

**The Shadow and Blight of Slavery:
How Long did the Advantages of Free Land Persist?**

Melinda Miller*
Department of Economics
U.S. Naval Academy

In a previous paper, I found that free land positively and significantly affected the economic outcomes of the Cherokee freedmen, a group of former slaves who received land. In this paper, I extend the analysis by twenty years to 1900. Using a newly collected linked census sample, I find that the Cherokee freedmen's advantages seemed to persist. First, I focus my analysis solely on the Cherokee Nation and construct measures of intra- and inter- generational occupational mobility. I find high degrees of occupational persistence and upward mobility for Cherokee freedmen. Next, I combine my sample of linked Cherokee freedmen with the 1% Public Use Microdata Sample of the 1900 United States Census with American Indian Oversample (IPUMS). I compare the outcomes of Cherokee freedmen to 2 control groups—blacks in the South and residents of the Oklahoma and Indian Territories. I find evidence that the Cherokee freedmen children have higher levels of human capital accumulation than black children both in the South and the Territories. Additionally, Cherokee freedmen adults tend to have higher literacy rates, are more likely to own their own homes, and are more likely to be farmers. Finally, by incorporating whites and Cherokees from the IPUMS sample into the analysis, I measure the levels of racial inequality in the Cherokee Nation and the South. As in my earlier paper, I find evidence that the level of racial inequality is smaller in the Cherokee Nation than in the South.

* I would like to thank my dissertation committee— Warren Whatley, Ben Chabot , Martha Bailey, Maggie Levenstein, and Tiya Miles—for their helpful comments and support. I am grateful to the National Science Foundation (Award # SES-0619588), the Sasakawa Young Leaders Fellowship Fund, and the Economic History Association for their generous support. mmiller@usna.edu.

We still linger in the shadow and blight of an extinct institution.

-Frederick Douglass¹

During the 1890s, Zack Foreman, a wealthy black cattleman in the Cherokee Nation, struck a deal with the Kansas City Southern Railroad.² If Foreman would prepare the roadbed, the railroad would lay the steel. He soon had his own train line, and was the “only Negro in the United States at the time who privately owned a railroad.”³

Foreman’s wealth and property were exceptional during a time period when blacks’ income and wealth levels lagged far behind those of whites. In 1900, blacks held only 1/23 the property of whites and had an average income that was just 7/20 that of whites (Higgs: 1977, 1982). While Foreman may have been able to partially escape the “shadow and blight” of slavery that trapped so many blacks in the United States, his success in some measure can be attributed to an accident of his birth place. As a former slave in the Cherokee Nation, he possessed a key advantage over blacks in the southern United States: free land.

An 1866 treaty between the Cherokee Nation and the United States guaranteed the Cherokee’s former slaves the right to claim and improve any unused land in the Nation’s

¹ “The Color Line in America.” Frederick Douglass, *Three Addresses on the Relations Subsisting Between the White and Colored People of the United States*, Washington, 1886, pp. 3.

² The Cherokee Nation was located in Indian Territory. Indian Territory, which initially encompassed all United States territory west of the Mississippi (excluding Missouri, Louisiana, and Arkansas), was established in 1834. By the outbreak of the Civil War, the Territory’s area had been whittled down to what is now known as the state of Oklahoma. Its western half became Oklahoma Territory in 1890, and it was here that the famous “Sooners” participated in runs for land. The eastern half remained Indian Territory until 1907, when the Oklahoma and Indian Territories merged to form the state of Oklahoma. See map 1.

³ J.J. Cape Interview, GFPHC, 88:56-58. Quoted in Wickett, M. R. (2000).

public domain. During the American Civil War, the Cherokee Nation had joined the Confederacy. The Union's victory placed the Cherokee Nation on the losing side, and, as a "domestic dependent nation," the Cherokee Nation was forced to reach its own separate peace with the North.⁴ During treaty negotiations, the United States insisted that the Cherokees offer their former slaves (who were of African descent) citizenship with, "all the rights of native Cherokees."⁵ According to the laws of the Nation, all citizens, including the freed slaves, were guaranteed the right to claim and improve any unused land in the Nation's public domain.⁶ Armed with farming supplies provided by the Department of Interior, many Cherokee freedmen abandoned sharecropping and wage labor to start their own farms when the treaty went into effect.⁷

In chapter two, I exploited this plausibly exogenous variation in postbellum policy between the Cherokee Nation and the southern United States to identify the impact of free land on the economic outcomes of former slave families.⁸ Using a 60% sample from the 1880 Cherokee Census, I found that the racial gap in land ownership rates was smaller in the Cherokee Nation than in the southern United States. Furthermore, black farmers in the Cherokee Nation, on average, owned farms that were closer in size to those

⁴ John Marshall famously declared the Cherokee Nation a "denominated domestic dependent nation" in *Cherokee Nation v. Georgia*, 30 U.S. 1 (1831). The practical implication of the designation is that the Cherokee Nation had a government that could enact and enforce its own laws and policies. However, all laws and policies could be overridden by the United States Congress. To do this, Congress must explicitly pass legislation contradicting a law or policy. In the absence of such legislation, the Cherokee law stands.

⁵ Article 9 of the Treaty between the United States and the Cherokee Nation, July 19, 1866.

⁶ Once a Cherokee citizen claimed land, the citizen had ownership rights similar to those of typical fee simple ownership. As long as the land was not abandoned, the citizen held heritable usufructuary rights, and the land could be sold, used as collateral for loans, bequeathed in wills, or improved upon. However, only Cherokee citizens were able to hold these rights. See Bloom (2002).

⁷ Because the Freedmen's Bureau did not have jurisdiction in Indian Territory, the Department of Interior undertook some tasks that would have been the Bureau's responsibility and additionally served as a liaison between the Cherokee's former slaves and the rest of the Nation.

⁸ Unless explicitly stated otherwise, I define the South as Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

of non-black farmers, were more likely to undertake long-term capital investments in their land, and had higher absolute levels of wealth and income than southern black farmers. These advantages translated into significantly lower levels of racial inequality in the Cherokee Nation than in the South.⁹ The estimated difference in the racial wealth gap was substantial and ranged from 46% to 75%. For income, the estimated difference in the racial gap was between 20 to 56%.¹⁰

These results suggest that if Reconstruction era plans to provide the newly freed slaves with “forty acres and a mule” had been implemented, the level of American racial inequality could have been greatly diminished—at least in the short run. Would this initial decrease in inequality have persisted as the nineteenth century drew to a close? To explore this question, I have collected a new sample of individuals linked from the 1880 Cherokee Census to the 1900 United States Census. By locating both adults and children from the 1880 Census twenty years later, I am able to trace the how the economic circumstances of Cherokee freedmen families changed over time.

