NBER WORKING PAPER SERIES

BLACK AMERICANS' LANDHOLDINGS AND ECONOMIC MOBILITY AFTER EMANCIPATION: NEW EVIDENCE ON THE SIGNIFICANCE OF 40 ACRES

William J. Collins
Nicholas C. Holtkamp
Marianne H. Wanamaker

Working Paper 29858
http://www.nber.org/papers/w29858

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
March 2022

Collins acknowledges support from National Science Foundation grant SES 1156057 and from the Grey and Dornbush gifts at Vanderbilt University. Wanamaker acknowledges support from National Science Foundation grant SES 1156085. This paper has benefited from the feedback of seminar participants at Stellenbosch University, University of Warwick, Yale University, Duke University (Sanford School), Stanford University, University of Oxford, George Washington University, University of Michigan, George Mason University, University of California-Berkeley, the Atlanta Fed's Southeastern Micro Labor Workshop, and the Virtual Economic History Seminar. Insights from Jeremy Atack, Robert Margo, Paul Rhode, James Fenske, and Gavin Wright were particularly helpful. Bokseong Jeong provided valuable research assistance. Any opinions presented in this paper are of the authors only and do not represent the views of their employers. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

At least one co-author has disclosed additional relationships of potential relevance for this research. Further information is available online at http://www.nber.org/papers/w29858.ack

Black Americans' Landholdings and Economic Mobility after Emancipation: New Evidence on the Significance of 40 Acres

William J. Collins, Nicholas C. Holtkamp, and Marianne H. Wanamaker

NBER Working Paper No. 29858
March 2022
JEL No. N0,N21

ABSTRACT

The US Civil War ended in 1865 without the distribution of land or compensation to those formerly enslaved—a decision often seen as a cornerstone of racial inequality. We build a dataset to observe Black households' landholdings in 1880, a key component of their wealth, alongside a sample of White households. We then link their sons to the 1900 census records to observe economic and human capital outcomes. We show that Black landowners (and skilled workers) were able to transmit substantial intergenerational advantages to their sons. But such advantages were small relative to the overall racial gaps in economic status.

William J. Collins
Department of Economics
Vanderbilt University
VU Station B #351819
2301 Vanderbilt Place
Nashville, TN 37235-1819
and NBER
william.collins@vanderbilt.edu

Nicholas C. Holtkamp
U.S. Department of Health and
Human Services
nicholas.holtkamp@hhs.gov

Marianne H. Wanamaker
Department of Economics
University of Tennessee
524 Stokely Management Center
Knoxville, TN 37996
and NBER
wanamaker@utk.edu

A data appendix is available at http://www.nber.org/data-appendix/w29858

I. INTRODUCTION

America's renewed reckoning over racial inequality has brought fresh attention to the economics literature on persistent gaps in wealth and income.[1] In accounts concerning the origins and evolution of racial disparities in economic status, scholars have long seen the post-Civil War era of Reconstruction (1865-77) as a critical juncture (Du Bois 1935, Myrdal 1944, Higgs 1977, Ransom and Sutch 1977, Jaynes 1986, Foner 1988). In particular, the nation's failure to provide the formerly enslaved population with the resources and protections required to participate fully in economic and political life hindered Black-White income, wealth, and human capital convergence and perpetuated large disparities in economic well-being that are still present today.

Explanations of the ways in which Reconstruction-era policy choices undermined the economic status of Black Americans and their descendants often focus on the distribution of land ownership.[2] The Civil War ended without implementing a plan to distribute land or compensation to those formerly enslaved. Consequently, even by 1880, relatively few Black households owned real property.[3] At this time, 85 percent of Black Americans lived in rural areas. Land ownership offered Black households an escape from farm tenancy, sharecropping, and wage labor, affording them more control of their daily lives and the fruits of their production. Accordingly, freedmen made land their paramount economic concern. Historian Eric Foner explains that, "The desire to escape from white supervision and establish a modicum of economic independence profoundly shaped blacks' economic choices during Reconstruction… *Above all, it inspired the quest for land of their own*" (1988, p. 104, emphasis added).

This paper provides new evidence on the intergenerational ramifications of large disparities in landholdings at the end of Reconstruction. Our work complements that of Miller (2020), which compares freedmen's outcomes in the Cherokee Nation (in Northeast Oklahoma), where they were granted land after the war, to outcomes elsewhere in the South.[4] It also complements a prior

[1] Recent work includes Margo (2016), Bayer and Charles (2018), Wolff (2018), Craemer et al. (2020), Kuhn, Schularick, and Steins (2020), Collins and Wanamaker (2021), and Derenoncourt (2022).
[2] Other areas of focus in the literature include violence, the rollback of civil and legal rights, restricted access to credit, and poor provision of education (Du Bois 1935, Ransom and Sutch 1977, Foner 1988, Logan 2020).
[3] Collins and Margo (2011) estimate that 13.5 percent of Black households owned homes in 1880, compared to 55 percent of White households.
[4] Miller (2020) finds that Black farm acreage, ownership, livestock value, and crop production were higher in the Cherokee Nation than elsewhere in the South, and some of these advantages were likely transmitted to the next generation (e.g., higher school attendance rates for Black children in the Cherokee Nation in 1900's cross section). Our paper provides a different and broader empirical perspective. We construct a dataset with national coverage for perspective on overall Black/White gaps; we examine a wide range of intergenerational

literature on wealth inequality in the post-Reconstruction period (Du Bois 1901, Higgs 1982, Margo 1984, Spriggs 1984), where conclusions are based primarily on geographically aggregated data without the ability to observe intra-household transmission dynamics. We build a novel dataset of fathers and sons with national coverage, including thousands of hand-linked and transcribed records from the census of population to the census of agriculture manuscripts in 1880. Such record linkage is essential for characterizing the relationship between landholding in one generation and the economic status of the next because (1) the 1880 census of *population* manuscripts contain no information on property ownership, let alone farm characteristics, whereas (2) the census of *agriculture* manuscripts, which provide the most consistent, micro-level, and national-in-scope data on farms, contain no information on the farmer's race or household members.[5] To capture the intergenerational implications of differences in economic status, we link children from all households in 1880, including those of non-farmers, to their adult selves in the 1900 census of population manuscripts where we can observe their occupation, literacy, home ownership status, migration, and more (Bailey et al. 2020, Abramitzky et al. 2021).

We first show that the farm ownership rate and the distributions of farm acreage and value differed dramatically for Black and White households in 1880. It is immediately clear that allocating up to 40 acres of farmland to Black households—as proposed during and after the Civil War but not implemented (Cox 1958, Oubre 1978, Foner 1988)—would have greatly increased Black Americans' landholdings and wealth relative to what they had actually attained by 1880 and relative to White farmers. Although some Black households owned farmland in 1880 (approximately 12 percent in our sample), relatively few had acquired plots of 40 acres or more; instead, most Black men worked as sharecroppers or wage laborers.

outcomes; we compare sons of farmers of all tenure statuses and sons of men in other occupational categories; and we provide insight on whether status transmission was centered within households as opposed to variation in local characteristics. Most importantly, we illustrate how small the realized intergenerational benefits of Black farm ownership were relative to the size of racial disparities, even among children whose parents were all landless farmers.

[5] The published volumes of the 1880 census of agriculture do not report statistics by race. The volumes of the 1900 census of agriculture do report summary tables by race, but the original micro-level data have been destroyed. The 1870 census of population has information on the value of real property (Collins and Margo 2011). We focus here on 1880 because scholars have expressed concerns with the quality of the 1870 census (for discussion see Ransom and Sutch 1977, p. 284; Reid 1995; Hacker 2013) and because 1880 provides a relatively high-quality benchmark at the end of Reconstruction. Several southern states produced tables of aggregate tax assessment data by race (Du Bois 1901, Higgs 1982, Margo 1984).

We then investigate the significance of fathers' land ownership and farm size in 1880 for the fortunes of their sons in 1900, showing that the returns in terms of sons' home ownership and literacy were substantial. For instance, conditional on age, sons of landowning Black farmers achieved a home ownership rate that was 7 percentage points higher than for sons of Black laborers, whereas sons of farmers who did not own land saw no such home ownership advantage. Sons of landowning farmers were also 11 percentage points more likely to be literate in 1900 than the sons of laborers, and approximately 13 percentage points more likely to be literate than the sons of farmers who rented. We also show that sons of Black farmers in the upper quintiles of owned acreage or farm value fared better in terms of literacy and home ownership than sons of Black landless farmers and, often, better than those in the lower quintiles of owned acreage or value.[6] These are fundamental insights about the first generations of Black households in the post-emancipation period, visible only with the fully linked dataset we have created.

Conceptually, it is important to be clear that our measures of sons' outcomes conditional on fathers' landholdings or occupations cannot be given a simple causal interpretation, nor is that what we aim to provide.[7] The connections between one generation's economic status and the next's are manifold, and the extensive intergenerational mobility literature recognizes that statistical associations may reflect investments in human capital, social connections, local resources and environments, health, and more (Loury 1977, Becker and Tomes 1986, Margo 2016). In the context we study, all of the above were inflected by the history of slavery and ongoing discrimination and violence against Black Americans. We do aim to see whether and how strongly differences in economic status among Black households shortly after the Civil War, especially with respect to farm ownership and fathers' occupations, were transmitted to the next generation. We find that Black families with more economic resources were able to transmit substantial advantages to their children—advantages that manifested in the form of both property and human capital accumulation. Because local fixed effects do not greatly weaken these relationships, we conclude that the advantages were primarily due to "within family" mechanisms rather than economic or social differences across localities.

[6] The literacy gains we document are qualitatively consistent with Miller's findings (2020, Table 9), which were estimated within the Cherokee Nation.

[7] If selection into farm ownership is positive then one might consider the observed associations between fathers' landholdings and sons' outcomes to be an upwardly biased measure of the effect.

Despite these advantages, the limits of landownership as a springboard for the next generation's prosperity are also clearly evident. Even for Black sons of landowning farmers, average rates of literacy and homeownership in 1900 were far lower than for White sons. In fact, sons from the top quintiles of Black farm-owning families (by value or acres) had much lower literacy rates and slightly lower homeownership rates than White sons of *landless* farmers. Moreover, in terms of labor market outcomes, as reflected in the sons' occupational status in 1900, we find that the advantages associated with Black fathers' land ownership were small compared to the magnitude of the Black-White gap. We interpret this as evidence of the severe limits on Black workers' labor market opportunities outside of agriculture in this critical period, which were impervious to the landownership status of fathers.

In sum, this paper offers a new micro-level and national-in-scope window on Black and White Americans' agricultural landholdings circa 1880 and then traces disparities in the freedmen's generation into the next generation's economic and human capital outcomes. In doing so, it informs fundamental debates regarding the origins and evolution of racial inequality in the United States (Du Bois 1901, DeCanio 1979, Higgs 1977, Margo 1984, Oliver and Shapiro 1995, Margo 2016, Derenoncourt et al. 2022). Interpretations of today's racial disparities are often grounded in the failure to redistribute farmland to freedmen after the Civil War, but there is still much to learn about how Black Americans' landholdings developed in this era and what the implications were for their descendants. This paper also contributes to the growing literature on intergenerational mobility in the long run of American history (e.g., Aaronson and Mazumder 2008, Long and Ferrie 2013, Olivetti and Paserman 2015, Bleakley and Ferrie 2016, Ager et al. 2019, Tan 2021, Ward 2021), including work that is focused on racial differences (Hertz 2005, Mazumder 2014, Collins and Wanamaker 2021, Derenoncourt 2022). It deepens this literature by providing new insights regarding the freedmen and their children, with unprecedented detail on variation in economic status within the large population of farmer-headed households.

II. DATA AND ANALYTICAL FRAMEWORK

Dataset Construction

To assess the intergenerational legacy of landownership in this context, we began with the full count dataset of the 1880 census of population, available through the North American Population

Project (Minnesota Population Center 2017). We then linked all sons aged 0 to 17 who were living with their father in 1880 to themselves in the 1900 census of population, made available by Ancestry.com through IPUMS (Ruggles et al. 2015).[8] The data collection described here is a subset of that described in Collins and Wanamaker (2021), but with additional transcription and much more analysis of farm-level data in 1880 to glean insights into this critical period of American economic and political history.

Based on their ages, the vast majority of the sample's Black sons were born free to previously enslaved parents—this is essentially the first generation of post-emancipation young men. But there is no way to observe in the census exactly which individuals had been enslaved before 1865. In 1880, we can observe parents' occupation, race, age, and location; we cannot observe home ownership or literacy in this sample.[9] In 1900, we can observe sons' occupation, location, home ownership, and literacy status; we cannot observe the value of homes or farms.

To sharpen our characterization of parents' socioeconomic status and land holdings, we linked households to the 1880 census of agriculture manuscripts if the father reported that he was a farmer. This step allows us to discern the farmer's tenure status and provides information on farm acreage (both improved and unimproved), farm value, livestock value, and other characteristics. This information, which we transcribed from the hand-written manuscripts, distinguishes between farm owners, renters for "fixed money" (cash), and renters for "shares of production," and allows us to segment owners and renters by the value and size of their farms. Because links to the 1880 agricultural census must be done manually, we searched for a subset of the farming fathers from the universe of 1880-to-1900 census of population links. Undergraduate researchers at our home institutions established the links from the population census to the agricultural census based on name and detailed locations, using digitized and searchable manuscripts available on the Ancestry.com website.[10] We searched for a random sample of farming fathers in the census of agriculture records,

[8] See the Data Appendix for more details on the linkage. We matched 9.5 percent of white sons and 3.4 percent of black sons. We follow recommendations from Bailey et al. (2020) by using the intersection of two linked samples as our working sample: one sample is based on an Abramitzky et al. (2014) methodology and another is based on Ferrie (1996).

[9] Homeownership was not recorded in 1880, and literacy is not transcribed in the NAPP full count data.

