia. These reports were originally analyzed by Du Bois (1901) and Higgs (1982) (Georgia only) and Margo (1984a) (the remaining five states) to understand post-Civil-War wealth accumulation by Black Americans as well as Black-white wealth dynamics during this period. In this appendix, we briefly describe our digitization and construction of Black and white wealth measures from these data. We also provide descriptive statistics on Black wealth and racial wealth inequality in these states.

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[44]For a detailed description of the general property tax system in place in the US at the time, see Dray, Landais, and Stantcheva (2023).

Figure A.1: Virginia auditor report, 1904

All money on deposit with any bank or other corporation, firm, or person. Value.	Shares of stocks of incorporated companies.	TOTAL VALUE	Total value of personal property owned by whites.	Total value of personal property owned by negroes.	COUNTIES.
~~,~~~	. . . .	~,~~~,~~~	~,~~~,~~~	~,~~~	Shenandoah.
29,389	. . . .	570,785	566,695	4,090	Smyth.
45,226	10	1,782,249	1,574,839	207,410	Southampton.
7,282	. . . .	348,807	304,423	44,384	Spotsylvania.
250	. . . .	306,787	290,532	16,255	Stafford.
45,428	4,250	446,656	371,288	75,368	Surry.
34,798	. . . .	609,788	510,358	99,430	Sussex.
97,602	. . . .	1,242,088	1,221,560	20,528	Tazewell.
700	. . . .	353,297	349,011	4,286	Warren.
1,550	. . . .	149,739	115,799	33,940	Warwick.
18,605	. . . .	748,168	739,670	8,498	Washington.
. . . . . .	. . . .	316,659	266,346	50,313	Westmoreland.
82,159	50	857,007	850,017	6,990	Wise.
103,220	10,000	1,124,340	1,117,860	6,480	Wythe.
3,500	. . . .	252,476	204,429	48,047	York.
114,165	618,523	$80,254,537	$75,901,055	$4,353,482	Total, Counties.

Notes: Excerpt from Virginia's Annual Report of the Auditor of Public Accounts for the year 1904 showing county totals of personal property for white and Black Virginians separately. Data sources: Auditor of Public Accounts (1904).

Digitization We used the website HathiTrust Digital Library (https://www.hathitrust.org/) to access scanned auditor reports, which we downloaded and from which we digitized the relevant information. We then supplemented with dozens of physical copies of additional reports available in the Princeton University Library ("PUL") or via inter-library loan ("ILL"), which we scanned and then digitized in a similar manner.

We were unable to obtain either digital or physical copies for a handful of years – 1873 for Georgia, 1923 for North Carolina, and 1928 for North Carolina and Virginia. Additionally, some of the original books contained missing or damaged pages, preventing data collection for that year. We supplemented our data on Georgia with data from Du Bois (1901), which provided Black wealth estimates for 1873. We also supplemented our data for North Carolina and Virginia in the late 1920s using Work (1926) and Work (1931).

We have digitized state-level wealth data from the following reports and other sources for each state:

1. Arkansas: Auditor of State (1896; 1898; 1901; 1903; 1904; 1906; 1909; 1911; 1913).

2. Georgia: Comptroller General of the State of Georgia (1878; 1879; 1882; 1884a; 1884b; 1885; 1888; 1890; 1891; 1892; 1893; 1894; 1895; 1898; 1899; 1900; 1886; 1887; 1894; 1896; 1900; 1901; 1902; 1904; 1905; 1907; 1908; 1909a; 1909b; 1911; 1912; 1913; 1914; 1915; 1916; 1917; 1918; 1919; 1920; 1921; 1922; 1924; 1925; 1926; 1927; 1928; 1929; 1930; 1931; 1932; 1933; 1934; 1935; 1936; 1937); Du Bois (1901).

3. Kentucky: Auditor of Public Accounts, of the State of Kentucky (1866; 1867; 1869; 1871; 1873; 1877a; 1877b; 1879; 1883; 1885); Margo (1984b).

4. Louisiana: Auditor of Public Accounts for the State of Louisiana (1892; 1894; 1896; 1900; 1906; 1908; 1910; 1912; 1914; 1916; 1918).

5. North Carolina: Auditor of the State of North Carolina (1891; 1892; 1893; 1894; 1895; 1896; 1898), State Tax Commission (1903; 1904a; 1904b; 1905; 1906; 1907; 1908; 1909; 1910; 1911; 1912; 1913; 1914; 1915; 1891; 1917; 1918; 1919; 1920; 1921; 1922; 1923; 1923; 1925a; 1925b; 1926; 1929; 1930); Work (1926; 1931).

6. Virginia: Auditor of Public Accounts (1891; 1892; 1893; 1894; 1895; 1896; 1899; 1900; 1901; 1902; 1903; 1904; 1907; 1910; 1911; 1912; 1913; 1916a; 1916b; 1917; 1918; 1919; 1920; 1922; 1923a; 1923b; 1925; 1926; 1926; 1927; 1930); Work (1931).

The following chart indicates the state-years of data available.

Year	Arkansas	Georgia	Kentucky	Louisiana	North Carolina	Virginia
1866			■			
1867			■			
1868			■			
1869			■			
1870			■			
1871						
1872			■			
1873			■			
1874		■	▨			
1875		■	▨			
1876		■	▨			
1877		■	▨			
1878		■				
1879		■				
1880		■	▨			
1881		■	▨			
1882		■	▨			
1883		■	▨			
1884		■				
1885		■	▨			
1886		■				
1887		■				
1888		■				
1889		■			■	
1890		■			■	▨
1891		■		■	■	▨
1892		■		■	■	▨
1893		■		▨	▨	▨
1894		■			■	▨
1895	■	■		▨		▨
1896	■	■				▨
1897	■	■		▨	■	▨
1898	■	■		■		▨
1899	■	■		■	■	
1900	■	■		▨	■	
1901	■	▨		▨	■	▨
1902	■	▨		▨	■	
1903	■	▨		▨	■	
1904	■	▨		■	■	■
1905	■	▨		▨	■	▨
1906	■	▨		■	■	
1907	■	▨		■	■	
1908	■	▨		■	■	
1909	■	▨		■	■	

Legend:
- ■ Scanned books on HathiTrust
- ▨ Physical books from PUL/ILL
- (light) Additional data from Work

Year	Arkansas	Georgia	Kentucky	Louisiana	North Carolina	Virginia
1910	Scanned	Physical		Scanned	Scanned	
1911	Scanned	Physical		Scanned	Scanned	
1912		Physical		Scanned	Scanned	Scanned
1913		Physical		Scanned	Scanned	Physical
1914		Physical		Scanned	Scanned	Additional
1915		Physical		Scanned	Scanned	Physical
1916		Physical		Scanned	Physical	Physical
1917		Physical			Physical	Physical
1918		Physical			Physical	Physical
1919		Physical			Physical	Physical
1920		Physical			Physical	
1921		Physical				Physical
1922						Physical
1923		Physical			Additional	Physical
1924		Physical				Physical
1925		Physical			Physical	Physical
1926		Physical				
1927		Physical				
1928		Physical			Additional	Additional
1929					Physical	
1930						
1931		Physical				
1932		Physical				
1933		Physical				
1934		Physical				
1935		Physical				Additional
1936		Physical				

Legend:
- Scanned books on HathiTrust (black)
- Physical books from PUL/ILL (dark gray)
- Additional data from Work (light gray)

Construction   These reports provide either county-level aggregates of assessed wealth by racial group or aggregate tax payments by racial group. In the latter case, we follow Margo (1984a) and impute Black and white aggregate wealth by assuming the Black-white ratio of property tax payments equals the wealth ratio and multiplying the former by the state's reported aggregate wealth for that year or an adjacent year. We detail our approach for each state below.

1. Arkansas: The auditor reports for the state contained, for all years, assessed valuations of total property (not broken down by race) along with total property tax payments by racial group. Following Margo (1984a), we imputed Black and white aggregate wealth by assuming the Black-white ratio of property tax payments equals the wealth ratio and multiplying the former by the state's reported aggregate property valuation for that year.

2. Georgia: The comptroller reports for the state consisted, for all years, of assessed valuations of total property (not broken down by race) along with assessed valuations of total property of Black residents. We calculated white wealth by subtracting Black assessed valuations from total assessed valuations.

3. Kentucky: The information contained in the reports differed by year. Between 1866 and 1877, the reports contained information on total assessed valuations (not broken down by race) and assessed valuations for Black residents. For these years, we calculated white wealth by subtracting Black assessed property from total assessed property. From 1880 forward, the reports contained information on total assessed property broken down by race.

4. Louisiana: The auditor reports for the state consisted, for all years, of county-level total assessed wealth broken down by racial group.

5. North Carolina: The information contained in the reports differed by year. Between 1889 and 1894, the reports contained information on total assessed property (not broken down by race) along with total property tax payments by racial group. Following Margo (1984a), we imputed Black and white aggregate wealth by assuming the Black-white ratio of property tax payments equals the wealth ratio and multiplying the former by the state's reported aggregate property valuation for that year. From 1897 forward, the reports contained information on total assessed property broken down by racial group.

6. Virginia: The auditor reports for the state consisted, for all years, of county-level total assessed real and personal property broken down by racial group. We summed real and personal property to obtain total assessed wealth for each group.

Comparison of historical state wealth ratios to Margo (1984)   Below we compare our estimates for the white-Black per capita wealth ratio derived from our digitization of state auditor reports to those of Margo (1984a). Table A.2 shows that results are broadly similar for most states with Louisiana being the exception. This is due to the fact that the Louisiana state auditor reports

exclude data for Orleans Parish, which includes New Orleans. Margo (1984a) assumes that country parish ratios apply to the state overall, for which aggregate wealth is available, and computes the state-wide wealth ratio this way. We use a different approach to account for the possibility of greater wealth holding by Black Americans in New Orleans relative to the country parishes. We take the 1870 Census and compute white-to-Black wealth ratios in New Orleans. We then subtract total country parish wealth from total wealth in Louisiana to derive wealth in New Orleans every year for which tax data are available. Assuming that the white-to-Black wealth ratio in New Orleans holds constant over time, we compute Black and white wealth in New Orleans using this method and then recompute the per capita wealth ratio for the state of Louisiana using these adjusted measures for aggregate Black and white wealth in the state.

Table A.2: White-Black per capita wealth ratios from state tax records

	1870	1880	1885	1890	1895	1900	1910
Arkansas							
Margo (1984b)					9	8	6
Our estimates					9	8	6
Georgia							
Margo (1984b)							
Our estimates		36	31	26	24	23	16
Kentucky							
Margo (1984b)	36	22	19				
Our estimates	33	22	19				
Louisiana							
Margo (1984b)				18		20	25
Our estimates				16		16	17
North Carolina							
Margo (1984b)				17		12	9
Our estimates				17		12	9
Virginia							
Margo (1984b)				19		14	10
Our estimates				19		14	10

Notes: Wealth gap estimates from state auditor reports. Margo (1984b) refers to the data originally collected from southern state auditor reports and reported for selected years in Table 1 of that paper (Margo, 1984a). Data sources: Our estimates are calculated from a new digitization of the same reports and supplemented with data from Du Bois (1901) on Georgia.

Descriptive patterns in Black wealth and white-to-Black wealth ratios in the six states

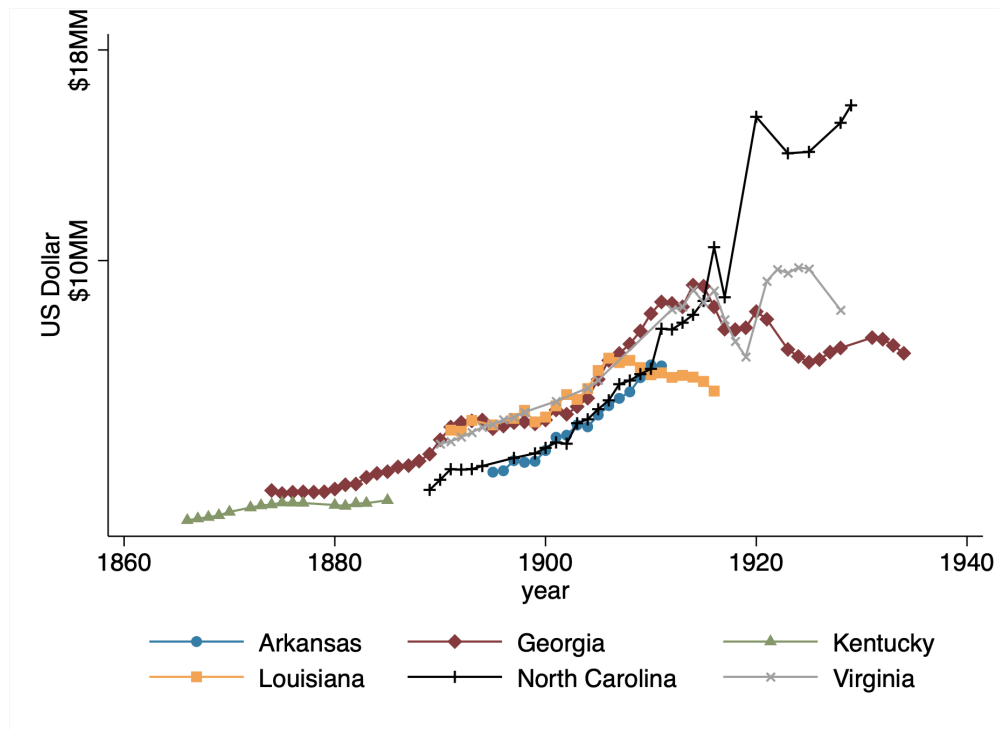Figure A.2 plots aggregate assessed Black wealth in each of the six states adjusted using the Warren-

Pearson Index to the 1910-1914 price level. The figure shows that the assessed wealth of Black Americans grew substantially over this period in each of the six states, with particularly fast growth around the turn of the 20th century.[45]

Figure A.3 plots the white-to-Black per capita wealth ratios for each state. The pattern of rapid initial convergence followed by a slowdown that we document in our national series also holds for these six states.

Figure A.4 extends the above analysis using data from the census and from the SCF+. As there is no consistent micro-level data with information on states, we draw on various data sources. For 1860 and 1870, we use the full-count census data that include information on the states (filled dark blue diamonds). The red hollow circles represent the average racial gap in taxable wealth coming from the Southern state auditor reports. For the post-1950 period, we first utilize the SCF+ that provides regional information until 1983 (green diamonds). Afterwards, we use the PSID (yellow triangles). Overall, we observe that even in the more recent period, the wealth gap in the six southern states the same hockey-stick shape of convergence as the national average, albeit with an initially higher average.

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[45]Assessed wealth is not equivalent to the market value of wealth, and extensive documentation of assessment ratios shows that they varied over time and across locations (Dray, Landais, and Stantcheva, 2023). Thus changes in assessed values are not equivalent to changes in market values. We discuss the role of assessment ratios over this time period in detail in Appendix B.3, where we describe our estimation of Black wealth growth rates using these data.

Figure A.2: Aggregate Black wealth by state, 1860-1920 (in $1910-1914)

Notes: Measures of aggregate assessed Black wealth for the six southern states with auditor reports recording Black and white wealth or tax payments separately (Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia). Note, we omit the years 1918 and 1919 for North Carolina where fluctuations in total property seem implausibly large, even after adjusting for assessment ratio changes. Estimates are adjusted to be in $1910-1914 using the Warren-Pearson Index (United States Bureau of the Census, 1949). Data sources: Southern state auditor reports (see Appendix Section A.1).

Figure A.3: White-Black per capita wealth ratio in the six tax data states, 1860-1936
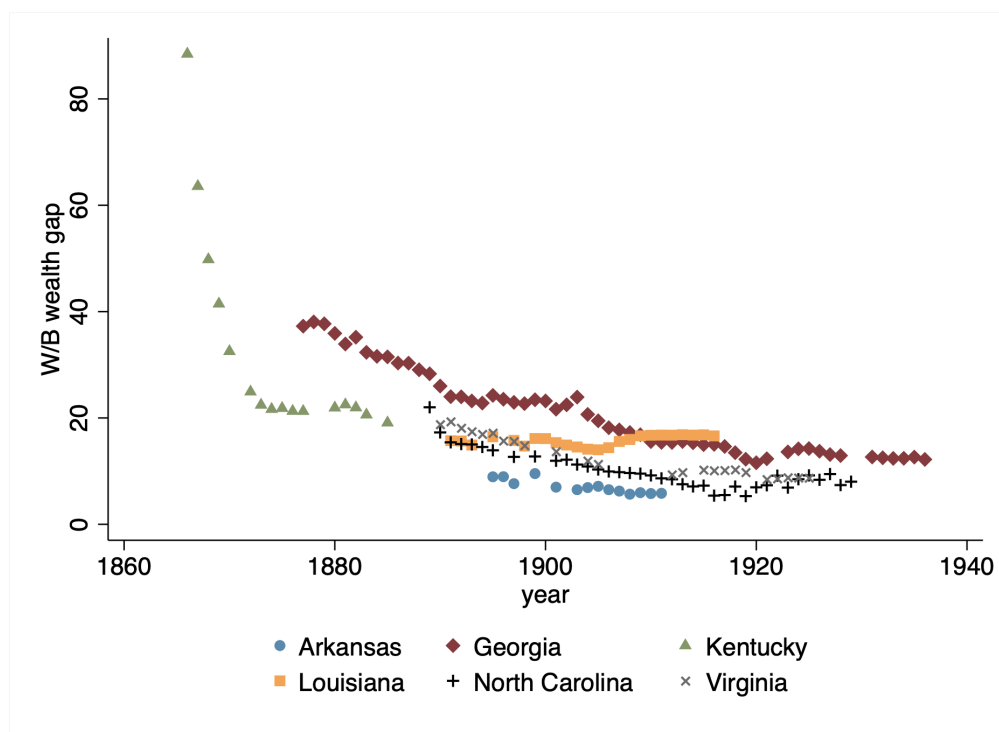
Notes: White-to-Black per capita wealth gaps for the six southern states with auditor reports recording Black and white wealth or tax payments separately (Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia). Data sources: Southern state auditor reports (see Appendix Section A.1) and Cummings and Hill (1918).

Figure A.4: White-Black per capita wealth ratio in the six tax data states, 1860-2020
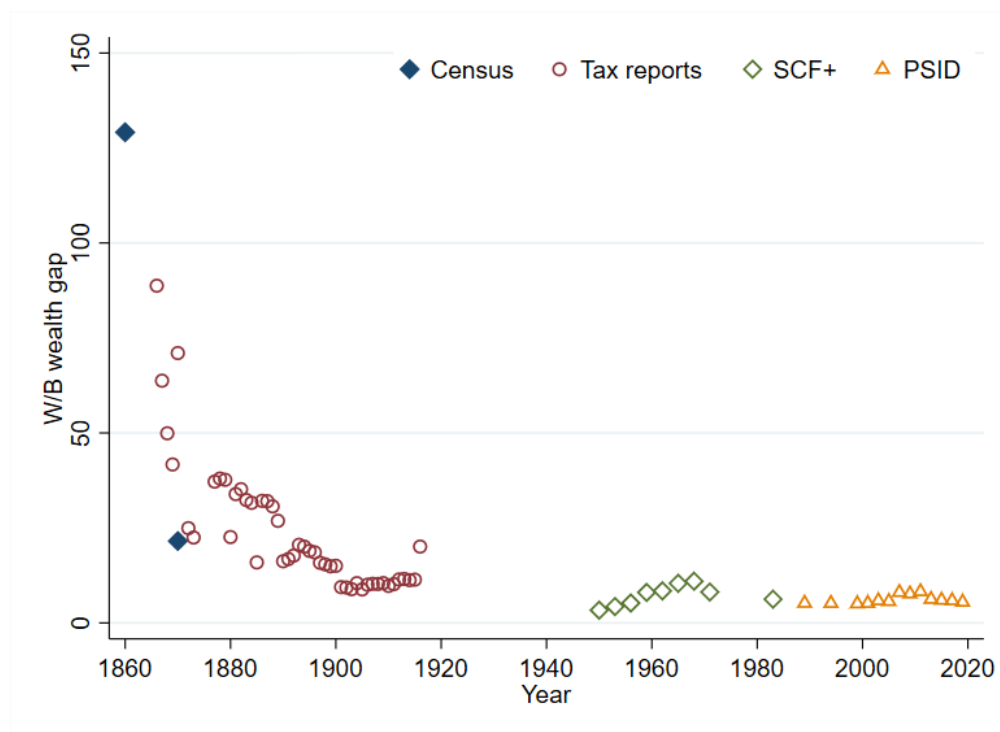
Notes: White-to-Black per capita wealth gap series in Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia. The dark blue filled diamond presents the results using census data. Red hollow circles are from tax reports in the six southern states. Green hollow diamonds represents the racial wealth gap using the SCF+. Finally, the yellow triangles are based on data of the PSID. Data sources: Census (Ruggles et al., 2021); southern state auditor reports (see Appendix Section A.1); Du Bois (1901); SCF+; and the PSID.

Appendix B   Additional details on construction of the historical racial wealth gap series

This appendix provides additional details on the construction of our long-run series.

B.1   Top-coding in the 1860 and 1870 censuses

There are very few top-coded observations in the 1860 and 1870 census (211 in 1860 and 432 in 1870). To adjust for top-coding, we take the earliest available estimates for wealth concentration at the very top of the U.S. wealth distribution from Saez and Zucman (2016). They report that the top 0.01 percent of tax units owned 8.8 percent of total wealth in 1913. To impute wealth levels of top-coded observations, we take national estimates of total taxable wealth from United States Bureau of the Census et al. (1924), which was $16,159,616,068 in 1860 and use this to derive an estimate for average wealth of the top 0.01 percent of tax units in 1860. In the Census data, we consider the household to be equivalent to the tax unit and replace all top-coded observations using this estimate for average top wealth. In other words, we estimate that the top 0.01 percent of the population in 1860 held average wealth of $2,668,456 and we take this as the average wealth of the top-coded households. We proceed with the same steps for 1870 and estimate that the average wealth of the top 0.01 percent of the wealth distribution was wealth of $3,432,867. The estimate for national wealth in 1870 is $30,068,518,507.