First, I focus my analysis solely on the Cherokee Nation and construct measures of intra- and inter- generational occupational mobility. I find high degrees of occupational persistence and upward mobility for Cherokee freedmen. Ninety percent of farmers remain farmers, eighty percent of people who could transition to higher occupational class did. Their children also displayed a high degree of intergenerational occupation persistence and upward mobility. 65.9 percent of all sons have the same occupation as their father, and a majority of the observed occupational mobility is

⁹ Wealth was measured by value of livestock owned, and income was determined as the total value of crops produced.

¹⁰ For more detailed results and a discussion of identifying assumptions, please see the paper.

upward. These high degrees of occupational persistence and upward mobility suggest that at least some of the beneficial effects of free land persisted in the first generation of Cherokee freedmen and was passed on to their children.

Next, I combine my sample of linked Cherokee freedmen with the 1% Public Use Microdata Sample of the 1900 United States Census with American Indian Oversample (IPUMS). I compare the outcomes of Cherokee freedmen to 2 control groups—blacks in the South and residents of the Oklahoma and Indian Territories. I find evidence that the Cherokee freedmen children have higher levels of human capital accumulation than black children both in the South and the Territories. Additionally, Cherokee freedmen adults tend to have higher literacy rates, are more likely to own their own homes, and are more likely to be farmers. These results all suggest that the Cherokee freedmen's income and wealth advantages persisted until 1900.

Finally, by incorporating whites and Cherokees from the IPUMS sample into the analysis, I measure the levels of racial inequality in the Cherokee Nation and the South. As in my earlier paper, I find evidence that the level of racial inequality is smaller in the Cherokee Nation than in the South.

2. Theory and Relevant Literature

An extensive empirical literature in economics suggests that the Cherokee freedmen's initial income and wealth advantages over southern freedmen could have been partially transmitted to the next generation. Solon (1999) reviews several studies that find a significant and positive correlation between the earnings and wealth of parents and those of their children. With twentieth century data, the estimated elasticity of a

son's long run labor earnings with respect to his father's long run earnings is typically between 0.3 and 0.5. In other words, family background and environment explain about 40 percent of the variation in individuals' earnings.

Studies that focus on the nineteenth century corroborate the influence of parents' economic status on their children. Kearl and Pope (1981) found the intergenerational correlation to be between 0.09 and 0.21 for income and between 0.10 and 0.34 for wealth. Guest, et al. (1989) examined white men in 1900 and found a great deal of occupational inheritance. A quarter of laborers, for example, had laborers as fathers, and 59.9 percent of farmers had farmer fathers. Ferrie (2005) collected a linked census sample of fathers in 1880 and sons in 1900; he found levels of occupational inheritability similar to Guest, et al. 29.5 percent of unskilled laborers had unskilled laborers as sons, while 46.6 percent of farmers had farmers as sons. Thernstrom's (1973) community study of Boston between 1840 and 1890 found that around 40 percent of sons were in the same occupational category as their fathers.

These results suggest that the greater wealth and income of the Cherokee freedmen could have had a positive effect on their children. However, all these studies limit their analysis to white men. An examination of the theoretical underpinnings of the intergenerational transmission of economic status suggests that the effects of parents' earnings and wealth on their children may have been more pronounced for former slaves. Lack of access to capital markets, little experience with formal schooling, restricted access to public education, and racism all impeded the economics activities of former slaves. With their higher levels of wealth and income, the Cherokee freedmen may have

had the resources necessary to bypass some of these constraints faced by blacks in the South.

Becker and Tomes (1979; 1986) most famously formalized the relationship between parent and child income. In their model, parents influence the income of their children through three channels—the transmission of cultural and genetic endowments, investment in human capital, and bequests. Parents seek to maximize some weighted average of their own utility today and their children’s utility tomorrow. Utility is an increasing and concave function of consumption, which in turn depends on income and wealth. A parent can choose to influence a child’s future level of income by investing in the child’s human capital or leaving a bequest.

With perfect capital markets, parents can borrow funds to pay for human capital investments, and the model predicts that a child’s level of human capital is unrelated to the income of his or her parents. However, southern credit markets in the decades after the Civil War suffered from multiple problems, and freedmen had very restricted access to credit.¹¹ Parents would likely be required to self-finance human capital investment, and the constraints of poorer parents could detrimentally affect their children’s human capital acquisition. If the Cherokee freedmen’s higher levels of income allowed them to increase investment in their children, then, all else equal, their children would have higher levels of human capital and income than the children of southern freedmen. Sufficiently large public educational expenditures could have offset parents’ limited budgets. However, as Collins and Margo (2003) discuss, the late nineteenth century was

¹¹ For a discussion of capital market imperfections faced by freedmen following the Civil War, please see Miller (2007).

characterized by a decline in the per pupil expenditures for black students relative to white students. Within this paradigm, the ability to self-finance children's education could have served as an important mechanism for their future income growth.

The Cherokee freedmen's high level of farm ownership may have also served to perpetuate their income and wealth advantages. First, managing a farm successfully promotes the development of a certain skill set, which then could have been taught to children as a form of human capital developed outside of formal schooling. While southern freedmen farm owners may have also had a similar skill set, the majority of black southerners were not farm owners. Instead, they tended towards occupations that provided a higher degree of supervision and a less advanced skill set, such as laborers or sharecroppers. Second, farm ownership may have promoted changes in what Becker and Tomes refer to as the "cultural endowment" a parent passes along to a child. During slavery, many blacks had not been exposed to the formal schooling, standard farming management practices, business contacts and other aspects of the southern economy that would encourage agricultural success. If land ownership provided the Cherokee freedmen with a crash course in life as a southern farm owner, then their children may have inherited this beneficial cultural change. Third, farmland and equipment could have been bequeathed to one or all of a family's children. The value of such a transfer could have been quite substantial and served to greatly increase the wealth and income generating ability of the next generation.

Both economic theory and empirical studies suggest that the parents' economic status can influence that of their children. Therefore, the Cherokee freedmen's access to land may have positively influenced not just the first generation of former slaves, but also

subsequent generations. If true, blacks in the Cherokee Nation may have possessed higher levels of income and wealth than southern freedmen as the nineteenth century drew to a close. Additionally, there may be evidence of higher levels of parental investment in children in the Cherokee Nation than in the South.