[10] Roughly half of all farmers lived in states with searchable records on Ancestry.com: Alabama, California, Connecticut, Georgia, Illinois, Iowa, Kansas, Maine, Massachusetts, Michigan, Nebraska, New York, Ohio, South Carolina, Tennessee, Texas, Virginia, and Washington. In aggregate, states with searchable records are not remarkably different from national averages for key agricultural characteristics, such as tenure distribution. States from all regions are represented with the exception of the Mountain West, where less than 1 percent of farmers resided in 1880.

and we oversampled Black fathers. The final working sample includes 4,976 matched White farmer fathers and 3,276 matched Black farmer fathers, plus 299,847 Black and White non-farmer fathers. All analysis samples are weighted to be representative of fathers in 1880.[11] Fathers who reported being a farmer in the 1880 population census but who were not found in the agriculture census are not included in the analyses below.[12]

Measures of Sons' Outcomes in 1900

Home Ownership: Home ownership in the 1900 census of population is a binary indicator for whether the son is a household head and living in owner-occupied housing. For those who were farmers, it is likely that a homeowner also owned at least some farmland. For both farmers and non-farmers, home ownership may reflect labor market success, the accumulation of savings, and perhaps inheritance or *inter vivos* transfers. This variable must be interpreted with some care because homeownership was higher in rural than urban areas (Collins and Margo 2011), but urban migration sometimes led to higher paying jobs.

Human Capital: We use literacy as a proxy for human capital accumulation. The census did not record highest grade of attainment before 1940, leaving us with a basic but still informative measure of educational attainment. Approximately 58 percent of the Black population, age 20-40, could read and write in 1900.

Occupation Category: In the absence of individual income measures in the 1900 census of population, we rely on occupation indicators to characterize labor market outcomes. A binary indicator for *laborer status* is a measure of whether the son works on the lowest rung of the occupational distribution. We group farm and non-farm laborers together in the laborer category because both groups had low compensation and because it was not uncommon for laborers to move

[11] We reweight to match the distribution of fathers of co-resident sons aged 0 to 17 in 1880 using inverse probability weights based on a probit for being in the matched sample. Observables include region, urban dummy, city population, and father's age. For farmers' sons, the final analysis weights are the product of these probability weights multiplied by the number of farmers in the full linked sample divided by the number of farmers successfully matched to the agricultural census, separately by race.

[12] This is implicitly a "missing at random" assumption. There are several reasons one might not find a farmer in the agricultural census. Names might be transcribed differently from the population and agricultural census records; "farmers" in the population census might not have been the sole operator (the agricultural census lists only one); enumerators might not have completed a schedule for the farm or it might not have been preserved; or we might have missed a farmer who is actually in the manuscripts somewhere.

between sectors in this period. For some analyses, we also include indicators for "blue collar" and "white collar" status, where blue collar refers to semi-skilled or skilled craft workers (not laborers).

Income Scores: A supplementary measure of labor market outcomes is the son's occupational rank assignment. This is based on a methodology described in full in Collins and Wanamaker (2021), which takes account of detailed occupation, race, and region.[13] For farming sons, our income assignments differentiate based on home ownership status in 1900. Based on these scores, we then rank the sons in the national distribution of scores (i.e., we rank all linked sons against the complete count sample for 1900). Although these ranks go a step beyond "laborer status" in characterizing labor market outcomes based on detailed occupations, a clear shortcoming is that they cannot register individual-level income variation *within* occupation/race/region cells.

Analytical Framework

We use the new dataset to answer fundamental questions about whether and how Black households' economic status in 1880 was transmitted to their sons' outcomes in 1900. *We begin with a sample of farmers' sons.* In this sample, we use detailed information on farm size, farm value, and livestock value, transcribed from the census of agriculture's handwritten manuscripts, to categorize farming fathers into one of six groups. When we use farm acreage to categorize fathers, a "zero acreage" farmer is one who rents for cash or rents for share, and the five remaining categories reflect quintiles of the acreage distribution among farm owners (separately by race). When we use farm value to categorize farmers, we assume those who "rent for cash" own the value of their livestock but not the land, and that those who "rent for share" do not own the farm's livestock or land. This distinction is coarse, but it reflects a real difference in their average economic status.[14] A "zero value" farmer in this cut of the data is one who rents for share or rents for cash on a farm with no

[13] We rely on mean values of race/region/occupation-specific income data from the 1940 and 1960 censuses, with adjustments for in-kind income for farm workers based on Department of Agriculture reports, as described in Collins and Wanamaker (2021) and the Data Appendix.

[14] Alston and Kauffman explain, "Although a cropper farmed a certain plot of land…he differed from other tenants in important respects, especially when he worked on a plantation.….he generally supplied no input besides labor services.…He resembled a wage laborer more than a true tenant…" (1998, 264-65). The 1880 data do not allow a clear distinction between share *tenants* and sharecroppers. Our assumption, given our focus on Black men circa 1880, is that most farmers who did not own their farm and did not rent for cash were sharecroppers (or were approximately as well off as sharecroppers).

livestock; the five remaining categories reflect quintiles of the farm value distribution, including the value of livestock.

We then widen the scope of comparison by *including sons of non-farming fathers*, in which case the fathers' categories correspond to broad occupational groups. We still differentiate between sons of farm owners and renters, but we also include the sons of white- and blue-collar workers and those of unskilled laborers, none of whom enter the farmer-specific analyses based on farm size and value.

For each of these comparisons, we age-adjust the data to avoid differences in average outcomes that are due solely to differences across groups in the ages at which we observe the household head's status in 1880. Following Alsan and Wanamaker (2018), we separately standardize the sample of *farming fathers* and *all fathers* by reweighting the observations within each status category to mimic the age distribution of all fathers in the universe in question.[15] So, for example, if fathers who rent for shares are systematically younger than fathers in the 5th quintile of farm acreage, the age adjustment process will result in comparisons of their sons' outcomes that are pre-adjusted for these differences. Later, we refer to regression analyses that account for age differences and other confounders using fixed effects.

Caveats

Our data have limitations. First, our characterization of farm ownership is based on information about farm operators in the census of agriculture manuscripts. We do not observe Black households' non-agricultural property ownership in 1880, though we do observe the sons' homeownership status in 1900 regardless of their farm or non-farm residence at that time. Given the concentration of Black households in rural areas and the long-standing focus on agricultural land distribution policies after the Civil War, we believe our dataset speaks to a crucially important issue in American economic development and the history of racial disparities. Yet we want to highlight for readers and future researchers that non-agricultural property ownership also merits attention, especially as urbanization increased in the twentieth century.[16] In addition, it is important to keep in mind that if the farm was

[15] We divided the sample into four bins of fathers' age (18 to 24, 25 to 29, 30 to 34, 35 and older) and then reweighted each status category to match the distribution among the full universe in question (farming fathers or all fathers).

[16] In 1870, 13 percent of urban Black male household heads reported owning some real property, compared to 6 percent of rural households (based on the *realprop* variable in the 1870 1-percent IPUMS sample). But 87 percent of Black male household heads were in rural areas.

rented, the census recorded the operator's name but not the owner's. Given that White households owned disproportionate amounts of farmland compared to Black households (i.e., much of the stock of rented land was owned by White households), the owned-*and*-operated tallies of acreage and value from the census records will understate the total Black-White gap in farmland owned.

Second, as in all linked datasets, we must address selection into linkage relative to the base population of fathers with co-resident sons; as mentioned above, we accomplish this through reweighting (as recommended in Bailey et al. 2020). But differences in unobservables, such as sons' educational attainment or health, may also influence linkage probabilities and positively bias the linked sample. There may also be positive bias in our ability to link farmers to their farms in the 1880 agricultural census manuscripts because census enumerators were instructed to omit the most marginal farms (under 3 acres), and above that threshold, it is possible that larger farms were more likely to be recorded.[17]

Moreover, despite our effort to limit bad matches by adopting a conservative linkage procedure, remaining mismatches might come into play through various channels. For instance, an 1880 son who is matched to the wrong adult in 1900 might have his occupation, home ownership, and literacy mistaken. This will tend to flatten the relationship between father and son's status. Similarly, Ward (2021) emphasizes that fathers' occupations are sometimes recorded inconsistently. Our emphasis on fathers' broad occupational categories might avoid placing too much weight on their detailed occupational codes, but there is certainly scope for measurement error. Again, such errors will tend to flatten the relationship between fathers' and sons' outcomes.[18]

III. Results

Racial Differences in Landholding, 1880

We begin with a tabulation of occupations and agricultural landholding data, shown in Table 1. Comparatively few Black fathers in our linked sample owned farms in 1880—approximately 12 percent compared to 44 percent of White fathers. This means that only about 25 percent of the

[17] We cannot re-weight the sample to reflect this potential source of bias because there is no underlying "true" distribution of farm value (by race) on which to base the weights.
[18] In principle, one could make multiple census links for the fathers. In our setting, this is difficult because the 1890 manuscripts were destroyed, the 1870 census under-enumerated the Black population, and adding another dimension of linkage (fathers forward or backward) would reduce sample size dramatically.

sample's Black *farmers* owned land compared to nearly 80 percent of White farmers. This reflects both the legacy of slavery and the failure of plans for land distribution to those formerly enslaved, yet it is also evidence of the determination of many Black households to ascend the "agricultural ladder" and achieve some measure of economic independence. Only 9 percent of Black fathers were farmers who owned and operated 40 total acres or more, but more than half of Black farmers who owned land held at least this much. If not farmers, Black fathers were relatively concentrated in the unskilled "laborer" category (43 percent), whereas White men were more concentrated in white-collar jobs and skilled or semi-skilled blue-collar jobs.

Further evidence on farm size and value is contained in Figure 1. The upper panels focus on each farm's total *acreage*, including both improved and unimproved acreage. Here, we assign farmers who rent land (whether on shares or for cash) a value of zero acres in the histograms. Only 16 percent of Black farmers owned and operated farms with 40 acres or more, and only 10 percent owned 80 acres or more. Conditional on owning some land, the average total acreage holding for Black farmers was 101 acres (median 66), although much of that land was unimproved. In contrast, the majority of White farmers in our sample (80 percent) owned land, and 70 percent nationwide operated farms with 40 acres of land or more.[19] Approximately 54 percent of White farming fathers owned and operated 80 or more acres of land, five times the rate among Black farming fathers. Conditional on owning land, White farmers operated farms with an average of 180 total acres (median 120).

Summary statistics for farm *values* reveal similar racial inequalities, as evidenced in the lower panels of Figure 1. The vast majority of Black farmers—89 percent—owned properties valued at $500 or less, compared to only 27 percent of White farmers. This reflects, in part, the large number of Black farmers who owned no land (hence a spike at $0). But even among the farm owners, the average value of Black farms was very low compared to White farms. At the upper end of the distribution, only 7 percent of Black farm owners operated farms valued above $2,000, compared to 53 percent of White farm owners.

Large disparities in farm ownership, acreage, and values are not a great surprise, and yet, the histograms show in sharp relief just how large an addition to Black landownership the allocation of

[19] The White ownership rate among farmers in our 1880 sample is higher than the 71.7 percent rate for 1890 reported in Holmes and Lord (1896, p. 175, cited in Collins and Margo 2011). This may reflect positive selection into our sample.

40 acres of productive southern farmland would have been *if* Reconstruction proposals for land distribution had actually occurred. Indeed, this is one of the great "what ifs" of American history. Looking forward to the next generation, it is impossible to know what course the political economy of the South and the fortunes of Black Americans' might have taken if there had been largescale land re-allocations after the war (Ransom 2005). It *is* possible, however, to see how the children of Black farmers fared later in life as a function of their fathers' landholding in the environment that actually did prevail in the late nineteenth century. This provides perspective on both the potential benefits and clear limitations of landholding as a basis for Black intergenerational gains in this period.

Sons of Farmers: Intergenerational Results

For sons of farmers, the panels on the left side of Figure 2 report outcomes as a function of paternal land ownership. On the *x*-axis, we classify 1880 farm households into six groups based on total owned acreage or (separately) farm value: those with "zero" and then five quintiles for those with at least some owned acreage or value. Then, we plot the average value of sons' outcomes in 1900 for each group with separate lines corresponding to the acreage- or value-based quintiles. As in Figure 1, farm values are set to zero for share renters, equal to the value of livestock for cash renters, and equivalent to the full value of livestock and land for farm owners.

It is clear that some advantages accrued to Black sons of fathers who owned larger or more valuable farms. They tended to have higher literacy and home ownership rates, and were (for the most part) less likely to be laborers (top three panels).[20] Black sons from the top quintile of Black farming families (measured as either value or acreage) had a 75 percent chance of being literate in 1900 and a 15 to 20 percent chance of being homeowners. For comparison, Black sons of farmers with no owned acreage or farm value were about 60 percent literate and only 8 percent owned homes in 1900. The intergenerational returns associated with landholdings are less clear in terms of the income score rank variable (bottom panel), though rank-based outcomes are compressed and low for Black men in this period.

Despite some advantages for Black sons whose fathers owned larger or more valuable farms, these were small compared to the magnitude of the Black-White gaps. For reference, we have

[20] Such sons were more likely to achieve white-collar status, too, but this was still a rare outcome (see Appendix Figure A1).

plotted a horizontal line in each panel showing the average outcome for White sons whose fathers owned no land.[21] *It is striking that Black sons from the top quintile of farming families (by either acreage or value) were far less likely to be literate than White sons from the bottom—by about 20 percentage points—and were substantially more likely to work as a laborer in 1900.* Of course, these gaps are even larger when comparing sons of landless Black farmers to those of landless White farmers. Only in terms of homeownership did Black sons from the best off farming families approach parity with sons of landless White farmers. Overall, on each of the four outcome metrics, Black farmers' sons from every quintile fared worse than White farmers' sons whose families who owned no land.

For reference, we summarize the results using regressions with additional control variables in Appendix Table A1. The regressions include fixed effects for the age of the father (1880) and son, state of residence in 1880, and residence in an urban location in 1880. Results are consistent with those graphed in Figure 2. Returns to farm value are positive, large, and statistically significant for home ownership and literacy outcomes, and are negative, large, and significant for laborer status. Returns in terms of the occupational income rank are quite muted. We estimate returns to farm value for several additional outcomes (e.g., migration, marital status, and family size) in Appendix Table A2.

All Sons: Intergenerational Results

For a wider scope on intergenerational mobility patterns in this period, we can add the sons of non-farmers to the sample and then measure differences in sons' outcomes depending on their fathers' occupational group. The fathers' occupation categories correspond to those in Table 1, but for concise presentation, we combine skilled and semi-skilled blue collar fathers into a single "blue collar" group. The panels on the right side of Figure 2 plot age-adjusted average outcomes for sons from each category of fathers' occupations; for reference, the dashed line represents the average outcome for sons of White laborers.