Because top-coded individuals make up less than .01% of the population in both censuses and we only impute wealth for the top-coded individuals, we end up with a top 0.01% share of 4.4% in 1860 and 6.9% in 1870. A top .01% share of 4.4% is the median top 0.01% share observed in the time series by Saez and Zucman (2016) while 6.9% is in the third quartile of their estimates. In case we underestimate top white wealth with this imputation, as a sensitivity check, we used the minimum and maximum values of the top 0.01% share from Saez and Zucman (2016) for the years 1913 to 2012 – which are 2.2% and 11.4%, respectively – to generate alternative estimates of the wealth of top-coded white individuals. Doing so gives us a range of estimates for the wealth gap in 1860 of 55.0 to 56.7 and a range in 1870 of 20.6 to 21.6 .

B.2   Alternative assumptions around bottom-censoring in the 1870 census

In the first step, we consider the 1860 census data that does not have censoring at 100 dollars for personal property. We use these data to estimate the share of persons with personal wealth of zero conditional on having wealth below 100 dollars. For the Black population, we include the enslaved population of 3,858,866 persons with personal property of 0 dollars. We find that 99.4% of the Black population and 97.5% of the white population in 1860 that report personal property below 100 dollars report zero dollars of personal property. In the entire population only 15.1% of all individuals, 17.3% of white individuals and 1.3% of Black individuals, report positive values for

personal property in 1860.

We then consider the 1870 data and find that the recording of personal property in 1870 also contains slightly above 80,000 non-zero observations below 100 dollars whereas there should be none (54,000 white individuals, 26,000 Black individuals). We consider these records as the result of data collectors not following the instructions and also recording values below 100 dollars. Based on these records, we estimate separately for the Black and white population conditional means for personal property below 100 dollars in 1870, i.e., we compute the conditional mean for positive personal property below 100 dollars for Black and white individuals. For Black individuals, we get a mean of 39 dollars and for white individuals a mean of 48 dollars. We impute these means to a fraction of individuals that according to our 1860 estimates should have non-zero personal property below 100 dollars, i.e., we match the 1860 share for the Black and white population with "true zeros." Before the imputation, average personal property of Black individuals was 15 dollars and it is 15 dollars after the imputation. For white individuals, we have 248 dollars of average personal property before the imputation and 249 dollars including the imputation. The share of individuals with zero wealth in the group of individuals with less than 100 dollars is 99.8% for white individuals before the imputation and it is 97.5% after the imputation. For Black individuals, the share of Black individuals with zero personal property conditional on having less than 100 dollars of personal property is 99.4% after the imputation unchanged from the 99.4% before the imputation. The shares for zero wealth after the imputation are targeted based on the 1860 data.

In both years, we replace missing observations with zeros. In 1860, we replace 2,004 observations for real estate and 1,608 observations for personal property. In 1870, we replace 329 observations for real estate and 355 observations for personal property.

B.3 Estimating Black wealth growth rates from state tax data

We use data from the state auditor reports described in Appendix A.1 to estimate growth rates of Black wealth, which we then use to extrapolate aggregate Black wealth as recorded in the 1870 Census until the year 1926. Specifically, we regress log wealth in state s on a linear time term t and state fixed effects δ_s:

$$\log w_{st} = \alpha + \beta t + \delta_s + \varepsilon_{st}. \tag{6}$$

Because we have an unbalanced panel of state-years, we weight the regression by the inverse number of observations.[46] Figure B.1 plots predicted log wealth ($\hat{\log} w_{st} = \hat{\alpha} + \hat{\beta} t + \hat{\delta}_s$) against observed log wealth for the six states using the estimated coefficients from regression equation 10. The figure shows a close fit to the data. Our extrapolation of Black wealth after 1870 using this estimated growth rate ($\hat{\beta}$) is described in Section 3.

As discussed in Section 3.1.2, we must make two assumptions to apply the growth rate estimated

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[46]We find a similar growth rate using the unweighted regression.

using assessed Black wealth in these six states to Black wealth nationally. First, the growth rate of Black wealth in these six states must be representative of the national growth rate of Black wealth. Second, that changes in assessment ratios and Black over-assessment do not bias our estimate of the growth rate. We explore these issues in detail in this Appendix section.

Figure B.1: Log wealth and predicted log wealth for six southern states
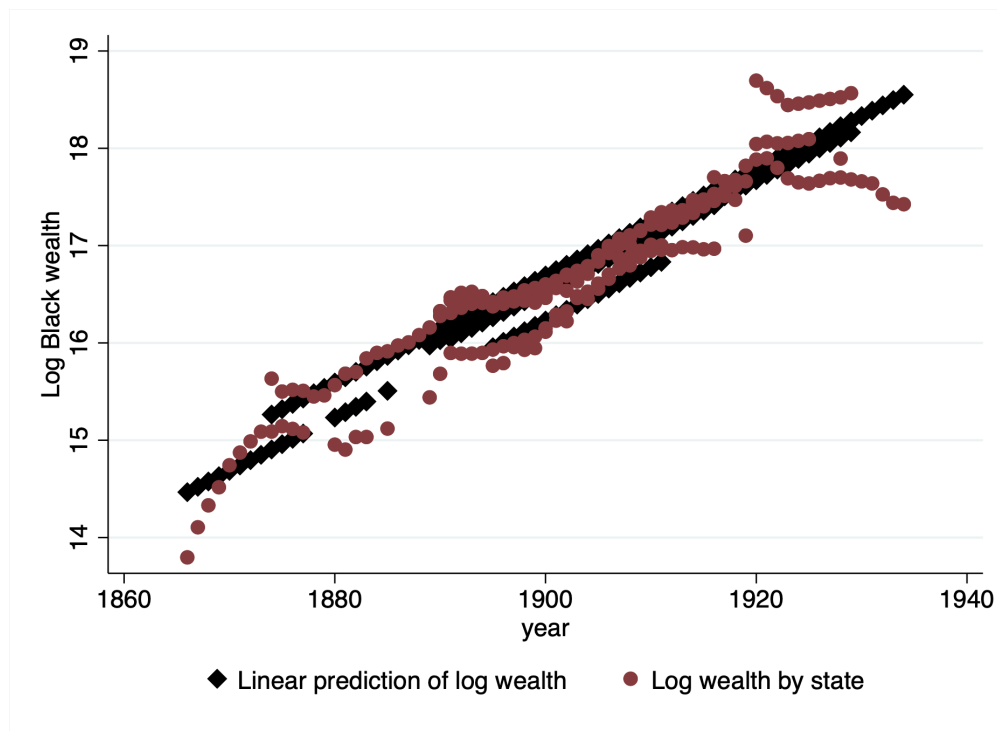
Notes: Log wealth and log wealth predicted using a linear time trend and state fixed effects. States included are Kentucky, North Carolina, Georgia, Arkansas, Virginia, and Louisiana. Data sources: Southern state auditor reports; Du Bois (1901); Work (1922); and Margo (1984a).

B.3.1 Comparison of growth rates in tax record states to national growth rates

As a first step, we compare growth rates in Black wealth in the six states for which we have tax data to that of Black wealth nationally using the available data. First, we examine the growth rate in real wealth using the 1870 census, which recorded real property, and the 1930 and 1940 censuses which recorded home values for owner-occupied homes.[47] Taking the log of Black real wealth in 1870 and the log of Black real wealth averaged across 1930 and 1940, we construct the growth rate as the annualized difference in log wealth across the two periods. Figure B.2 shows the results. As seen in the figure, while some of the six states have growth rates higher than the national, others

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[47]We cannot separately identify home values from other real property in 1870, and the 1930-1940 censuses does not include measures of personal property or real estate wealth beyond home values (for owner-occupied units). We take the average of 1930 and 1940 to smooth out real wealth declines during the Great Depression which may have been differential across states and regions.

have growth rates below. The average growth rate across these states, depicted in the dashed line is extremely similar to the national growth rate.

Figure B.2: Comparison of tax state wealth growth rates to national using census data
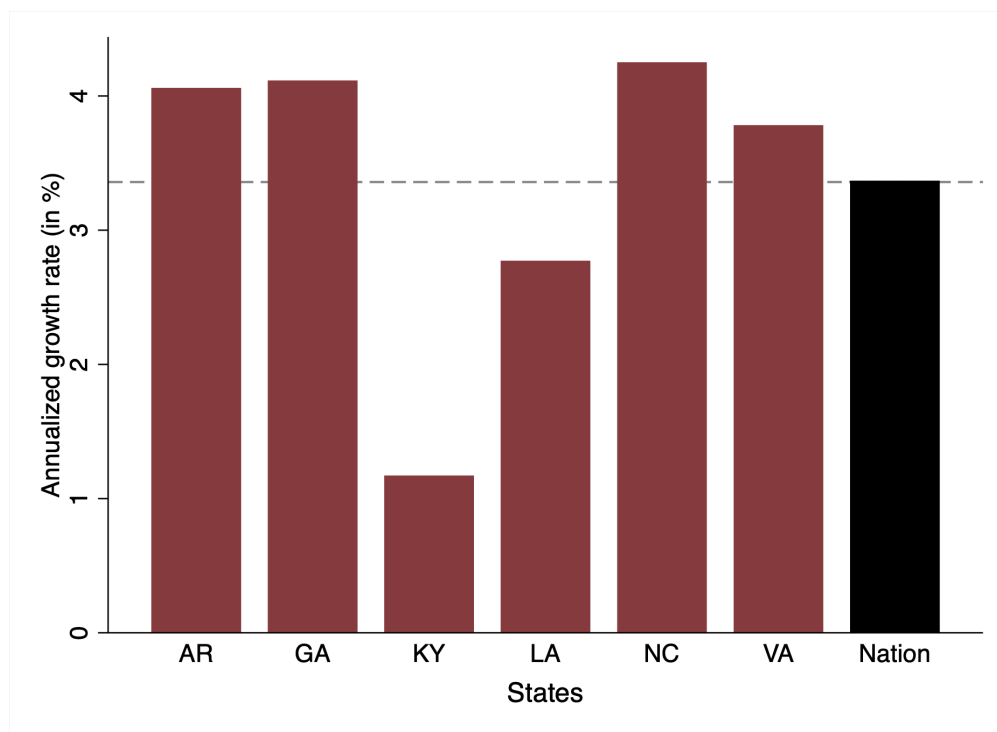
Notes: State-level and national growth rates in real property values (from 1870 to the 1930s (averaging 1930 and 1940). The horizontal dashed line marks the average growth rate across the six southern states with data on wealth by racial group from 1860 to 1929. The states are Kentucky, Arkansas, Virginia, Georgia, Louisiana, and North Carolina. The dashed line shows the average growth rate across the six states. Data sources: 1870, 1930, and 1940 complete-count censuses (Ruggles et al., 2021).

B.3.2 Evolution of southern Black wealth shares

In a second step, we examine to what extent the share of aggregate Black wealth located in the six states (and the South overall) changed over time. A simple decomposition relates the growth rate of Black wealth in one set of states to that of Black wealth in the other states. For simplicity, we write this decomposition in terms of the South versus the North, but we show empirically that the six states with tax data are in fact more representative of the national picture than the South as a whole.

Denote total Black wealth in region $i = \{S, N\}$ in period t by $W_t^{B,i}$, where S stands for South and N for North (or non-South). Total national Black wealth (W_t^B) is then, per definition, the sum of northern and southern Black wealth:

$$W_t^B = W_t^{B,S} + W_t^{B,N}.$$

Define the share of aggregate Black wealth in the South in period t as

$$\alpha_t = \frac{W_t^{B,S}}{W_t^B}.$$

In this case, national wealth growth rate g is a wealth-share-weighted average of northern and southern wealth growth rates:

$$\frac{W_{t+1}^B}{W_t^B} = \frac{W_{t+1}^{B,S} + W_{t+1}^{B,N}}{W_t^{B,S} + W_t^{B,N}} \tag{7}$$

$$1 + g = \alpha_t(1 + g^S) + (1 - \alpha_t)(1 + g^N) \tag{8}$$

Finally, the growth rate of the southern Black wealth share α is

$$
\begin{aligned}
\frac{\alpha_{t+1}}{\alpha_t} &= \frac{W_{t+1}^{B,S}}{W_{t+1}^B} \frac{W_t^B}{W_t^{B,S}} \\
&= \frac{1 + g^S}{1 + g} \\
&= \frac{1 + g^S}{1 + \alpha_t g^S + (1 - \alpha_t)g^N} \\
&= \left(\alpha_t + (1 - \alpha_t)\frac{1 + g^N}{1 + g^S} \right)^{-1}.
\end{aligned}
$$

Therefore,

$$\alpha_{t+1} = \alpha_t \left(\alpha_t + (1 - \alpha_t)\frac{1 + g^N}{1 + g^S} \right)^{-1}. \tag{9}$$

Thus, the evolution of the southern wealth share depends on the relative growth rates of Black wealth in the North compared to the South. Only if the northern black growth rate exceeds the growth rate in the South, we will observe declining southern Black wealth shares (and vice versa).[48]

Given these insights, we now explore the evolution of the Black wealth share in the tax states and in the South overall from 1870 to 1950. During this period, we only have micro-level data on total wealth from the 1870 census and SCF+, which starts in 1950. Thus, we also construct share of Black housing wealth in these regions over time, so we can examine wealth shares in 1930 and 1940 as well, using data from census.[49] Figure B.3 presents the time series of the shares of total Black wealth and housing wealth in the tax states and the South relative to the country as a whole from 1870 to 1950.

The picture that emerges is one of relative stability. The share of Black wealth in the South

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[48]See Kuhn, Schularick, and Steins (2020) for a similar argument regarding wealth shares of poor and rich households over time.

[49]We use real property as our measure of housing wealth in 1870.

decreased from 61% in 1870 to 51% in the post 1950 period. The share of housing wealth in the region fell from 56.4% in 1870 to 55.8% over the 1930-1940 period and to 50% in 1950. The share of Black wealth located in the states with tax data remained even steadier over the long run. The share of total Black wealth in the six states was 25% in 1870 and 25% in the post-1950 period. The share of Black housing wealth located in these states fell slightly from 25% in 1870 to 23% in the 1930-1940 period and was once again 25% in the post-1950 period.

A decline of 2 pp over the 60 year period between 1870 and 1930 would imply a log growth rate in the six states that is 2 basis points smaller than that in the remaining states (5.33% in the tax states compared to 5.35% in the remaining states). Thus, we conclude that the states with tax data on Black wealth have growth rates representative of Black wealth in the nation overall.

B.3.3 Black churches

In addition to the evidence above, we also provide an alternative estimate for Black wealth growth rates using information on the economic characteristics of Black churches. Black churches began forming before the Civil War and became centers of postbellum Black American life. New congregations would either buy land and build a structure for worshipping or would purchase white church buildings (Woodson, 1921; Rabinowitz et al., 1978). Typically, funds for church projects, buildings, and building improvements were raised from the community (Du Bois, 1903). According to Rabinowitz et al. (1978), Black churches became a testament to Black material progress after Emancipation. He writes that "[t]o trace the move of a church from its original building to another larger and more attractive one is to trace 'the progress of the race.'"'

To measure the growth in the value of property owned by Black churches, we use data from the census of religious bodies. Table B.1 shows the wealth of Black churches in 1890, 1906, 1916, and 1926. Using these data, we regress log Black church property values on a linear time trend:

$$\log \text{Church Wealth}_t = \gamma + \beta^{\text{Church}} t + \epsilon_t. \tag{10}$$

We estimate an average growth rate ($\hat{\beta^{\text{Church}}}$) of 0.0549, very similar to the trend in log Black wealth from the state auditor reports covering a similar period, from 1870 to 1917. This independent estimate of the growth rate from Black wealth church property values corroborates our estimate from the state tax data.

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Figure B.3: Southern Black wealth and housing wealth share, 1870-1950
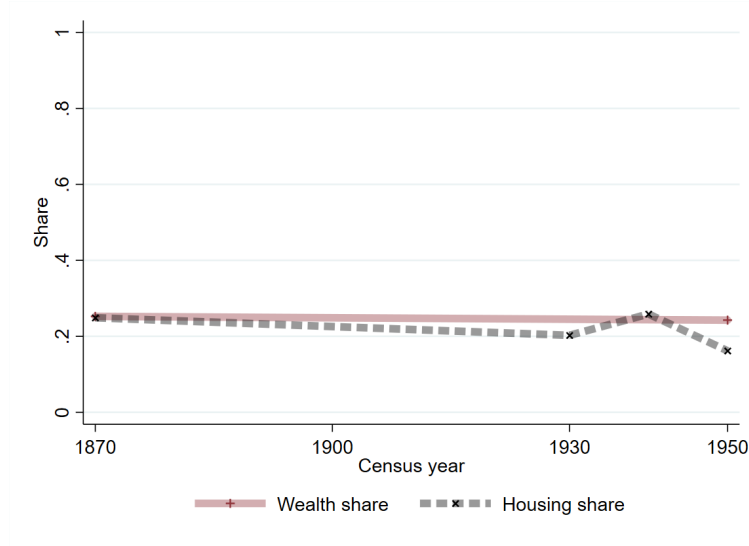
(a) Six tax data states
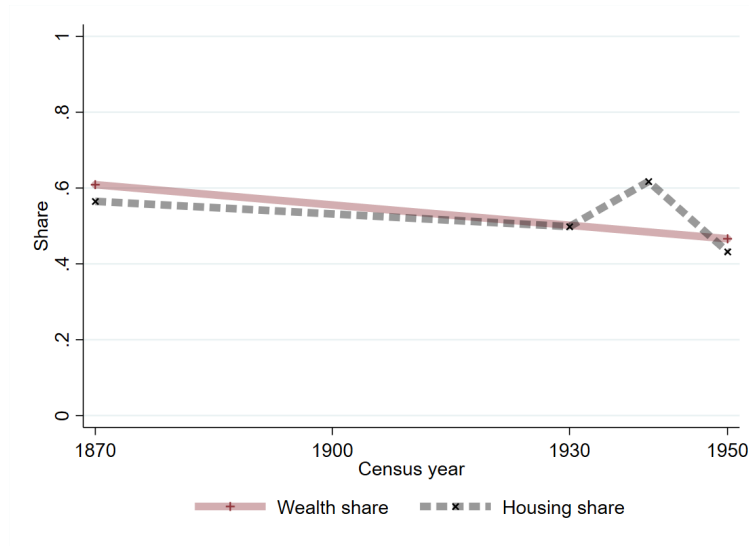
(b) Total south

Notes: Panel (a) presents the time series of the shares of aggregate Black wealth and housing wealth owned by the Black populations of Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia combined, from 1870-1950. Panel (b) presents the shares of aggregate Black wealth and housing wealth owned by the entire southern Black population. Data sources: Data sources: 1870, 1930, and 1940 complete-count censuses (Ruggles et al., 2021) and SCF+.

Table B.1: Value of Black churches, 1890-1926

	1890	1906	1916	1926
Value of Black churches	$26,626,448	$56,636,159	$86,809,970	$205,782,628

Notes: Data on the value of Black church property from 1890 to 1926. All values are current dollar values. Data sources: Census of religious bodies (United States Bureau of Census, 1992).

B.4 Sensitivity of growth rate estimate to dynamics in assessment ratios and Black over-assessment

In this section, we assess how changes in assessment ratios and Black over-assessment might affect our estimated growth rates using data on assessed wealth. We digitized data on assessment ratios for the six states with racial breakdowns in their auditor reports. We corroborated our data with data kindly shared by Dray, Landais, and Stantcheva (2023) and find that the two data series are extremely consistent (a correlation of .94 across state-years).

Figure B.4 plots our data assessment ratios and the number of states for which we observe assessed wealth from auditor reports each year. Reported in the figure is the average growth rate in assessment ratios based on a regression of log assessment ratios on a time trend, weighted by the inverse number of observations.

The decline in the assessment ratio is estimated to be 3 basis points. Adjusting by this amount would revise our wealth gap estimate to 5.5 from 5.8. However, any increases in Black over-assessment (the ratio of Black to white assessment ratios) work in the opposite direction.

We evaluate three possibilities for Black over-assessment. The first takes the data from Snavely (1919) for Virginia and assumes that the Black-to-white assessment ratio widened from 1 to 1.22 over this 60-year period. We take an alternative estimate for Georgia from Margo (1984a) and assume that the Black-to-white assessment ratio widened from 1 to 1.48 over this 60-year period. Finally, we also show the growth rate for an alternative lower estimate of changes in Black over-assessment from 1 to 1.10.

We show the impact of these potential changes in Black over-assessment in conjunction with assessment ratio declines. Assessment ratios for the states for which we have Black wealth data fell by 3 basis points over this 60-year period. Our middle-of-the-road assumption on changes in Black over-assessment fully counteracts this decline in assessment ratios. We adhere to our baseline estimate for this reason.

We also use data from Martin (1913) on estimates of Black per capita wealth (originally from Thomas (1901)) and white per capita wealth to corroborate our wealth gap estimate for 1900. Martin (1913) reports a Black per capita estimate of $90 and a white per capita estimate of $1000, in nominal terms. This yields an alternative nationwide wealth gap estimate for 1900 that is

extremely close to our baseline estimate, both around 11 to 1.

