Appendix A. Historical Backdrop, Data Description, and Data Sources

This appendix provides observations about our historical setting (A.1), and gives some detail on our data (A.2 and A.3).

A.1. Historical Background: Educational Opportunities in the U.S. for the "Parent Generation"

Our paper describes upward mobility in education for two generations—a children generation, born in the 1920s, and a parent generation, most of whom were born between 1880 and 1910. These parents were educated during a period of rapid evolution in American education.

In 1880 the availability of public primary schooling was widespread in the U.S., but secondary schooling, public or private, was rare. In 1880 the number of high school graduates equaled only 2.5% of the population aged 17, and the majority of these students attended private academies.[1] Individuals born around 1880 were then the beneficiaries the "first great transformation" of American secondary education (Trow, 1961), which resulted in the widespread establishment of public secondary schools across the country. By 1910 there were 10,000 public high schools in the U.S., educating more than 900,000 students.[2] As Goldin and Katz (1999) discuss, a "second great transformation" in secondary education then swept the country, and by 1950 the U.S. had widespread provision of public secondary schools. The growth of public high schools, also known as the "high school movement," resulted in a rapid increase in graduation rates—from 8.6% in 1910 to 16.3% in 1920 and 28.8% in 1930.

Many individuals in the 1880–1910 birth cohorts worked as children. Child labor was common in the U.S. during the first half of the 19th century; the first law limiting child labor in the U.S. did not appear until 1842.[3] Laws limiting child labor were strengthened and became widespread during late 19th century; by 1914 all states had regulations limiting child labor (Lleras-Muney, 2002). Thus, "gainful employment" of children aged 10 to 15 peaked at 1.75 million in 1900 and declined to 667,000 by 1930 (Bureau of the Census, 1975). Our analysis below indicates that reported employment of children aged 13 and younger was rare in 1940 Census records.

More broadly, by 1940 the stage was set for post World War II American educational norms—the emerging middle-class expectation of high school graduation and the real pos-

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[1] All statistics are from Bureau of the Census (1975).

[2] In additional, approximately 100,000 students attended private school.

[3] The Massachusetts Act of 1842, chapter 60, limited children under age 12 to ten-hour work days, though it appears that the law was not actively enforced. A memorandum book from a 19th century firm provides evidence about the productivity of children for one family—a father who worked alongside his children at a Massachusetts cotton mill. His weekly wage was $5.00; his 16 year old son Michael earned $2.00; 13 year old son William, $1.50; 12 year old daughter Mary, $1.25; and 10 year old son, Robert Rier, $0.83. An 8 year old niece Sally had a weekly wage of $0.75 (Abbott, 1908).

sibility of advancement to higher education.

While the U.S. was the first nation to provide widespread access to public primary and secondary education, this broad access did not initially extend to all communities, a point vividly illustrated by the experiences of black, Chinese, and Japanese Americans born 1880–1910.

Black Americans

In 1900 literacy among native-born white Americans (aged 10 and above) was more than 95%, a result no doubt of the widespread accessibility of public primary schooling in the 19th century. The corresponding literacy rate among black Americans was less than 55%. Of course, in 1900 black individuals over age 35 had been born prior to the 13th Amendment, which abolished slavery in the U.S., and the vast majority of black Americans lived in Southern states, where segregation was enforced as a matter of public policy.

After the Civil War, a series of federal actions granted and then strengthened the rights of black Americans—most notably the 1868 ratification of the 14th Amendment, which granted citizenship to all persons born in the U.S., and the Civil Rights Act of 1875. Nonetheless, in 1881 Southern states began to issues laws that scaled back civil rights for black Americans—initiating a period of increasingly rigid state-sponsored segregation. The first of these Jim Crow laws was a 1881 Tennessee law that segregated railroad cars. The flood of similar laws that followed was made possible by the 1883 *Civil Rights Cases,* an 8-1 ruling by the Supreme Court overturning key provisions of the Civil Rights Act of 1875.[4] As for educational institutions, the *Plessy v. Feguson* decision of 1896 declared racial segregation in schools to be constitutional, and the 1899 Supreme Court's ruling in *Cumming v. Richmond County Board of Education* clarified that the resulting "separate but equal" doctrine did not necessitate equality of resources devoted to racially segregated schools. Segregation in education thus became a permanent feature in the South for generations; it was not declared unconstitutional until 1954, with *Brown v. Board of Education.*