Black sons of land-owning farmers were much more likely to own homes than were Black sons of laborers or any other occupational group. This is especially notable in light of the idea that facilitating more access to landownership for the formerly enslaved population might have translated

[21] White results for all quintiles of land ownership are contained in Appendix Figures A3 and A4.

into distinct economic advantages for the next generation. Moreover, Black sons of white-collar workers, blue-collar workers, and farm owners were all much more likely to be literate than sons of laborers, by at least 10 percentage points and by more than 20 percentage points for sons of white-collar workers.[22] This is consistent with the results for farm families discussed above, where farm owners' sons were more literate than renters' sons. It also confirms the sense that children from better off Black families had substantial advantages relative to other Black children in the acquisition of human capital. Finally, this is broadly consistent with evidence from Miller (2020, table 8), that Black children in the Cherokee Nation in Oklahoma—whose parents were entitled to claim land after emancipation—were more likely to attend school than Black children elsewhere.

Sons of unskilled laborers were substantially more likely to be unskilled laborers themselves than were the sons from all other groups, which were roughly similar to one another in their likelihood of being laborers (around 50 percent). In the bottom right panel of Figure 2, the sons of white-collar and blue-collar Black fathers achieved somewhat higher average occupational ranks than other groups, even though their probability of being a laborer was similar.

The striking size of the Black-White gap in sons' outcomes is again apparent in the right-side panels of Figure 2. In terms of homeownership, Black sons of land-owning farmers were the only group that fared better than White sons of laborers. In terms of literacy, even sons of white-collar workers were less literate than White sons of laborers. Black sons from across the fathers' occupational distribution fared worse than White sons of laborers in terms of occupational income rank and laborer status. If we compare to southern White sons, we reach similar conclusions.[23]

IV. POSSIBLE CHANNELS AND EXTENSIONS

How were landowning Black families able to endow their sons with higher homeownership and literacy rates in this first post-Civil War generation? A deep assessment of this question is beyond the scope of this paper, but we can shed some light on broad, proximate channels. In theory, it is possible that location-specific differences in economic opportunity explain both land ownership among Black fathers and the subsequent achievements of sons. For a simple test of whether the

[22] Differences across groups are reduced but still large when controlling flexibly for sons and fathers ages, urban residence (in 1880), and state fixed effects (Appendix Table A3).
[23] Literacy is lower among southern Whites, and Black sons of white-collar fathers exceed the literacy rate of southern Whites as a result; no other occupation class does so.

father-son gradients in outcomes described in Section III are largely a reflection of differences in local environments, we can regress sons' outcomes on fathers' status conditional on location fixed effects.[24] If cross-place differences were driving the baseline results described above, we would expect the relationship between fathers' and sons' outcomes to be much weaker when based solely on *within* locality variation. In fact, we find that the homeownership and literacy returns to fathers' farm ownership are not much weaker with the addition of location fixed effects; therefore, we infer that the mechanisms linking fathers and sons outcomes were primarily "within family" in nature.[25]

Further analysis of heterogeneity within the linked sample provides more nuance (Appendix Tables A5 and A6). When we split the sample by sons' ages (<30 versus 30 and over), we see that fathers' landholdings are similarly correlated with sons' *literacy* in both subsamples, but the father-son property *ownership* gradient is much stronger among sons observed at older ages (columns 5 and 6). Thus, observable advantages in homeownership, a proxy for household wealth, tended to materialize later in the sons' lifecycle. It is tempting to infer that this simply reflects within-family transfers or inheritances of land (e.g., sons taking over the family farm). Surely there was some of this, but the story is more complex. We see a positive, albeit muted, father-son gradient in ownership even among sons who left agriculture (column 7), consistent with improved lifecycle wealth accumulation for Black sons of landowning farmers even if they left the family farm.[26] More detailed, locally focused case studies might help uncover the extent to which sons in 1900 took over existing family farms or set up separate households on family-owned land.

Why were Black sons of landholding fathers unable to translate their advantages in terms of family background and literacy into much better labor market outcomes, at least by the metrics we observe? We offer three interconnected explanations. First, for context, it is important to keep in mind that most landowning Black households were still relatively poor—they were higher on the "agricultural ladder" than many others and, therefore, had a higher degree of autonomy in their work and higher average income, but their economic resources were still modest. Second, pervasive discrimination impeded Black advancement up the occupational and income-rank ladder. This does not imply that labor market returns to literacy or family background were zero for Black men circa

[24] Because the farmer sample is not large, we implement this using dummy variables for "state economic areas," groups of contiguous counties with similar economic, demographic, and cultural characteristics (Bogue 1951).
[25] Regression results are in Appendix Tables A5 and A6, column 2.
[26] There is no evidence of a stronger gradient in ownership for oldest sons in each household (columns 3 and 4).

1900, but there were limited possibilities for earning high incomes through upward occupational mobility. Third, fathers' property ownership and place-specific human capital may have entailed substantial returns for sons *within farming*—perhaps in ways that our metrics cannot detect—but not elsewhere. If so, Black sons of landowning fathers may have been strongly attached to local agriculture and less inclined to seek opportunity in other lines of work. This is consistent with evidence of their relatively low rates inter-state and inter-regional migration.[27]

V. CONCLUSIONS

In 1880, fifteen years after the Civil War's conclusion, there was substantial heterogeneity in the economic situation of Black households even though, on average, the population was poor. Some had succeeded in acquiring land of their own, but most had not; some held skilled craft or white-collar occupations, but most toiled as laborers or sharecroppers. We find that Black households with more economic resources were able to transmit some advantages to the next generation, particularly in terms of literacy and property ownership. We also find that this positive transmission did not merely reflect better local conditions; rather, it appears to have held across families within the same 1880 locality.

On one hand, evidence of positive status transmission is not surprising—economic studies of intergenerational mobility typically find evidence of a positive correlation between fathers' and sons' outcomes. On the other hand, the economic and political environment of the late nineteenth century was severely biased against Black children's acquisition of human capital, against Black workers' advancement beyond the lowest paying jobs, and against Black families' accumulation of property, wealth, and status. This environment undermined the prospects for rapid reversion toward the mean outcomes of the US population. Indeed, Margo (2016) points out that Black-White income convergence after 1870 was far slower than a simple regression-to-the-mean calculation would suggest when based on standard estimates of intergenerational persistence. Instead, Black workers circa 1900 remained remarkably clustered at the lowest paying rungs of the labor force. When we look specifically at the *labor market* outcomes of young men in our linked dataset, we see only traces of advantages transmitted over generations within the Black population and very large Black-White gaps regardless of the sons' background. The children of White landless farmers and unskilled

[27] These are reported in Appendix Figures A1 and A2 and Tables A2 and A4.

laborers had far better life chances in terms of economic status than did the children of Black workers in any occupational category.

A key element in discussions of the Civil War and Reconstruction's "unfinished revolution" (Foner 1988) is the distribution of farmland and, in particular, the priority Black Americans attached to acquiring and holding land to gain a measure of economic independence. We see in our data that a policy of distributing 40 acres of land to all recently emancipated Black men would have been a large addition relative to the size of actual Black landholdings circa 1880. Taken literally, such a policy likely would have raised Black households' real property ownership rate above that of White households. But to succeed it would have required an open-ended federal commitment to protecting Black Americans' lives, property, and civil rights in the South. In this regard, Ransom points out that by the end of Reconstruction, "most Northerners were unwilling to pay for the effort that would be required to guarantee freed slaves their rights in a society of hostile white Southerners" (2005, p. 367).[28] Without these protections, we find that even the sons of landholding Black households struggled to advance. Instead, the post-Civil War Black-White income gap closed slowly, remained large, and powerfully shaped the wide-ranging racial disparities that have persisted to this day.

[28] Ransom (2005) also points out that freedmen would have required better access to capital to succeed in commercial farming.

REFERENCES

Aaronson, Daniel and Bhashkar Mazumder. 2008. "Intergenerational Economic Mobility in the United States, 1940 to 2000." *Journal of Human Resources* 43, 1: 139-72

Abramitzky, Ran, Leah Platt Boustan, and Katherine Eriksson. 2014. "A Nation of Immigrants: Assimilation and Economic Outcomes in the Age of Mass Migration." *Journal of Political Economy* 122, 3: 467-506.

Abramitzky, Ran, Leah Boustan, Katherine Eriksson, James Feigenbaum, and Santiago Perez. 2021. "Automated Linking of Historical Data." *Journal of Economic Literature* 59, 3: 865-918.

Ager, Philipp, Leah Platt Boustan, and Katherine Eriksson. 2019. "The Intergenerational Effects of a Large Wealth Shock: White Southerners after the Civil War." *American Economic Review* 111, 11: 3767-3794.

Alsan, Marcella and Marianne Wanamaker. 2018. "Tuskegee and the Health of Black Men." *Quarterly Journal of Economics* 133, 1: 407-455.

Alston, Lee J. and Kyle D. Kauffman. 1998. "Up, Down, and Off the Agricultural Ladder: New Evidence and Implications of Agricultural Mobility for Blacks in the Postbellum South." *Agricultural History* 72, 2: 263-279.

Bailey, Martha, Connor Cole, Morgan Henderson, and Catherine Massey. 2020. "How Well Do Automated Linking Methods Perform in Historical Samples? Evidence from US Historical Data." *Journal of Economic Literature* 58, 4: 997-1044.

Bayer, Patrick and Kerwin Kofi Charles. 2018. "Divergent Paths: A New Perspective on Earnings Differences Between Black and White Men since 1940." *Quarterly Journal of Economics* 133, 3: 1459-1501.

Becker, Gary S. and Nigel Tomes. 1986. "Human Capital and the Rise and Fall of Families." *Journal of Labor* Economics 4, 3: S1-S39.

Bleakley, Hoyt and Joseph P. Ferrie. 2016. "Shocking Behavior: Random Wealth in Antebellum Georgia and Human Capital Across Generations." *Quarterly Journal of Economics* 131, 3:1455-1495.

Bogue, Donald Joseph. 1951. *State Economic Areas.* U.S. Bureau of the Census.

Collins, William J. and Robert A. Margo. 2011. "Home Ownership and Race from the End of the Civil War to the Present." *American Economic Review, Papers and Proceedings* 101, 3: 355-359.

Collins, William J. and Marianne H. Wanamaker. 2021. "African American Intergenerational Mobility since 1880." *American Economic Journal: Applied*, Forthcoming.

Cox, LaWanda. 1958. "The Promise of Land for the Freedmen." *Mississippi Valley Historical Review* 45, 3: 413-440.

Craemer, Thomas, Trevor Smith, Brianna Harrison, Trevon Logan, Wesley Bellamy, William Darity, Jr. 2020. "Wealth Implications of Slavery and Racial Discrimination for African American Descendants of the Enslaved." *Review of Black Political Economy* 47, 3: 218-254.

DeCanio, Stephen J., 1979. "Accumulation and Discrimination in the Postbellum South." *Explorations in Economic History* 16, 2: 182-206.

Derenoncourt, Ellora. 2022. “Can you Move to Opportunity? Evidence from the Great Migration.” *American Economic Review* 112(2): 369-408.

Derenoncourt, Ellora, Chi Hyun Kim, Moritz Kuhn, and Moritz Schularick. 2022. “Wealth of Two Nations: The US Racial Wealth Gap, 1860-2020.” Working paper.

Du Bois, W.E.B. 1901. “The Negro Landholder in Georgia.” US Department of Labor Bulletin No. 35. Washington DC: GPO.

Du Bois, W.E.B. 1935. Black Reconstruction in America : an Essay toward a History of the Part Which Black Folk Played in the Attempt to Reconstruct Democracy in America, 1860-1880.

Ferrie, Joseph P. 1996. “A New Sample of Males Linked from the Public Use Microdata Sample of the 1850 US Federal Census of Population to the 1860 US Federal Census Manuscript Schedules.” *Historical Methods* 29, 4: 141-156.

Foner, Eric. 1988 [2014 edition]. *Reconstruction: America’s Unfinished Revolution, 1863-1877*. New York: HarperCollins, Perennial Classics.

Hacker, J. David. 2013. “New Estimates of Census Coverage in the United States, 1850-1930.” *Social Science History* 37, 1: 71-101.

Hertz, Tom. 2005. “Rags, Riches, and Race: The Intergenerational Economic Mobility of Black and White Families in the United States.” In S. Bowles, H. Gintis, and M. Osborne (eds.), *Unequal Chances: Family Background and Economic Success*. New York: Russell Sage and Princeton University Press, pp. 165-191.

Higgs, Robert. 1977. *Competition and Coercion: Blacks in the American Economy, 1865-1914*. New York, NY: Cambridge University Press.

Higgs, Robert. 1982. “Accumulation of Property by Southern Blacks before World War I.” *American Economic Review* 72, 4: 725-737.

Jaynes, Gerald David. 1986. *Branches without Roots: Genesis of the Black Working Class in the American South, 1862-1882*. New York: Oxford University Press.

Kuhn, Moritz, Moritz Schularick, and Ulrike I. Steins. 2020 "Income and Wealth Inequality in America, 1949–2016." *Journal of Political Economy* 128.9: 3469-3519.

Logan, Trevon. 2020. “Do Black Politicians Matter? Evidence from Reconstruction.” *Journal of Economic History* 80, 1: 1-37.

Long, Jason and Joseph Ferrie. 2013. “Intergenerational Occupational Mobility in Britain and the U.S. Since 1850.” *American Economic Review* 103, 4: 1109-1137.

Loury, Glenn. 1977. “A Dynamic Theory of Racial Income Differences” in P.A. Wallace and A. LaMond (editors) *Women, Minorities, and Employment Discrimination.* Lexington, MA: Lexington Books.

Margo, Robert A. 1984. “Accumulation of Property by Southern Blacks before World War I: Comment and Further Evidence.*”* *American Economic Review* 74, 4: 768-776.

Margo, Robert A. 2016. “Obama, Katrina, and the Persistence of Racial Inequality.” *Journal of Economic History* 76, 2: 301-341.

Mazumder, Bhashkar. 2014. “Black-White Differences in Intergenerational Economic Mobility in the US.” *Economic Perspectives* 38, 1: 1-18.

Miller, Melinda C. 2020. “The Righteous and Reasonable Ambition to Become a Landholder: Land and Racial Inequality in the Postbellum South.” *Review of Economics and Statistics* 102, 2: 381-394.

Minnesota Population Center. 2017. *North Atlantic Population Project: Complete Count Microdata. Version 2.3* [dataset]. Minneapolis: Minnesota Population Center. http://doi.org/10.18128/D040.V2.3.