Figure B.4: Assessment ratios by state, 1860-1920
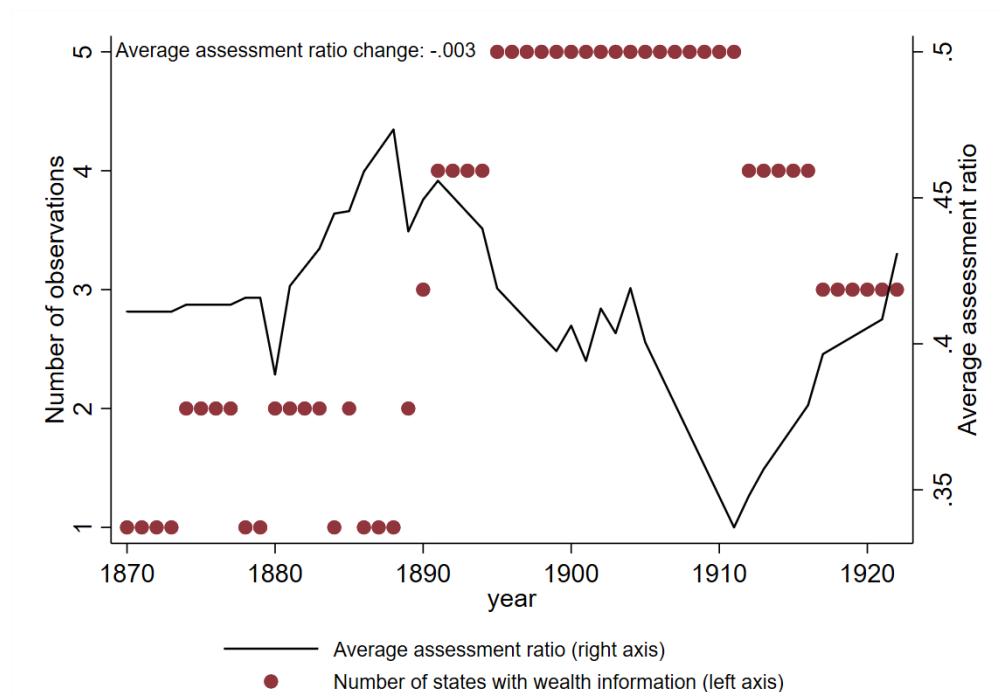
Notes: Assessment ratios for the six southern states with auditor reports recording Black and white wealth or tax payments separately (Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia). Data sources: "Wealth, Debt, and Taxation" reports (United States Bureau of the Census, 1907; United States Bureau of the Census et al., 1924).

B.5   Reconstruction and adjustment of Monroe Work's national Black wealth estimates from the *Negro Year Book* series

Every edition of the *Negro Year Book* edited by Monroe Work provided national estimates of Black wealth estimates. However, information on the methodology or sources behind these estimates is scarce. In this section, we describe our reconstruction of Work's estimates from raw sources using the information available in the books. We also describe our adjustment of these estimates to make them consistent with our overall time series of Black wealth.

B.5.1   Reconstruction of Work's Black wealth estimates

The sections of the *Negro Year Book* that provide national wealth estimates follow a common pattern. When describing the economic progress of the Black population, Work typically described data from Georgia, North Carolina, and Virginia auditor reports and how Black wealth in these states changed over time (see Figure B.5 below). He would then state that the growth of property in

the rest of the country *"has no doubt been as rapid."* We use our digitized tax data together with the description of data from Monroe Work's reports to reconstruct his estimates. Such a reconstruction will naturally involve choices, and we experimented to get close to his historical estimates. We believe the result of the experimentation yields a description on how to construct his estimates that appears to us reasonable and likely.

Figure B.5: Monroe Nathan Work methodology

2   **NEGRO YEAR BOOK.**

In Virginia in 1917 Negroes owned 1,783, 745 acres of land valued at $10,986, 993. The assessed value of their real and personal property was $42,291,830. In those states where there are no separate returns for white and Negro property owners, the increase in property holdings has no doubt, been as rapid as in Georgia, North Carolina and Virginia. Through purchases and increase in values, property holdings of Negroes of the country increased during the year by probably, $40,000,000. It is estimated that the total wealth of the Negroes of the United States is about One Billion One Hundred Million Dollars. They own twenty-one million acres of land, or more than thirty-two thousand square miles; an area greater than that of the state of South Carolina.

Notes: Excerpt from the *Negro Year Book* of 1919. Data sources: Work (1919).

For the year 1873, Monroe Work reports a level of 50 million dollars of national Black wealth. This level is much lower than the level of national Black wealth from the 1870 Census, which is already 191 million dollars. We think his lower level results from him relying on tax data. Also, for the 19th century, Work focuses on the data from Georgia. Total Black wealth in Georgia in 1873 is 6.16 million. We conjecture that he used the wealth data from Georgia as representative for the entire Black population in the United States at that point in time. If this is true, then we arrive at the national wealth estimate for the Black population by dividing total Black wealth in Georgia by the share of the Black population living in Georgia.

Using linear interpolation between Censuses, we get that 11.1 percent of the Black population lived in Georgia in 1873. The resulting national wealth estimate are 55.2 million dollars, hence, only 10 percent higher than the level reported by Monroe work. We therefore think that given the data listed in his reports this is the approach he used to construct his level estimate. We apply the same methodology for the two other estimates for the 19th century in 1883 and 1893. It is important to note that Monroe Work's first report appeared in 1912 and most of the reported data come from his 1913 report. Hence, he had to construct aggregate Black wealth estimates for a period four decades earlier. At the time of his writing, the economic progress of the Black population had accelerated and wealth growth was higher than in the late 19th century. Based on his description, we infer that he started to rely on wealth growth estimates from the first decade of the 20th century to extrapolate his initial level estimates based on data from Georgia over time.

It is difficult to determine when Monroe Work started to use extrapolation based on growth rates or extrapolation based on levels and population shares. For the late 19th century, the two

approaches will be identical if we consider Georgia as the only data source. With the beginning 20th century, data for more states become available. We typically rely on data that cover roughly a decade before his estimates and use all available data for Georgia, Virginia, and North Carolina.

We consider five time periods for which we estimate wealth growth rates 1900-1910, 1913-1920, 1916-1922, 1916-1928, and 1922-1932 and apply these estimates to time period from 1903 to 1936. Figure B.6 reports the (log) wealth levels from his reports and our replication. It is quite likely that Monroe Work adjusted his estimates from report to report in the later years especially during the period of the Great Depression. We abstained from such additional adjustment so that we associate our higher wealth levels compared to his original estimates to these missing adjustments. In summary, the replicated time series matches the reported time series very well such that we are confident that we closely approximate his approach to construct national wealth estimates.

Figure B.6: (Log) Black wealth from Monroe Work and replication
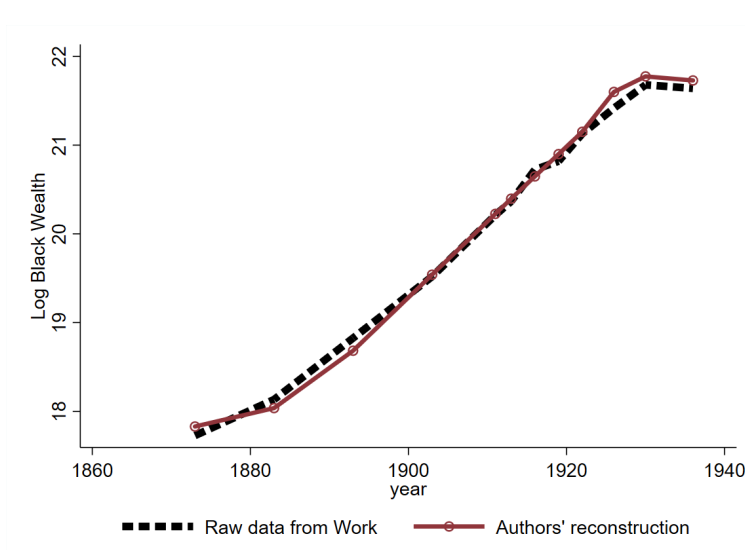
Notes: Raw estimates of Black wealth (logged) from the *Negro Year Book* alongside our reconstruction of these estimates using population and state tax data. Data sources: Southern state auditor reports (see Appendix Section A.1); Work (1915), Work (1917), Work (1922), Work (1926), Work (1931), and Work (1938).

It is important to note that these estimates are all extrapolations from the national wealth estimate based on Georgia data. Given that his national wealth estimate is too low, all subsequent extrapolated wealth levels will be too low unless the wealth growth rate is also overestimated. We corroborated the level of wealth growth, thus the lower initial levels in the late 19th century also account for the need to adjust the wealth levels from his estimation upward. We describe our adjustments of these estimates below.

B.5.2 Adjustment of Work's Black wealth estimates

To make Work's estimates of Black wealth consistent with our full time series of Black wealth from census, our extrapolation based on tax records, and the data from the SCF+, we proceed as follows. We first construct the linear time trend between Black per capita wealth from 1925 to 1929 to 1950 to 1953. We compare average per capita Black wealth implied by Work's estimates for the years 1930 and 1936 to the level of Black per capita wealth implied by the linear time trend described above. We take the ratios of these averages as the scaling factor that we then apply to the original Work estimates to adjust them in levels. Using this approach, we keep the time series variation implied by the Work estimates and adjust only their levels over time. The resulting adjustment factor is 0.603.

Appendix C   Alternative wealth gap estimates during the interwar period

C.1   Racial gaps in farm values, housing wealth, and financial wealth

We construct an alternative estimate of the racial wealth gap in 1930 and 1940 combining estimates of total farm value by owner status and racial group from the census of agriculture and home values by race from the census of population. Below, we detail how we construct white and Black farm and housing wealth, followed by a discussion of the financial wealth gap between the two groups, which we do not observe at a national level.

Farm wealth gap   Tabulations of the census of agriculture from 1900 to 1940 provide breakdowns of total farm land and building value by racial group and owner status (owner, manager, or tenant). We calculate white farm wealth as the difference between total farm land and building values across all operated farms regardless of ownership status and total farm land and building values of Black-owned farms. We compute per capita farm wealth gaps from these two measures using the number of non-Black (NB) and Black (B) individuals:

$$\text{Per capita farm wealth gap} = \frac{\text{Farm wealth}^{NB}/\text{Non-Black pop}}{\text{Farm wealth}^{B}/\text{Black pop}},$$

where $\text{Farm wealth}^{NB} = \text{Farm value}^{\text{All}}_{\text{operated}} - \text{Farm value}^{\text{B}}_{\text{owned}}$ and $\text{Farm wealth}^{B} = \text{Farm Value}^{\text{B}}_{\text{owned}}$.

Housing wealth gap   We use the census of population microdata from 1930 and 1940 to calculate housing wealth gaps. The 1930 census is the first census in which enumerators elicited home values from homeowners. We construct per capita housing wealth gaps as follows:

$$\text{Per capita housing wealth gap} = \frac{\text{Housing wealth}^{NB}/\text{Non-Black pop}}{\text{Housing wealth}^{B}/\text{Black pop}}.$$

Thus, we measure the ratio of non-Black-to-Black per capita home values in these years.

We construct an alternative overall wealth gap for 1930 and 1940 by summing farm and housing wealth for each group and calculating the per capita wealth ratio for combined farm and housing wealth. The results are extremely close to our baseline series.

C.2 Study of Consumer Purchases in the United States

We use data from the 1935-1936 Study of Consumer Purchases in the United States (SCP) (Bureau of Labor Statistics, US Department of Labor, 2009) to provide an additional alternative estimate of the white-to-Black per capita racial wealth gap during the 1930s. The SCP was conducted jointly by the Bureau of Labor Statistics, the Bureau of Home Economics, and the Department of Agriculture, with the aim of documenting the earning and spending habits of Americans based on sampling units that represent the demographic, regional, and economic characteristics of the United States.

In order to obtain a measure of Black and white wealth, we apply the capitalization method of Saez and Zucman (2016) on the flow variables in the SCP data.[50] Even though the SCP does not provide the full range of different capital income sources, we do have separate information on households' (i) rental income, (ii) business income, and (iii) dividend income from stocks, bonds, bank accounts, trust funds, etc., which cover a substantial amount of the total flows. In addition to the flow values, the SCP also provides information on the value of the household's main dwelling, as well as of farms (for farm owners). We utilize this information as well to complement our final Black and white wealth measure.

Housing wealth Households' are asked to report the rental income on their first and second home. For the capitalization method, it is important that we only consider rental income of tenant-occupied housing. Therefore, we exclude households if they reported to have lived fully in the reported house. Afterwards, we apply the capitalization factor to obtain the stock value for tenant-occupied housing wealth. This we combine with the reported data on the value of the households' main dwelling and thus obtain an estimate for total housing wealth.

Business wealth The SCP provides data on up to ten household members for labor and/or business income, as well as a separate measure for labor income only. We subtract these two to obtain a clean measure for households' business income.[51]

Financial wealth The information on financial wealth in the SCP data does not differentiate between asset classes, but only provides the combined interest and dividend income from stocks, bonds, bank accounts, trust funds, etc.. We capitalize this income variable using a capitalization factor that we obtain from combining the capitalization factors of equities with the factor for fixed-income assets. Specifically, we weight the factor for equities by the share of equities in total household wealth relative to the share of fixed-income assets and vice versa for the fixed-income capitalization factor. These two weighted factors are then added together to form the combined capitalization factor that is applied to the interest income and dividends variable. Therefore, we assume that

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[50]The capitalization factors for the different asset classes in 1936 can be found on Gabriel Zucman's website: https://gabriel-zucman.eu/uswealth/.

[51]It is not clear from the survey whether business profits other than labor income (from their business) are included in the category "business income".

the composition of households' portfolios in the SCP data broadly reflects the composition of U.S. household wealth by asset class in Saez and Zucman (2016) which we use for weighting the two capitalization factors.[52]

Farm wealth   In the SCP, we have information on the total acres of farm land and the the share of acres that is owned by the household. Furthermore, households report the value of land and buildings on that farm. We utilize this information to obtain a proxy for the farm wealth of full farm owners.

Alternative wealth gap 1936   After we obtain values of total housing wealth, business wealth, financial wealth, and farm wealth separately for Black and white households, we aggregate all components and divide by their respective population totals to calculate the per capita white-to-Black wealth ratio (WR_{1936}):

$$WR_{1936} = \frac{House_{1936}^w + Bus_{1936}^w + Fin_{1936}^w + Farm_{1936}^w}{House_{1936}^b + Bus_{1936}^b + Fin_{1936}^b + Farm_{1936}^b} \cdot \frac{pop_{1936}^b}{pop_{1936}^w}. \tag{11}$$

.

Table C.1 presents the results. In the first column, we present our benchmark per capita white-to-Black wealth gap of 1936, which is at a level of 9 to 1. In column 2 and 3, we present two estimates of the wealth gap using the SCP, one without weighting the data (WR_{1936}), and the other employing post-stratification methods to obtain a nationally representative sample (WR_{1936}^w).[53] We find the estimates to be extremely similar. The close alignment between this independent estimate of the racial wealth gap using an alternative data source and methodology corroborates the scaling approach we applied to Black wealth estimates from Work (1926), Work (1931), and Work (1938).

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[52]With the SCP, we are not able to obtain information on the households' cash holdings. Therefore, our estimated financial wealth gap may be larger than the true gap.

[53]We employ the post-stratification method developed by Berinsky (2006), using income-race-region cells for which we calculate weights such that the SCP data matches the corresponding proportions of the 1940 U.S. census data. The data is weighted in several steps. First, we construct income (using quartiles to obtain four income groups), race (white, Black), and region (South, Non-South) cells in both the SCP and the 1940 census data. Secondly, we calculate the proportions of each income-race-region cell for each data set. Lastly, we calculate the cell-specific weights w_c by applying the following formula:

$$w_c = \frac{\pi_c^C}{\pi_c^{SCP}} \tag{12}$$

with c denoting a specific income-race-region cell and π_c^C and π_c^{SCP} denoting cell proportions for census and SCP, respectively. We let $w_i = w_c$ for each household i and by construction, the resulting weights are such that $\sum_i^N \frac{w_i}{N} = 1$. As a robustness check, we also compute weights using only race (white, Black) and region (South, Non-South) for a race-region cell definition. The results remain robust.

Table C.1: Per capita white-to-Black wealth gap in 1936

	1936 (data)	WR_{1936}	WR^w_{1936}
Wealth ratio (W/B)	8.9	9.00	9.15

Notes: Alternative estimate of the racial wealth gap based on data from the Study of Consumer Purchases in the United States (SCP), 1935-1936. First column presents the white-to-Black per capita wealth gap in 1936 of our baseline series. The wealth ratio in the second column is our estimate from the SCP without weighting the survey data. The last column presents the results with weights. Data sources: Authors' series; SCP (Bureau of Labor Statistics, US Department of Labor, 2009).

Appendix D   Additional results, robustness checks, and sensitivity analyses for wealth gap series

This section presents additional results, robustness checks, and sensitivity analyses for our long-run wealth gap series whose construction is described in Section 3. We provide a summary of these results in Section 3.3 in the main text.

First, we explore the contribution of the abolition of slave wealth to the decline in the racial wealth gap after Emancipation. Figure D.1 presents the racial wealth gap when we exclude slave wealth from our 1860 estimate of white wealth while keeping our measure of per capita Black wealth the same. Excluding white wealth held in enslaved individuals reduces the racial wealth gap to 47 to 1. By comparison, the racial wealth gap in 1870 is 23 to 1. Growth in per capita Black wealth between 1860 and 1870 explains most of the reduction in the wealth gap over these ten years.

Figure D.2 considers the evolution of the racial wealth gap if we consider only the white population instead of the non-Black population in constructing the gap. Separate wealth information for white and non-Black individuals is only available in selected years. However, the differences between the two are nearly negligible in the historical period. In more recent decades, the wealth gap between white and Black Americans is larger than the gap between all non-Black versus Black Americans.

In Figure D.3, we examine the sensitivity of our racial wealth gap estimates to different assumptions around debt holding. Prior to 1950, we only observe gross wealth. We construct a lower bound for the wealth gap between 1860 and 1950 by assigning all observed aggregate debt in those years to the non-Black population. From 1950 onwards, we directly measure wealth net of debt for each racial group using the SCF+. This extreme assumption around debt holding lowers the racial wealth gap slightly in the historical period, with the biggest effects in 1870 (the gap declines from 23 to 20). In Figure D.4, we use the SCF+ microdata to compare the racial asset gap to the gap in net wealth from 1950 to the present. We find the asset gap to be slightly lower than the wealth gap throughout the whole period.

We explore the sensitivity of our racial wealth gap estimates to measuring wealth per capita vs. per household. Figure D.5 plots household size for Black and non-Black households over time. Differences in household size across racial groups are modest until the 1950s and 1960s and converge again in the 2000s. Figure D.6 compares the household-level racial wealth gap to our baseline series, which measures the per capita gap. We find that the two measures track each other closely due to the relatively small differences in household size over this period.

In Figure D.7 we leverage the richness of the SCF+ to compare different versions of the racial wealth gap in a single dataset. Despite some differences in levels, these alternative measures of the wealth gap show similar trends and fluctuations as our baseline series over this 70-year period.

D.1 Black and non-Black per capita wealth

In this section, we present our per capita estimates of Black and non-Black wealth. The sources for our time series are extensively described in Appendix A. To present estimates in real terms, we deflate the Black and non-Black wealth series using two price indices, as there is no consistent price deflator available throughout 1860-2020. The first deflator is the CPI data of the Jordà-Schularick-Taylor Macrohistory Database that is available for 1870-2020. For 1860-1870, we use the Warren-Pearson Index coming from the census document "Historical Statistics of the United States, 1789 - 1957" (Bureau of the Census, 1949). We use the years, where we have both information on the CPI and Warren-Pearson Index, to harmonize the two price deflators. Afterwards, we set the base year of the price deflator to 2019. Figure D.8 presents our benchmark series, while Figure D.9 presents the benchmark series in logs, as this transformation is helpful in capturing particularly salient changes in the slope. Finally, in Figure D.10, we only present the Black per capita wealth series with various robustness exercises described below.

Overall, per capita white wealth has been consistently higher than those of Black. In 1860, an average white American possessed around 19,000 USD (in 2019 Dollars), while the average Black American only had 340 USD. In 2020, the racial difference is substantially lower, with an average White possessing around 340,000 USD and Black 60,000 USD. This is not surprising, given that over the last 160 years, Black wealth growth was much faster than white, with an annual growth rate of around 3.3%, as opposed to 1.8%. However, after 1980, the dynamics of Black and white wealth seem to have changed. During this period, despite the huge drop during the Global Financial Crisis, white wealth growth is much higher at an annual rate of 3.0%, compared to 2.5% for Black.

Similar to the white per capita wealth series in Figure D.8, we observe a quite steady increase in Black wealth until the early 20th century, which than slows down in 1920, which is due to high inflation rates during that time. Such dynamics seem to continue in the 1930s, when growth rates of our benchmark Black wealth series are low. Our robustness measures even predict a slight decrease in Black wealth during 1930-1936, see yellow triangles and green dots in Figure D.10. After World War II, Black wealth continues to grow, which then starts to accelerate starting from the 1960s. In particular, we observe a steep increase in Black wealth during the first half of the 2000s, which aligns with the housing market boom period in the US. Such boom in Black wealth accumulation, however, is disrupted by the Global Financial Crisis, which has severe consequences for Black wealth, much stronger than for white: ten years after the crisis, Black wealth reaches levels similar to the pre-crisis level, while white wealth already recovers within less than five years.

Figure D.1: Wealth ratio, excluding slave wealth in 1860

Notes: White-to-Black per capita wealth gap series with and with out slave wealth as part of our measure of white wealth in 1860. The solid line shows our baseline estimate (with slave wealth), and the red dashed line shows the gap when we exclude slave wealth. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.