A large majority of black Americans lived in the South at the turn of the century, but millions were then part of the Great Migration—the flow of migrants leaving the South in hopes of building a better life elsewhere. Among those born 1900–1909 in Deep South States, for example, fully one third lived outside the South as adults (Black, et al., 2015). A large literature documents the daunting circumstances these migrants faced in their destination locations, in terms our employment and housing (Smith and Welch, 1989; Margo, 1995; Maloney, 1995; and Eichenlaub, et al., 2010). In the Northern, Midwestern, and Western urban areas to which these black Americans largely migrated, most public

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[4]The court ruled that while the state could not discriminate on the basis of race, individual citizens could. As Justice Joseph P. Bradley argued, " . . . it would be running the slavery argument into the ground to make it apply to every act of discrimination which a person may see fit to make as to guests he will entertain, or as to the people he will take into his coach or cab or car; or admit to his concert or theater, or deal with in other matters of intercourse or business."

school districts were not segregated as a matter of official policy, but *de facto* segregation in schooling was common.

Given the historical context, it is not surprising that levels of educational attainment of these parents was much lower than their white counterparts, as we document in Table A1 (at the end of this appendix).

Chinese Americans

The first sizable flow of immigrants from China was in 1854, a year in which 13,100 Chinese immigrants arrived in the U.S. By 1882 approximately 275,000 immigrants had come from China to the U.S.[5] The Chinese Exclusion Act of 1882 reduced this flow substantially;[6] from 1882 through 1943, the annual number of immigrants from China was often less than 1000, and never greater than 6,992 (in 1924). Thus the Chinese American children we study in 1940 were mostly native born, and indeed many were third or fourth generation Americans. Most lived in California, but there were significant Chinese populations in other states.

As Kuo (1998) documents, in 1880 discrimination targeting Chinese Americans and Chinese immigrants was enshrined in the California constitution.[7] State laws passed in the late 19th century imposed restrictions for Chinese in land ownership, interracial marriage, and naturalization. Chinese American children faced barriers in access to public education. In 1885 the parents of an eight-year-old Chinese American girl, Mamie Tape, challenged her exclusion from San Francisco's public schools, and the ruling in *Tape v. Hurley* favored the Tape family. In response, state legislation was passed allowing school districts to offer segregated schools under the "separate but equal" doctrine, and in 1885 the San Francisco School Board thus opened the Chinese Primary School. Segregation in schooling remained a feature in the city for the next 40 years. Kou (1998) indicates that elsewhere in California the experience of Chinese Americans students varied. In some communities student were admitted to white public schools, while in others students were educated in segregated schools or in missionary schools set up for Chinese American students. Strict segregation policies waned by the 1920s and in 1940 local school policies no longer segregated Chinese students, though legislation establishing *de jure* segregation was not repealed until 1947.

Chinese students living in the U.S. South also experienced exclusion from white public schools in many cases, as was highlighted by the 1927 Supreme Court case, *Lum v. Rice*. The issue involved a nine-year-old girl, Martha Lum, who had been excluded from an all-white public school in Mississippi. The Court ruled that the exclusion was permissible on the grounds that Martha could instead attend the school intended for black children.

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[5]Statistics on immigration are from Bureau of Census (1975).

[6]The Act was signed by the President Chester Arthur over the objections of only a few statesmen, including Senator George Frisbie Hoar of Massachusetts, who characterized the Act as "the legalization of racial discrimination." The Act was not repealed until 1943.

[7]The 1879 California Constitution denied voting rights to "idiots, insane persons, and 'natives of China'."

In general in the South, there were Chinese American students in both white and black schools, and also some in missionary schools.

Japanese Americans

The annual level of immigration to the U.S. from Japan first exceeded 1000 in 1891, and from that year through 1924, approximately 270,000 Japanese immigrants arrived in the U.S. There was then a cessation in immigration as President Calvin Coolidge signed the Immigration Act of 1924, which included the Asian Exclusion Act; from 1925 through 1940 only a few hundred immigrants per year arrived in the U.S. from Japan. Thus, like Chinese American students, in 1940 nearly all Japanese American primary and secondary students were native born.