Myrdal, Gunnar. 1944. *An American Dilemma: The Negro Problem and Modern Democracy*. New York, NY: Harper & Row.

Oliver, Melvin and Thomas M. Shapiro. 1995. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York, NY: Routledge.

Olivetti, Claudia and M. Daniele Paserman. 2015. “In the Name of the Son (and the Daughter): Intergenerational Mobility in the United States.” *American Economic Review* 105, 8: 2695-2724.

Oubre, Claude F. 1978 [2012 edition]. *Forty Acres and a Mule: The Freedmen’s Bureau and Black Land Ownership*. Baton Rouge: Louisiana State University Press.

Ransom, Roger L. 2005. “Reconstructing Reconstruction: Options and Limitations to Federal Policies on Land Distribution in 1866-67.” *Civil War History* 51, 4: 364-377.

Ransom, Roger L. and Richard Sutch. 1977 [2001 edition]. *One Kind of Freedom: The Economic Consequences of Emancipation*. Cambridge, UK: Cambridge University Press.

Reid, Richard. 1995. “The 1870 United States Census and Black Underenumeration: A Test Case from North Carolina.” *Social History* 28, 56: 487-499.

Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2015. *Integrated Public Use Microdata Series: Version 6.0* [database]. Minneapolis: University of Minnesota. http://doi.org/10.18128/D010.V6.0.

Spriggs, William Edward. 1984. *Afro-American Wealth Accumulation: Virginia 1900-1914*. Dissertation, University of Wisconsin-Madison. Accessed via HathiTrust March 2, 2022.

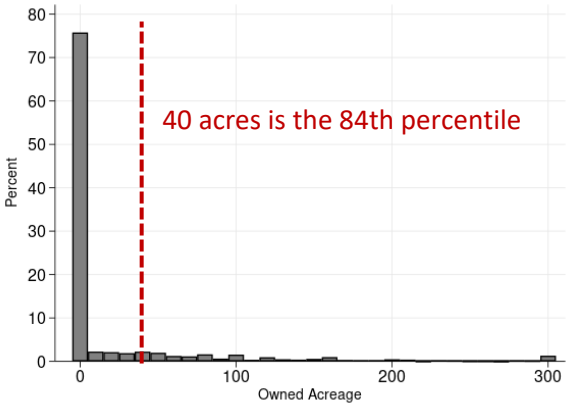
Tan, Hui Ren. 2021. “A Different Land of Opportunity: The Geography of Intergenerational Mobility in the Early 20th Century.” *Journal of Labor Economics*, forthcoming.

Ward, Zach. 2021. “Intergenerational Mobility in American History: Accounting for Race and Measurement Error.” NBER Working Paper 29256.

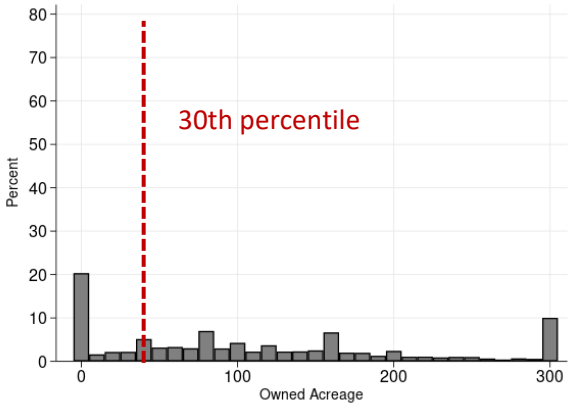
Wolff, Edward. 2018. “The Decline of African-American and Hispanic Wealth Since the Great Recession.” Working Paper.

FIGURE 1 – 1880 DISTRIBUTION OF FARM ACREAGE AND FARM VALUE AMONG BLACK AND WHITE FARMERS, ALL U.S. STATES

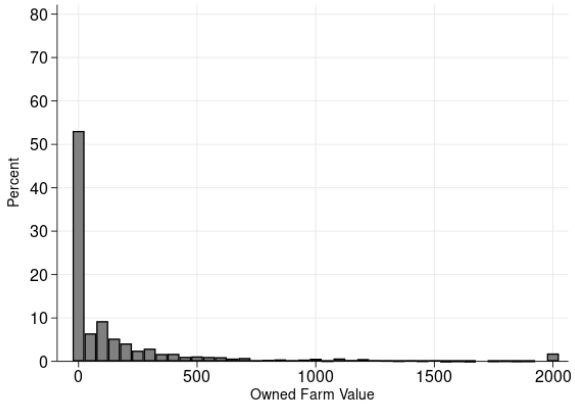
BLACK FARM ACREAGE



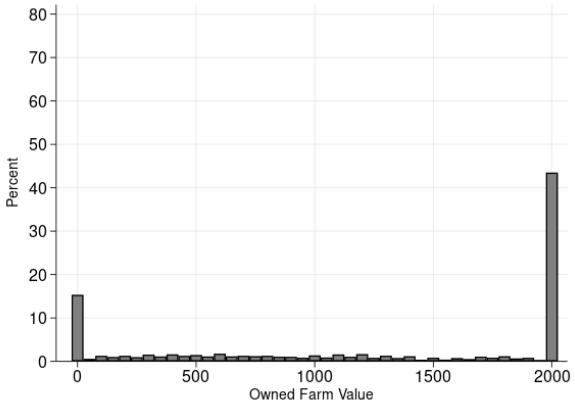
WHITE FARM ACREAGE



BLACK FARM VALUE



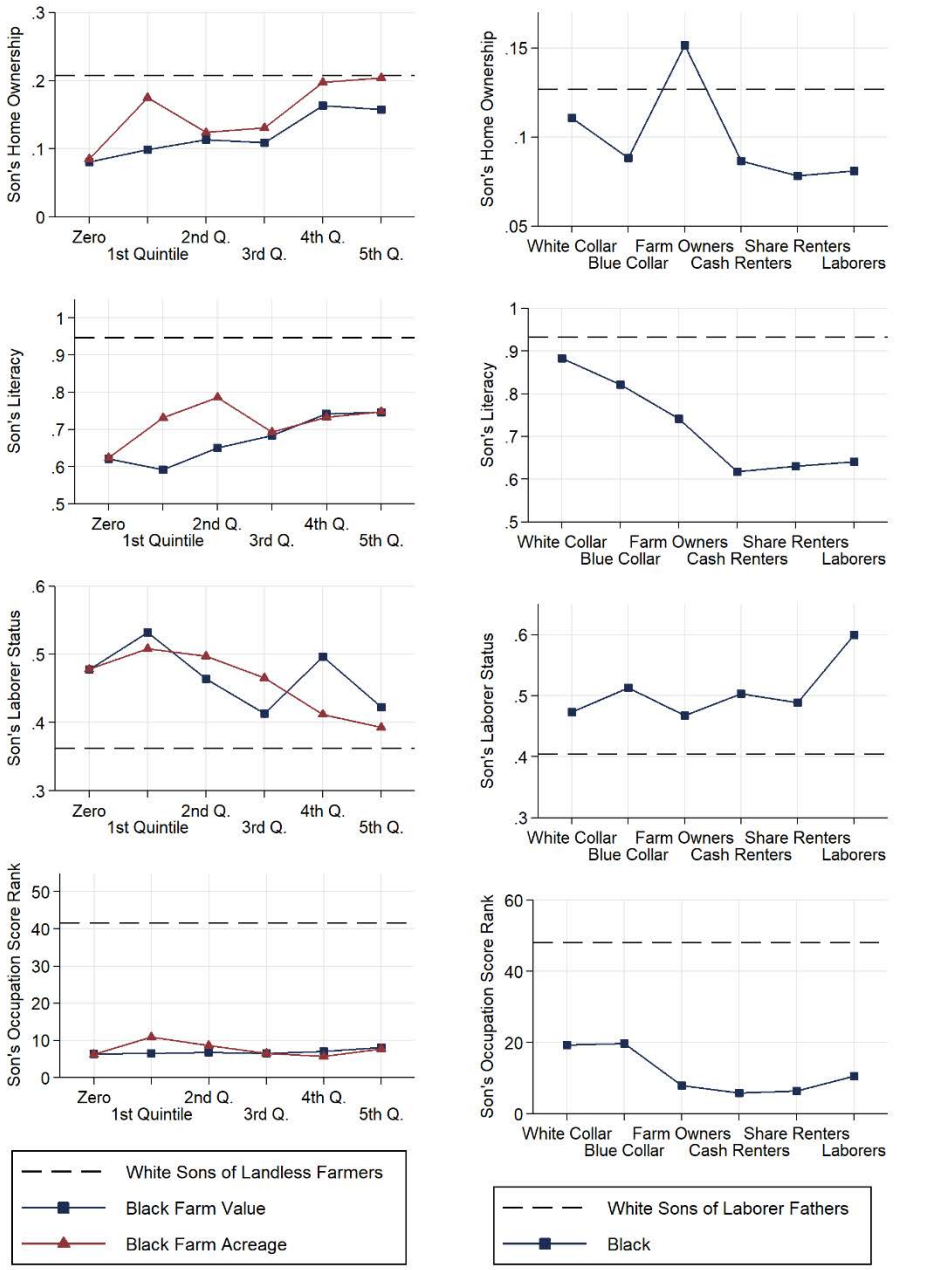
WHITE FARM VALUE



Notes: Includes non-owning farmers, but not farm laborers. For presentation, farm acreage capped at 300 acres and farm values are capped at $2,000. All renters for share are assumed to have a farm value of $0. Renters for cash are assumed to have a farm value equal to their livestock value only.

FIGURE 2 – SONS' 1900 OUTCOMES BY FATHERS' 1880 LANDOWNING OR OCCUPATION STATUS

QUINTILES OF FARM OWNERSHIP **OCCUPATION CATEGORIES**



Notes: Figures display average value of outcome within quintile or occupation category, after age adjusting. See text for description of samples. For Quintiles of Farm Ownership, reference sample for age adjustment is all farmers (owners, cash renters, and share renters). For Occupation Categories, reference sample for age adjustment is all fathers. Reference samples are divided into age buckets of 18-24; 25-29; 30-34; 35-39. Quintile-by-race and occupation-by-race subsamples are then reweighted to reflect the age distribution of the reference sample.

TABLE 1: OCCUPATION and LANDOWNERSHIP DISTRIBUTION AMONG 1880 FATHERS in LINKED SAMPLE

	LINKED SAMPLE	
	White	**Black**
Farmer, Owns	43.8	12.3
Owns >40 Acres	39.6	8.7
Farmer, Rents for Cash	3.0	13.8
Farmer, Rents for Share	8.0	23.8
White Collar	13.9	1.1
Blue Collar, Skilled	12.5	2.5
Blue Collar, Semi-skilled	9.4	3.9
Laborer	9.6	42.6
Among Farm Owners and Renters		
Average value ($)	3005.5	262.5
Median value ($)	1529.0	0.0
Average acreage	144.2	24.9
Median acreage	90.0	0.0

Notes and Sources: Farm ownership and rental status is ascertained from the Census of Agriculture manuscripts. Other occupational categories follow the Census of Population information, as coded in the IPUMS variable occ1950. "White collar" includes professional, clerical, and sales occupations. "Blue collar skilled" includes craftsmen primarily and certain service occupations (e.g., policemen and detectives). "Blue collar semi-skilled" includes operatives primarily and certain service occupations (e.g., barbers, bartenders). Laborer includes both blue collar laborers and farm laborers.

APPENDIX TO

Black Americans' Landholding and Economic Mobility after Emancipation: New Evidence on the Significance of 40 Acres