Figure D.2: Wealth ratio, excluding non-Black, non-white population
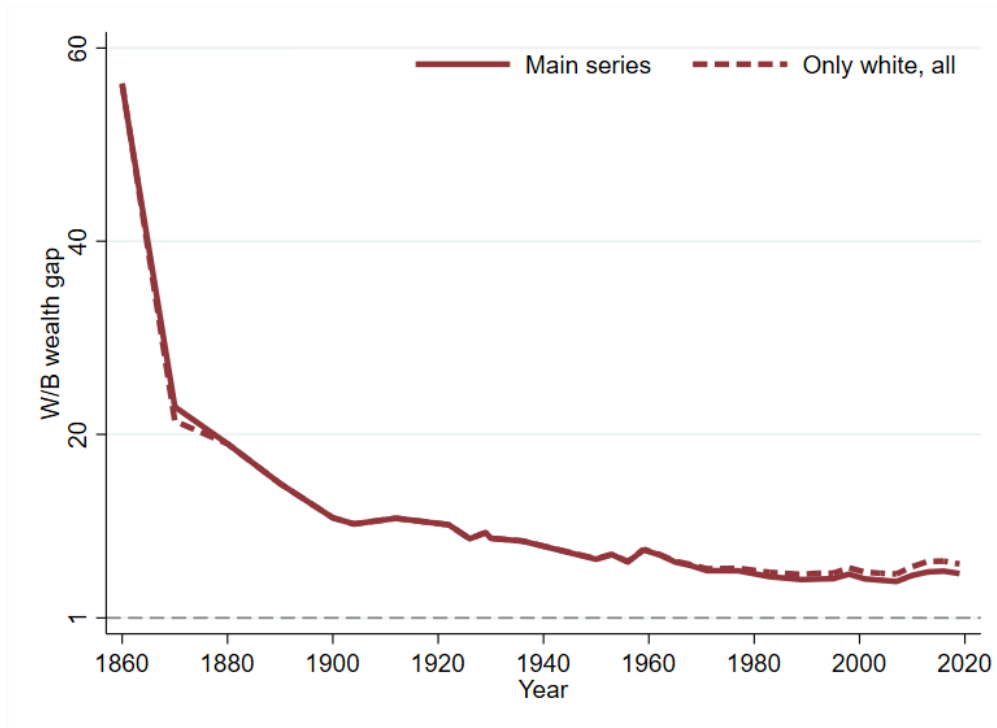
Notes: White-to-Black per capita wealth gap restricting the data to Black and white populations only. The red solid line shows our baseline estimate where we define white per capita wealth as non-Black per capita wealth. The red dashed line shows the wealth gap when we exclude the non-white, non-Black population from the sample for the years when direct measures of white wealth are available (1860, 1870, and 1950-2019. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.

Figure D.3: Wealth ratio, adjusting for debt in the historical period
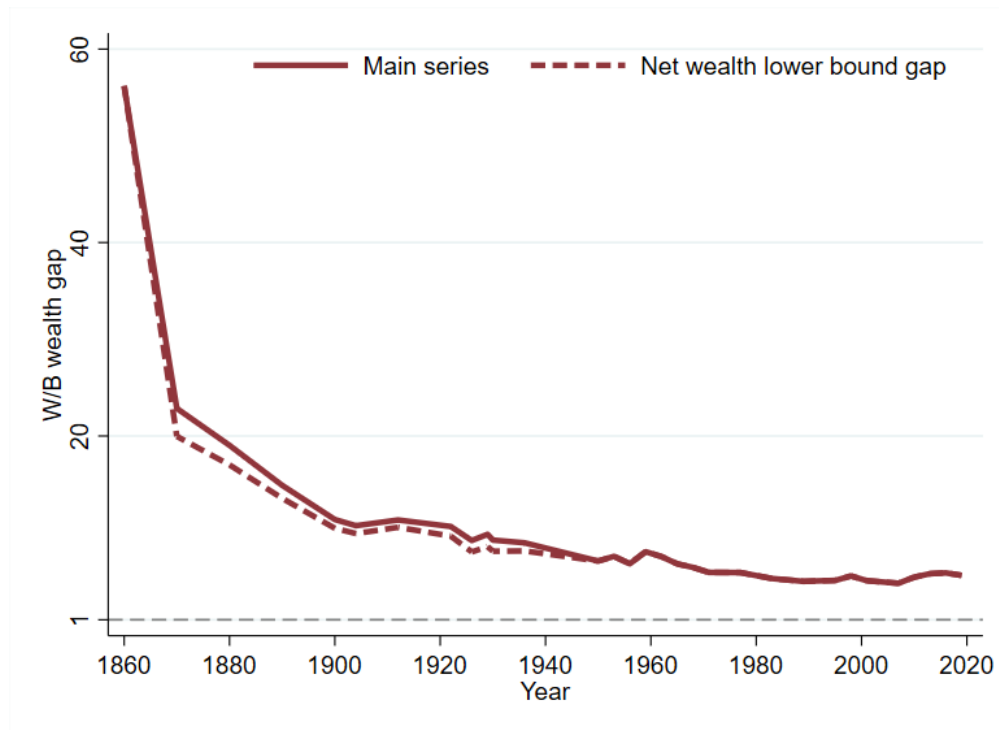
Notes: White-to-Black per capita wealth gap series with debt adjustments for the historical period (1870-1950). The solid line shows our baseline gap, which is the gap in gross wealth for the pre-1950 period. The dashed line shows our lower bound estimate of the wealth gap for this period, constructed by assigning all household debt to the non-Black population. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.
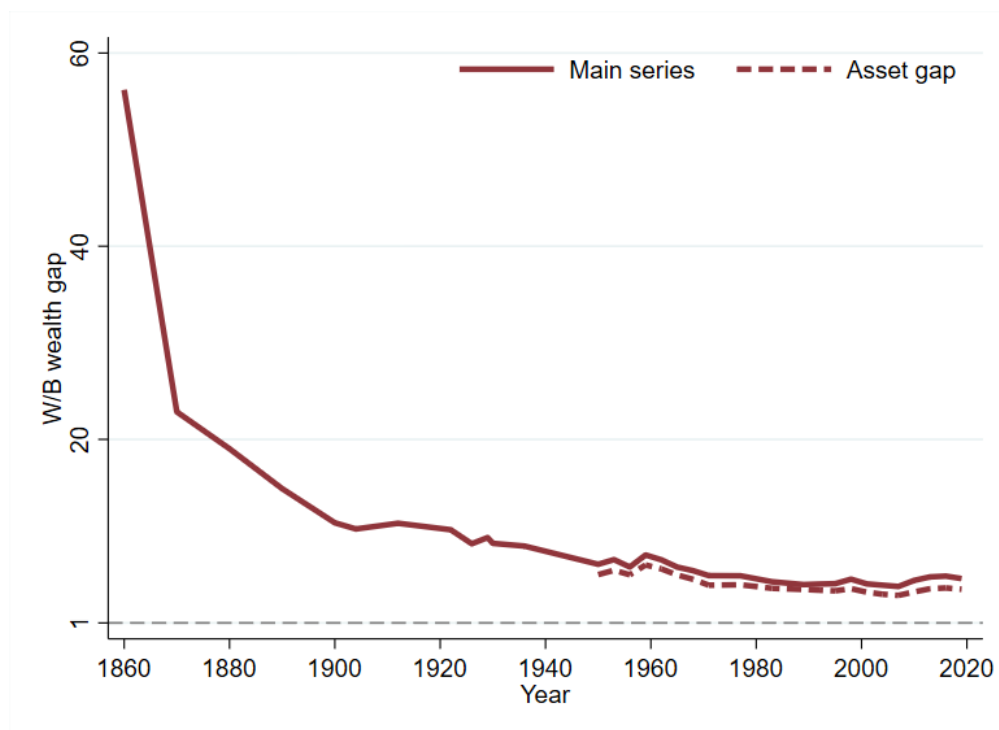
Figure D.4: Wealth ratio, ignoring debt

Notes: White-to-Black per capita asset gap series (excluding debt). The solid line shows our baseline series. The dashed line shows the racial asset gap after 1950 using SCF+ microdata. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.

Figure D.5: Black and white household sizes, 1870-2020
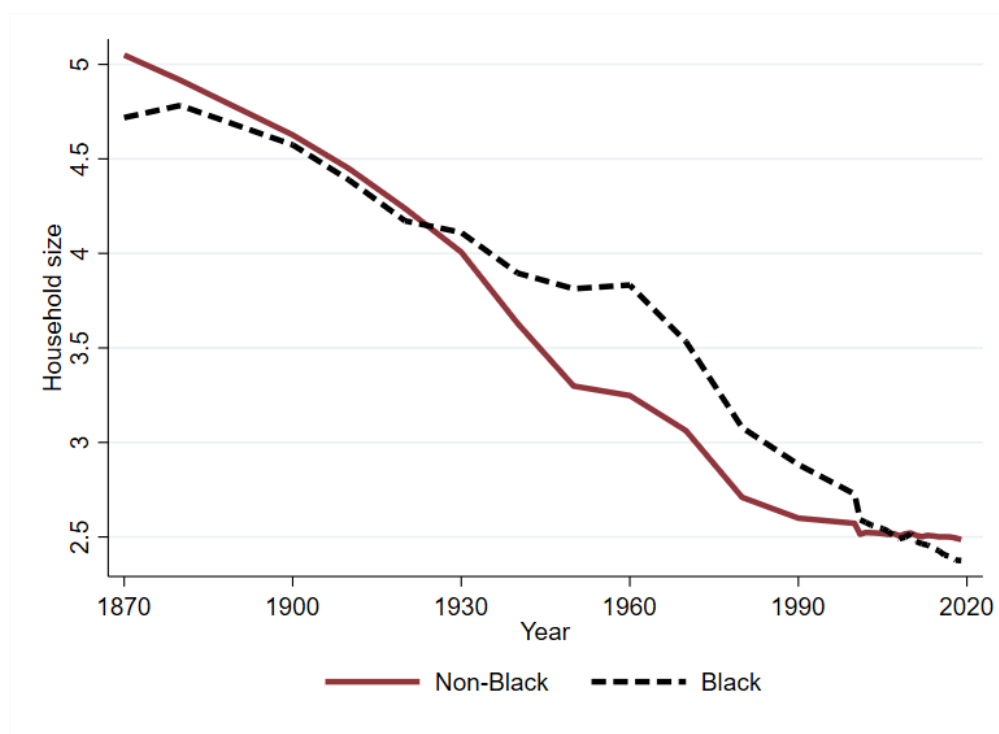
Notes: Household size by racial group from the census. The solid line shows non-Black household size over time. The dashed line shows Black household size. Data sources: Census (Ruggles et al., 2021).

Figure D.6: Per household racial wealth gap

Notes: White-to-Black wealth gap series at the household level. The solid line shows the wealth ratio at the per capita level and the dashed line depicts the household level ratio. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.
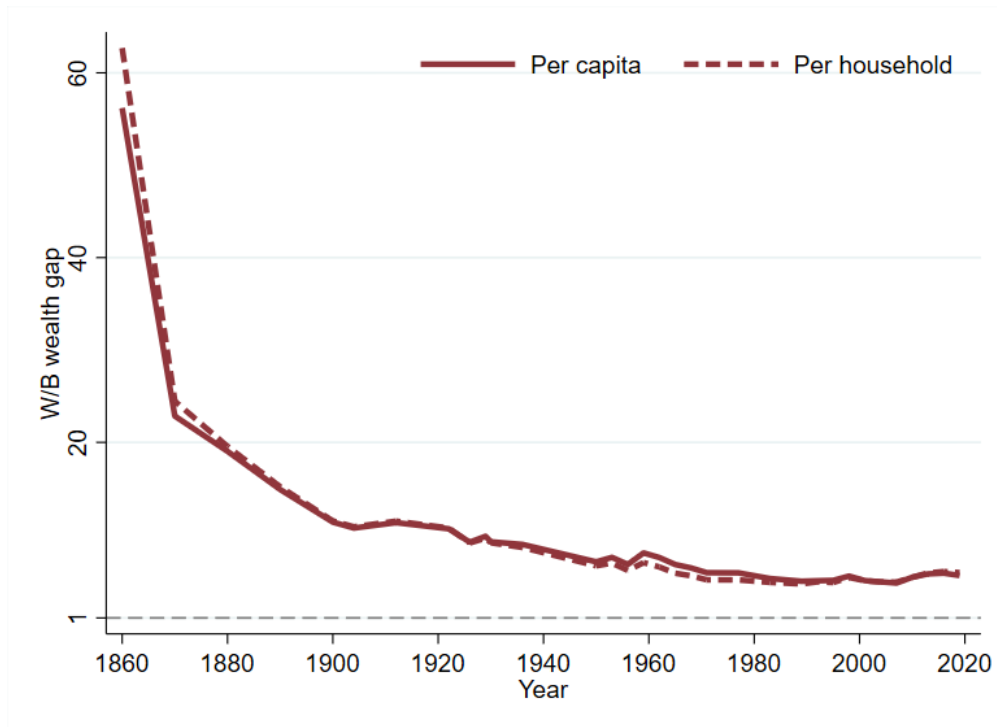
Figure D.7: Comparison of alternative wealth gap measures since 1950
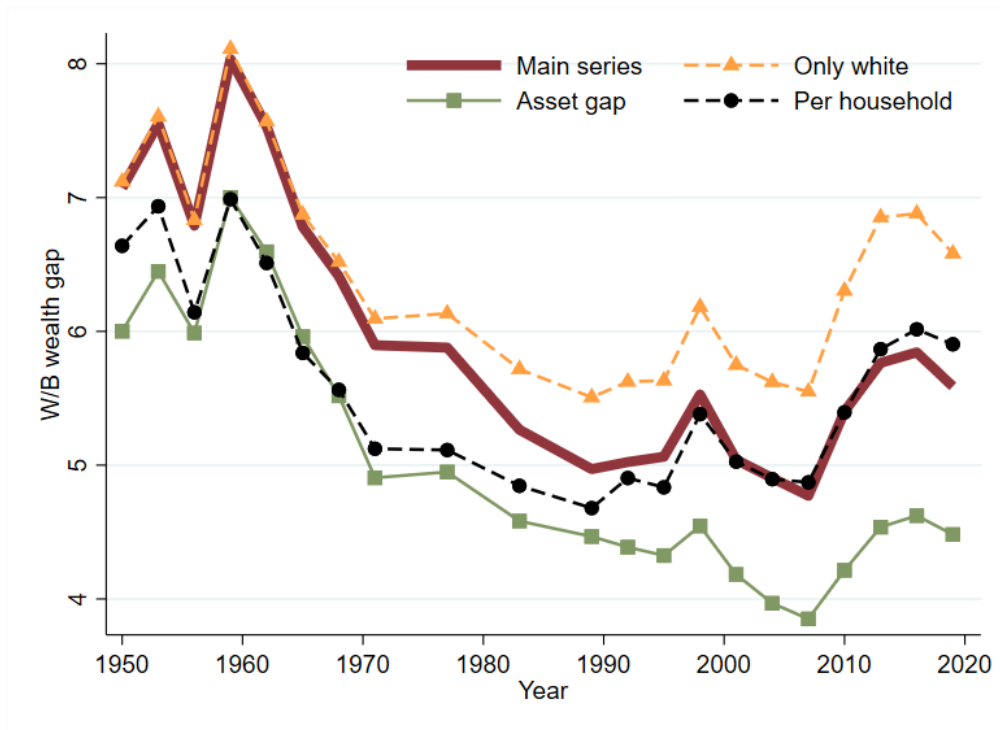
Notes: The figure shows alternative measures of the racial wealth gap from 1950 to 2020. The solid line shows our baseline series. The dashed line with triangles shows the racial wealth gap if non-Black population is restricted to the white population. The solid line with squares shows the racial asset gap, excluding any debt holdings of households. The dashed line with dots shows the racial wealth gap at the household level. Data sources: SCF+.

Figure D.8: Black and non-Black wealth: 1860-2020
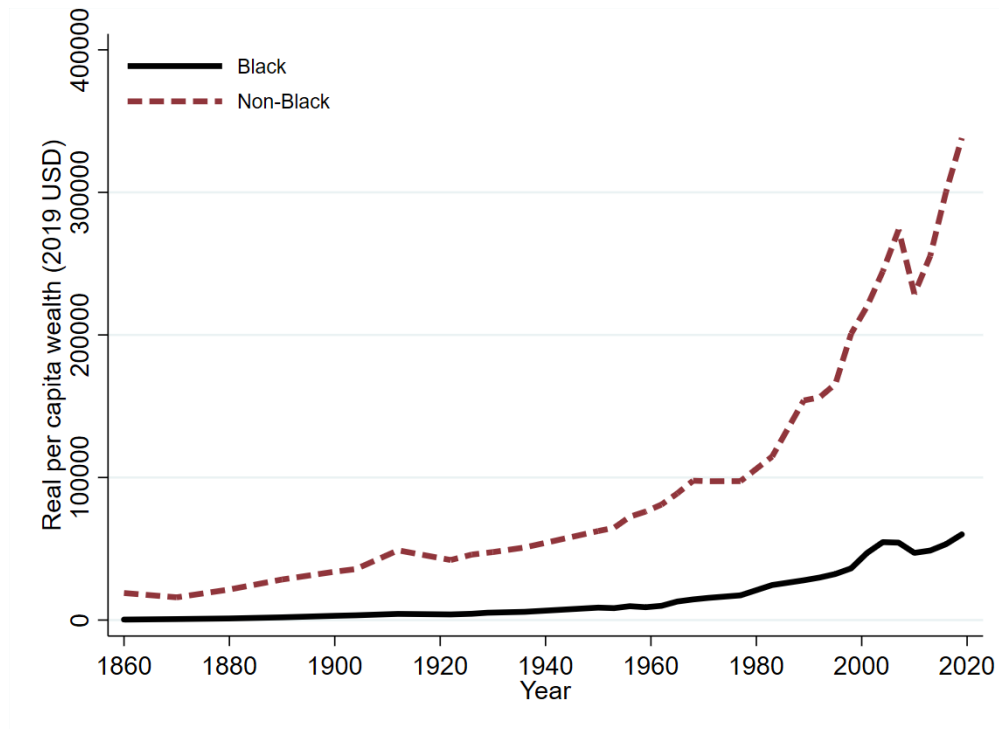
Notes: Real values of per capita Black and non-Black wealth from 1860 to 2020. Details on the construction of this series are available in Section 3. All values are normalized to 2019 USD. Data sources: Various, described in Section 3 and Appendix A.

Figure D.9: Black and non-Black wealth in logs: 1860-2020
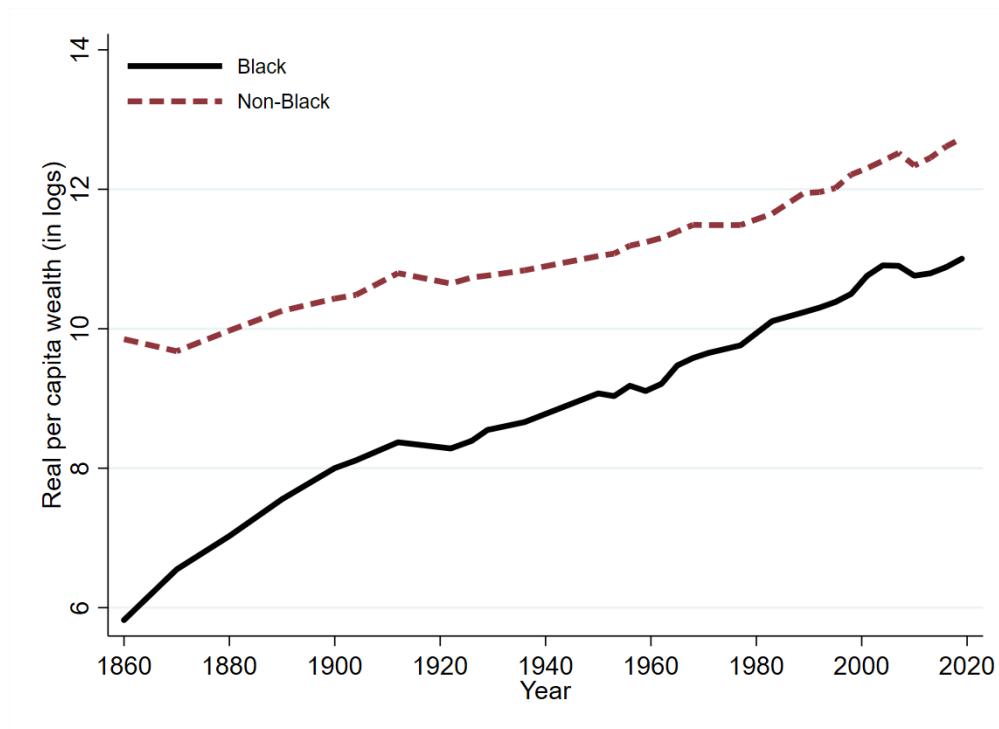
Notes: Log of the real values of per capita Black and non-Black wealth from 1860 to 2020. Details on the construction of this series are available in Section 3. Data sources: Various, described in Section 3 and Appendix A.

Figure D.10: Black wealth: 1860-2020

Notes: Real values of per capita Black wealth from 1860 to 2020. Details on the construction of this series are available in Section 3. All values are normalized to 2019 USD. Data sources: Various, described in Section 3 and Appendix A.