III. Construction of the Linked Sample of Cherokee Freedmen

In 1880, the Cherokee Nation collected a census that enumerated all citizens living in the Nation. Because only people counted in the census were granted the rights of Cherokee citizenship (including the right to both live in and claim land in the Cherokee Nation), every citizen had an incentive to insure that he or she was listed in the census. Two enumerators were appointed for each of the Nation's nine districts (equivalent to a state or county) and were tasked with taking the census. They were required to make "full and complete returns of all persons residing or sojourning in their district," including their "chief productions of agriculture, including number of horses, cattle, hogs, sheep, etc., during the year ending in May 1st 1880."¹² The census also included basic demographic information, such as age, race, sex, marital status, literacy, and occupation. I collected and digitized a 60 percent sample of the 1880 Cherokee Census; it includes approximately 100 percent of blacks in the Cherokee Nation and 50 percent of the rest of the population.¹³

Because the 1880 Cherokee Census listed all citizens of the Nation, the United States government later referenced it when compiling a complete list of all Cherokee

¹² *Cherokee Advocate*, January 28, 1880.

¹³ People whose information was illegible or missing due to damage to the original census manuscripts were excluded.

citizens in preparation for the establishment of the state of Oklahoma. During the last decades of the nineteenth century, public demand for land began to focus on Indian Territory as a potential supply. With the passage of the Curtis Act in 1898, the U.S. Congress established a plan to abolish the Cherokee government, allot land to each Cherokee citizen, and open all remaining land to settlement.¹⁴

Between 1899 and 1907, Cherokee citizens applied to the Dawes Commission to be classified as official citizens of the Cherokee Nation.¹⁵ These people were then sorted into different lists (now commonly referred to as Dawes Rolls) according to race and eligibility for citizenship.¹⁶ Besides listening to applicants' claims, the Dawes Commission was also charged with locating every single person eligible for Cherokee citizenship and accounting for all people included on the 1880 Cherokee Census. Their task was facilitated by the incentive structure in place—inclusion on the list guaranteed each person land. Only people on these lists would receive an allotment of land when Indian Territory became the state of Oklahoma.¹⁷ Furthermore, those who already owned land had to enroll to *keep* their land.

When an individual was placed on a list, information about the person and his or her family was recorded on a separate card. Figure 1 provides an example of such a card. For freedmen, this information included name, age, sex, familial relationship to others on

¹⁴ The Curtis Act, as it is commonly referred, was officially called the “Act for the Protection of the People of Indian Territory.” Besides the Cherokee Nation, four other Indian nations (Choctaw, Chickasaw, Creek, and Seminole) were affected by the Act. An earlier act, the 1887 Dawes Severalty Act, applied to the remaining tribes in Indian Territory and legislated the extinguishment of their governments and the allotment of their lands.

¹⁵ The Dawes Commission and Dawes Rolls were named after the Commission's first chairman, Henry Dawes, who also lent his name to the Dawes Act.

¹⁶ Freedmen were included on a separate roll from Cherokees by blood. Additionally, there was also a roll of freedmen who had doubtful Cherokee citizenship.

¹⁷ The amount of land allotted and the terms of allotment varied with race and percentage of Cherokee blood.

the card, year of tribal enrollment, and current location. Additionally, the names of the person's former slave owner, mother's former slave owner, and father's former slave owner were noted.

The card's unique identification number was then recorded next to the individual's entry on the original 1880 Cherokee Census. People who were proven to have died in the intervening years were denoted "DEAD" on the census rolls. Of the 1,812 freedmen in my sample of the 1880 Census, only 12 were not located by the Dawes Commission. 579 were confirmed to have died. 27 people had card numbers that were illegible on the 1880 census, and an additional 157 were classified as "doubtful" Cherokee citizens and had their information recorded on a different list. For the remaining 1,065 Cherokee freedmen, the detailed demographic and family member information provides an invaluable asset in locating that person in the 1900 United States Census.

The linking procedure had three basic steps. First, the 1880 Census provided the card number for each Cherokee freedmen. Second, microfilm versions of the cards were located and copied. These cards provided the name and family members of the person in 1900. Third, this information was used to find the individual in the database index of the 1900 Census available at www.ancestry.com. When the person was located in the 1900 Census, all census and Dawes card information for the person and each household member in the 1900 Census was recorded. Information from the 1900 Census is listed in Table 1. The dataset currently includes 789 freedmen from the 1880 Cherokee Census, 2,664 total individuals, and 470 households.

Segal Whitmire, who was a 14-year-old Cherokee freedman in 1880, provides an excellent illustration of some of the difficulties faced when linking. Without subsidiary Dawes Card information, the search for Segal Whitmire would have been fruitless—there was no one by that name in the 1900 U.S. Census index. Whitmire’s Dawes card, F863, revealed an important name change—his first name was recorded as Zeke. A search for Zeke or Ezekiel Whitmire, however, still produced no matches. Zeke’s Dawes Card provided useful subsidiary information. He had five children—William, Lettie, Mose, Edward, and Sequoyah. Their mother was recorded as Lucinda Whitmire. A search for Mose Whitmire found one possible match in the 1900 index. A five-year-old boy named “Mose Whitmire” lived in Indian Territory. His race, however, was listed as “white.” The names of his parents, also recorded as white, were suggestive—Lucinda and Elizabeth. The marriage of two women was unlikely in this time period, and the name Elizabeth bears a certain resemblance to “Zeke.” Inspection of the original census manuscript revealed that “Ezekiel Whitmire” had been transcribed incorrectly as “Elizabeth.” Additionally, all five of Zeke’s children and his wife were listed in the household. The entire family’s race was denoted as “n” (for “negro”) in the census and had been incorrectly transcribed as white in the census index.

Without the additional information provided by the Dawes Card, Segal Whitmire, a black boy born in 1867, would have likely never been linked to the individual indexed as Elizabeth Whitmire, a white woman born in the same year. This example highlights how the information recorded on an individual’s Dawes Card can ameliorate problems that traditionally arise when linking individuals across censuses. These problems include name changes, data errors in the original census manuscripts, and transcription errors.

Linking an individual across censuses can be impossible if his or her name has changed in the intervening years. The problem of name change is particularly critical for women, who were likely to marry and adopt their husbands' last names. As a result, analyses of linked census data traditionally exclude women. Women can be and are included in my linked sample. Although men's names tend to stay fairly constant over time, they may, like Segal/Zeke Whitmire, abandon childhood nicknames for more formal adult names. Furthermore, throughout the linking process, I have discovered that men's last names change more often than would be expected. Such a situation occurs, for example, when a woman remarries and her children adopt her new husband's name.

People with non-unique names also pose problems for linking. Because an individual's card includes information on family members, individuals with like names can be differentiated by the names and ages of their family members listed on their Dawes Card. The family member data eliminates any guesswork when determining which commonly named individual is the correct one.