APPENDIX I. APPENDIX TABLES AND FIGURES

APPENDIX II. DATA APPENDIX

a. LINKED SAMPLE

b. IMPUTING MISSING OCCUPATIONS FOR SONS OBSERVED IN 1900

c. 1880 AGRICULTURE CENSUS LINK

d. ASSIGNMENT OF INCOME SCORES AND INCOME SCORE RANKS

APPENDIX I. TABLES AND FIGURES

FIGURE A1 – SONS' 1900 ADDITIONAL OUTCOMES BY FATHERS' 1880 LANDOWNING STATUS

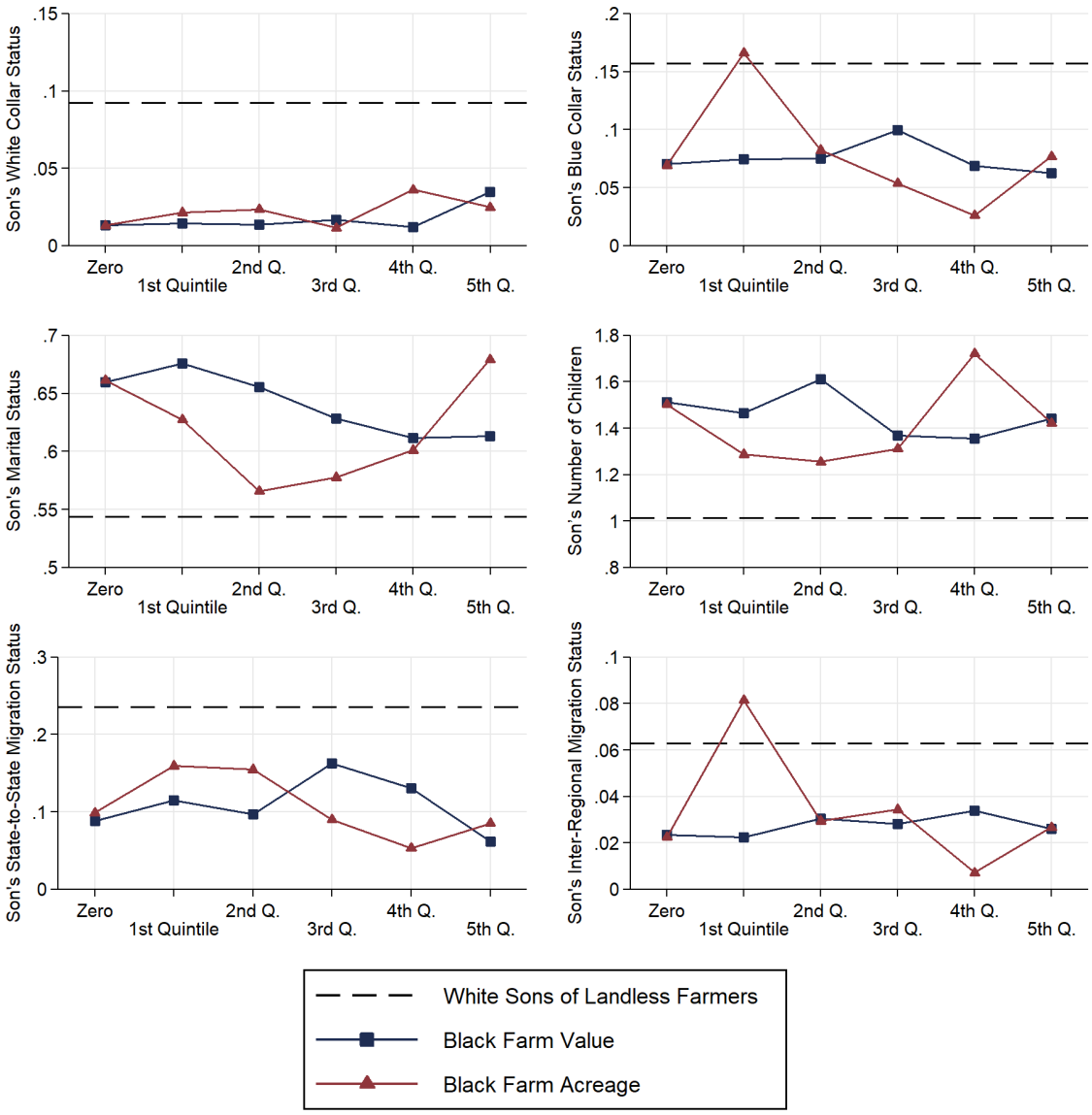


FIGURE A2 – SONS' 1900 ADDITIONAL OUTCOMES BY FATHERS' 1880 OCCUPATION STATUS

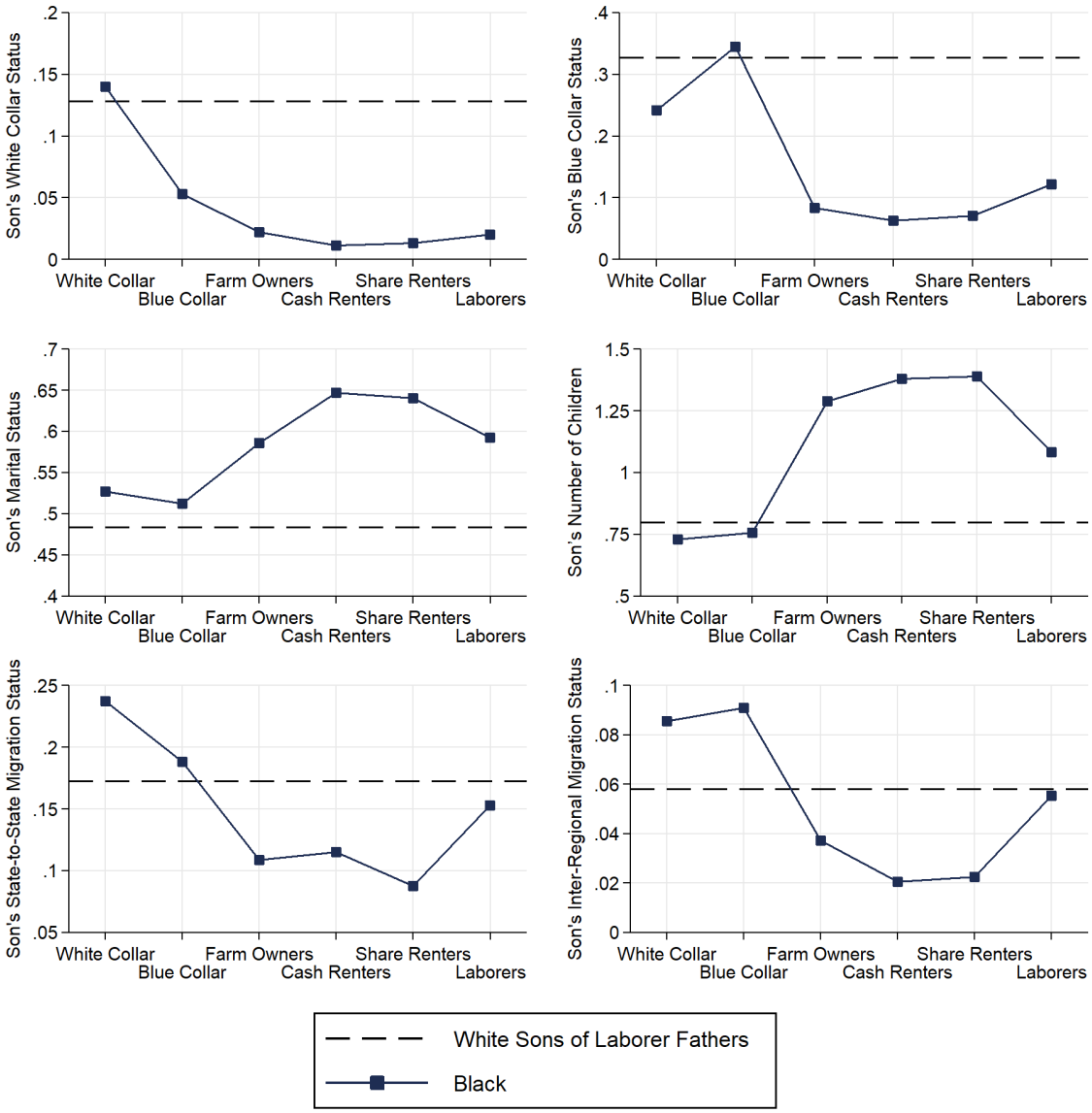
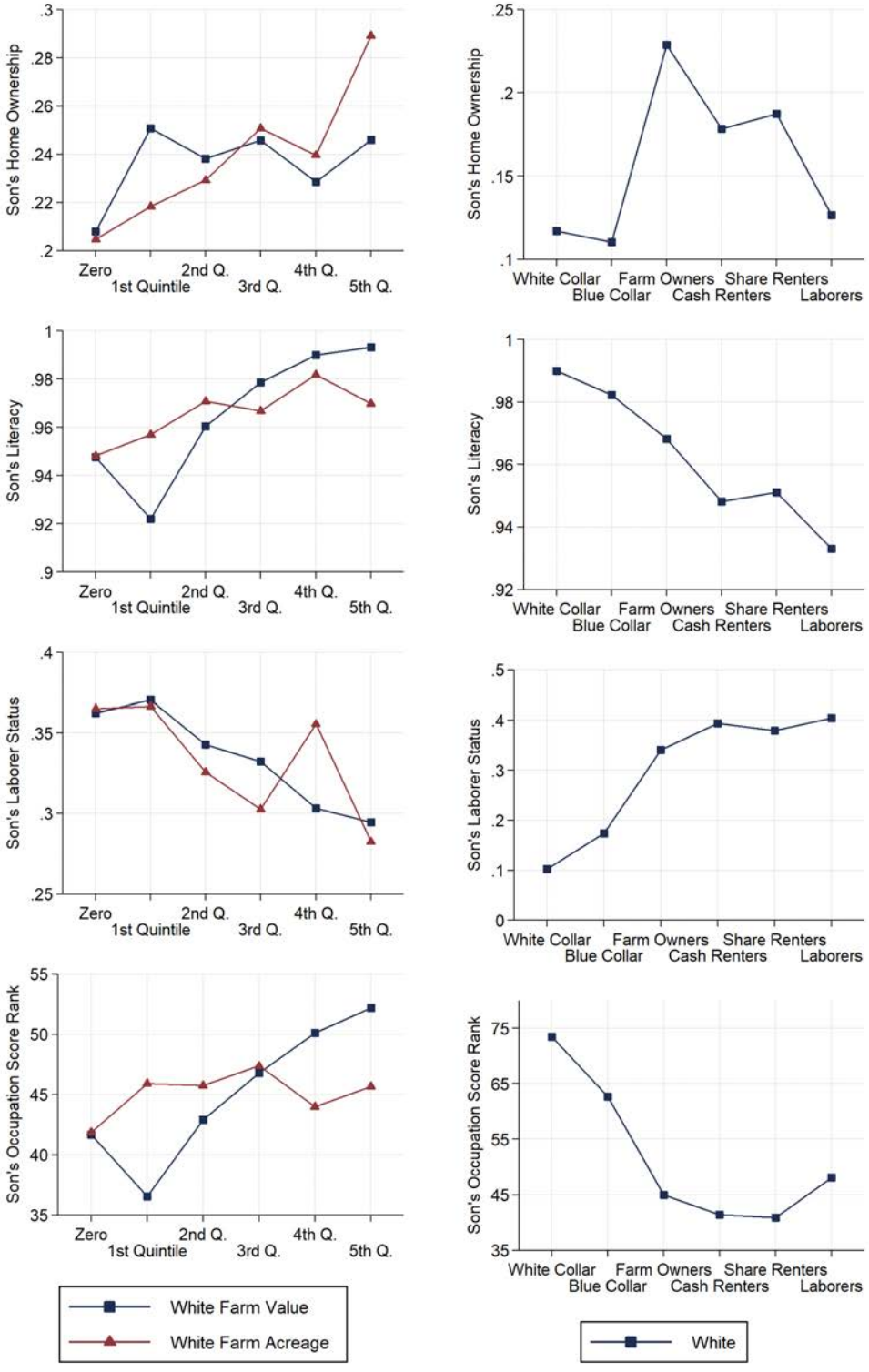


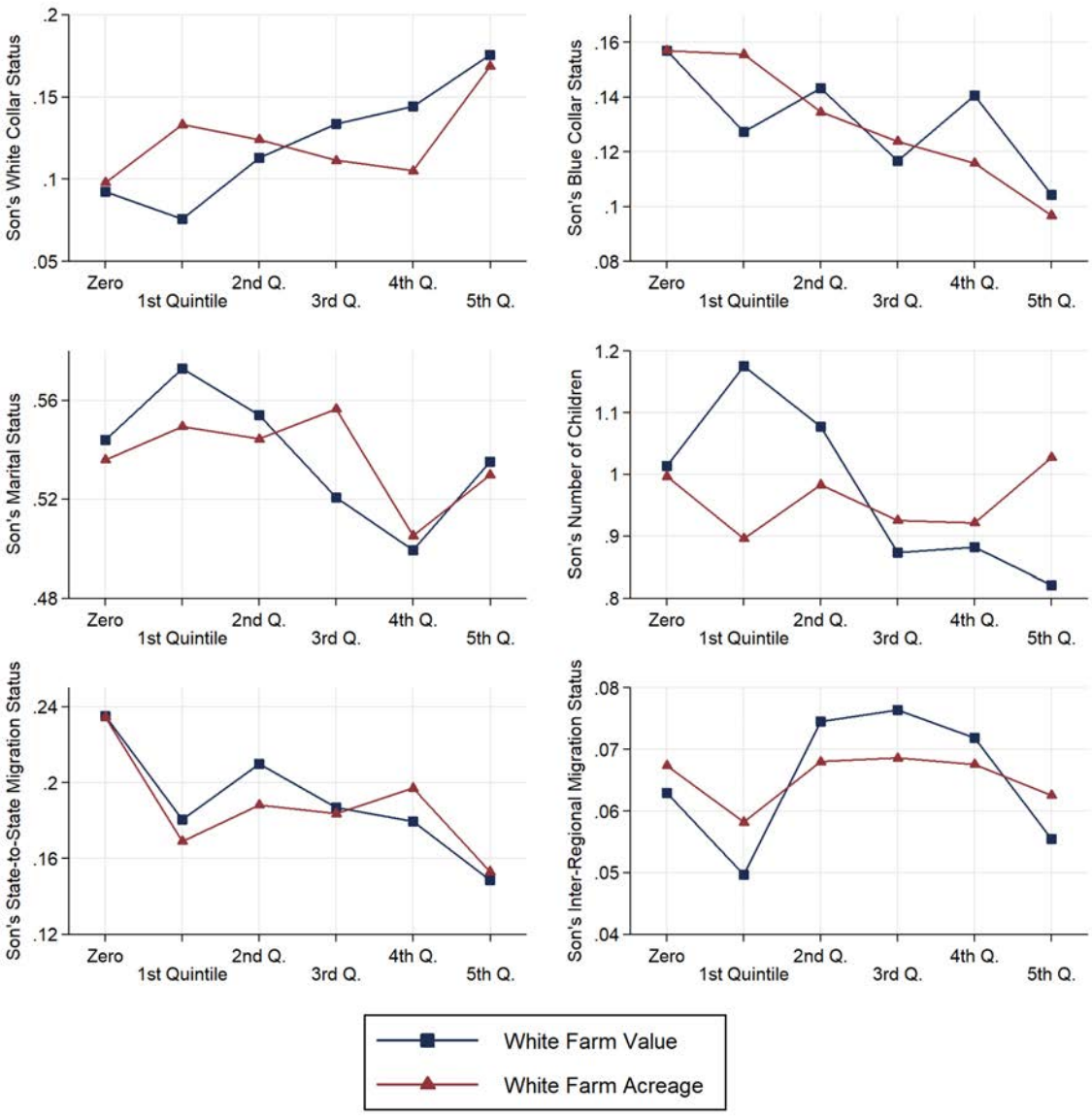
FIGURE A3 – SONS' 1900 OUTCOMES BY FATHERS' 1880 LANDOWNING OR OCCUPATION STATUS – WHITE SONS ONLY