As with Chinese American students, school segregation policies targeted Japanese American students in California, but the extent of this segregation was substantially less for Japanese American children.[8] The most prominent attempt at segregation, in the Fall of 1906, created an international crisis. When the School Board of San Francisco resolved to send Japanese American children to the Chinese School (which it renamed the Oriental School), nearly all Japanese parents refused, and the Japanese Consulate issued a strong letter of protest. The issue created a stir in the Japanese press, and American ambassador in Tokyo alerted President Theodore Roosevelt to the matter. In a December 1906 address to Congress, President Roosevelt condemned the exclusion of Japanese students from general public schools in San Francisco, and the School Board eventually backed down. Sacramento eventually enacted legislation allowing school districts to place Japanese American students into segregated schools, in 1921, but by that point only a small number of districts elected to do so.[9]

Educational Attainment in the Parent Generation (1880–1909 Birth Cohorts)

Against this historical backdrop, the appendix table below provides statistics about educational attainment among white, black, Japanese, and Chinese Americans aged 30 to 60 in 1940, i.e., men and women in the typical age range to be parents heading the households we study below. We provides rates of 8th grade completion and 12th grade completion across three cohort groupings, 1880–1889, 1890–1899, and 1900–1909, for four Census regions.

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[8]This paragraph draws on the account of Wollenberg (1995).

[9]Wollenberg (1995) suggests that as of 1929 only 575 Japanese American students were in segregated schools (some of them with Chinese American classmates), compared with approximately 30,000 students who attended integrated schools.

Table A1: Proportion Graduating 8th and 12th Grades

	White		Black		Japanese American		Chinese American	
	8th	12th	8th	12th	8th	12th	8th	12th
Northeast								
Born 1880–89	0.635	0.171	0.380	0.080				
Born 1890–99	0.692	0.212	0.440	0.098				
Born 1900–09	0.808	0.293	0.521	0.124				
Midwest								
Born 1880–89	0.678	0.162	0.376	0.085				
Born 1890–99	0.750	0.218	0.445	0.102				
Born 1900–09	0.852	0.323	0.552	0.135				
South								
Born 1880–89	0.502	0.191	0.136	0.039				
Born 1890–99	0.570	0.225	0.170	0.047				
Born 1900–09	0.633	0.273	0.220	0.061				
West								
Born 1880–89	0.746	0.267	0.487	0.140	0.428	0.147	0.215	0.056
Born 1890–99	0.800	0.320	0.581	0.179	0.508	0.167	0.325	0.100
Born 1900–09	0.864	0.412	0.684	0.240	0.615	0.235	0.515	0.219

Note: Authors' calculations, 1940 U.S. Census. Sample sizes are as follows.

White: $n_{NE} = 13,312,182$, $n_{MW} = 13,388,867$, $n_S = 10,332,791$, and $n_W = 5,220,229$.

Black: $n_{NE} = 532,354$, $n_{MW} = 569,100$, $n_S = 2,884,876$, and $n_W = 72,144$.

Japanese American: $n_W = 79,729$. Chinese American: $n_W = 26,392$. Only a small number of Chinese and Japanese Americans live outside the West. We do not provide statistics because of concerns about measurement error in the 1940 Census in areas where there were few Chinese and Japanese Americans.

A.2. Schooling Resources for the Child Generation

Card and Krueger (1992a, 1992b) document large differences across states in simple measures of school quality—the pupil-teacher ratio and average annual teacher wages. See those papers for original data sources. The following graphs summarize, using quality measures for white schools in the case of segregated states:

Figure A1: Characteristics of School Quality Measures in 1940 (White Schools)