Appendix E The conditional racial wealth gap

A large literature in the 1990s and 2000s explored the role of income differences, differences in household size and structure, and other ob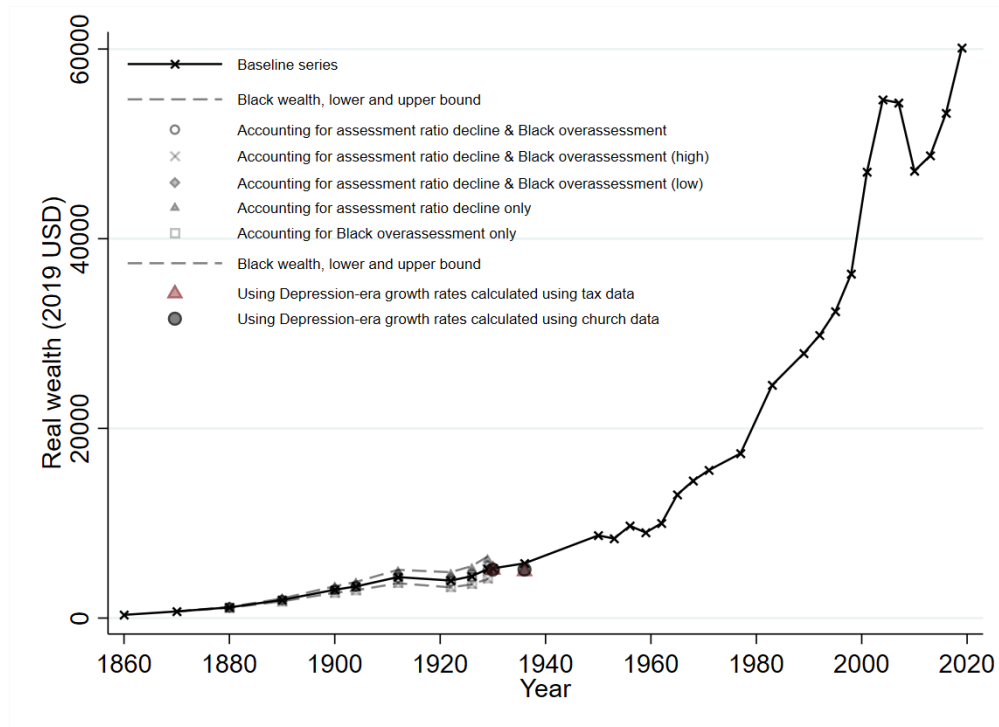servable characteristics, such as age, gender, and education, in explaining the racial wealth gap (Terrell, 1971; Blau and Graham, 1990; Smith, 1995; Avery and Rendall, 1997; Menchik and Jianakoplos, 1997; Conley, 1999; Barsky et al., 2002; Altonji and Doraszelski, 2005). The consensus from this literature is that while demographics and income explain a portion of the gap, a gap still remains even after controlling for all of these factors. Furthermore, the portion of the gap explained by observables hinges on whether one uses the relationship between characteristics and wealth estimated off of white individuals (white models) or the relationship estimated off of Black individuals (Black models). The mapping from observables to wealth is weaker among Black Americans. To quote a seminal paper by Blau and Graham (1990) studying the racial wealth gap in the late 1970s, "even if society were successful in eliminating all the disadvantages of blacks in terms of their lower income and adverse locational and demographic characteristics, a large portion of the gap – 78 percent – would remain." Different researchers, using refined measures of permanent income or refined econometric techniques, have still not been able to explain a majority of the gap using coefficients from Black models (Altonji and Doraszelski, 2005; Barsky et al., 2002).[54] For this reason, the literature since the early 2000s shifted to understanding other determinants of the gap, finding a role for differences in financial behavior, including savings and investment; differences in inheritance; differences in retirement benefits; and differences in asset returns (Gittleman and Wolff, 2004; Bradford, 2014; Killewald and Bryan, 2018; Pfeffer and Killewald, 2019; Kermani and Wong, 2021; Kroeger and Wright, 2021; Boerma and Karabarbounis, 2021; Fairlie, Robb, and Robinson, 2022; Choukhmane et al., 2022).

Rather than focus solely on the determinants of differences in wealth levels, Gittleman and Wolff (2004) investigated the role of savings from income, returns on savings, and inheritance on Black and white wealth accumulation. In a simulation exercise, they show that even if Black and white households had the same saving rates and income, the racial wealth gap would still persist. Other studies emphasize the role of systematic barriers to wealth accumulation that have hampered wealth building of the Black population throughout history (Oliver and Shapiro, 1995; Baradaran, 2017; Althoff and Reichardt, 2022; Baker, 2022).[55] Our paper contributes to this literature by demonstrating the important and persistent effect of initial conditions and historical dynamics on the wealth gap today.

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[54]Barsky et al. (2002) introduce a nonparametric alternative to the Blinder-Oaxaca-Kitagawa method to allow for a non-linear relationship between income and wealth and find that racial differences in income explain more of the wealth gap than previous work. Nevertheless, income differences still fail to fully account for the racial wealth gap. Finally, Altonji and Doraszelski (2005) investigate the role of permanent income on wealth and confirm the finding from Blau and Graham (1990) that the wealth holdings of Black households are less sensitive to income and demographics than the wealth holdings of white households. Finally, Krivo and Kaufman (2004) confirm such dynamics for the racial housing wealth gap by investigating a wide range of locational, life-cycle, socio-economic, and family characteristics.

[55]In Appendix F, we also provides direct, if suggestive, evidence linking historical institutions of racial oppression and racial violence to the wealth gap and Black wealth accumulation.

Given the vast literature on wealth differences and their relationship to demographic and socio-economic characteristics, the focus of our paper is on the historical development of the racial wealth gap, which we investigate through novel data construction and the application of an accounting framework for wealth accumulation for the two groups. Nevertheless, the data used in our analysis allow us to contribute to the existing literature with an analysis of unstudied historical periods. Specifically, we build on the long timespan of the SCF+ dataset to investigate whether the importance of income and socio-demographic characteristics for Black and white wealth changed over time.

Some important differences with the prior literature on the conditional wealth gap are worth noting. First, our data consists of repeated cross sections rather than the panel data as used in Blau and Graham (1990), Barsky et al. (2002), Gittleman and Wolff (2004), and Altonji and Doraszelski (2005). Second, leveraging our longer run data, we focus on two distinct periods, before and after 1983, while prior studies tend to draw on a specific set of survey waves covering a narrower range of years.

We proceed in the following manner. First, we estimate linear wealth models for Black and white samples of households separately for each period. The included controls are total family income, education, age of head (and its square), household size, marital status, sex of head, employment status of head, working in the industry category "professional," and survey year fixed effects. We then conduct the Blinder-Oaxaca-Kitagawa decomposition in the spirit of Blau and Graham (1990) and Altonji and Doraszelski (2005) to investigate the change in Black wealth when applying coefficients estimated using the white sample to average characteristics of the Black sample and vice versa. Table E.1 presents the decomposition results.

In the first row of Table E.1, we present the predicted average Black wealth for average Black characteristics from either applying the coefficients from the Black wealth model (columns 1 and 3) or coefficients from the white wealth model (columns 2 and 4) for the two time periods. The same is done for fixed characteristics of white households in row 2. Hence, each row keeps household characteristics fixed and varies model coefficients across columns. Afterwards, we evaluate the contribution of the difference in mean characteristics to the racial wealth gap. We compare the unadjusted difference between white and Black wealth (row 4) to the white-Black difference in wealth under the same wealth model, i.e., the adjusted wealth gap with different characteristics but for fixed coefficients (row 3). Recall that the unadjusted wealth gap is not the raw wealth gap but the absolute difference between the estimated wealth levels of each racial group using group-specific coefficients. Row 5 reports the share of the unadjusted wealth gap that is accounted for by differences in observable characteristics, i.e., the ratio of rows 3 and 4.

We first focus on the pre-1983 period. In line with the literature, we observe higher predicted wealth levels for the white model which means that observable income and socio-demographic characteristics yield higher returns on wealth in the sample of white households. Predicted Black wealth using Black coefficients is $37744 but is $52787 using white coefficients. We observe the oppo-

site for white households. When we apply Black coefficients to average white characteristics (row 2), predicted white wealth is lower ($82365) than predicting white wealth using white coefficients ($233600). Under the white wealth model, we find that differences in Black and white income and socio-demographic characteristics account almost all of the wealth differential between Black and white households (92.3%). By contrast, if the Black wealth model is applied, then observable characteristics account for only 22.8% of the wealth gap.

After 1983, we obtain the same qualitative results in terms of the explanatory power of the white wealth model. However, the explanatory power of the Black model shows a shift up from 22.8% to 38.2%. This increase in explanatory power could be due to changes in the Black wealth accumulation function relating to savings behavior or investment choices. Alternatively, such improvements could stem from reductions in discrimination in housing and financial markets or the reduction of other frictions that dampen the relationship between income and other characteristics and wealth.

Finally, though our results are qualitatively comparable to that of the literature, they are not directly quantitatively comparable due to the different samples used and the structure of the data. Much of the prior literature uses the post-1984 waves of the PSID or the 1983-1989 SCF panel. Papers in this literature seek to measure permanent income and past savings using multiple survey waves covering the same individuals. Our data consists of repeated cross-sections and tends to pool many more years of data than prior studies.

Table E.1: Regression decomposition of racial gap in wealth, 1950-2020

| | Pre-1983 | | Post-1983 | |
	Black coefficients	White coefficients	Black coefficients	White coefficients
Black characteristics	37744	52787	114656	177576
White characteristics	82365	233600	320121	652669
Adjusted wealth gap (W-B)	44621	180813	205466	475094
Unadjusted wealth gap (W-B)	195856	195856	538013	538013
Adjusted/Unadjusted (%)	22.8	92.3	38.2	88.3

Notes: The wealth models are separately estimated by race (Black model/white model), where each model is a linear function of wealth with the following control variables: total family income, education, age of head (and its square), household size, marital status, sex of head, employment status of head, and working in the industry category "professional." The model includes a constant and time fixed effects. Row 1 presents the estimated average Black wealth for the pre-1983 and post-1983 period (column 2-3 and 4-5, respectively), where Black characteristics are applied to the Black wealth model (column 1 and 3) or to the white model (column 2 and 4). The same is applied for white in row 2. Row 3 presents then the white-to-Black difference in the estimated wealth levels coming from the same wealth model, while row 4 presents the unadjusted difference between white and Black wealth (estimated with their own wealth model). All values are presented in 2019 USD. Finally, row 5 presents the ratio between the adjusted and unadjusted difference in wealth (row3/row4). Data sources: SCF+.

Appendix F   Historical violence, institutions, and the racial wealth gap

In Section 4.2, we discuss reasons for slow convergence in the early 20th century, including historical institutions and the violent destruction of Black wealth by white supremacist groups. Perhaps the most salient example comes from the Tulsa Race Massacre of 1921 whose impacts on Black patenting and homeownership were studied by Cook (2014) and Albright et al. (2021), respectively. Similar events of this nature, involving the burning of Black homes and businesses, lynchings and killings of Black residents, targeting of Black politicians, and expelling of all Black residents from entire towns occurred throughout the country, and particularly in the post-Reconstruction South (Logan, 2019; Loewen, 2005).

Existing research has focused on the persistent negative effects of slavery and, more recently, Jim Crow on economic outcomes such as poverty, education, occupational attainment, income, intergenerational mobility, and housing wealth (Althoff and Reichardt, 2022; Albright et al., 2021; Aneja and Xu, 2021; Craemer et al., 2020; O'Connell, 2012; Reuf and Fletcher, 2003). To the best of our knowledge, however, no work has studied the effects of these institutions on total Black wealth or the racial wealth gap due to a lack of data.

While it is beyond the scope of the present paper to exhaustively analyze these events and their impacts on racial wealth dynamics. However, here we provide direct, if suggestive, evidence of the impact of historical institutions and racial violence on Black wealth accumulation and the racial wealth gap. A key advantage of our newly digitized data is its high frequency nature, which allows us to examine the immediate aftermath of specific laws or episodes of racial violence.

First, we investigate the consequence of slavery on Black wealth accumulation by correlating a state's number of years as a free state with the level of per capita Black wealth in that state by 1870. Second, we investigate the relationship between the severity of southern states' racial regimes (using a composite measure from Baker (2022)) and the racial wealth gap. Finally, we compare the evolution of wealth in Wilmington, North Carolina to the rest of the state before and after the 1898 white supremacist coup that ushered in a Jim Crow government. All three exercises point to the negative relationship between racial regimes and violence on racial wealth inequality.

F.1   Years as a free state and racial wealth inequality

To explore the impact of slavery on Black wealth accumulation, we exploit variation in each state's history with the institution of slavery. With the exception of Vermont, which banned slavery in its founding constitution, states admitted before the Missouri Compromise typically passed legislation to abolish slavery during the late 18th and early 19th centuries.[56] However, many of these states enacted gradual abolition, such that the enslaved population did not drop to zero immediately

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[56] As a rule, non-southern states admitted to the union after the Missouri Compromise of 1820 and the Kansas-Nebraska Act of 1854 were admitted as free states.

after the law. For example, Michigan and Vermont spent zero years of statehood with an enslaved population while New Jersey had an enslaved population until the Civil War due to the gradual nature of the state's abolition law. Delaware had no abolition law and slavery only ended in the state with the passage of the 13th amendment.

We calculate the portion of statehood spent with a positive fraction of enslaved Black residents. Data on the state's number of enslaved Black residents and total Black population come from the U.S. Census's Black population report covering 1790 to 1915 (Cummings and Hill, 1918). We then relate this to per capita Black wealth levels in the state in 1870 as measured in the complete count census.

Focusing on non-confederate states admitted to the union before the Missouri Compromise, Figure F.1 plots the relationship between the fraction of statehood spent with an enslaved population and per capita Black wealth in 1870. The correlation between Black per capita wealth in these states and portion of statehood with slavery is -.39. Figure F.2 expands the analysis to include the confederacy as well as non-southern states that joined the union after 1820 ("always free states"). With the addition of the confederacy and always free states, the correlation between these two variables rises to -.80.

Figure F.1: Years of statehood as a free state and racial wealth gap
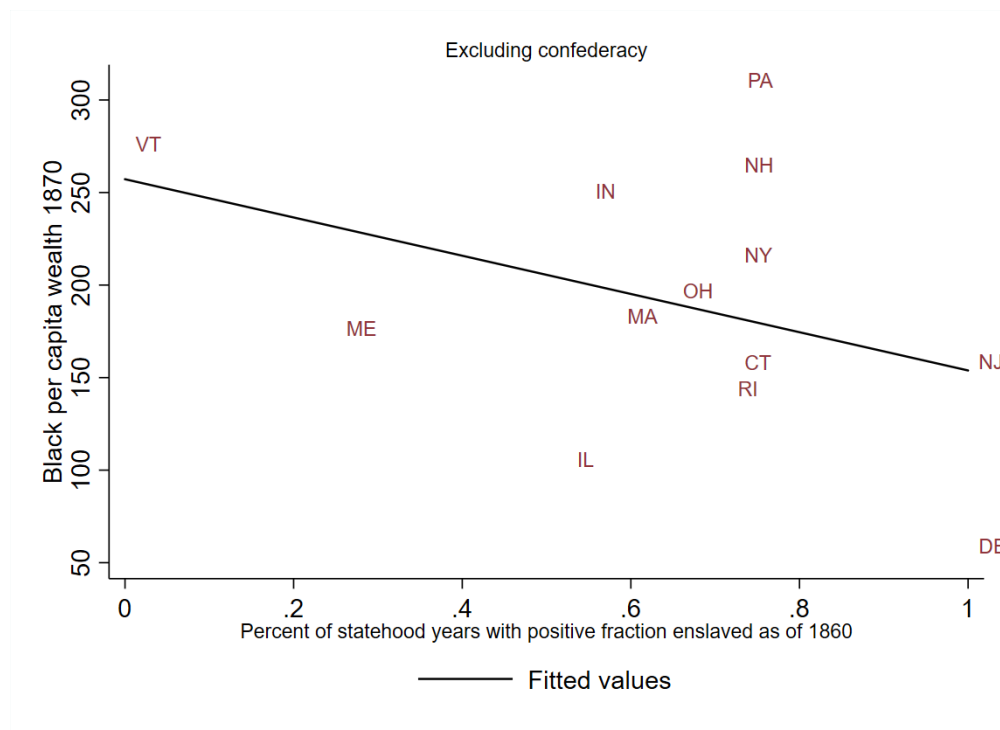
Notes: Relationship between share of statehood years with an enslaved population and per capita Black wealth in 1870. Sample includes all non-confederate states admitted to the union by 1860. Data sources: 1870 wealth data from Ruggles et al. (2021). Years of statehood as free state calculated by authors using data on enslaved population at the state level from Cummings and Hill (1918).

Figure F.2: Years of statehood as a free state and racial wealth gap (including confederacy)
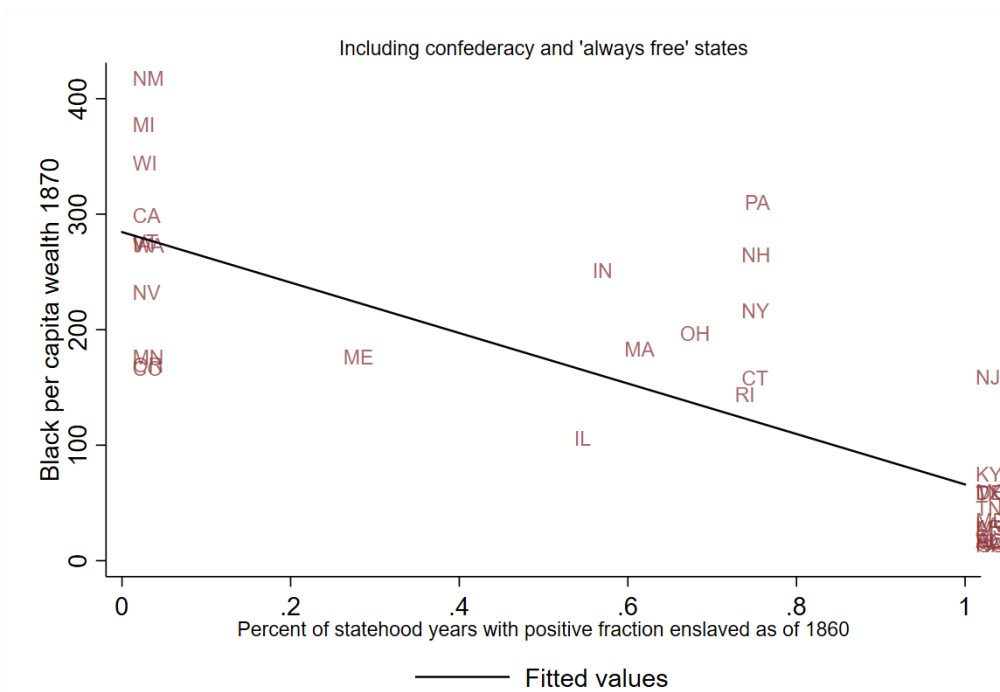
Notes: Relationship between share of statehood years with an enslaved population and per capita Black wealth in 1870. Sample includes all states admitted to the union by 1870. Data sources: 1870 wealth data from Ruggles et al., 2021. Years of statehood as free state calculated by authors using data on enslaved population at the state level from Cummings and Hill (1918).

F.2 Historical racial regime and the racial wealth gap

To examine the relationship between Jim Crow and racial wealth inequality, we combine our state-level Black and white wealth data from southern state auditor reports with each state's historical racial regime ("HRR") score developed by Baker (2022). The score combines information on each state's share enslaved in 1860, Black sharecroppers in 1930, number of Jim Crow laws, and the share of a state's congressional delegates who signed the Southern Manifesto in protest of the Supreme Court ruling in *Brown v. Board of Education* desegregating public education.

Figure F.3 and F.4 show the correlation between the HRR score and white-to-Black per capita wealth ratios across Arkansas, Georgia, Kentucky, Louisiana, North Carolina, and Virginia. In 1900, the correlation is .64 while in 1910 the correlation rises to .92. Although there are just six states for which we have data on Black and white wealth, they are sufficiently differentiated in their racial regimes and their racial regimes sufficiently correlated with wealth inequality that a clear pattern emerges.

Though beyond the scope of this paper, future analysis could exploit the timing of specific Jim Crow laws and Black wealth accumulation in those states.

Figure F.3: Historical racial regime and racial wealth inequality in 1900

Corr between wealth ratio and HRR score: 0.640
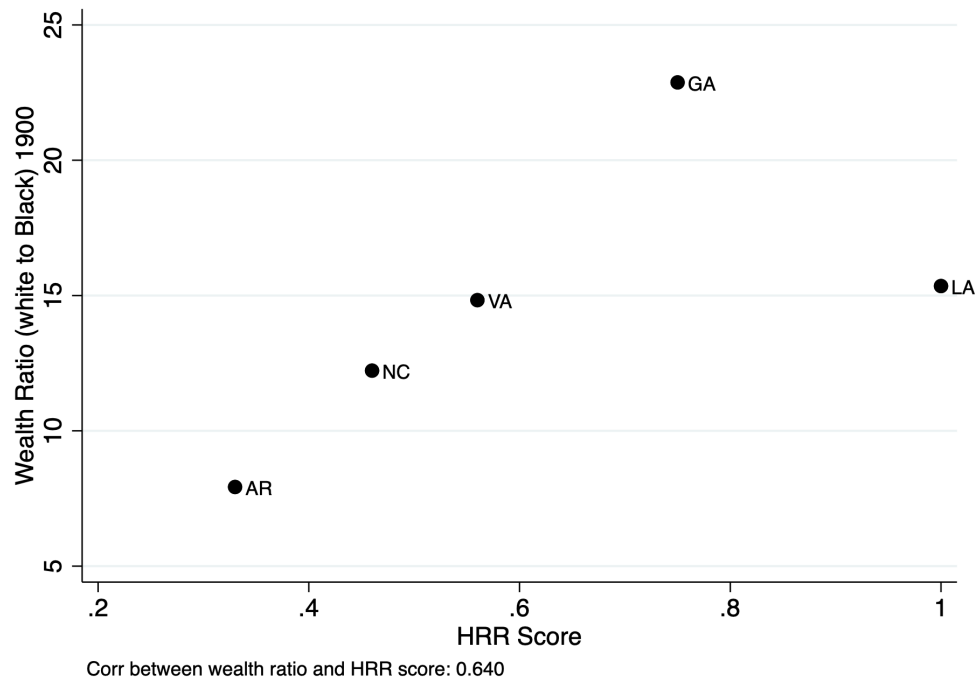
Notes: White-to-Black wealth ratios against historical racial regime score in 1900. Data sources: Data sources: Southern state auditor reports (see Appendix Section A.1); population data from Manson et al. (2017); data on state historical racial regime scores from Baker (2022).