QUINTILES OF FARM OWNERSHIP **OCCUPATION CATEGORIES**



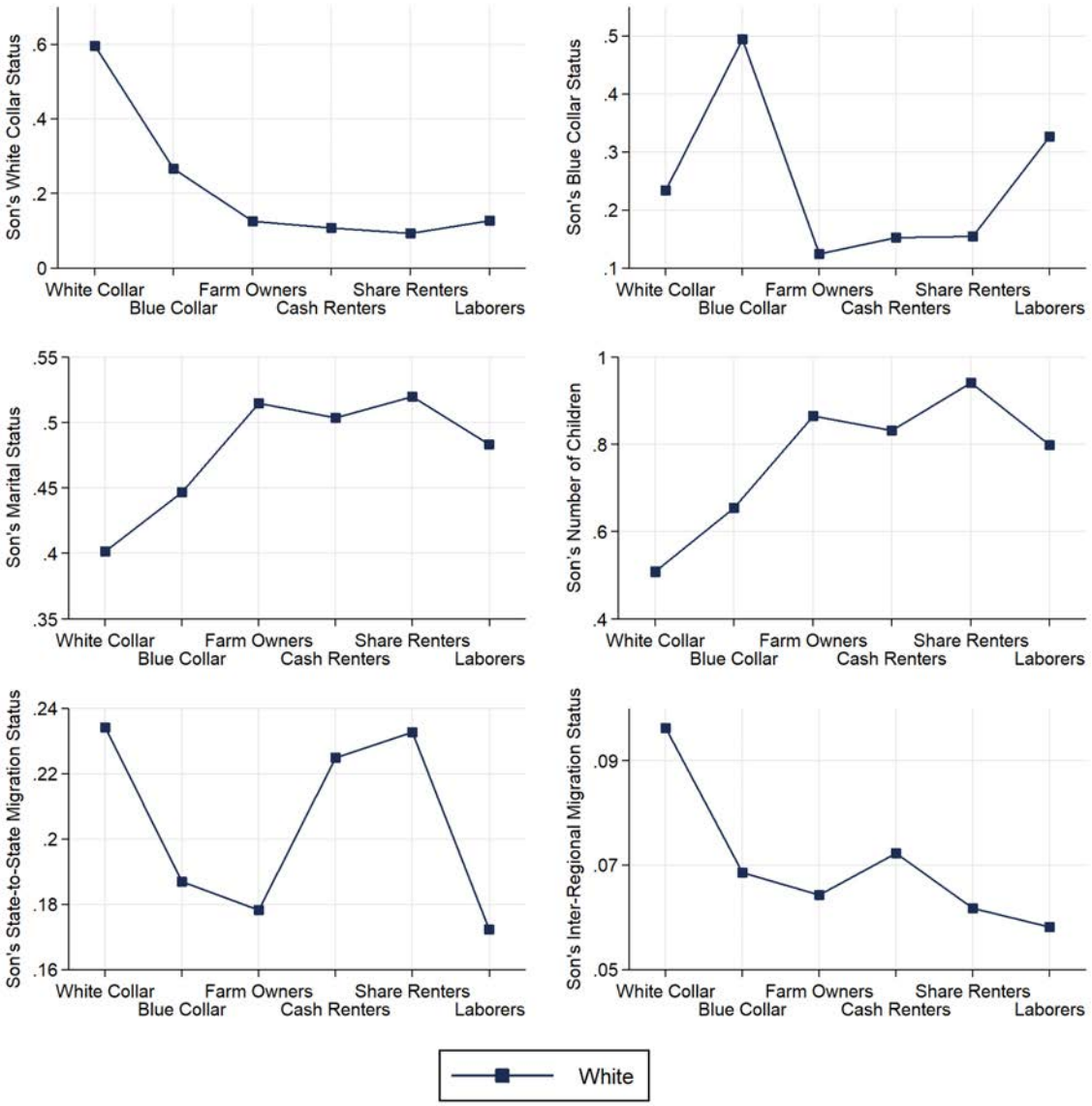
Notes: See notes to Figure 2 in the main text.

FIGURE A4 – SONS' 1900 ADDITIONAL OUTCOMES BY FATHERS' 1880 LANDOWNING STATUS – WHITE ONLY



Notes: See notes to Figure 2 in the main text.

FIGURE A5 – SONS' 1900 ADDITIONAL OUTCOMES BY FATHERS' 1880 OCCUPATION STATUS – WHITES ONLY



Notes: See notes to Figure 2 in the main text.

TABLE A1: RETURN TO QUINTILES OF FATHERS' FARM VALUE (RELATIVE TO NON-OWNERS)

	BLACK		WHITE	
	U.S.	South Only	U.S.	South Only
SONS' OCCUPATION INCOME SCORE RANK				
1st Quintile	-0.1853	-0.1028	-2.6167**	-2.5062
	(0.4720)	(0.4705)	(1.2338)	(1.7425)
2nd Quintile	0.1055	0.1439	0.5407	0.8710
	(0.5893)	(0.5903)	(1.2551)	(1.9192)
3rd Quintile	-0.0834	-0.1259	2.9432**	3.7294*
	(0.4773)	(0.4771)	(1.2591)	(2.2499)
4th Quintile	0.2496	0.3807	4.8980***	7.3141**
	(0.4940)	(0.4940)	(1.2649)	(3.0835)
5th Quintile	0.6576	0.4820	5.8146***	8.0435**
	(0.5520)	(0.5604)	(1.2915)	(3.7938)
SONS' HOME OWNERSHIP (BINARY)				
1st Quintile	0.0201	0.0206	0.0225	0.0410
	(0.0180)	(0.0180)	(0.0194)	(0.0280)
2nd Quintile	0.0379*	0.0385*	0.0143	0.0310
	(0.0207)	(0.0208)	(0.0199)	(0.0308)
3rd Quintile	0.0290	0.0288	0.0327	0.0502
	(0.0201)	(0.0203)	(0.0203)	(0.0373)
4th Quintile	0.0788***	0.0836***	0.0257	0.0165
	(0.0232)	(0.0236)	(0.0201)	(0.0444)
5th Quintile	0.0882***	0.0849***	0.0537**	0.0352
	(0.0241)	(0.0248)	(0.0209)	(0.0531)
SONS' LITERACY (BINARY)				
1st Quintile	-0.0194	-0.0195	-0.0113	0.0018
	(0.0284)	(0.0285)	(0.0125)	(0.0221)
2nd Quintile	0.0512	0.0516	0.0148	0.0459**
	(0.0317)	(0.0318)	(0.0109)	(0.0213)
3rd Quintile	0.0710**	0.0732**	0.0256***	0.0744***
	(0.0297)	(0.0300)	(0.0098)	(0.0211)
4th Quintile	0.0948***	0.0963***	0.0316***	0.0853***
	(0.0280)	(0.0284)	(0.0088)	(0.0221)
5th Quintile	0.0770***	0.0780**	0.0314***	0.0769***
	(0.0295)	(0.0305)	(0.0086)	(0.0237)
SONS' LABORER STATUS (BINARY)				
1st Quintile	0.0593**	0.0573**	0.0234	0.0353
	(0.0290)	(0.0291)	(0.0234)	(0.0322)
2nd Quintile	-0.0150	-0.0154	-0.0139	0.0075
	(0.0306)	(0.0307)	(0.0230)	(0.0338)
3rd Quintile	-0.0548*	-0.0550*	-0.0423*	-0.0206
	(0.0299)	(0.0302)	(0.0230)	(0.0373)
4th Quintile	0.0074	0.0034	-0.0888***	-0.0171
	(0.0294)	(0.0298)	(0.0225)	(0.0461)
5th Quintile	-0.0677**	-0.0652**	-0.0982***	-0.0464
	(0.0302)	(0.0310)	(0.0230)	(0.0582)
N	**3,182**	**3,109**	**4,934**	**1,639**

Notes: Table contains regression coefficient for quintile dummies, representing the quintile of fathers' 1880 farm value, and are interpreted relative to a farm value of $0. Sample includes only farmers; renters for share are assigned a farm value of $0. Renters for cash are assigned a farm value equal to the value of their livestock. Farm owners are assigned the combined value of the property and livestock. Regressions also include fixed effects for sons' age in 1900, fathers' age in 1880, fathers' urban status, and fathers' 1880 state fixed effects.

TABLE A2: RETURN TO QUINTILES OF FATHERS' FARM VALUE (RELATIVE TO NON-OWNERS), OTHER OUTCOMES

	BLACK		WHITE	
	U.S.	South Only	U.S.	South Only
SONS' STATE-TO-STATE MIGRATION				
1st Quintile	0.0157	0.0155	-0.0343*	-0.0684**
	(0.0185)	(0.0186)	(0.0204)	(0.0274)
2nd Quintile	-0.0097	-0.0099	-0.0207	-0.0567*
	(0.0188)	(0.0189)	(0.0205)	(0.0292)
3rd Quintile	0.0516**	0.0481**	-0.0494**	-0.0564*
	(0.0225)	(0.0226)	(0.0204)	(0.0330)
4th Quintile	0.0381*	0.0331	-0.0490**	0.0133
	(0.0202)	(0.0203)	(0.0208)	(0.0435)
5th Quintile	-0.0184	-0.0175	-0.0803***	-0.0282
	(0.0162)	(0.0162)	(0.0205)	(0.0502)
SONS' INTER-REGIONAL MIGRATION				
1st Quintile	-0.0074	-0.0075	0.0065	-0.0228*
	(0.0091)	(0.0091)	(0.0119)	(0.0123)
2nd Quintile	-0.0014	-0.0017	0.0101	-0.0056
	(0.0100)	(0.0100)	(0.0126)	(0.0154)
3rd Quintile	-0.0028	-0.0040	0.0097	-0.0033
	(0.0096)	(0.0094)	(0.0128)	(0.0182)
4th Quintile	0.0062	0.0057	0.0073	0.0131
	(0.0109)	(0.0108)	(0.0130)	(0.0242)
5th Quintile	-0.0039	-0.0006	-0.0171	0.0108
	(0.0098)	(0.0094)	(0.0127)	(0.0330)
SONS' WHITE COLLAR STATUS				
1st Quintile	0.0012	0.0011	-0.0262*	-0.0119
	(0.0070)	(0.0070)	(0.0144)	(0.0192)
2nd Quintile	0.0023	0.0022	0.0144	0.0421*
	(0.0081)	(0.0081)	(0.0155)	(0.0229)
3rd Quintile	0.0007	0.0006	0.0384**	0.0646**
	(0.0082)	(0.0084)	(0.0162)	(0.0280)
4th Quintile	-0.0017	-0.0021	0.0479***	0.1345***
	(0.0069)	(0.0071)	(0.0169)	(0.0412)
5th Quintile	0.0203*	0.0213*	0.0799***	0.1247**
	(0.0119)	(0.0124)	(0.0180)	(0.0524)
SONS' BLUE COLLAR STATUS				
1st Quintile	0.0000	0.0002	-0.0153	-0.0294
	(0.0156)	(0.0156)	(0.0178)	(0.0233)
2nd Quintile	-0.0029	-0.0029	-0.0150	-0.0352
	(0.0169)	(0.0169)	(0.0180)	(0.0245)
3rd Quintile	0.0221	0.0214	-0.0511***	-0.0600**
	(0.0193)	(0.0193)	(0.0175)	(0.0263)
4th Quintile	-0.0063	-0.0029	-0.0341*	-0.0564*
	(0.0164)	(0.0166)	(0.0186)	(0.0315)
5th Quintile	-0.0115	-0.0133	-0.0780***	-0.0226
	(0.0155)	(0.0155)	(0.0182)	(0.0454)

SONS' MARITAL STATUS				
1st Quintile	0.0003	0.0032	0.0183	0.0160
	(0.0247)	(0.0247)	(0.0223)	(0.0319)
2nd Quintile	-0.0156	-0.0200	0.0024	-0.0240
	(0.0263)	(0.0263)	(0.0225)	(0.0349)
3rd Quintile	-0.0228	-0.0246	-0.0207	-0.1021**
	(0.0251)	(0.0254)	(0.0228)	(0.0403)
4th Quintile	-0.0493*	-0.0519**	-0.0286	-0.0726
	(0.0261)	(0.0263)	(0.0225)	(0.0490)
5th Quintile	-0.0371	-0.0324	0.0045	-0.1806***
	(0.0272)	(0.0278)	(0.0228)	(0.0558)
SONS' NUMBER OF CHILDREN				
1st Quintile	-0.0922	-0.0822	0.0657	0.1149
	(0.0960)	(0.0962)	(0.0620)	(0.0907)
2nd Quintile	0.0698	0.0721	0.0706	0.0974
	(0.1118)	(0.1123)	(0.0624)	(0.1023)
3rd Quintile	-0.1108	-0.1045	-0.0747	-0.2040*
	(0.1089)	(0.1100)	(0.0622)	(0.1179)
4th Quintile	-0.1549	-0.1649	-0.0217	-0.0744
	(0.1035)	(0.1046)	(0.0623)	(0.1674)
5th Quintile	0.0267	0.0413	-0.0634	-0.2314
	(0.1222)	(0.1261)	(0.0625)	(0.1975)
N	**3,182**	**3,109**	**4,934**	**1,639**

Notes: See notes to Table A1.

TABLE A3: RETURN TO FATHERS' OCCUPATION CATEGORIES (RELATIVE TO LABORERS)

	BLACK		WHITE	
	U.S.	South Only	U.S.	South Only
SONS' OCCUPATION INCOME SCORE RANK				
Return to White Collar Status	4.3883***	3.9178***	21.7760***	29.2695***
	(0.6412)	(0.6750)	(0.1558)	(0.4159)
Return to Blue Collar Status	3.3726***	3.3008***	9.9445***	12.7533***
	(0.2684)	(0.3200)	(0.1389)	(0.3786)
Return to Farm Ownership	-0.2565	-0.2972	2.5032***	3.3950***
	(0.3270)	(0.3317)	(0.4424)	(0.7995)
Return to Cash Renting	-1.2147***	-1.2246***	0.2223	2.9528
	(0.2843)	(0.2839)	(1.5535)	(2.3344)
Return to Share Renting	-0.7134**	-0.7609***	-0.4923	2.4331
	(0.2798)	(0.2795)	(0.9528)	(1.5049)
SONS' HOME OWNERSHIP (BINARY)				
Return to White Collar Status	0.0343**	0.0412**	0.0015	-0.0047
	(0.0158)	(0.0204)	(0.0020)	(0.0050)
Return to Blue Collar Status	0.0182***	0.0256***	0.0010	0.0002
	(0.0066)	(0.0088)	(0.0018)	(0.0046)
Return to Farm Ownership	0.0774***	0.0802***	0.0745***	0.0736***
	(0.0141)	(0.0146)	(0.0068)	(0.0120)
Return to Cash Renting	0.0063	0.0085	0.0286	0.0014
	(0.0108)	(0.0108)	(0.0216)	(0.0337)
Return to Share Renting	-0.0057	-0.0042	0.0266*	0.0161
	(0.0082)	(0.0082)	(0.0140)	(0.0219)
SONS' LITERACY (BINARY)				
Return to White Collar Status	0.1680***	0.2113***	0.0505***	0.1461***
	(0.0168)	(0.0217)	(0.0012)	(0.0041)
Return to Blue Collar Status	0.0872***	0.1035***	0.0394***	0.1131***
	(0.0089)	(0.0120)	(0.0011)	(0.0043)
Return to Farm Ownership	0.1178***	0.1240***	0.0416***	0.1221***
	(0.0171)	(0.0180)	(0.0030)	(0.0081)
Return to Cash Renting	0.0410**	0.0451***	0.0272**	0.0641**
	(0.0174)	(0.0175)	(0.0132)	(0.0319)
Return to Share Renting	0.0346**	0.0390***	0.0292***	0.0884***
	(0.0138)	(0.0140)	(0.0081)	(0.0179)
SONS' LABORER STATUS (BINARY)				
Return to White Collar Status	-0.1135***	-0.0864***	-0.2457***	-0.2619***
	(0.0243)	(0.0292)	(0.0026)	(0.0062)
Return to Blue Collar Status	-0.0886***	-0.0570***	-0.1851***	-0.1729***
	(0.0112)	(0.0137)	(0.0025)	(0.0062)
Return to Farm Ownership	-0.1086***	-0.1148***	-0.0824***	-0.0984***
	(0.0183)	(0.0189)	(0.0080)	(0.0145)
Return to Cash Renting	-0.0675***	-0.0655***	-0.0179	-0.0698
	(0.0172)	(0.0173)	(0.0289)	(0.0444)
Return to Share Renting	-0.0856***	-0.0831***	-0.0236	-0.1101***
	(0.0138)	(0.0139)	(0.0179)	(0.0270)
N	**25,025**	**20,128**	**282,938**	**44,456**

Notes: Table contains regression coefficient for occupation dummies, representing fathers' 1880 occupation category, and are interpreted relative laborer fathers. Sample includes all fathers with a recorded occupation. Regressions also include fixed effects for sons' age in 1900, fathers' age in 1880, fathers' urban status, and fathers' 1880 state fixed effects.