Panel A. Distribution of Pupil-Teacher Ratio

Panel B. Distribution of Teacher Salaries
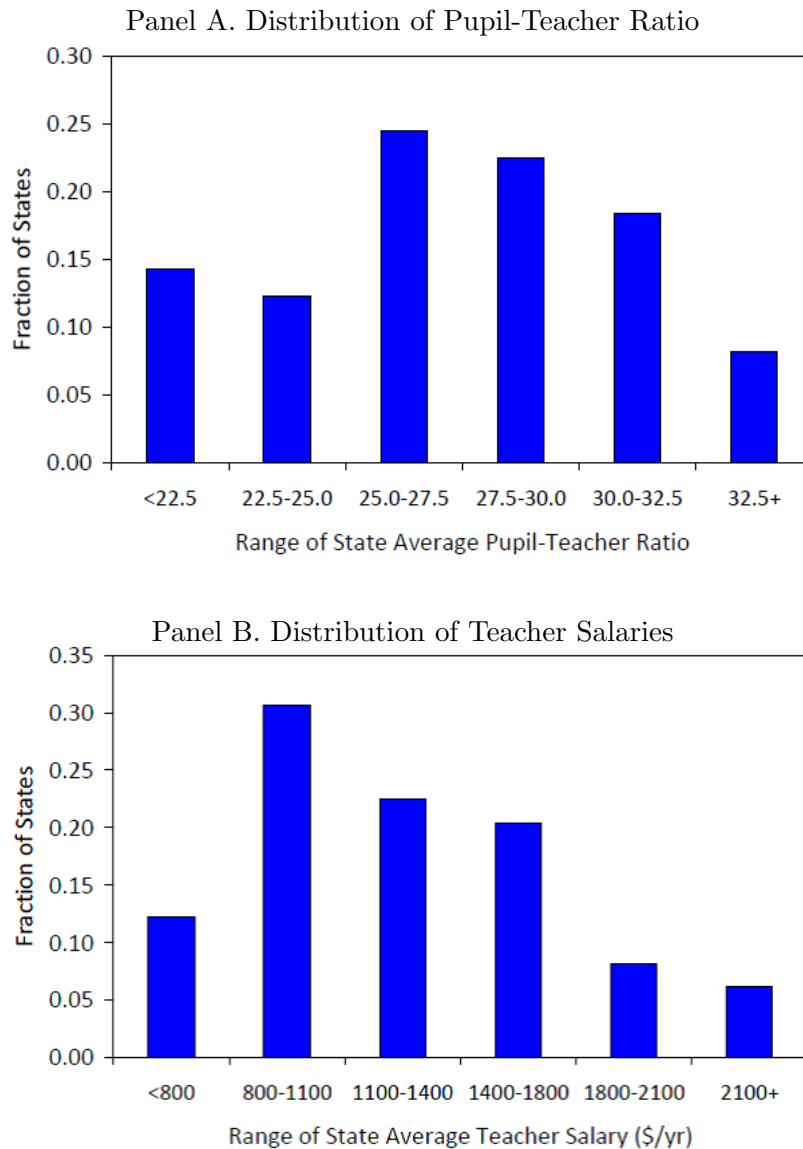
A.3. Historical Observations about Teacher Salaries in the South

Cross-state variation in teacher salaries—for both black and white teachers—was in part the consequence of differences in state policy. In 1940 minimum teacher salaries were set according to administrative schedules in 27 states nationwide, including 11 of the Southern states in our analysis.[10] Minimum salary provisions were generally part of broader legislation through which State Boards of Education provided funds to counties to supplement local expenditure for schooling. The supplementary funding was generally intended to finance the lengthening of the school term and increases in teacher pay. In exchange for state funds, counties were required to abide by state standards. Such minimum salary standards also aimed to reduce inequalities in teacher pay that resulted from differences in local tax revenues.

As shown in Table 6 (in the main text) in most Southern states, salary schedules set minimum salaries that were lower for black teachers, even for comparable levels of education, experience, and teacher certification. Such practices had not yet been successfully challenged in court as of 1939.[11] Outside the Deep South, several states with segregated schools set minimum salary standards that were the same for black and white teachers, including Delaware, Kentucky, Oklahoma, Tennessee and West Virginia. We briefly describe below the minimum salary standards in the Southern states included in our analysis:

- Alabama. In 1919 Alabama passed legislation mandating that the State Board of Education establish a standardized salary schedule in counties benefiting from state funds. An explicit minimum salary schedule appears in subsequent regulation, e.g., the 1927 School Code (Davis, 1927). By 1940 all counties receiving state funding under the "Minimum Program Fund" were required to comply with the teacher minimum salary schedule and were required to provide a seven-month school term. Salaries of black teachers were set to be 75% of the minimum for white teacher. The minimum for whites for a Class E Certificate (one year of college or less) was $50 per month, or $350 for the seven-month required term. For black teachers, this translated to $262.50 for the seven-month term. All counties in Alabama received funding under the Minimum Program in 1940 and were therefore required to comply with the minimum salary schedule.[12]

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[10]Much of our discussion draws from a research report of the National Educational Association, *State Minimum-Salary Standards for Teachers* (1940).

[11]As discussed in Coleman (1947), black teachers and the National Association for the Advancement of Colored People challenged race-based salaries for teachers; the first case to reach Federal courts was Mills v. Anne Arundel County Board of Education. In 1939, Walter Mills, a teaching principal in Anne Arundel County, sued the Maryland State Board of Education for providing lower minimum salaries for black teachers. The Federal Court ruled the practice discriminatory, and in 1941 the Maryland legislature responded by equalizing minimum salaries for black teachers. Similar lawsuits were filed during the 1940s in what came to be known as the "salary equalization movement."

[12]See the Alabama Department of Education 1939 Report, pages 96-197.