Index transcription error proved to be a significant problem when searching for individuals. Recording a race as "white" when it was denoted "n" in the census was an unfortunately common occurrence. Names were often transformed into a version that had little semblance to their true spelling. At times, this was due to simple typing errors during the indexing process. However, barely legible handwriting on the original census manuscripts was also a culprit. The Dawes Cards proved invaluable in dealing with this problem by providing additional search terms. While the name of the person from the 1880 Cherokee Census may have been mangled, their children's name may not have been. If the last name of the entire family's last name was altered beyond recognition,

then a unique first name provided an alternate search parameter, or a father-son first name combination could provide a list of potential families. Of all the individuals located in the census data, over one-third would not have been found without auxiliary family information due to incorrectly spelled names in the census index.

Table 2 provides a summary of the census linking results. 1,065 individuals had census card information. Census searches occurred for 932 of these people.¹⁸ 788 were located, giving a successful linkage rate of 84 percent. Of those found, 359 were men, and 394 were women. The linkage rate was nearly identical for men and women, 42 percent and 43 percent, respectively, suggesting that the linked census sample is not biased with respect to gender.¹⁹

Table 3 provides summary statistics of 1880 characteristics by census linking category. Approximately half of each category is male, which again suggests that the sample is not biased with respect to gender. Age does differ somewhat between most of the categories. Figure 2 plots the cumulative age distributions for each category. Reassuringly, the mean 1880 age of people who died is significantly older than that of living population. Although mean age differences exist between the found, not found, and problem categories, the large standard deviations make these difference significantly insignificant. Figure 2 demonstrates the distributional similarities between these categories.²⁰

¹⁸ 133 people's Dawes Card information was unavailable during archive visits. Their Dawes Cards were located on microfilms that were unavailable during archive visits.

¹⁹ There were 35 people for whom census card information was available who had missing or illegible sex information in the 1880 Census. All of these people were found. According to the 1900 census data, 14 were men, 14 were women, and 7 remained of unknown gender.

²⁰ It also serves to highlight the difference between the 133 people who have yet to be searched for due to the microfilm unavailability (labeled as "In Progress") and the rest of the sample. They are younger, on average, than the rest of the sample. Given their younger ages, they are also less likely to be married and

IV. Black Mobility Within the Cherokee Nation

An examination of the occupational mobility experiences of freedmen in the Cherokee Nation can provide insight into the longer term effects of free land access.²¹ The linked sample of Cherokee freedmen contains information that can be used to quantify two types of mobility. First, how did an individual's occupational category change between 1880 and 1900? If individual Cherokee freedmen were able to maintain their occupational statuses or experience upward mobility, then the beneficial effects of free land likely did not significantly dissipate during the course of their lifetimes. Second, data on the occupations of a parent in 1880 and that of their children in 1900 can be used to gauge the extent to which intergenerational occupation persistence occurred. If the children of the first generation of Cherokee freedmen were largely engaged in unskilled occupations and did not own farms, this would suggest that free land would have had little effect on racial inequality in the long run.

Intragenerational occupational mobility can be examined for people who were of working age in both 1880 and 1900.²² I restrict my analysis to people who were male

have lower literacy rates. However, much of the literacy rate difference disappears when the literacy for very young people (less than 10 years of age) is excluded. Why would this group be younger? People appear on the Dawes Roll microfilms in order of their Dawes Card numbers. Dawes Card number assignment is likely related to the order in which people applied to the Dawes Commission. Therefore, anything that affected the order in which people applied to the Commission would affect the people who were on the microfilm that was not available.

²¹ An analysis of income or wealth mobility would also be interesting. However, while the 1880 Cherokee Census does include measures that can be used to proxy for income and wealth, the 1900 United States Census does not. Therefore, the analysis in this section will be restricted to occupation for reasons of data availability.

²² People who died between 1880 and 1900 are, by construction, excluded from the analysis. This may be a concern in evaluating mobility if death was somehow correlated with mobility experience. For example, perhaps people who worked harder, manual labor jobs died younger and had lower levels of upward mobility. It is difficult to evaluate such possibilities given the data. However, based on observed occupations in 1880, people who died and lived shared a similar occupational distribution. 67.4% of found household heads were farmers in 1880. 66.8% of dead heads were farmers. 29.7% of found heads were some form of laborer, while 26.3% of dead heads performed some sort of laborer. When combined with

household heads in both years.²³ Table 4 presents the results in a mobility table. Each column represents an 1880 occupation category. The prestige of occupation falls from left to right on the table: farmer, cow driver, minister, cook, and laborer.²⁴ 1900 occupational categories are represented in the rows, and occupational prestige falls from the top to bottom rows. A cell in the x th column and y th row in the table represents the number of people employed in occupation x in 1880 who were employed in occupation y in 1900. Hence, the diagonal represents occupational immobility, upward mobility is found above the diagonal, and downward mobility appears below the diagonal.²⁵

In 1880, 78.4 percent of the household heads were members of the highest occupation class of farmer. By 1900, it had grown by 10 percent to 88.1. Not only did farmers constitute a large occupational share, but there was also a large degree of persistence among the farming class—90 percent of farmers remained farmers. This result suggests that contemporary concerns that former slaves would be unable to

the average difference in ages, this suggests that found heads were similar to dead heads, with the exception that dead heads were much older in 1880.

²³ I restrict my analysis to male household heads for several reasons. First, almost all household heads have occupations listed, while most non-heads do not. Therefore, a large proportion of the sample would be heads regardless of the restriction. Second, non-household heads with occupations tend to be younger members of the household (e.g., teenage sons). Their occupation could change as they age, making their younger occupation a poor reflection of their “permanent” occupation. Third, this restriction does preclude women from the analysis. While an understanding of women’s intra- and inter-generation mobility during this time period could be quite informative, such an analysis deserves a more in depth analysis than can be provided within the scope of the current chapter.

²⁴ I use IPUMS 1950 median annual occupational income data to assist in determining this ranking. While this ranking can be problematic if rank order of occupation incomes changed between 1900 and 1950, most people in the Cherokee Nation were either farmers or laborers. There is much evidence to support that farmers were, on average, of a higher socioeconomic status than laborers at the turn of the century. Cow drivers are not cowboys—they are people who own large herds of cattle. Laborers include general laborers, farm laborers, and day laborers. For ministers, the situation is slightly complicated. Although their incomes tended to place them in a lower class, they also tended to be highly respected within a community. One person who was in jail in 1900 was excluded from the table.

A great degree of variance could exist within each occupational class—there were both incredibly rich farmers and subsistence farmers who barely earned a living—and farmers could have changed their position with the class. However, the data do not allow for such changes to be measured.