TABLE A4: RETURN TO FATHERS' OCCUPATION CATEGORIES (RELATIVE TO LABORERS), OTHER OUTCOMES

	BLACK		WHITE	
	U.S.	South Only	U.S.	South Only
SONS' STATE-TO-STATE MIGRATION				
Return to White Collar Status	0.0775***	0.0712***	0.0672***	0.0480***
	(0.0209)	(0.0254)	(0.0025)	(0.0058)
Return to Blue Collar Status	0.0176**	0.0285***	0.0262***	0.0322***
	(0.0088)	(0.0110)	(0.0022)	(0.0055)
Return to Farm Ownership	-0.0270**	-0.0228*	-0.0441***	-0.0398***
	(0.0124)	(0.0127)	(0.0065)	(0.0114)
Return to Cash Renting	-0.0210*	-0.0183	0.0094	0.0491
	(0.0118)	(0.0118)	(0.0251)	(0.0411)
Return to Share Renting	-0.0351***	-0.0308***	0.0078	0.0169
	(0.0090)	(0.0090)	(0.0157)	(0.0237)
SONS' INTER-REGIONAL MIGRATION				
Return to White Collar Status	0.0256*	0.0253	0.0405***	0.0406***
	(0.0134)	(0.0167)	(0.0017)	(0.0039)
Return to Blue Collar Status	0.0197***	0.0317***	0.0157***	0.0265***
	(0.0065)	(0.0085)	(0.0014)	(0.0038)
Return to Farm Ownership	-0.0159**	-0.0122	-0.0087**	-0.0042
	(0.0074)	(0.0075)	(0.0042)	(0.0073)
Return to Cash Renting	-0.0188***	-0.0169***	0.0094	0.0225
	(0.0059)	(0.0059)	(0.0156)	(0.0218)
Return to Share Renting	-0.0147***	-0.0125**	-0.0104	0.0044
	(0.0055)	(0.0055)	(0.0092)	(0.0118)
SONS' WHITE COLLAR STATUS				
Return to White Collar Status	0.1026***	0.0872***	0.4329***	0.4518***
	(0.0165)	(0.0185)	(0.0026)	(0.0061)
Return to Blue Collar Status	0.0150***	0.0098**	0.1008***	0.0958***
	(0.0045)	(0.0050)	(0.0022)	(0.0051)
Return to Farm Ownership	0.0061	0.0072	0.0287***	0.0311***
	(0.0056)	(0.0059)	(0.0064)	(0.0101)
Return to Cash Renting	-0.0017	-0.0019	0.0122	0.0325
	(0.0043)	(0.0044)	(0.0193)	(0.0292)
Return to Share Renting	-0.0009	-0.0011	0.0008	-0.0031
	(0.0035)	(0.0035)	(0.0116)	(0.0166)
SONS' BLUE COLLAR STATUS				
Return to White Collar Status	0.0624***	0.0692***	-0.1199***	-0.0257***
	(0.0206)	(0.0239)	(0.0028)	(0.0055)
Return to Blue Collar Status	0.1488***	0.1463***	0.1332***	0.1950***
	(0.0101)	(0.0123)	(0.0026)	(0.0058)
Return to Farm Ownership	-0.0099	-0.0029	-0.1508***	-0.0486***
	(0.0113)	(0.0116)	(0.0065)	(0.0100)
Return to Cash Renting	-0.0272***	-0.0249***	-0.1150***	-0.0162
	(0.0095)	(0.0095)	(0.0222)	(0.0316)
Return to Share Renting	-0.0145*	-0.0119	-0.1122***	-0.0062
	(0.0082)	(0.0082)	(0.0142)	(0.0207)

SONS' MARITAL STATUS				
Return to White Collar Status	-0.0374*	-0.0527**	-0.0692***	-0.1419***
	(0.0213)	(0.0256)	(0.0027)	(0.0065)
Return to Blue Collar Status	-0.0249**	-0.0273**	-0.0190***	-0.0596***
	(0.0101)	(0.0125)	(0.0025)	(0.0061)
Return to Farm Ownership	-0.0308*	-0.0362**	-0.0015	-0.0448***
	(0.0162)	(0.0166)	(0.0078)	(0.0138)
Return to Cash Renting	0.0124	0.0091	-0.0091	-0.0121
	(0.0147)	(0.0148)	(0.0265)	(0.0365)
Return to Share Renting	0.0129	0.0090	-0.0014	-0.0135
	(0.0119)	(0.0120)	(0.0170)	(0.0276)
SONS' NUMBER OF CHILDREN				
Return to White Collar Status	-0.2119***	-0.3182***	-0.2800***	-0.4733***
	(0.0654)	(0.0778)	(0.0070)	(0.0183)
Return to Blue Collar Status	-0.1172***	-0.1629***	-0.0876***	-0.2042***
	(0.0315)	(0.0410)	(0.0064)	(0.0174)
Return to Farm Ownership	0.1097*	0.1168*	-0.0301	-0.0476
	(0.0633)	(0.0661)	(0.0200)	(0.0396)
Return to Cash Renting	0.1085*	0.1012*	-0.0906	-0.0922
	(0.0583)	(0.0585)	(0.0730)	(0.1288)
Return to Share Renting	0.1593***	0.1505***	-0.0477	-0.0673
	(0.0473)	(0.0474)	(0.0440)	(0.0737)
N	**25,025**	**20,128**	**282,938**	**44,456**

Notes: See notes to Table A3.

TABLE A5: RETURN TO QUINTILES OF BLACK FATHERS' FARM VALUE HETEROGENEOUS EFFECTS

	(1) Baseline	(2) With SEA Fixed Effects	(3) Oldest Sons Only	(4) Sons Younger than 30	(5) Sons 30 and Older	(6) Sons Who Left Agriculture
SONS' HOME OWNERSHIP (BINARY)						
1st Quintile	0.0173	0.0122	-0.0222	0.0196	0.0109	0.0279
	(0.0177)	(0.0183)	(0.0243)	(0.0190)	(0.0364)	(0.0395)
2nd Quintile	0.0341	0.0314	0.0069	0.0082	0.0764*	-0.0032
	(0.0208)	(0.0207)	(0.0312)	(0.0203)	(0.0424)	(0.0374)
3rd Quintile	0.0257	0.0158	0.0395	0.0422*	0.0131	-0.0786**
	(0.0199)	(0.0205)	(0.0349)	(0.0238)	(0.0342)	(0.0310)
4th Quintile	0.0827***	0.0633***	0.0393	0.0315	0.1567***	0.0598
	(0.0229)	(0.0241)	(0.0319)	(0.0222)	(0.0458)	(0.0412)
5th Quintile	0.0925***	0.0799***	0.1092**	0.0375	0.1560***	0.0547
	(0.0232)	(0.0245)	(0.0431)	(0.0256)	(0.0403)	(0.0424)
SONS' LITERACY (BINARY)						
1st Quintile	-0.0313	-0.0127	-0.0866**	-0.0440	-0.0076	-0.0655
	(0.0287)	(0.0295)	(0.0433)	(0.0345)	(0.0510)	(0.0502)
2nd Quintile	0.0326	0.0584*	0.0531	-0.0076	0.0979*	0.0068
	(0.0320)	(0.0327)	(0.0483)	(0.0406)	(0.0514)	(0.0560)
3rd Quintile	0.0578*	0.0758**	0.1281***	0.0562	0.0675	-0.0353
	(0.0297)	(0.0304)	(0.0457)	(0.0373)	(0.0472)	(0.0525)
4th Quintile	0.1130***	0.0902***	0.0510	0.1142***	0.1116**	0.0238
	(0.0285)	(0.0291)	(0.0472)	(0.0353)	(0.0472)	(0.0473)
5th Quintile	0.1255***	0.0740**	0.0808	0.1145***	0.1392***	0.0879*
	(0.0284)	(0.0307)	(0.0491)	(0.0379)	(0.0430)	(0.0459)
SONS' LABORER STATUS (BINARY)						
1st Quintile	0.0531*	0.0693**	0.0654	0.0224	0.1085**	
	(0.0288)	(0.0304)	(0.0422)	(0.0344)	(0.0514)	
2nd Quintile	-0.0142	0.0048	-0.0465	0.0085	-0.0462	
	(0.0308)	(0.0312)	(0.0453)	(0.0391)	(0.0492)	
3rd Quintile	-0.0564*	-0.0445	-0.0805	-0.1058***	0.0055	
	(0.0298)	(0.0310)	(0.0497)	(0.0381)	(0.0461)	
4th Quintile	0.0171	0.0171	0.0494	0.0306	0.0003	
	(0.0295)	(0.0300)	(0.0455)	(0.0376)	(0.0469)	
5th Quintile	-0.0388	-0.0594*	-0.0463	-0.0628	-0.0084	
	(0.0299)	(0.0306)	(0.0503)	(0.0414)	(0.0429)	
SONS' OCCUPATION INCOME SCORE RANK						
1st Quintile	0.1080	0.1051	0.8559	0.6191	-0.8233	
	(0.4764)	(0.4755)	(0.8223)	(0.6055)	(0.7581)	
2nd Quintile	0.3927	0.2267	0.1623	0.8865	-0.3900	
	(0.6009)	(0.6125)	(0.9202)	(0.7505)	(0.9947)	
3rd Quintile	0.1194	-0.5554	-0.6107	0.3640	-0.2777	
	(0.5295)	(0.4581)	(0.9590)	(0.7115)	(0.7938)	
4th Quintile	0.6423	-0.0082	0.4091	1.0739*	-0.0257	
	(0.5064)	(0.5052)	(0.8533)	(0.5919)	(0.8917)	
5th Quintile	1.7188***	0.4799	1.7512*	2.2083**	1.0834	
	(0.6246)	(0.5838)	(1.0523)	(0.8968)	(0.8698)	
N	**3,182**	**3,182**	**1,310**	**2,035**	**1,147**	**894**

Notes: See notes to Table A1. Sample includes only Black farmers. Baseline regressions include fixed effects for sons' age in 1900, fathers' age in 1880, fathers' urban status, and fathers' 1880 state of residence. Column 2 includes fixed effects for State Economic Area (SEA) of residence in lieu of state of residence fixed effects. Column 3 includes oldest sons in the 1880 household only. Columns 4 and 5 bifurcate the sample by age. Column 6 excludes Black sons who were farmers or farm laborers in 1900.