Figure F.4: Historical racial regime and racial wealth inequality in 1910

Corr between wealth ratio and HRR score: 0.923
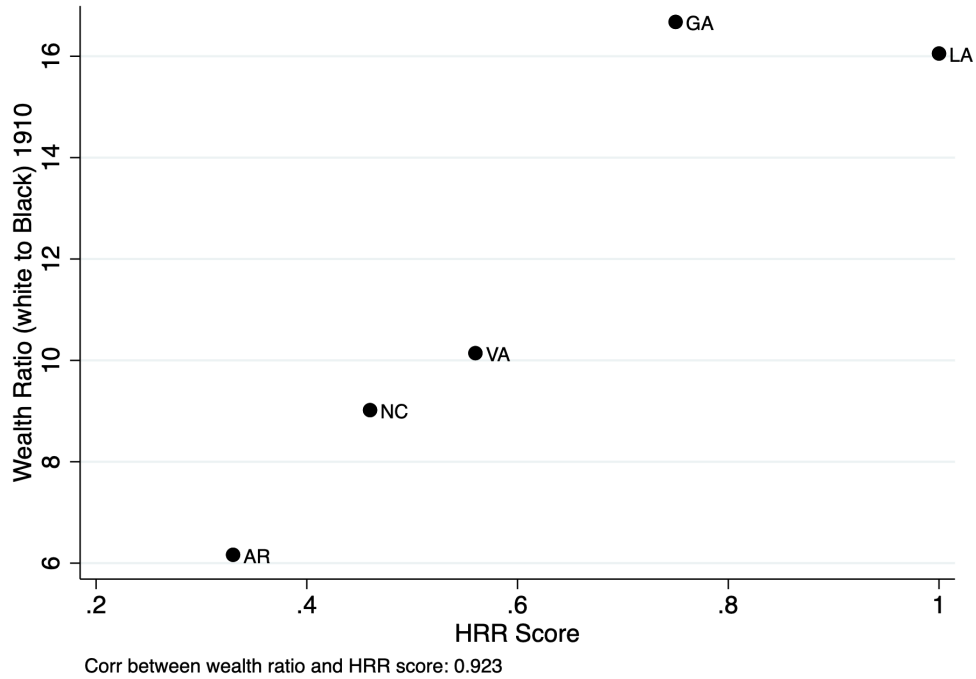
Notes: White-to-Black wealth ratios against historical racial regime score in 1910. Data sources: Data sources: Southern state auditor reports (see Appendix Section A.1); population data from Manson et al. (2017); data on state historical racial regime scores from Baker (2022).

F.3 Wilmington, NC in 1898

Wilmington, North Carolina in the 1890s was notable for its fusion government of Populists and Republicans, high rates of Black literacy and representation in professional occupations, and lower segregation. In the midterm election year of 1898, a white supremacist coup overthrew the government and installed Democrats in power. During the coup, white supremacists burned Black businesses, directly or indirectly expelled hundreds of Black residents, and killed an unknown number of Black individuals. The coup ushered in a Jim Crow government in Wilmington and eventually at the state level in North Carolina, with ramifications throughout the South (Edmonds, 1951; Zucchino, 2020).

Historical accounts of the violence in Wilmington suggest major destruction of local Black wealth through homes and businesses destroyed and through the fleeing of the town's more educated and prosperous Black residents (Zucchino, 2020). Tracing the real-time impacts of the coup is difficult to do with decennial census data. Our annual county-level wealth data allows us to examine the impact of the coup on racial inequality. Figure F.5 plots the evolution of the white-to-Black per capita wealth ratio in New Hanover County, the county containing Wilmington, in black and the remaining North Carolina counties in red. As can be seen in the figure, prior to the coup, the racial

wealth gap in Wilmington was similar in levels and trends to the rest of the state. Both fall from around 20 to 1 to 15 to 1 on the eve of the 1898 coup. After 1900, however, the racial wealth gap in New Hanover County increases back to its level in the early 1890s, and the gap with the rest of North Carolina widens and persists until the 1910s.

These differential trends in wealth convergence before and after the coup provide some direct evidence of the link between racial violence in the South at the time and the evolution of racial wealth inequality. We reserve the further exploration of this link, based on Wilmington and numerous other violent episodes in the South at the time, for future work.

Figure F.5: Wealth gap in New Hanover, NC compared to rest of North Carolina
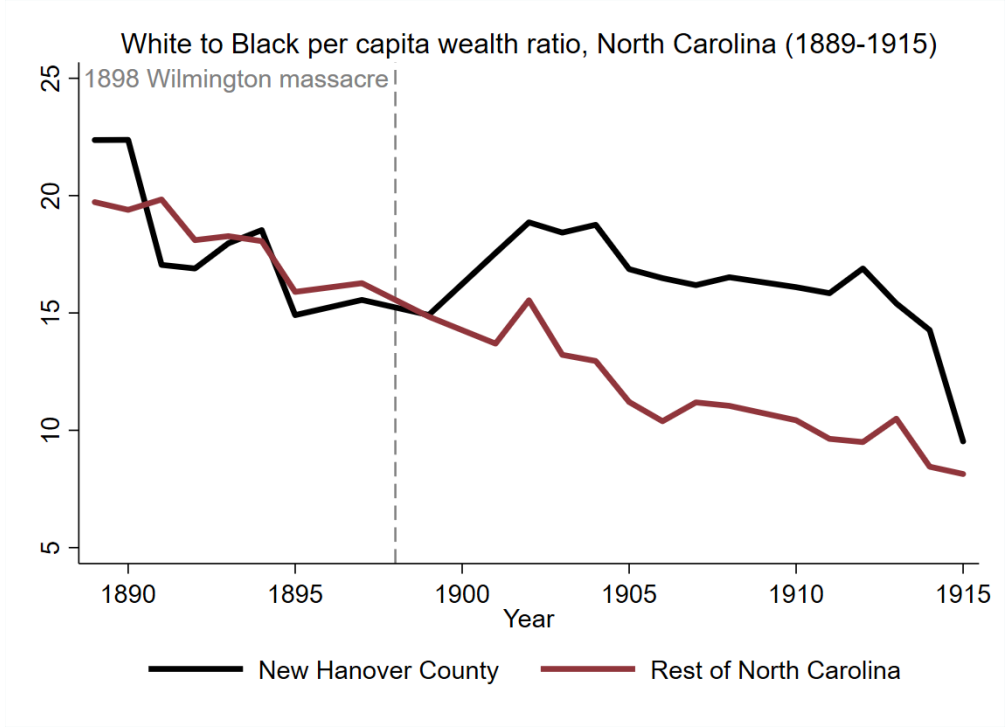
Notes: White-to-Black wealth ratio in New Hanover county and the rest of North Carolina before and after the 1898 coup. Data sources: Auditor reports digitized by the authors (Auditor of the State of North Carolina (1891) through State Tax Commission (1915)); Population data from Manson et al. (2017).

Appendix G Black-to-white wealth ratios and Black Americans' share of national wealth, 1860-2020

This section presents two alternative views of the racial wealth gap: the inverse wealth ratio (the ratio of Black-to-white per capita wealth) and Black Americans' share of national wealth.

Black-to-white wealth ratio   Figure G.1 plots the inverse of our baseline wealth gap measure. Rather than depict the white-to-Black per capita wealth ratio, here we plot the Black-to-white per capita ratio. This view of the wealth gap allows for a more nuanced view of the dynamics of the gap during periods with very low levels of Black wealth, such as the late 19th century. We find that the Black-to-white wealth ratio has increased almost linearly from about 0.02 to around 0.17 today. This alternative view of the wealth gap also highlights slow convergence during the height of the Jim Crow era as well as post-1980. Black wealth as a share of white wealth has fluctuated around 17% over the last four decades, with a sharp drop during the Great Recession.

Black share of national wealth   We also construct the time series of Black Americans' share of national wealth from 1860 to the present. Figure G.2 reports the results. In Appendix Figure G.1, we find that per capita Black wealth has represented a growing share of per capita white wealth over time. Figure G.2 instead depicts total Black wealth as a fraction of total national wealth. This measure is affected by per capita Black wealth holding but also by changes in Black Americans' share of the total population. We report the Black population share in Figure G.3.

In 1870, five years after the end of the Civil War, the Black population in the U.S. held just 0.5% of the nation's wealth despite representing 14% of the population. The Black share of wealth increased steadily over the late 19th century but saw little change from 1900 to 1940. The share then increased dramatically from 1950 to 1980. The reason behind the different evolution of the per capita wealth ratio and the wealth share stem from the time series variation in the Black population share over time (Figure G.3). From 1860 to 1940, a period which encompasses the era of mass European migration to the United States (approximately 1880 to 1920), the Black population share of of the U.S. population fell from around 14% to less than 10%. Between 1950 and 1980 the Black population share climbed back up to just under 12%. In the early 20th century, the forces of rapid Black per capita wealth growth and declining Black population share counteracted each other, producing a flat trend in the Black share of national wealth. From 1950 to 1980, continued Black per capita wealth growth and a rebound in the Black share of the population combined to produce a large increase in the Black share of national wealth. Still, by 2020, the Black share of national wealth is low relative to the population share, at 2.5% compared to a population share of over 12%. The Black population share today is still about five times Black Americans' share of national wealth.

Figure G.1: Black-to-white wealth ratio: 1860-2020
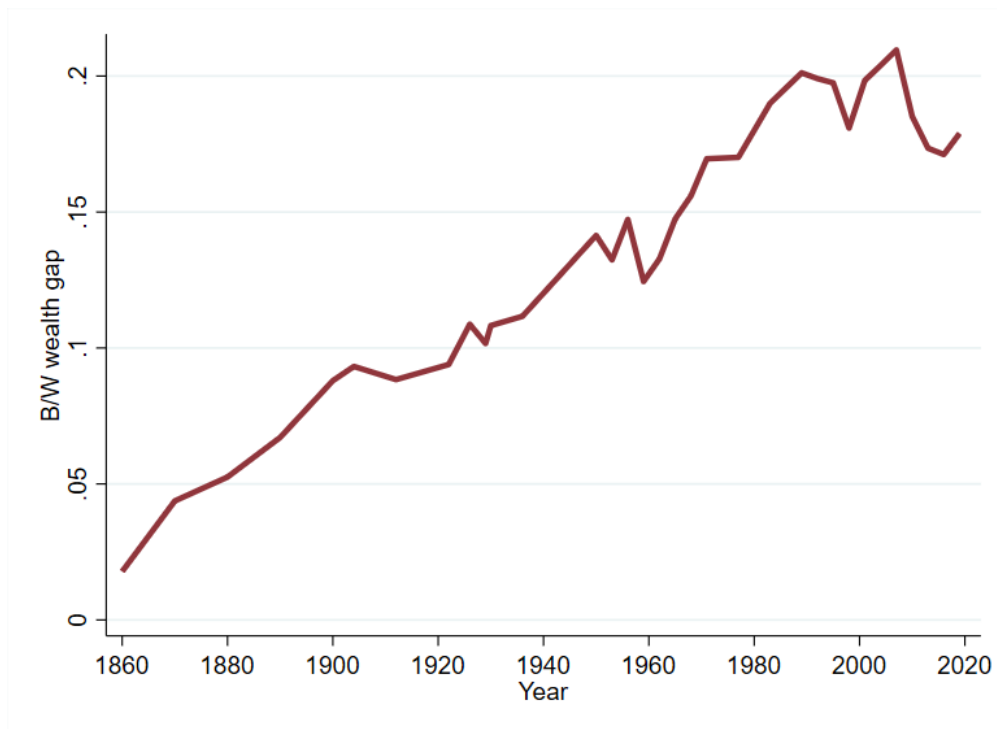
Notes: Authors' series of the Black-to-white per capita wealth ratio from 1860 to 2020. The Black-to-white wealth ratio is the inverse of our baseline series shown in Figure 1. Data sources: Authors' series of the white-to-Black per capita wealth ratios from 1860 to 2020.

Figure G.2: Black share of national wealth: 1860-2020
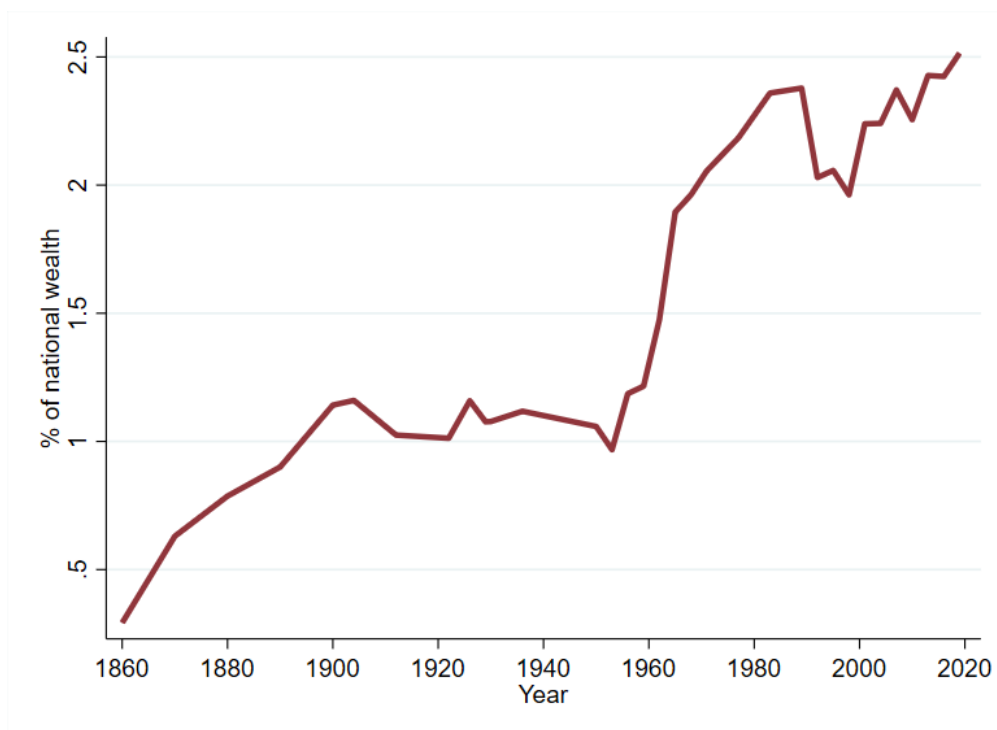
Notes: Authors' series of the Black share of national wealth from 1860 to 2020. Black share computed as total Black wealth as share of national wealth over time. Data sources: Authors' series of aggregate Black wealth and national wealth. Sources are described in Appendix A.

Figure G.3: Black share of U.S. population: 1860-2020
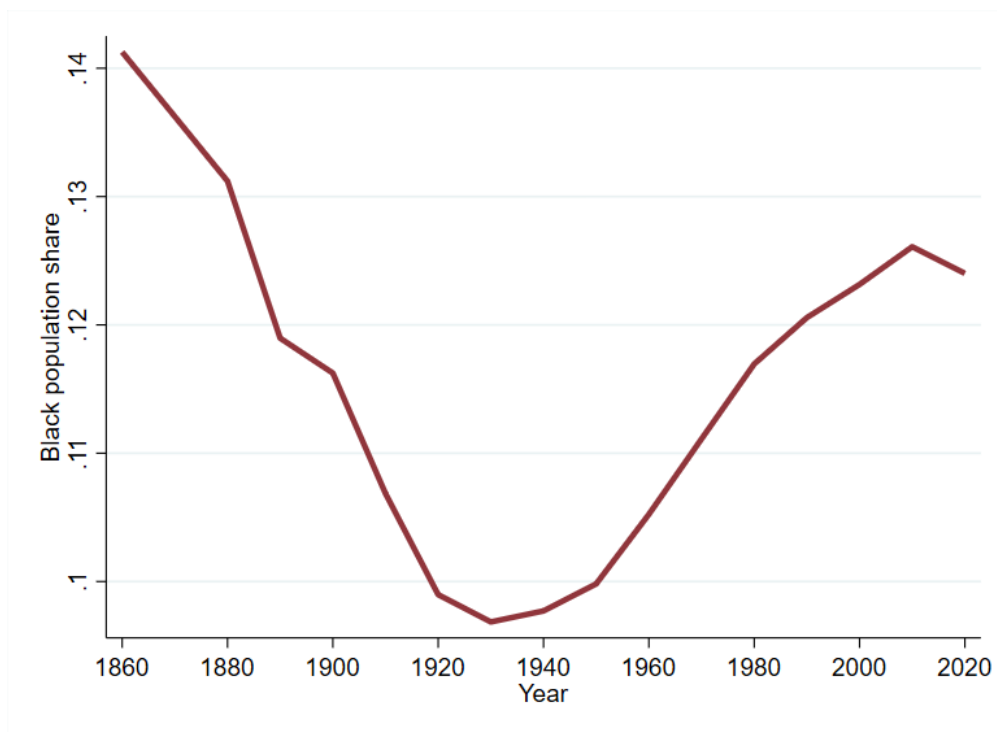
Notes: Share of Black population in the United States from 1860 to 2020. Data sources: Census (Ruggles et al., 2021).

Appendix H   Homeownership and housing wealth gaps, 1860-2020

We construct a time series of Black and white homeownership rates from census data, which can be compared to the series published by Collins and Margo (2011). First, we extract all housing value and homeownership information from the complete-count census data for 1860, 1870, 1900, 1910, 1920, 1930, and 1940. We then add data from the American Community Survey (ACS) for 1960 through 2019. To construct a homeownership indicator in 1860 and 1870, we consider all households reporting positive real estate wealth to be homeowners, following Collins and Margo (2011). For 1860, we add the enslaved population and assume that a counterfactual household size for enslaved Black persons is equivalent to the household size of free Black persons in 1860, or about five individuals. The resulting share of 20% of counterfactual household heads among the enslaved population corresponds to the share in the free Black population (19.2%). We replace all missing housing values with zeros.

We construct time series for housing values and homeownership rates by collapsing data for homeownership and housing values by year for Black and non-Black heads of households.[57] Thus, unlike our measures of the wealth gap, the housing gap and homeownership gap are per household and not per capita. Home values in the census data are only available from 1930 onwards. From 1960 onwards, we use the ACS. Housing values in these data are top-coded with time varying top-coding levels (see Table H.1).

We currently do not adjust the housing wealth series from the ACS for top-coding but provide a comparison to data from the SCF+ for 1950 onwards, which does not have top-coding of housing values. We also replace values coded as missing with zeros. We collapse the data annually using census-provided person weights.[58] To construct housing values and homeownership rates in the SCF+, we take the value of housing assets and consider a household as owning their home if the household reports positive housing assets. We collapse data by SCF+ survey year, using survey weights.

Figure H.1 shows white and Black homeownership rates from census, ACS, and the SCF+, with linear interpolations for years when no data are available.[59] Results are highly consistent with Collins and Margo (2011). Homeownership rates for white households decline slightly between 1860 and 1940 and show a strong increase between 1940 and 1960. After this, white homeownership rates follow a modest upward trend after 1960 followed by a small decrease after the financial crisis of 2008. For Black households, there is a large increase in homeownership rates between 1870 and 1900. Between 1900 and 1940, Black homeownership rates remain flat at just over 20 percent. Homeownership rates for Black households increased strongly between 1940 and 1960 from just over 20 percent to almost 40 percent. There is a slightly increasing trend between 1960 and 2007 and a larger drop compared to white households after the financial crisis. Today, homeownership

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[57] Note, we do not make age or gender restrictions on household heads as in Collins and Margo (2011).

[58] These weights are equal to 1 in the complete-count censuses.

[59] Notably, the 1950 census microdata do not contain homeownership information.

rates of Black and white households are again at the levels they were in 1970 and a large racial homeownership gap persists.

The post-1950 data allow a comparison between SCF+ and census data. To improve estimates of the time series trends, we construct moving averages across three survey waves in the SCF+. Whereas the time series of homeownership rates for non-Black households can by accurately estimated using single survey waves, the moving average improves the estimated time series for Black households. Figure H.1 shows the estimated time series relative to the estimates from census data and show that the two estimates align closely, partly due to the fact that the SCF+ data has been stratified to the national homeownership rate.[60] The flatter slope of the increase in homeownership rates between 1950 and 1960 for both groups suggests a slightly more rapid increase during World War II.

In the next step, we compare the home values of Black and white households. We construct a housing value gap similar to our wealth gap series with the key difference that our housing gap is a per household gap, not a per capita gap. The gap that represents the ratio of the average home value of white households to Black households. We do not condition on homeownership so that the average home value also includes households with zero housing wealth. We also do not subtract debt to get home equity but consider the gross value of housing. In the SCF+ data, we again use three-wave moving averages as discussed above in the construction of homeownership rates. We offer two estimates based on SCF+ data. One estimate uses the reported housing value from the survey and the second one that we refer to as "top-coded" does not report values above the top-coding limit of the census from the nearest census wave (See Table H.1 for census top-coding values over time).

Figure H.2 shows the resulting home value gap series. Home value gaps in census align with those in the SCF+ data starting in 1960. In 1960, the ratio of average white households' housing assets to average Black households' housing assets was 3 and declined between 1960 and 1970 to around 2.5 where it still stands today. The gap moved downwards during the 1990s and 2000s, but increased substantially again after the financial crisis of 2008. The SCF+ shows a higher home value gap after 1960 at around 2.7, but the trend is similar to the gap estimated using census data. When we impose top-coding from the nearest census survey year to the SCF+ data, the housing gap is only modestly reduced. Before 1950, the census data show a much higher home value gap of 6 in 1940 and 6.5 in 1930. This gap falls by 50% between 1940 and 1960. As with the homeownership series, SCF+ estimates of the home value gap in 1950 fall below the linear interpolation of census home values for that year. This may be due to convergence occurring primarily between 1940 and 1950 and stabilizing thereafter.

Overall, between 1940 and 1960, Black households saw a large increase in homeownership rates than white households. Black homeownership rates increased by about 15 pp from 25% to 40% for the Black population and by 20 pp for the white population (from 45% to 65%). Expressed as a growth rate, the homeownership rate for the Black population grew by about 60% (from 25% to

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[60]The SCF+ also match trends in and levels of homeownership rates by age.

40%) and by 44% for the white population (from 45% to 65%). In growth terms, this increase for Black households exceeded that of white households and likely contributed to racial convergence in housing wealth during this period.