²⁵ This style of mobility table is used in other work, such as Ferrie (2005).

successfully manage their farms were unfounded. The total level of upward mobility also seems quite high. Of those who could transition to a higher occupational class, 82.8 percent did. Only 8.2 percent of household heads were of a lower occupation class in 1900 than 1880. The Cherokee freedmen, then, seemed to do quite well in either maintaining or improving their own occupational status

Table 5 contains intergenerational mobility rates for fathers in 1880 and sons in 1900. Fathers' occupations are represented in the rows, while sons' are in the columns. The columns correspond to occupational categories for fathers in 1880, while the rows represent the occupations of their sons in 1900. Occupations are divided into three classes: farmers, laborers (both general and farm), and other.²⁶

Like Guest, et al. (1989) and Ferrie (2005), who reported large degrees of intergenerational *immobility*, I find that most Cherokee freedmen remain in the same occupational class as their fathers. 65.9 percent of all sons have the same occupation as their father. Occupational persistence is higher for farmers— 77.5 percent of farmers have sons who remain farmers. 24 percent of laborers have sons who are also laborers. A majority of the mobility that does occur is above the diagonal and represents upward mobility. 73 percent of laborers have sons who achieve the rank of farmer. There are two caveats when interpreting these results. First, they do not control for any lifecycle effects. If fathers experienced an upward occupational trajectory and were at the start of their careers in 1880, then their sons' upward mobility may simply reflect the fact that each was observed at a different point in their career trajectory. Second, there is the

²⁶ The 'other' category contains occupations of various levels of prestige. The father-son pairs that have been included in 'other' are: minister to laborer (2), blacksmith to farmer, blacksmith to painter, farmer to landlord, insane to farmer, and unemployed to farmer. Of these, minister to laborer would likely have been considered a decline in status. Blacksmith to painter and insane to farmer both embody an unknown change in status. The remainder represent an increase in status.

potential for great income and status variation within the class of farmers, which will not be captured by the mobility table.

The Cherokee freedmen's high degrees inter- and intra- generational occupational persistence and upward mobility suggest that any convergence between Cherokee and southern freedmen will not be the result of the Cherokee freedmen's initial occupational advantages dissipating over time. Instead, any potential convergence would likely be the result of southern freedmen improving their socioeconomic status.

IV. Potential Convergence Between Cherokee and Southern Freedmen

To examine the potential convergence in outcomes between Cherokee and southern freedmen in 1900, I combined the linked sample of Cherokee freedmen with a sample of southern households drawn from the 1900 IPUMS with Indian oversample.²⁷ Table 6 provides summary statistics for the black populations in the South and Cherokee Nation.²⁸ These raw means suggest that the Cherokee freedmen continued to have significant advantages over southern freedmen. The top half of the table provides information only for children ages 6 to 18. Young Cherokee freedmen displayed higher average levels of human capital accumulation than southern freedmen. Not only were black children in the Cherokee Nation more likely to attend school (38 percent vs. 33.71 percent), but they also attended school for more months (5.2 months vs. 3.9 months).²⁹

²⁷ IPUMS provides two samples for 1900—a standard 1-in-100 sample and 1-in-100 sample that includes 1-in-5 sampling of the American Indian Schedules. Because the Cherokee Nation's population was relatively small in 1900, I opt to use the Indian oversample.

²⁸ Because all of the Cherokee Nation was considered rural, the southern IPUMS sample is restricted to include only people living in rural areas. Only a relatively few blacks lived in urban areas.

²⁹ The census enumerators asked if children of school age had attended school between June 1, 1899 and June 1, 1900. If they attended school, then the numbers of months attended in that same time period was recorded.

The higher level and duration of school attendance were associated with increased literacy rates (44.71 percent vs. 34.04 percent).

This evidence on schooling in the Cherokee Nation is notable for several reasons. First, public education was funded differently in the Cherokee Nation than in the South. While schools in both places were segregated, a larger share of the financial burden for education fell on the local freedmen communities in the Cherokee Nation. The Cherokee government provided only teachers for schools.³⁰ The local black community needed to raise funds for all other school related expenses (e.g., school building, books). Additionally, a minimum enrollment policy restricted public school access in remote areas with small populations. In contrast, funding for black schools in the South was not directly reliant upon the local community. Because it was relatively more costly for blacks in the Cherokee Nation to educate their children, the higher rates of school attendance are particularly impressive. Additionally, black parents in the Cherokee Nation bore another implicit cost of education. Their children attended school for 1.3 more months, on average, than black children in the South. Although children were not as productive as adults, they still provided needed labor on many family farms. The average Cherokee family bore a higher opportunity cost for this lost labor.

Second, investment in children is, according to the Becker and Tomes' model, one mechanism by which parents transmit economic status to their children. The schooling advantages of black Cherokee children suggest that their parents were able to devote more resources to education than their southern counterparts—e specially given

³⁰ There is evidence that the teachers provided to the freedmen schools were of poor quality. The Cherokee Nation rated its teachers. Each school year, the location of a school, the race of its attendants, and the level of its teacher was published in the official Cherokee newspaper, *The Cherokee Advocate*. An analysis of the teachers provided to black schools in the years 1878-1882 revealed that the teachers appointed to black schools were consistently of the lowest quality.

the higher costs of education in the Cherokee Nation, as discussed above. This suggests that the Cherokee freedmen continued to have higher levels of wealth and income than the southern freedmen. Furthermore, the educational differentials between the two groups of young people could have allowed these differences to persist as the children aged.

The lower half of table 6 focuses on adults. Again, these uncontrolled means suggest that the Cherokee freedmen exhibit higher levels of human capital and socioeconomic status than southern freedmen. At 54 percent, the Cherokee adult literacy rate is 17 percentage points higher than that of southern freedmen. Additionally, the Cherokee heads of household are more likely to be farmers (72 percent vs. 56 percent). Although the definition of farmer in the census was very broad, there was a large practical distinction between farmers who worked others' land (as sharecroppers or tenants) and farmers who worked their own land. While a direct measure of farm tenancy does not appear in the population schedules of the 1900 U.S. Census, home ownership is likely highly correlated with land ownership. Using this measure suggests that the Cherokee freedmen farmers were much better off than southern farmers. 90.23 percent of adults in farming households owned their homes, while only 28.34 percent of farming southern blacks households did. In general, all black adults in the Cherokee Nation are much more likely to live in an owned house than a rented house (77 percent vs. 24 percent).

These sample statistics support the hypothesis that the Cherokee freedmen's access to free land improved their outcomes and those of their children for several decades following slavery. To further explore these results, I will estimate three sets of

regressions. First, I will restrict the analysis to blacks in the Cherokee Nation and the South to check the robustness of the Cherokee freedmen’s advantages in both human capital and home ownership. Next, I will utilize the IPUMS sample of the Oklahoma and Indian Territories to compare the outcomes of the Cherokee freedmen to other people living the Territories. Finally, after expanding the analysis to all people in the Cherokee Nation and the South, I will use difference-in-difference estimation to gauge the relative levels of racial inequality in the Cherokee Nation and the South.