TABLE A6: RETURN TO BLACK FATHERS' OCCUPATION CATEGORIES HETEROGENEOUS EFFECTS

	(1) Baseline	(2) With SEA Fixed Effects	(3) Oldest Sons Only	(4) Sons Younger than 30	(5) Sons 30 and Older	(6) Sons Who Left Agriculture
SONS' HOME OWNERSHIP (BINARY)						
Return to White Collar Status	0.0363**	0.0296*	0.0272	0.0337**	0.0430	0.0169
	(0.0158)	(0.0161)	(0.0198)	(0.0170)	(0.0352)	(0.0169)
Return to Blue Collar Status	0.0173***	0.0158**	0.0204**	0.0161**	0.0203	0.0143*
	(0.0065)	(0.0068)	(0.0090)	(0.0065)	(0.0150)	(0.0074)
Return to Farm Ownership	0.0782***	0.0704***	0.0776***	0.0322**	0.1418***	0.0353*
	(0.0137)	(0.0142)	(0.0215)	(0.0140)	(0.0267)	(0.0212)
Return to Cash Renting	-0.0028	0.0091	-0.0141	0.0094	-0.0178	0.0099
	(0.0102)	(0.0110)	(0.0151)	(0.0112)	(0.0196)	(0.0214)
Return to Share Renting	-0.0093	0.0020	0.0006	-0.0040	-0.0168	0.0073
	(0.0074)	(0.0084)	(0.0114)	(0.0075)	(0.0161)	(0.0160)
SONS' LITERACY (BINARY)						
Return to White Collar Status	0.1837***	0.1602***	0.1692***	0.1823***	0.1825***	0.1228***
	(0.0167)	(0.0173)	(0.0235)	(0.0193)	(0.0327)	(0.0169)
Return to Blue Collar Status	0.1098***	0.0787***	0.1125***	0.1050***	0.1189***	0.0814***
	(0.0090)	(0.0093)	(0.0120)	(0.0104)	(0.0169)	(0.0092)
Return to Farm Ownership	0.1211***	0.1183***	0.0987***	0.1243***	0.1167***	0.0629**
	(0.0166)	(0.0174)	(0.0272)	(0.0211)	(0.0268)	(0.0261)
Return to Cash Renting	0.0002	0.0557***	0.0088	-0.0124	0.0198	-0.0268
	(0.0171)	(0.0177)	(0.0261)	(0.0214)	(0.0279)	(0.0305)
Return to Share Renting	0.0118	0.0378***	0.0211	0.0185	0.0002	0.0240
	(0.0132)	(0.0141)	(0.0197)	(0.0159)	(0.0233)	(0.0226)
SONS' LABORER STATUS (BINARY)						
Return to White Collar Status	-0.1122***	-0.1211***	-0.0906***	-0.1169***	-0.1071**	-0.1817***
	(0.0241)	(0.0244)	(0.0335)	(0.0287)	(0.0452)	(0.0286)
Return to Blue Collar Status	-0.0738***	-0.0865***	-0.0773***	-0.0870***	-0.0479**	-0.1590***
	(0.0111)	(0.0113)	(0.0152)	(0.0130)	(0.0204)	(0.0127)
Return to Farm Ownership	-0.1282***	-0.1108***	-0.1098***	-0.1091***	-0.1618***	-0.0354
	(0.0177)	(0.0183)	(0.0277)	(0.0230)	(0.0271)	(0.0296)
Return to Cash Renting	-0.0973***	-0.0491***	-0.0783***	-0.0744***	-0.1381***	0.0182
	(0.0166)	(0.0177)	(0.0250)	(0.0208)	(0.0276)	(0.0308)
Return to Share Renting	-0.1113***	-0.0795***	-0.0877***	-0.0878***	-0.1567***	-0.0286
	(0.0129)	(0.0140)	(0.0194)	(0.0157)	(0.0222)	(0.0242)
SONS' OCCUPATION INCOME SCORE RANK						
Return to White Collar Status	5.2286***	4.1090***	6.0843***	4.9485***	5.8165***	3.9252***
	(0.7766)	(0.6425)	(1.0412)	(0.8676)	(1.6060)	(0.9151)
Return to Blue Collar Status	5.0872***	3.0566***	5.2284***	4.7477***	5.7730***	2.4906***
	(0.3206)	(0.2731)	(0.4259)	(0.3640)	(0.6104)	(0.3556)
Return to Farm Ownership	-1.3344***	-0.3478	-1.3557**	-0.9855**	-1.8182***	-1.2350*
	(0.3424)	(0.3292)	(0.5796)	(0.4408)	(0.5365)	(0.6419)
Return to Cash Renting	-3.3347***	-0.6113**	-3.4423***	-3.1261***	-3.6487***	-2.7868***
	(0.2778)	(0.2886)	(0.4466)	(0.3602)	(0.4371)	(0.6884)
Return to Share Renting	-2.7524***	-0.3583	-2.7525***	-2.9115***	-2.4905***	-1.3013**
	(0.2526)	(0.2830)	(0.3548)	(0.2848)	(0.4855)	(0.6197)
N	**25,025**	**25,025**	**12,074**	**18,276**	**6,749**	**12,137**

Notes: See notes to Table A5.

APPENDIX II. DATA APPENDIX

a. LINKED SAMPLE

We begin with the 1880 full count sample, originally provided by the North American Population Project (MPC 2017; Ruggles 2015). We restrict the sample to all males aged 0 to 17 in 1880 living in the same household as their father or stepfather.

Our linking methodology follows the advice of Bailey et al. (2020). We link the 1880 sons to the 1900 selves using two distinct methods and then define our analysis sample as the intersection of those two census-to-census linked samples. From Bailey et al., "to the extent that different methods make errors for different reasons, taking the set of common links helps avoid idiosyncratic reasons for errors" (Bailey et al. (2020), p. 1038).

The two linking methods we employ are well-known in this literature. The first, based on Ferrie (1996) and executed using code from Bailey and Cole (2019), links on name, place of birth, race, and age. Links are accepted if ages match within a 5-year window, and we use actual names rather than NYSIIS variants. Matches are accepted in this methodology if they are unique and exact based on last name, first four letters of first name, and (if provided) middle initial. This method prioritizes matches based on age; for a given individual, if there are more than 10 potential matches based on name, birthplace, and race, the case is dropped. If there are 10 or fewer potential matches but greater than one potential match, the potential match which most closely matches on age is selected. Ties result in no match.

The second methodology is based on Abramitzky, Boustan, and Eriksson (2014), executed using code provided by the authors (hereafter, ABE). [1] In this method, matches are made based on the same set of characteristics as before: name, place of birth, race, and age, but we employ NYSIIS coding of names rather than actual names.[2] We use the ABE methodology for robustness, which restricts the set of linked names to those that are unique within +/- 2 years of age. Matches are exact matches only, meaning they must match on last, first, and (if provided) middle initial NYSIIS codes to be included in the linked sample.

The analysis sample for this paper is the intersection of these two matched samples. Samples constructed in this way carry a substantially lower match rate than single-method match processes alone. Black match rates are 8.40% using the Ferrie method and 7.60% using the ABE method. The intersected sample of Black sons has a match rate of 3.40%. White match rates are 13.8% using the

[1] Available at https://ranabr.people.stanford.edu/matching-codes.
[2] By incorporating NYSIIS codes in one methodology and actual name strings in the other, our approach may be more robust to false matches.

Ferrie method and 15.3% using the ABE method. The intersected sample of White sons has a match rate of 9.50%. The Data Appendix to Collins and Wanamaker (2021) provides additional discussion of the qualities of the intersected sample.

To generate a final analysis sample that is representative of the 1880 population from which our initial data derive, we use propensity-based reweighting techniques, as recommended by Bailey et al. (2020). We employ a simple probit estimator for whether an individual was successfully matched to the 1900 Census where the probability is specified as a function of region of residence dummies, urban residence, 1880 city population, and age. The analysis sample is then re-weighted using inverse probability weights that downweight observations with a high probability of being matched to the 1900 census and upweight observations with a low probability of being matched. (See Table A.1. of Collins and Wanamaker (2021) for additional information.)

b. IMPUTING MISSING OCCUPATIONS FOR SONS OBSERVED IN 1900

The 100 percent Census samples provided to NBER From IPUMS have incomplete occupation coding. 13.1 percent of occupation codes are missing in the 1900 matched sample, but far fewer are missing occupation strings in the transcribed data. These omissions appear to be related to the presence or absence of an industry string or industry code. We assigned occupation codes to occupations using an algorithm based on the modal codes for other individuals with the same occupation string. Our method uses plurality-based coding, assigning occupation codes to occupation strings based on the most common IPUMS-assigned code for other individuals with the same occupation string. Observations with occupations still uncoded were then dropped from the analysis sample.

c. 1880 AGRICULTURE CENSUS LINK

The 1880 Census of Agriculture manuscripts contain a wealth of information that informs our analysis. For each farm property, the farm's operator is listed along with information on whether that operator is an owner, "rents for fixed money rental", or "rents for share of product". Acreage for each property is listed as tilled or unimproved, and acreage is further split between tilled acres that are in rotation that which is "permanent meadow, permanent pasture". Unimproved acreage is divided between "woodland and forest" and "other unimproved". Enumerators elicited the value of the farm itself (including land, fences, and buildings), the value of farming implements and machinery, and the value of livestock. The enumerators also inquired about the estimated value of farm production, the production volume for each crop, the amount of labor hired, and costs of inputs. We use information

on tenure (owner versus renter categories), farm value, livestock value, and farm acreage to derive the results in this paper.

This requires making links of farmers (who are fathers to sons 0-17) from the 1880 Census of Population records to the Census of Agriculture records, which are separate. Specifically, using the 1880 to 1900 linked sample of sons as the analysis sample, we take the additional step of linking a random subset of farming fathers to the 1880 Census of Agriculture. Only individuals who reported an occupation of "farmer" are included in the Census of Agriculture linkage process, and we restrict our work to fathers living in states with indexed, searchable Census of Agriculture files on Ancestry.com. The sets of searchable and unsearchable states are similar on a variety of agriculture sector metrics, including share of owner-operated farms (Collins and Wanamaker 2021).

Before searching for matches in the Census of Agriculture, we randomly sorted the farmers in our analysis sample for linking, and we oversampled Black farmers. Our linked sample includes 5,708 white farmers and 3,605 black farmers. To account for the random sampling procedure among farmers, we add an additional component to the sample probability weights described above. Each black farmer in our Ag Census linked sample represents *B/3,605* farmers and each White farmer represents *W/5,708* farmers where B and W represent the number of Black and White farmers, respectively, in the 1880 population census to 1900 population census linked sample.[3] We multiply the probability sampling weights by these representation weights to generate final analysis weights.

There are several reasons one might not find a farmer in the agricultural census. Names might be transcribed differently from the population and agricultural census records; "farmers" in the population census might not have been the sole operator (the agricultural census lists only one); enumerators might not have completed a schedule for the farm or it might not have been preserved; or we might have missed a farmer who is actually in the manuscripts somewhere. Our procedure implicitly assumes individuals who are unsuccessfully linked to the 1880 Census of Agriculture are missing at random.

d. ASSIGNMENT OF INCOME SCORES AND INCOME SCORE RANKS

One measure of sons' outcomes in 1900 is based on an occupational income score, which is then ranked. We assign this score based on the individual's occupation, region of residence, gender, and race. Income scores are derived from a combination of information on earnings from the 1940 (full count) and 1960 (5% sample) Census of Population data. Note that the 1940 Census was the first to

[3] Our analysis sample is further reduced by incomplete/illegible agriculture census images (145 in total) and by missing occupations for fathers or for sons. The final sample sizes are contained in Tables A1 (farmers only) and A3 (all father occupations).

inquire about annual earnings. If imputations would be based on fewer than 50 underlying earnings observations, we drop the location/region covariate from the procedure. If the problem persists, we create cells based on one-digit rather than three-digit occupation. Our approach is similar in spirit to the *occscore* variable that is widely available in IPUMS samples (Ruggles et. al 2015), but incorporates the additional considerations of race, gender, farm tenure, and location. These additional covariates provide valuable information for understanding intergenerational transmission of status (e.g., Inwood, Minns, and Summerfield 2019; Ward 2021, Saavedra and Twinam 2020).

The 1940 Census provides a valuable, but incomplete, record of earnings. Unfortunately, earnings from self-employment, including farming, were excluded. We assign incomes to self-employed individuals who are *not* farmers using the 1960 Census enumeration where earnings of wage and salary workers *and* self-employed workers are available. The ratio of income for self-employed relative to wage and salary workers within an occupation in the 1960 Census gives us a multiplier, which we then apply to wage and salary income for each race/gender/region/occupation cell from the 1940 Census to estimate income for self-employed workers in that year.

For farmers, our method reflects both differences between renters and owners and the value of perquisites enjoyed by farm residents. For farming sons in 1900, we use the *home ownership* variable in the Census of Population to identify likely farm owners. To rank farmers' income (both owners and renters) relative to individuals in our sample with non-farming occupations, we require a 1940-based occupational income score. We derive an estimate, separately for owners and renters and by race, gender, and region of residence, by assuming that the ratio of farmer (owning and non-owning) income to farm laborer income is constant between 1940 and 1960, and then exploiting the fact that farm laborer income is available in 1940 and 1960 and farmer income (owning and non-owning) is available in 1960. In estimating these values, we use the all-inclusive income of farmers and farm laborers, including the value of perquisites as discussed below.

Farm laborer incomes are reported in the 1940 and 1960 Census of Population enumerations. For the 1940 income observations, we scale up reported incomes for farm laborers by the ratio of perquisites and cash wages to cash wages alone in 1939 (equal to 1.26), as reported in the 1957 USDA report *Major Statistical Series of the U.S. Department of Agriculture: Volume 3, Gross and Net Farm Income* (Table 7).[4] We use this scaling factor to scale up the 1940-based occupation income score for each race, gender, and region of residence. We repeat this exercise for 1960 farm laborer income observations using the last available year of the same USDA report, 1956. For the 1960 calculation, the ratio is 1.19.

[4] We divide "Value of Perquisites – TOTAL" by "Cash Wages + Value of Perquisites – TOTAL" to calculate the perquisite rate. See Volume 3, Table 7.

Farmer incomes in 1960 are available in the population schedules, and we derive perquisite values (1956 based) from the same USDA report cited above. Farmer perquisite rates are more volatile year-to-year, so we use additional sources to smooth the rate between 1956 and 1959. In the end, we calculate a perquisite-included income ratio for farmers in the 1960 Census of 1.35. Combining all of this information allows us to estimate the 1940 income of owning and non-owning farmers, inclusive of perquisites, to anchor an occupational income score. For farm managers in all years, we estimate a perquisite rate as the average of farmers and farm laborers: 34% in 1940 and 27% in 1960.

REFERENCES

Abramitzky, Ran, Leah Platt Boustan, and Katherine Eriksson. 2014. "A Nation of Immigrants: Assimilation and Economic Outcomes in the Age of Mass Migration." *Journal of Political Economy* 122, 3: 467-506.

Bailey, Martha J. and Connor Cole. *Autolink.ado*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor], 2019-06-13.

Bailey, Martha, Connor Cole, Morgan Henderson, and Catherine Massey. 2020. "How Well Do Automated Linking Methods Perform in Historical Samples? Evidence from US Historical Data." *Journal of Economic Literature* 58, 4: 997-1044.

Collins, William and Marianne H. Wanamaker. 2021. "African American Intergenerational Mobility since 1880." *American Economic Journal: Applied*. Forthcoming.

Ferrie, Joseph P. 1996. "A New Sample of Males Linked from the Public Use Microdata Sample of the 1850 US Federal Census of Population to the 1860 US Federal Census Manuscript Schedules." *Historical Methods* 29, 4: 141-156.

Inwood, Kris, Chris Minns, and Fraser Summerfield. 2019. "Occupational Earnings Scores and Immigrant Assimilation: Evidence from the Canadian Census." *Explorations in Economic History* 72 (April): 114-122.

Minnesota Population Center. 2017. *North Atlantic Population Project: Complete Count Microdata. Version 2.3* [dataset]. Minneapolis: Minnesota Population Center. http://doi.org/10.18128/D040.V2.3.

Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2015. *Integrated Public Use Microdata Series: Version 6.0* [database]. Minneapolis: University of Minnesota. http://doi.org/10.18128/D010.V6.0.

Saavedra, Martin and Tate Twinam. 2020. "A Machine Learning Approach to Improving Occupational Income Scores." *Explorations in Economic History* 75.

U.S. Department of Agriculture. 1957. *Major Statistical Series of the U.S. Department of Agriculture*. Volumes 3 and 7. Washington, DC: Government Printing Office.

Ward, Zachary. 2021. "Intergenerational Mobility in American History: Accounting for Race and Measurement Error." Unpublished working paper.