Figure H.1: White and Black homeownership rates, 1860-2020
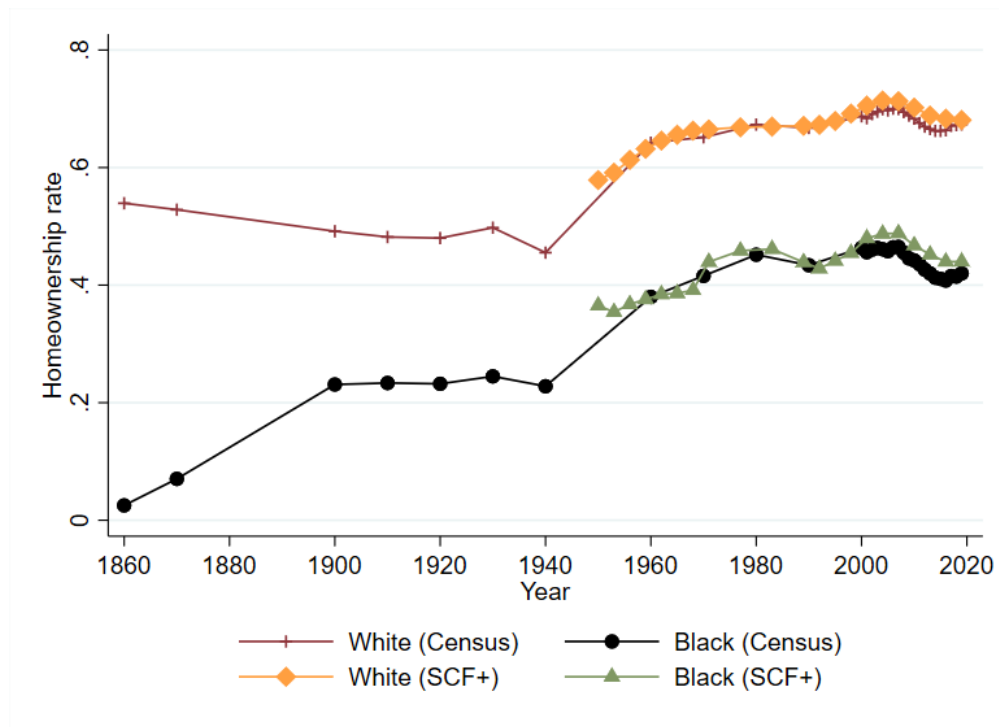
Notes: The line with cross marks plots white homeownership rates from the census, and the line with dots shows Black homeownership rates from the census. The squares and triangles show white and Black homeownership rates, respectively, estimated from the SCF+ microdata. Data sources: Census (Ruggles et al., 2021), ACS, and SCF+.

Figure H.2: White-to-Black per household home value ratio, 1930-2020
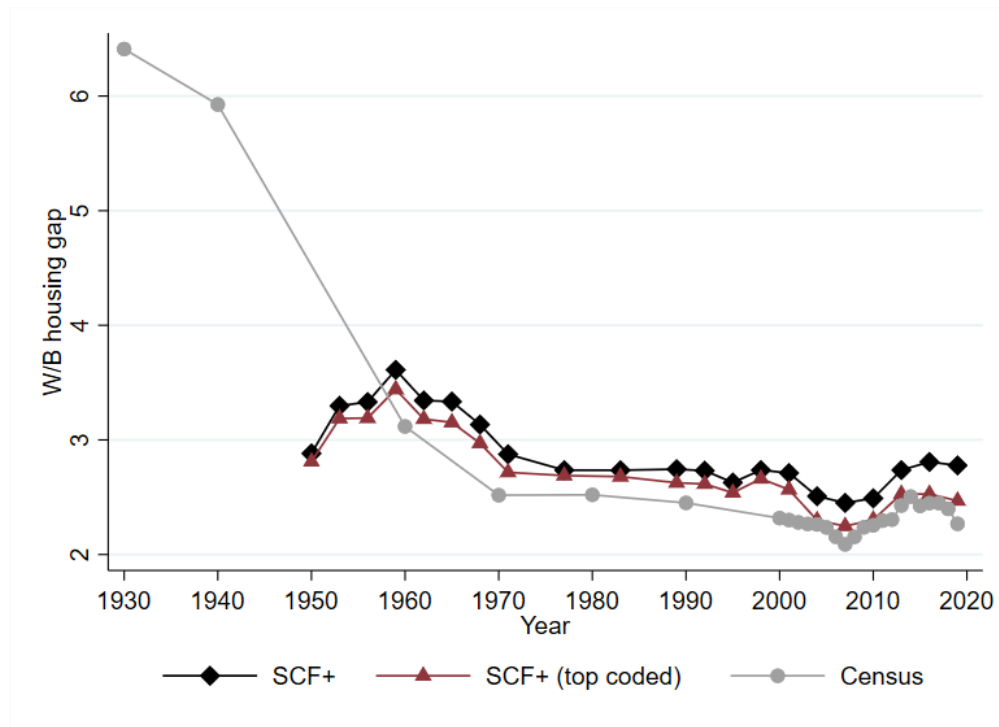
Notes: White-to-Black ratio of housing values per household over time. The dots show census and ACS data. The diamonds show SCF+ data, and the triangles show SCF+ data with the top-coding from census and ACS data applied (Table H.1). Data sources: Census (Ruggles et al., 2021), ACS, and SCF+.

Table H.1: Top-coding of home values in Census and ACS

Census	Top Code
1960	$35,000
1970	$50,000
1980	$200,000
2000	$1,000,000
ACS (2000-2007)	$1,000,000

Notes: Top-coding boundary for housing values for different time periods in census data and the American Community Survey (ACS). All values are current U.S. dollars. Data sources: Census and ACS data (Ruggles et al., 2021).

Appendix I Racial gaps in q and s implied by fitting wealth accumulation model to the data

In section 4, we begin our simulation of racial wealth convergence based on our wealth accumulation model by assuming constant and equal wealth-accumulating conditions for Black and white Americans from 1870-2020. We do this to provide a benchmark for the path of convergence arising from initial gaps in wealth and income alone. The data show slower convergence relative to this benchmark, consistent with racial differences in capital gains rates (q) and saving rates (s). In this appendix, we quantify such differences by estimating the q^b and s^b that give us the best fit with our wealth gap series, assuming white households have capital gains and savings rates equal to the national averages, or $q^w = 1\%$ and $s^w = 5\%$.

We proceed as the following. Recall Equation 2, which is the law of motion of the per capita white-to-Black wealth gap:

$$WR_{t+1} \equiv \frac{W_{t+1}^w}{W_{t+1}^b} = WR_t \times \frac{1+q^w}{1+q^b} \times \frac{1 + s^w \frac{Y_t^w}{W_t^w}}{1 + s^b \frac{Y_t^b}{W_t^b}}. \tag{13}$$

The predetermined variables are the initial per capita wealth and income levels of Black and white Americans in 1870. We then simulate Y_t^w and W_t^w for $t > 1870$ using race-specific income growth rates (g^w, g^b) and the wealth-accumulating conditions of white Americans ($q^w = 1\%$ and $s^w = 5\%$). Afterwards, we estimate the parameters of interest $\theta = [q^b, s^b]$ that minimizes the sum of residuals between the fitted wealth gap $\hat{WR}_{t+1}$ and our actual wealth gap series WR_{t+1}.[61] By doing so, we impose that wealth-accumulating conditions have been worse for Black Americans, or $q^b < q^w = 1\%$ and $s^b < s^w = 5\%$. Our least squares method implies a savings rate of 3.9% and capital gains rate of 0.8% for Black Americans (see Figure I.1).

We examine whether racial differences in savings-induced wealth accumulation (s) or capital gains-induced wealth accumulation (q) have played the more dominant role in influencing racial wealth convergence over the past 150 years. To shed light on this question, we compare two counterfactual wealth gaps, one where we only allow for our estimated difference in saving rates ($s^w = 5\%$ and $s^b = 3.9\%$) while keeping capital gains equal across the two groups ($q^w = q^b = 1\%$) and the second where we only allow our estimated difference in capital gains ($q^w = 1\%$ and $q^b = 0.8\%$),

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[61]Our approach can be formally described with the following equation:

$$Z_t = g(X_t; \theta_0) + \varepsilon_t$$

$$\hat{\theta}_{NLS} = \arg\min_{\theta \in \Theta} \sum_{t=1}^{T} (Z_t - g(X_t; \theta))^2,$$

where the dependent variable Z_t is a non-linear function of observables (X_t), along with the parameters of interest θ_0 that lie in the parameter set Θ. Non-linear least squares methods estimate $\hat{\theta}_{NLS}$ that gives us the best fit to the data.

keeping savings rates equal ($s^w = s^b = 5\%$). The results are presented in Figure I.1. The thick dashed line represents the scenario with different saving rates and thin dashed grey line represents the scenario with different capital gains. This exercise points to a larger role for savings-induced wealth accumulation over the full 150-year period: the counterfactual wealth gap with only differences in saving rates yields a white-to-Black wealth ratio of 4.3 in 2019, while the counterfactual gap with just differences in capital gains rates is 3.5. However, as we note in Section 4.4, recent developments in the racial wealth gap suggest a growing role for racial differences in capital gains rates compared to savings-induced wealth accumulation.

Finally, as a robustness check on our non-linear least squares estimation approach, we also estimate q^b and s^b using Ordinary Least Squares (OLS) and our log-linearized version of Equation 2:

$$\underbrace{log\left(\frac{WR_{t+1}}{WR_t}\right) - s^w\frac{Y_t^w}{W_t^w}}_{\equiv Y_t} = (q^w - q^b) - s^b\underbrace{\frac{Y_t^b}{W_t^b}}_{\equiv X_t} \tag{14}$$

$$Y_t = \alpha + \beta X_t. \tag{15}$$

In order to estimate the parameters of interest ($\alpha = (q^w - q^b)$, $\beta = -s^b$), we need continuous values of Black and white income and wealth. Therefore, we simulate income over time using initial per capita income levels of Black and white multiplied by their annual income growth rates from 1870 to 2020. For wealth, we interpolate our per capita Black and white wealth data for periods when we do not have data. The results of the OLS regression is provided in Table I.1.

Using OLS, our point estimate of the saving rate for Black Americans is by 5.2%, which is slightly than our saving rate estimated with non-linear least squares (3.9%). Our OLS estimates imply that Black Americans had slightly higher capital gains, with a rate of 1.1% (as opposed to 1% for white Americans); however, our estimated gap $q^w - q^b$ is not significantly different from zero. These results underscore that racial differences in capital gains rates are unlikely to be the main factor driving the evolution of the racial wealth gap over the full historical period. Rather, racial differences in savings-induced capital gains have strongly contributed to the overall shape of the long-run wealth convergence. Once we neglect the constant in the OLS estimation, the saving rates of Black Americans decrease to a level of 3.5%, which is very similar to our saving rate measure with non-linear least squares.

Figure I.1: Simulation with estimated q^b and s^b
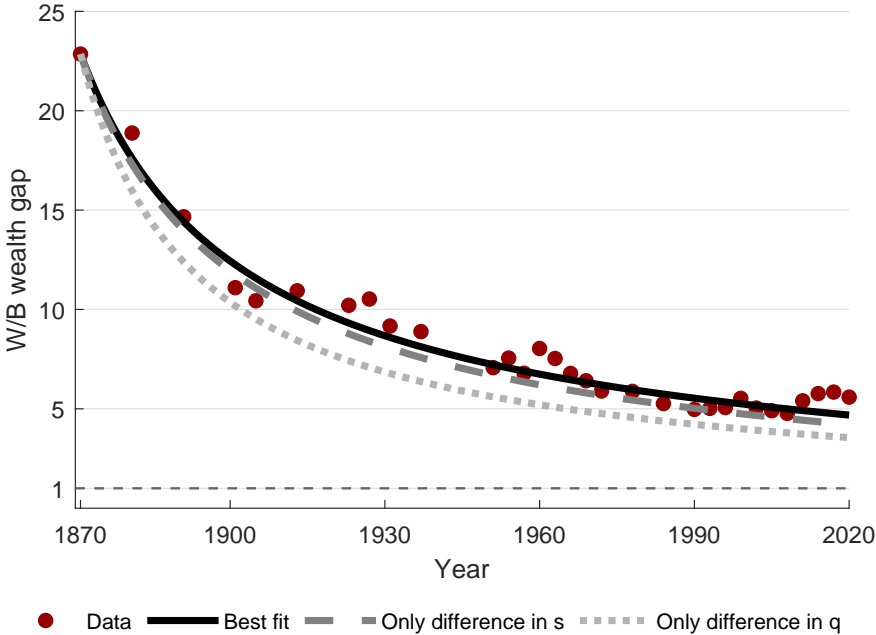
Notes: The grey dashed line is the simulation of Section 4, where we assume equal wealth-accumulating conditions throughout the whole simulation period 1870-2020 ($q^w = q^b$, $s^w = s^b$). The black solid line is the simulation result with q^b and s^b that gives us the best fit to the data. The red dots are our estimated wealth gap series. Data sources: Various, described in Section 3 and Appendix A.

Table I.1: Ordinary Least Squares: $\hat{\alpha}$ and $\hat{\beta}$

	Coefficients	Lower Bound	Upper Bound
$q^w - q^b = \hat{\alpha}$	0.009	-0.005	0.0244
$s^b = -\hat{\beta}$	0.052	0.025	0.080
$s^b = -\hat{\beta}$ (without constant)	0.035	0.029	0.042

Notes: Results from OLS regression. The first column presents the estimated coefficients. The last two columns show their lower and upper bounds using 95% confidence intervals. Data sources: Various, described in Section 3 and Appendix A.

Appendix J   Estimating racial differences in q and s using the SCF+

J.1   Racial differences in capital gains rates

We estimate racial inequality in capital gains following the approach of Xavier (2020), Wolff (2017), Wolff (2018), and Wolff (2022), where we assume that households experience the same capital gains within each asset class. Thus, the only differences in capital gains rates we allow for are those stemming from differences in wealth portfolio composition.

We define the total capital gains of Black and white households (q^j, $j = \{b, w\}$) as the weighted sum of the capital gains on different asset classes based on their shares of total net wealth:

$$q_t^j = \sum_A \omega_{t,A}^j q_{t,A}, \tag{16}$$

where $q_{t,A}$ denotes the capital gains on asset class A and $\omega_{t,A}$ its weight as a share of total net wealth at time t. Net wealth in our framework comprises marketable net wealth, which is the current value of all marketable assets net of the current value of debts. Assets include housing assets (main dwelling and/or other real estate), other non-financial assets (gold, silver, metals, jewelry, and vehicle), fixed-income and liquid assets (certificate deposits, checking and savings account, call and money market accounts, and bonds), stocks, business assets, and defined contribution retirement accounts. Total liabilities are the sum of housing debt, car loans, education loans, loans for consumer durables, credit card debt, and other non-housing debt.

For $q_{t,A}$, we take estimates of real capital gains rates on equity, housing, business, and fixed income assets from Saez and Zucman (2016), while we assume zero capital gains on other non-financial assets such as vehicles.[62] Note that we unveil defined contribution retirement accounts into fixed-income assets and stocks. We calculate the wealth portfolio shares $\omega_{t,A}$ using the SCF+. In Table J.1, we present the portfolio shares of Black and white households and in Table J.2 we present the average annual capital gains on housing, equity, businesses, and fixed income assets, together with the average capital gains on total wealth portfolios by race.

Overall, we observe that Black households have experienced lower capital gains than their white counterparts throughout the whole 1950-2020 period, a difference of 0.21 percentage points on average. During 1950-1980, the white-to-Black difference was rather small (0.1 p.p.), while after 1980, this difference increased by more than three times. Post-1980, both the equity and housing market experienced a boom. Nevertheless, equity experienced a much stronger increase in value compared to housing assets. Since Black households hold only a small share of their total wealth

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[62]For housing, we take the capital gains on gross housing in column E of sheet "TSD1" in *SaezZucmanAggregates2020.xlsx* in our replication file. Business capital gains are in column L of the same sheet. For stocks, we take the capital gains on equities held by US households that include price increases caused by retained earnings, see sheet "TS4" column S in *SaezZucmanAggregates2020.xlsx* in our replication file. For fixed-income assets, Saez and Zucman (2016) provide only capital gains net of personal debt. Therefore, we calculate gross capital gains on fixed-income assets, which is provided in *cg_fixed_inc.xlsx* in our replication file.

Table J.1: Portfolio shares (% of net wealth): 1950-2020

	1950-1980		1980-2020	
	White	Black	White	Black
Housing	0.37	0.75	0.45	0.81
Equity	0.25	0.10	0.19	0.09
Business	0.33	0.28	0.23	0.12
Fixed income	0.11	0.08	0.18	0.18
Other non-financial assets	0.03	0.09	0.05	0.12

Notes: Estimated portfolio shares (% of net wealth) of Black and white households during 1950-2020. Data sources: SCF+.

Table J.2: Real capital gains: 1950-2020

	Housing	Equity	Business	Fixed income	cg^w	cg^b	$cg^w - cg^b$
1950-1980	0.35%	2.13%	1.45%	-4.86%	0.61%	0.51%	0.1 p.p.
1980-2020	1.00%	8.54%	-1.15%	-2.44%	1.34%	1.02%	0.32 p.p.
Whole sample period	0.71%	5.75%	-0.05%	-3.48%	0.97%	0.76%	0.21 p.p.

Notes: Estimated capital gains rates and capital gains rate differences between Black and white households. See Appendix J for details on estimation. Data sources: SCF+ and Saez and Zucman (2016).

in equity, this divergence between the equity and housing markets led to an overall divergence in Black and white capital gains.

The above approach to estimating racial gaps in capital gains ignores the role of potential racial differences in returns within an asset class. Recent evidence suggests such differences exist. Kermani and Wong (2021) document differences in housing returns stemming from Black homeowners' greater likelihood of foreclosure and short sales. Black homeowners also face higher effective property taxes compared to white households, due to systematic differences in assessed-to-market value ratios by race (Avenancio-León and Howard, 2019). Finally, Kroeger and Wright (2021) show that Black businesses are shorter lived than white-owned businesses, and leading to greater incidence of business closure translates and its associated costs on Black business owners. Still, we show in Section 4.4 that racial differences in portfolio composition alone are more than enough to explain the increase in the racial wealth gap post-1980.

Finally, we also provide more details into the dynamics of Black and white capital gains during 1980-2020. The post-1980 period is characterized through major events in capital markets, such as the equity market boom, the Dotcom crisis in early 2000s, as well as the housing market boom afterwards. Also, the Global Financial Crisis (GFC) hit in the year 2008, when both the housing and equity market experienced a severe crash. In Table J.3, we present total capital gains on Black and white wealth portfolios for four sub-periods: (i) 1980-2000: Stock market boom before the Dotcom crisis, (ii) 2001-2007: Housing market boom, (iii) 2007-2010: GFC, and (iv) 2010-2020: Post-GFC period.

Table J.3: Real capital gains: 1980-2020

	1980-2000	2000-2007	2007-2010	2010-2020
White	1.27%	3.72%	-8.60%	2.33%
Black	0.84%	4.94%	-11.55%	2.38%
Difference W-B	0.43 p.p.	-1.22 p.p.	2.95 p.p.	-0.05 p.p.

Notes: Estimated capital gains rates on Black and white wealth portfolios by asset class (housing, equity, business, and fixed income), together with capital gains rates on total Black and white wealth portfolios. See Appendix J for details on estimation. Data sources: SCF+ and Saez and Zucman (2016).

The results visualize very well how housing market booms benefit Black households more than white households, and vice versa in case of stock market booms. Starting from 1980 until the Dotcom bubble burst in 2000, the stock market boom led to higher capital gains for white than Black, as Black Americans barely hold stocks in their portfolios. Compared to this, during the housing market boom 2001-2007, Black Americans have 1.22 percentage points higher capital gains on their total wealth portfolios than white. This phenomenon is well documented in Wolff (2022), who shows that minorities borrowed heavily during this period to profit from the boom in housing prices, thus leading to much higher capital gains. However, this trend reversed immediately as

the Global Financial Crisis hit (2007-2010), and Black households experienced severe losses in their wealth. Since then, Black and white households earn similar capital gains on their wealth portfolios, with Black capital gains being marginally higher.

J.2 Racial differences in savings rates

We estimate racial differences in savings rates using the synthetic saving rates approach of Saez and Zucman (2016), applied to Black and white households separately.[63] As a first step, we decompose the accumulation of personal wealth at the U.S. aggregate level using an asset-specific accumulation equation, which decomposes the growth of a given asset into a volume effect (saving) and a price effect (capital gains or losses). Each asset (and liability) type that enters wealth portfolios can be expressed as

$$A_{t+1} = (1 + q_{t+1,A}) \cdot (A_t + S_{t,A}), \tag{17}$$

where A_{t+1} and A_t are the real value of an asset from households' wealth at time $t + 1$ and t, and $S_{t,A}$ is the net-of-depreciation saving flow of the respective asset type A in time t. $q_{t+1,A}$ is then the real rate of capital gain (or loss) from asset type A between t and $t + 1$. The same applies for liabilities (housing debt and personal debt) at time t (L_{t+1}), where we here assume that the change in liabilities are solely coming from savings (or dissavings) of the previous period ($S_{t,L}$):

$$L_{t+1} = L_t + S_{t,L}. \tag{18}$$

Since A_{t+1}, A_t, and $S_{t,A}$ can be observed in the National Accounts, $q_{t+1,A}$ is estimated as the residual of equation (2).

As a next step, we turn to the SCF+ and estimate the synthetic savings of all asset (and liability) classes for Black and white households separately. Again, for a given asset type A, a white (or Black) household accumulates wealth following the following transition equation:

$$A_{t+1}^j = (1 + q_{t+1,A}) \cdot (A_t^j + S_{t,A}^j), \tag{19}$$

with $j = \{b, w\}$ representing the two racial groups. Since we have estimates of the capital gains (or losses) for each asset class and A_t^j is observable from the SCF+, this time $S_{t,A}^j$ is estimated as residuals of the accumulation equation (Equation 19) and is denoted the "synthetic savings" for group j.[64] Total savings of households is then the sum of all savings in each asset class included in

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[63]For similar approaches, see Wolff (2017), Bauluz and Meyer (2021), and Bauluz, Novokmet, and Schularick (2022).

[64]In order to obtain an adequate measure of savings, it is crucial to harmonize the asset class definitions of the SCF+ with the national accounts to match the accumulation equations 17 and 19. We follow the wealth definitions of Bauluz and Meyer (2021).

their wealth portfolio. We then divide total savings by total income to calculate savings rates by racial group.