A. Blacks in the Cherokee Nation and the South

I estimate the difference in several outcomes for blacks in the Cherokee Nation and the South. Only blacks are included in these regressions, and this basic specification takes the form

$$Y = \beta_0 + \beta_1 CN + \gamma X + \varepsilon$$

Y is the outcome of interest and some measure of economic well-being, such as home ownership or children’s school attendance. X is a vector of covariates that could potentially influence Y , and γ is its vector of estimated coefficients. The CN dummy variable is 1 if an individual lives in the Cherokee Nation. Its coefficient, β_1 , provides an estimate of a simple difference in means between blacks in the locations, controlling for other factors.³¹

The estimate value of β_1 would be positive if the Cherokee freedmen had an advantage over southern freedmen in outcome Y . If the root of the Cherokee freedmen’s

³¹ In all regressions with measures of children’s human capital as the dependent variable, the standard errors are clustered at the household level.

advantage over southern freedmen was their access to free land, then the estimated value of β_1 should remain positive and significant with the inclusion of demographic controls. However, when the depended variable is a measure of parental investment in children, β_1 should decrease when economic proxies are included if the difference in these investments is due to the greater wealth and income from free land.

Table 7 focuses on human capital investment in children aged 6 to 18. The dependent variable in columns 1 through 3 is an indicator variable equal to 1 if the child attended school at all in the past year, and 0 otherwise. Column 1 estimates the uncontrolled mean and includes no covariates besides the Cherokee Nation indicator variable. As the raw means reported in Table 6 would suggest, the estimate is positive and marginally significant at the 10% level. The results in column 2 include controls for age, sex, and family size to test if the difference in school enrollment is due to a difference in the composition of children in the Cherokee Nation and the South. While the coefficient remains positive, it is no longer significant. The new covariates have the expected signs. School attendance is influenced by age in a quadratic fashion. Boys are less likely to attend school than girls. If boys were more productive at home work (such as in manual labor on the farm), then a family's opportunity cost to send a boy to school would be higher than the cost for permitting a girl to attend school. The covariate for household size's predicted sign is ambiguous, and its estimated value is negative

Column 3 introduces three variables meant to proxy for the household's economic status. The first is an additional indicator variable for the literacy of the household head. A literate head might value literacy more than an uneducated head, and hence be more inclined to send a child to school. Additionally, if literacy is associated with higher

earnings, then a literate head might have greater resources to devote to childhood education. These scenarios both suggest that coefficient on the variable would be positive, and it is estimated as such. The second is an indicator variable equal to 1 if the head of the child's household owns their home. The third indicates if the household head is a farmer. In general, a 1 value for both variables suggests that the household is of a higher economic status than a 0 value. As discussed above, if the measured human capital advantages of the Cherokee freedmen children are a result of their parents' or grandparents' access to free land (and the accompanying increase in wealth and income), then the estimated effect of being in the Cherokee Nation on a measure of human capital should fall when economic status controls are included. This is exactly what happens in column 3; β_1 actually becomes negative (although insignificant) when the economic controls are present.

Columns 4 through 6 estimate the effect of the covariates on the months of schooling for those children who reported any school attendance. The effect of being in the Cherokee Nation is positive and significant for all 3 regressions. It is also quite large, and ranges from 34 to 43 percent of the constant term. As expected, the inclusion of the economic status regressors does decrease the estimated magnitude of β_1 .

Results for regressions on literacy appear in columns 7 through 9. In column 7, being in the Cherokee Nation has a significant and positive effect on literacy. The effect does not significantly dissipate with the inclusion of age, sex, and family size. However, when the economic indicators are included, the estimated coefficient decreases dramatically and is no longer significant. This change is consistent with the hypothesis that the higher levels of education and literacy of the Cherokee freedmen children is due

to their parents' greater levels of wealth and not any inherent difference in the educational system in the Cherokee Nation.

Table 8 focuses on the literacy of black adults in the Cherokee Nation and the South. The adults are separated into two categories for the purpose of analysis—18 to 35 year olds and greater than age 35. The 18 to 35 years all were born after slavery ended. In the Cherokee Nation, they would have been of school age after former slaves were allowed to claim free land. If their parents had used their relatively higher income from free land to invest in education, then this age group might experience a literacy advantage over southern freedmen for potentially the same reasons that the Cherokee freedmen children have higher literacy rates than southern freedmen children. The older group would have been of the ages when literacy is traditionally acquired during slavery. Because the Cherokee Nation and all southern states had laws restricting the education of slaves, this group's literacy rates will likely be much lower.

Columns 1, 3, and 5 report results for the 18 to 35 year olds. The 35 and over group is represented in columns 2, 4, and 6. Columns 1 and 2 report results of the baseline regression. Columns 3 and 4 add regressors for age, sex, and family size. Columns 5 and 6 include the economic indicators. Several interesting patterns emerge in the results. For each pair of regressions, the estimated value of β_1 is lower for the older age group. That is, the effect of being in the Cherokee Nation is larger for the younger people. This is consistent with higher levels of parental investment by Cherokee freedmen parents who had access to free land. Furthermore, there is almost no change in the estimated value of β_1 in the second pair of regressions. However, there is a large drop in its value once the economic indicators are included. This is again consistent with the

Cherokee freedmen's advantage in measures of human capital being a result of parents' relatively higher ability to invest in children. However, any conclusions drawn from this last set of regressions must be tempered with the acknowledgement of a potential simultaneity problem. While higher income or wealth levels may contribute to higher levels of literacy, literacy could also lead to higher income or wealth levels.

Table 9 presents results for wealth measures for heads of household. The dependent variable in columns 1 and 2 is an indicator variable that is positive when the head owns his or her home. In columns 3 and 4, the indicator is positive if the head is a farmer. As the raw means would suggest, Cherokee freedmen are significantly more likely to both own their own homes and to be farmers. These results are robust to the inclusion of covariates for age, sex, family size, and literacy.

The comparison regressions between blacks in the Cherokee Nation and the South suggest that the Cherokee freedmen remain better off than the southern freedmen. This is true not only of adults, who are more likely to own their homes and be farmers, but also true of children, who exhibit higher levels of human capital accumulation. These results suggest that the Cherokee freedmen remain better off than southern freedmen.

Additionally, because the magnitude of the estimated effect of being in the Cherokee Nation tends to fall when economic controls are included, this analysis supports the hypothesis that the Cherokee freedmen's advantages are due to free land and its accompanying higher levels of wealth and income.

B. Blacks in the Indian and Oklahoma Territories

Next, I restrict my analysis solely to Oklahoma and Indian Territories by augmenting my sample of linked Cherokee freedmen with the IPUMS sample of those areas. If the Cherokee freedmen fare better than other blacks in the Territories, this would support the hypothesis that their advantages came from access to free land and are not due to other factors unique to the Territories. Some additional context is required before proceeding with the analysis. The turn of the century was a transitional time for the Territories. Great swaths of land had been open for settlement during the past decade, and a large influx of people had established farms on new homesteads. In 1900, 49 percent of blacks in the Oklahoma and Indian Territory IPUMS sample had been born elsewhere and were immigrants to the area. The number of white migrants was particularly striking. Over 80 percent of whites were born outside of the Territories. Migrants tend to be different than non-migrants, and this fact will influence any interpretation of the results. Additionally, around 8 percent of blacks in the Territories were born in states that did not permit slavery. They may have been either free blacks or the descendents of free blacks. As Sacerdote (2005) documents, free blacks continued to have higher literacy levels and more prestigious occupations than freed blacks into the twentieth century. Again, their presence will influence the reading of the regression estimates. Finally, the political situation in the Territories was complex. Oklahoma had its own territorial government, and Indian Territory was divided into different Indian nations with different forms of government.

The general form estimated will include indicator variables for the various racial classifications in the Territories:

$$Y = \beta_0 + \beta_1 \text{Cherokee black} + \beta_2 \text{Cherokee Indian} + \beta_3 \text{Other Indian} + \beta_4 \text{Other Black} + \gamma X + \varepsilon$$

Cherokee black is a person in the linked freedmen sample. A Cherokee Indian is person whose race was identified as “Indian” and who reported his or her tribal affiliation to be Cherokee.³² Other Indians include all other people who were identified as “Indian.” Other blacks are all blacks except those in the linked sample. The omitted racial classification is white. Therefore, the coefficients estimated for the various races will be measured relative to whites in the Oklahoma and Indian Territories. If blacks (either Cherokee or non-Cherokee) are worse off than whites for a particular outcome of interest, then the estimated β ‘s will be negative. When such a situation arises when comparing the two groups of blacks, the largest estimated β (i.e., then one closest to zero) will correspond to the group that is relatively better off. If the Cherokee blacks are relatively better off than other blacks in the Territories, then their estimated value of β should be larger than the estimated coefficient for other blacks.

I first look at children in the Territories. Table 10 reports the results of these regressions. The dependent variable in columns 1 through 3 is an indicator for attending any school. The main coefficients of interest are β_1 , the estimated effect of being a Cherokee freedman on school attendance, and β_3 , the effect of being a non-Cherokee black. The first column includes only controls for race. While Cherokee freedmen

³² People are Indians with Cherokee race if they were identified as such on the Census. Although the 2000 Census is widely reported as being the first census to allow people to identify multiple races, the 1900 Indian Schedules actually provide information on multiple-raced Indians. Indians were asked to identify their tribe, their father’s tribe, and their mother’s tribe. If the mother or father was a non-Indian, “white” would sometimes be noted as their tribe. Additionally, their percentage of white blood was also recorded. This information reveals the over 60 percent of all Cherokees in the IPUMS sample reported having 25 percent of more white blood.

children are less likely to attend school than whites, they are significantly more likely to attend school than other blacks in the Territories. The difference between the two groups is robust to the inclusion of age, sex, and family size controls. These estimates suggest that there is not something inherently different in the Territories that cause blacks to invest more heavily in their children. Furthermore, once the economic indicators are included in column 3, the differences between the Cherokee and non-Cherokee blacks shrink substantially. This again supports the hypothesis the higher levels of school attendance by black Cherokee children may be due to their parents' economic status.

Columns 4 through 6 report the results with months of school attended as the dependent variable. Only those children who attended school are included. The same general pattern holds for months of school at attendance. Cherokee freedmen children attend school for significantly more months than the other black children, and the gap between the two groups shrinks with the inclusion of the economic controls. At first, the very large estimated coefficient for other Indians may seem surprising. However, all Indian children in sample are included in these regressions—including children in Federally run Indian boarding schools. Although there is some difficulty identifying which children are in Indian boarding, almost 30 percent of all Indian children (excluding Cherokees) who attend school do not live with their parents. These children attended school for an average of 9.35 months a year, which is quite higher than any other group.³³

Columns 7 through 9 include all children and examine literacy rates. The estimated coefficient for Cherokee freedmen children is slightly larger than that of the

³³ There was no Federal Indian boarding schools in the Cherokee Nation. There were two boarding schools—the male and female seminaries—that served as the Nation's high schools and were run by the Cherokee Nation's government. Black students were not allowed to attend.

other group of black children. This difference persists with the inclusion of the first set of controls, and then completely disappears when the economic variables are included.

Results for adults in the Territories can be found in Tables 11 and 12. The first table examines adult literacy. Columns 1 and 3 include 18 to 35 year olds, while 2 and 4 include those over 35. The estimates indicate that the Cherokee freedmen have lower literacy rates than other blacks in the Cherokee Nation. This result may be surprising until one recalls the high proportion of migrants in the non-Cherokee black group. The migrant black adults have a literacy rate of 60 percent. This is very high and almost twice that of black adults in the South, whose rate was 34 percent. When migrants are excluded from the sample in columns 5 and 6, the familiar pattern emerged. The Cherokee freedmen have a slight advantage in literacy until the economic controls are included.

Occupation and home ownership results are in Table 12. The Cherokee freedmen have a clear advantage in home ownership. The results are robust to a variety of included control variables. The result for the farming occupation regressions are not surprising, considering that many migrants settled in the Territories to start farms on homesteads. Many household heads were farmers, and there is no significant difference in the farming rates of Cherokee freedmen, Cherokee Indians, non-Cherokee blacks, and whites.

In general, the comparison of the Cherokee freedmen and other blacks in Oklahoma supports the claim that the Cherokee freedmen were better off than other blacks. Their advantages in children's human capital and home ownership are not shared

by all blacks within the Territories and seem to be unique to them. These findings support the hypothesis that the access to free land positively affected the Cherokee freedmen.