J.2.1 Drivers of the savings-induced convergence channel

Recall Equation 3, which shows how the racial wealth gap convergence emerges from two distinct channels: savings-induced and capital-gains induced convergence:

$$\log\left(\frac{WR_{t+1}}{WR_t}\right) \approx \underbrace{\left(q^w - q^b\right)}_{\text{Differences in capital gains rates}} + \underbrace{\left[s^w\frac{Y_t^w}{W_t^w} - s^b\frac{Y_t^b}{W_t^b}\right]}_{\text{Differences in savings}}.$$

The above equation shows that wealth gap convergence will occur through the savings channel only if

$$s^w\frac{Y_t^w}{W_t^w} - s^b\frac{Y_t^b}{W_t^b} < 0 \tag{20}$$

$$\Leftrightarrow \frac{W_t^b}{Y_t^b}/\frac{W_t^w}{Y_t^w} < \frac{s^b}{s^w}. \tag{21}$$

Equation 21 presents nicely how the wealth-to-income ratio differences of Black and white Americans influence the savings-induced convergence channel: If wealth-to-income ratios of Black Americans grow today proportionately more than white, then Black Americans need higher saving rates than the previous period to experience wealth convergence.

In Table J.4, we present estimates of $\frac{W_t^b}{Y_t^b}/\frac{W_t^w}{Y_t^w}$, as well as the Black-to-white ratio of saving rates $\frac{s^b}{s^w}$. In addition, we also provide the white-to-Black differences in income growth rates $g^w - g^b$, which has important implications on the dynamics of wealth-to-income ratios. As we have data on Black and white wealth and income levels throughout the whole 1870-2020 period, we provide estimates of $\frac{W_t^b}{Y_t^b}/\frac{W_t^w}{Y_t^w}$ and $g^w - g^b$ for three sub-periods: 1870-1950, 1950-1980, and 1980-2020. The saving rates ratio is estimated with data of the SCF+, therefore starting from 1950 onwards.

Overall, our estimates provide a clear worsening trend in savings-induced wealth convergence during the last 150 years, where the post-1980 period stands out. We first concentrate on the dynamics of white and Black wealth-to-income ratios. In the aftermath of Emancipation, Black wealth-to-income ratios were very low (only 22% of white wealth-to-income ratios). This, however, implied that Black Americans only needed saving rates slightly higher than 22% of white saving rates in order to experience convergence. This mechanism explains the rapid convergence rates during the decades after 1870. As Black Americans accumulated wealth over time, the differences in wealth-to-income ratios declined, reaching a level of 0.36 in the post-1980 period. Interestingly, since the 1980s, we also observe a worsening in the racial income gap (with white income growth

rates being slightly higher than those of Black). This implies that, given wealth levels remain constant, wealth-to-income ratios of Black Americans will increase faster than white, thus leading to a higher threshold $\frac{W^b}{Y^b}/\frac{W^w}{Y^w}$ to achieve convergence.

At the same time, Black-to-white differences in savings rates increased after 1980 as well: During 1950-1980, Black Americans had in fact similar savings rates as white (almost 85%), while during the post-1980 period, Black Americans' savings rates are only around half of those of white. This, in combination with larger $\frac{W^b}{Y^b}/\frac{W^w}{Y^w}$, the savings-induced wealth convergence have weakened substantially starting from 1980.

Table J.4: Savings-induced convergence: Key parameters

	$\frac{W_t^b}{Y_t^b}/\frac{W_t^w}{Y_t^w}$	$\frac{s^b}{s^w}$	$g^w - g^b$
1870-1950	0.22		-0.60 p.p.
1950-1980	0.32	0.83	-0.51 p.p.
1980-2020	0.36	0.44	0.07 p.p.

Notes: Differences between Black-to-white ratios of wealth-to-income ratios ($\frac{W_t^b}{Y_t^b}/\frac{W_t^w}{Y_t^w}$), Black-to-white saving rates ratio ($\frac{s^b}{s^w}$), and absolute differences in Black income growth ($g^w - g^b$) Data sources: Various, described in Section 3 and Appendix A.

J.2.2 Active saving rates: PSID

One concern with the synthetic savings method applied to the SCF+ is that the data are a repeated cross-section, not a panel of individuals. Therefore, it is not possible to track changes in assets held by a certain individual from time t to $t + 1$. This is particularly problematic in cases of estimating saving rates of different groups separately, where individuals can migrate across groups (Mian, Straub, and Sufi, 2020; Smith, Zidar, and Zwick, 2021). Given the stability of racial identity in the U.S., we do not believe this concern applies in our context. Nevertheless, we conduct an additional robustness check on our estimate of Black and white savings rates differentials using panel household survey data from the Panel Study of Income Dynamics (PSID). Following Dynan, Skinner, and Zeldes (2004) and Juster et al. (2006), we estimate Black and white households' "active" savings rates during 1984-2019 (s_t^j, where $j = \{b, w\}$), which is the total net amount of assets A that households newly purchased ($\sum_A NP_{t,A}^j$), relative to their total income Y_t^j:

$$s_t^j = \frac{\sum_A NP_{t,A}^j}{Y_t^j}. \tag{22}$$

The PSID provides information on the net purchase amount of the following asset categories: real estate other than main dwelling, farm or businesses, corporate equity, and IRAs. With respect

to other asset classes, such as other financial assets and main dwelling, we proceed in the following manner. For savings in main dwelling, we assume that the active savings of families living in the same house between two consecutive waves equals the change in their mortgage principal and investments in home improvement. For households moving between two consecutive waves, we define active savings as the change in their home equity.

With respect to other financial assets, we assume that households do not earn any capital gains, such that the change in value between two consecutive waves reflect their net purchase amount. Finally, we also control for amounts of wealth transferred into a household due to a new household member moving in, as well as wealth transferred out due to a current household member moving out. We further exclude increases in assets coming from inheritances. For income, we calculate the average total income of households during two consecutive waves and multiply this with the number of years between these waves.

Note that the PSID only provides wealth data starting from 1984, such that we are only able to derive the active saving rates for the post-1980 period. In Table J.5 we compare our post-1980 white-Black gap in savings rates using the SCF+ and PSID. The saving rates ratio is slightly larger with the PSID than SCF+, however, lower than the savings ratio pre-1980 (which was 0.83).[65]

Table J.5: Black-to-white ratio in saving rates post-1980: SCF+ vs. PSID

	SCF+	PSID
$\frac{s^b}{s^w}$	0.44	0.63

Notes: The ratio between Black and white saving rates ($\frac{s^b}{s^w}$) in the SCF+ versus the PSID. For our estimates from the SCF+, we apply synthetic savings methods, and for our estimates using the PSID, we estimate active saving rates using data of the PSID. Both approaches are described in detail in Appendix J. Data sources: SCF+ and PSID.

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[65]Racial differences in savings rates can arise from differences in socioeconomic characteristics. Dal Borgo (2019), for example, analyzes saving rate differentials of 50-65 year old household heads by race in the U.S. and provides evidence that the differences in white-Black active savings can be solely explained by their socio-demographic characteristics, such as income.

Appendix K   The racial wealth gap along the distribution

Our analysis thus far has focused on mean wealth holdings and the average wealth gap, primarily due to a lack of microdata on Black and white wealth in the historical period. However, prior work has shown that the U.S. wealth distribution is highly skewed with a large difference between median and mean wealth holding (Kuhn and Ríos-Rull, 2016). In this Appendix section, we provide descriptive evidence on racial wealth gaps along the distribution using the SCF+, which provides microdata on wealth. This analysis sheds light on how the racial wealth gap varies along the distribution and what forces drive the gap at different points in the distribution compared to the mean.

Figure K.1 shows the evolution of the white-to-Black wealth gap at the mean, median, and 90th percentile of the household wealth distribution as well as growth rates in median wealth by racial group for the period 1950 to 2020.[66] Throughout the entire period, the wealth gap at the median (Figure K.1a) has been substantially larger than the wealth gap at the mean or 90th percentile. The wealth gap at the median in 1950 was nearly 25 to 1. By 1970 this number has fallen substantially, reaching a level of 10 to 1, however the gap has remained at this level for the last 5 decades. In contrast to the wealth gap at the median, the gap at the mean and 90th percentile have changed very little over the last 70 years, ranging from just under 5 to around 7 to 1. What can explain the sharp drop in the median wealth gap, particularly between 1960 and 1970? In Figure K.1b, we show the growth rates in median wealth by racial group for each decade between 1950 and 2020. Black wealth at the median grew dramatically between 1960 and 1970, precisely when the wealth gap at the median fell by more than half. This stark increase in median Black wealth during this decade suggests that civil rights era policies and improvements in labor standards that disproportionately benefited Black workers, may have also translated into absolute and relative improvements in the wealth position of median Black households.

Table K.1 sheds light on which asset classes account for the improved wealth position of the median Black household. We show the mean gross values of different assets, mean net wealth, and average total debt for households in the bottom 50%, 50-90%, and top 10% of each racial group's wealth distribution over time. Between 1950 and 1980, Black households in the bottom half of the Black wealth distribution saw large increases in housing wealth, liquid assets, and other non-financial assets. By contrast, bonds and equity wealth did not increase for the bottom 50%. Between 1980 and 2010, the median wealth gap is quite stable. Nevertheless, these decades saw large increases in equity and bond wealth for Black households in the bottom 50%. Increases in housing wealth were more modest. Overall, however, these improvements have been counteracted by large increases in debt-holding for this group, and net wealth for the bottom half of the Black wealth distribution actually fell in real terms between 1980 and 2010. In contrast to this, white

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[66]We focus on the household-level gap in this section in keeping with the sampling frame in the SCF+, which is a household-level survey. As shown in panel (a) of Figure D.6, the household-level and per capita wealth gap do not differ substantially from each other. Nevertheless, as a robustness, we also calculated per capita wealth gaps at the median and 90th percentile by using the average household size of the 45th-55th percentile and 85th-95th percentile, respectively. Results remain robust.

households in the bottom 50% of the white wealth distribution have seen average wealth increase in all asset classes from 1950 to 1980 and from 1980 to 2010. Furthermore, although debt also increased for this group, net wealth still grew.

Detailed information on household asset portfolios in the SCF+ allows us to examine asset-specific wealth distributions by racial group. We summarize this information in Table K.2. The table shows the mean, median, and 90th percentile of wealth in that asset for Black and white Americans in 1950, 1980, and 2010, in $2019. A number of striking facts emerge from this analysis. First, as can be seen in the first panel of Table K.2, median holdings were zero within any asset class for Black households in 1950, indicating sizeable inequality in the distribution of assets. Even today, only the median of non-financial assets and liquid financial assets are positive for Black households. By contrast, the median holdings of housing and stocks – the two asset classes that experienced the greatest price gains over the last four decades – are typically zero for Black households. Hence, the median asset position for Black households resembles a situation of a household with a bank account and a car, but no notable savings that can yield high financial returns or capital gains. As a consequence, any capital gains in stocks or housing over the last decades bypassed the majority of the Black population whereas the median white household has always been a homeowner. Although the median white household did not benefit from rising stock prices, they still gained from rising house prices.

Moving further up the Black and white wealth distribution, we find that differences in asset positions across the two groups close to some extent. At the 90th percentile, Black households have positive holdings of all asset classes over time, yet equity holdings only turn positive during the 2010 decade. Differences in equity are large throughout these seven decades. In 1950, the 90th percentile of equity holdings of white households was more than double the wealth at the 90th percentile of the Black household wealth distribution. The 90th percentile of the Black wealth distribution increased in value between 1950 and 1980, but by 2010 this progress had reversed again. Hence, equity holdings at the top of the white equity wealth distribution grew more than the 90th percentile of overall Black wealth. Thus, while the overall wealth gap at the 90th percentile declined slightly over time, the gap remained at about 4.5 during the 2010 decade.

Finally, we present in Table K.3 the portfolio composition of Black and white households after excluding the wealthiest 10% Americans. Strikingly, the portfolio composition of Black households barely changes, while the portfolio composition of white households in this group resembles those of Black households. This is because most of the wealthiest Americans are white, while only 2% of the total Black population belongs to the wealthiest 10%. Thus, the recent divergence in the racial wealth gap post-1980 is closely related to overall widening wealth inequality, as it is the wealthiest individuals who are more invested in high capital gains yielding assets such as stocks (Piketty, 2013; Saez and Zucman, 2016; Saez and Zucman, 2020; Kuhn, Schularick, and Steins, 2020).

K.1   Racial wealth rank gap

The above discussion motivates examining an alternative measure of racial wealth inequality along the distribution. At each percentile of their respective wealth distributions, Black households have held lower levels of wealth than their white counterparts. Another way to represent this inequality is to measure the wealth rank gap: the difference between a Black household's percentile in the Black wealth distribution and the position that household would hold in the white wealth distribution. This method was pioneered by Bayer and Charles (2018) who examine the evolution of racial income gaps since 1940. Applying this technique to racial wealth in equality, we present the racial wealth rank gap at the median and the 90th percentile in Figure K.2.

As might be expected given the evidence presented above, Black households' position in the white wealth distribution has always been lower than their position in the Black wealth distribution. On average over the 1950-2020 period, Black households at the median have been 24 percentiles behind median white households. Black households at the 90th percentile of the Black distribution have been 28 percentiles behind 90th percentile white households. Figure K.2 also highlights dynamics in the rank gap. The median Black household saw a slow but steady closing of the rank gap between them and median white households, starting from a gap of 30 in 1950 and falling to a gap of 20 by 2010.[67] The rank gap at the 90th percentile has been more stable over time. Nevertheless, from 1970 to 1990, the 90th percentile Black households strongly improved their relative position, rising from the 55th to 65th percentile of the white wealth distribution. However, after 1990, the rank gap at the 90th percentile has remained roughly constant.

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[67]In 2020, we observe a slight deterioration of their position to 28th percentile, likely due to the differential effects of the Great Recession.

Figure K.1: The racial wealth along the distribution

(a) Wealth gap

(b) Growth rates in median wealth by racial group
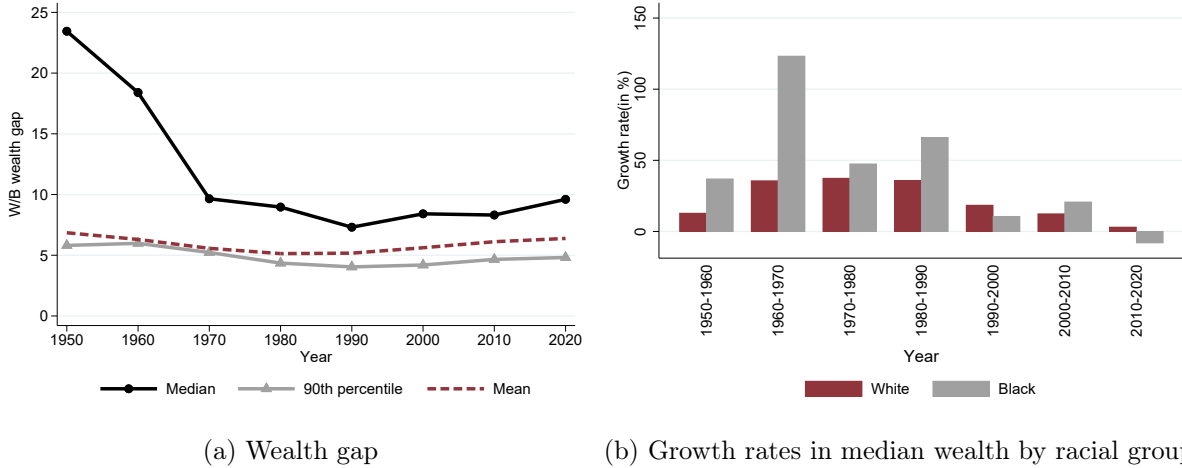
Notes: Panel (a) presents the household-level white-to-Black wealth gaps at the mean, median, and 90th percentile. Panel (b) presents growth rates in Black and white wealth at the median for each decade from 1950 to 2020. Data sources: SCF+.

Figure K.2: Racial rank gaps for net wealth at the median and 90th percentile

(a) Median
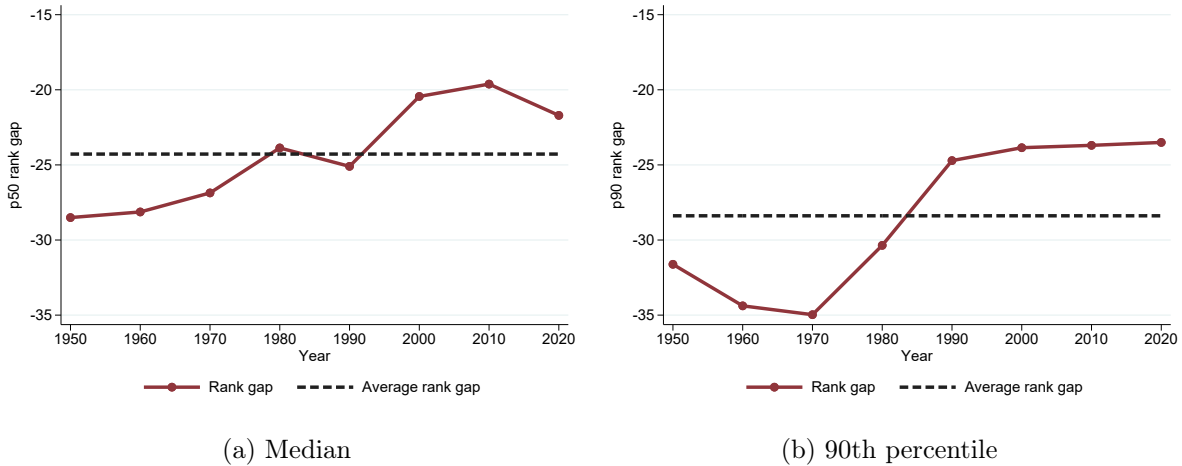
(b) 90th percentile

Notes: The racial rank gap is the difference in percentage points between the rank that the wealth level of the median and 90th percentile takes in the wealth distribution of white households and the rank of the median white household. Dashed line shows the long-run average of the racial wealth rank gap. Data sources: SCF+.

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Table K.1: Portfolio composition along the wealth distribution, 1950-2020

	White			Black		
	Bottom 50%	50%-90%	Top 10%	Bottom 50%	50%-90%	Top 10%
1950						
Housing	11,578	81,475	211,709	8,777	74,490	150,962
Other non-financial assets	3,982	6,324	7,891	1,332	4,911	8,064
Bonds	1,095	6,721	42,723	210	1,045	4,285
Equity	444	18,158	960,158	58	23,391	794,589
Liquid financial assets	2,829	14,003	60,868	919	4,783	14,310
Net wealth	10,846	112,411	1,262,223	5,881	91,899	952,045
Total debt	9,083	14,271	21,125	5,415	16,720	20,164
1980						
Housing	30,581	174,121	596,327	23,693	138,157	614,169
Other non-financial assets	7,116	14,938	33,630	5,629	14,728	98,476
Bonds	622	3,198	76,490	185	951	5,565.39
Equity	1,103	18,149	972,893	167	14,059	388,680.73
Liquid financial assets	6,304	34,567	121,649	3,896	21,682	35,044
Net wealth	25,721	217,928	1,865,101	18,893	171,903	1,131,058
Total debt	21,872	40,581	65,030	15,839	31,039	41,085
2010						
Housing	67,117	282,972	1,392,797	37,734	260,536	1,233,594
Other non-financial assets	14,666	29,925	96,117	9,166	23,669	85,040
Bonds	3,476	41,952	392,895	2,345	34,520	159,914
Equity	5,344	79,321	2,022,536	2,772	44,783	1,067,539
Liquid financial assets	4,571	35,546	286,162	2,546	24,530	97,225
Net wealth	23,587	395,380	4,641,114	13,114	308,490	2,584,225
Total debt	73,935	109,596	227,501	43,079	103,164	236,915

Notes: The table shows mean asset positions, net wealth, and debt for Black and white households from different parts of their respective wealth distributions in 1950, 1980, and 2010. All values are in 2019 dollars. Housing includes other real estate. Equity includes business wealth. Also, bonds and equity include indirect holdings in form of mutual funds and DC pensions. Data sources: SCF+.

Table K.2: Black and white wealth distributions by asset class, 1950-2020

	White			Black		
	Mean	Median	90th	Mean	Median	90th
1950						
Housing	62,911	34,645	148,989	20,678	0	61,553
Other non-financial assets	5,400	2,596	14,712	1,953	0	7,497
Bonds	7,985	0	16,499	403	0	185
Equity	111,692	0	142,293	11,101	0	0
Liquid financial assets	13,850	2,382	36,053	1,687	0	3,622
Net wealth	189,248	46,999	340,631	28,548	1,956	59,803
Total debt	12,589	634	43,923	7,275	660	21,026
1980						
Housing	158,569	100,935	343,567	55,287	2,717	135,874
Other non-financial assets	13,592	8,391	28,876	8,959	3,242	22,122
Bonds	10,508	0	4,637	422	0	184
Equity	123,603	0	122,232	9,708	0	0
Liquid financial assets	31,961	5,386	81,148	7,725	648	19,250
Net wealth	322,036	107,966	595,354	66,877	17,197	140,867
Total debt	35,022	6,438	102,876	19,085	2,531	64,010
2010						
Housing	331,872	164,726	686,356	111,295	0	306,345
Other non-financial assets	31,836	18,120	58,912	13,923	7,358	33,580
Bonds	69,993	88	137,363	12,727	0	28,476
Equity	347,705	5,491	474,769	32,433	0	38,436
Liquid financial assets	54,082	6,398	98,835	9,427	988	17,282
Net wealth	773,925	164,616	1,366,768	126,579	16,802	301,459
Total debt	109,422	35,141	294,562	60,836	11,052	191,334

Notes: The table shows mean, median, and 90th percentile asset positions, net wealth, and income for Black and white households from the full sample period of the SCF+. All values are in 2019 dollars. Housing includes other real estate. Equity includes business wealth. Also, bonds and equity include indirect holdings in form of mutual funds and DC pensions. Data sources: SCF+.

Table K.3: Portfolio composition without the wealthiest 10% Americans, 1983-2019

	Without top 10%		All	
	Black	White	Black	White
Housing	62%	58%	58%	39%
Stocks	10%	11%	9%	18%
Business	3%	4%	8%	19%
Fixed income	17%	19%	16%	20%
Other non fin. assets	8%	8%	9%	4%

Notes: Average portfolio shares of Black and white households over 1983-2019. Columns 1 and 2 presents the the portfolio shares of Black and white households after excluding the top 10% wealthiest Americans. The next two columns present the shares of all households by race. Data sources: SCF+.

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