C. Relative Status of Blacks in the Cherokee Nation and the South

To estimate the relative status of blacks in the Cherokee Nation and the South, I combine the IPUMS sample of the South and Cherokee Nation with my linked sample of Cherokee freedmen. Whites, blacks, and Cherokees are included in the sample. I then estimate

$$Y = \beta_0 + \beta_1 \cdot \text{Black} + \beta_2 \cdot \text{CN} + \beta_3 (\text{Black} \cdot \text{CN}) + \gamma X + \varepsilon$$

Black is a dummy variable equal to 1 if an individual is a black. β_1 measures the location invariant effect of being black on outcome Y . The CN dummy variable is 1 if an individual lives in the Cherokee Nation. Its coefficient, β_2 , measures the effect of living in the Cherokee Nation relative to living in the South for a non-black. β_3 , the coefficient on the interaction term, measures the difference in the gaps. Since the omitted category is non-black in the South,

$$\beta_3 = E[Y | \text{non-black in the South}, X] - E[Y | \text{black in the South}, X] -$$

$$E[Y | \text{non-black in Cherokee Nation}, X] - E[Y | \text{black in Cherokee Nation}, X].$$

A positive and significant estimate of β_3 supports the hypothesis that access to free land may have reduced racial inequality within the Cherokee Nation.

Table 13 focuses on children. The coefficient on the interaction term is positive and significant in all 9 regressions, suggesting that the racial gap in schooling is smaller in the Cherokee Nation than in the South. Additionally, the inclusion of the economic

indicator variables again decreases the magnitude of the coefficient, which suggests that the Cherokee freedmen children's higher levels of human capital accumulation may be due to higher levels of parental income and wealth.

Table 14 examines adult literacy. There is little difference in the racial literacy gaps for the older group. This suggests that any differences in the literacy gaps of younger adults and children are not due any pre-emancipation differences in the literacy rates of blacks in the Cherokee Nation. The younger group does have a large and significant positive difference in the racial literacy gap. Additionally, the size of this difference declines with the inclusion of the economic indicator variables.

Estimates for difference in the gap for measures of economic status appear in Table 15. The analysis is restricted to heads of households. There is no statistically significant difference in the gap for being a farmer. However, there is a very large and significant difference in the rates of home ownership. This suggests that, although the farming gap is the same in both locations, the relative status of people who farm may be higher among Cherokee freedmen than southern freedmen.

V. Conclusion

The linked census sample of Cherokee freedmen provides additional insight into this unique group of former slaves who received access to free land. Analysis of intra- and inter- generational occupational persistence and upward mobility, human capital investment in children, and the economic status of adults all suggest that the Cherokee freedmen's access to free land continues to benefit them at the turn of the century.

Comparisons of blacks in the Cherokee Nation to both black in the southern states and other blacks in the Oklahoma and Indian Territories demonstrate that the Cherokee freedmen were relatively better off. Additionally, a comparison of the relative degrees of racial inequality in the Cherokee Nation and the South suggests that Cherokee freedmen's access to land may have lowered racial gaps in education and home ownership. These results are striking and suggest that movements to provide former slaves with free land could have potentially have had long lasting and beneficial effects on former slaves.

Bibliography

Altonji, Joseph G. and Thomas A. Dunn (1991), "Relationships among tile family incomes and labor market outcomes of relatives", *Research in Labor Economics* 12: 269-310.

Bound, John, Zvi Griliches and Bronwyn H. Hall (1986), "Wages, schooling and IQ of brothers and sisters: do the family factors differ?" *International Economic Review* 27: 77-105.

Cape, J.J. Interview, Grant Foreman Pioneer History Collection, 88:56-58. Oklahoma City Oklahoma Historical Society, Archives and Manuscript Division.

Ferrie, Joseph. "A New Sample of Americans Linked from the 1850 Public Use Microsample of the Federal Census of the Population to the 1860 Federal Census Manuscript Schedules." NBER Historical Working Paper 71, August 1995.

Grawe, Nathan D. and Casey B. Mulligan. "Economic Interpretations Of Intergenerational Correlations," *Journal of Economic Perspectives*, 2002, v16(3,Summer), 45-58.

Grusky, David B. (19 87). *American Occupational Mobility in the 19th and 20th Centuries*. Ph.D. dissertation, University of Wisconsin, Madison.

Guest, Avery, Landale, N., Mccann, J. "Intergenerational Occupational Mobility in the Late 19th Century United States." *Social Forces*, December 1989, 68:2, 351-378.

Higgs, Robert. [Competition and Coercion: Blacks in the American economy, 1865-1914.](#)
New York: Cambridge University Press, 1977.

Higgs, Robert. “Accumulation of Property by Southern Blacks Before World War I.”
[The American Economic Review](#) 72.4 (1982): 725-737.

Hoffnagle, Warren. “The Southern Homestead Act: Its Origins and Operation.” [The Historian](#) 32.4 (197): 612-629.

Holland, Cullen Joe. [The Cherokee Indian Newspapers, 1828-1906: The Tribal Voice of a People in Transition.](#) Doctoral Dissertation, University of Minnesota, 1956.

Kearl, JR. and Clayne L. Pope (1986), "Unobservable family and individual contributions to the distributions of income and wealth", *Journal of Labor Economics* 4: 48-79.

Littlefield, Daniel F. Jr. [The Cherokee Freedmen: From Emancipation to American Citizenship.](#) Westport, Connecticut: Greenwood Press, 1978.

Littlefield, [Daniel F., Jr.](#) and [Mary Ann Littlefield.](#) “The Beams Family: Free Blacks in Indian Territory.” [The Journal of Negro History](#) [61.1](#) (1976):16-35.

Long, Jason and Ferrie, Joseph. “A Tale of Two Labor Markets: Intergenerational Occupational Mobility in Britain and the U.S. Since 1850.” NBER Working Paper 11253, March 2005.

Margo, Robert A. “Accumulation of Property by Southern Blacks Before World War I: Comment and Further Evidence.” [The American Economic Review](#) [74.4](#) (1984): 768-776.

Miles, Tiya Alicia. “Bone of My Bone”: Stories of a Black-Cherokee Family, 1790-1866. Doctoral Dissertation, University of Minnesota, 2000.

Sanborn, Brevet Major General John B. Letter to the Honorable James Harlan, U.S. Secretary of the Interior. January 5, 1866.

http://www.coax.net/people/lwf/IND_FREE.HTM.

Sacerdote, Bruce. “Slavery and the Intergenerational Transmission of Human Capital.” NBER Working Paper 9227, September 2002.

Solon, Gary. “Intergeneration Mobility in Labor Markets.” Chapter 29 of the Handbook of Labor Economics, Volume 3, edited by O. Ashenfelter and D. Card, 1999, pages 1761-1800.

Ruggles, Steven , Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. *Integrated Public Use Microdata Series: Version 3.0* [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004.

Wickett, Murray R. *Contested Territory: Whites, Native Americans, and African Americans in Oklahoma, 1865-1907*. Baton Rouge: Louisiana State University Press, 2000.