- Delaware. In 1917 Delaware established a commission that surveyed its educational system and recommended a new school code, subsequently adopted. The report found that high teacher turnover and poor training were due to the low annual salaries. The new school code set the lowest minimum salary for a provisional elementary third grade certificate at $400. This minimum strongly binding for black teachers, as the median salary of black teachers was only $315 dollars (General Education Board, 1919).

- Georgia. Georgia's 1926 Equalization Act disbursed education funding to counties according to a formula developed by the State Board. While there was considerable support for a minimum salary schedule, Governor Eugene Talmadge stood in active opposition.[13] However, his successor, Governor E. D. Rivers, endorsed a minimum salary schedule for teachers, and in 1937 the state passed legislation funding counties so that they could provide a minimum school term of seven months and meet a minimum salary schedule for teachers. Minimum salaries were set lower for black teachers than for white teachers. As of 1940 all counties in our analysis were receiving equalization funding and were thus required to comply with minimum salary schedules.

- Kentucky. Legislation introduced in 1912 ended the practice of paying teachers based on the number of students in the district, and instead made pay conditional on the number of students in attendance. The law set wages at a minimum of $35 a month. Conditioning pay on the number of students in attendance provided incentives for teachers to keep students in attendance, but the law also provided a cap of $70 per month on salaries.

- Maryland. The first minimum wage for teachers was introduced in Maryland in 1904, but it pertained only to white teachers. A minimum standard for blacks was later introduced in 1918, at $280 per year (while the minimum for whites that year stood at $600 per year). Over the 1920s and 1930s, the minimum standards for black teachers remained lower than those for whites, for teachers holding the same level of education and experience. Under court order, the Maryland legislature eventually equalized minimum salaries for black and white teachers in 1941.

- Mississippi. In 1924 Mississippi passed legislation mandating an $80 minimum salary for all teachers—$20 per month for a four-month minimal school term required by the state constitution. As a practical matter this minimum pertained only for black teachers. Counties which received state equalization funds were required to pay white teachers a minimum of $532 for an eight-month term (and a minimum for blacks of $161.50 for a six-month term). However, these higher minimum standards

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[13]Governor Talmadge also vehemently opposed any form of racial integration, and opposed activities of the Rosenwald Fund.

did not apply to school districts independent of county boards. Thus, we consider the constitutional minimum standard of $80 to be applicable for black teachers, and consider Mississippi to a state for which there was no binding minimum annual salary for white teachers.[14]

- North Carolina. Legislation in North Carolina established a Teacher's Salary Fund in 1919. This legislation extended the constitutional minimum term length from four months to six months and fixed a minimum teacher salary. By 1940 North Carolina provided funds for an eight-month school term and set teacher salaries according to a statewide schedule. The requirement for counties to abide by the minimum teacher salary schedule was clarified in communication between the State Superintendent and the Attorney General.[15] In 1940 the minimum salary was a relatively generous $504 for black teachers and $656 for white teachers.

- Oklahoma. Under its 1939 equalization program, the state of Oklahoma disbursed state funds to local districts maintaining an eight month school term. In exchange, districts were required to comply with a teacher pay schedule that set the minimum at $50 per month for a first grade elementary certificate.

- Tennessee. Tennessee established a state education equalization funding program in 1925. In order to receive state funding, local school districts were required to provide an eight-month term and had to meet a minimum teacher salary schedule. In elementary schools the salary schedule was the same for white and black teachers. According to Bergeron, et al. (1999), the 1925 General Education Bill was hotly contested by conservatives, especially rural politicians who opposed state intervention at the local level and opposed also taxes to support the state system of higher education. Teachers, on the other hand, very much favored the law, to such extent that State Teacher's Association lobbyists, who had packed the State capitol building, were ordered off the floor of the senate. It seems that Governor Austin Peay achieved the necessary political support for this Bill through a political compromise, gaining favor with fundamentalists by agreeing to not veto the Butler Act—legislation banning the teaching of evolution in public schools (Fitzgerald, 2007).

- West Virginia. In 1882 West Virginia became the first state to adopt a minimum salary law for teachers. The minimum for the lowest certificate was set at $18 per

[14]Because salaries of black teachers in Mississippi were so low, teachers often resorted sought out other earnings opportunities. In a survey conducted by Wilson (1947), Mississippi teachers indicated that they also held the following jobs: "beautician, dental assistant, farming, hotel maid, insurance collector, kindergarten work, laundress, merchant, ministry, nurse's aid, ... and seamstress."

[15]The *Biennial Report of the Attorney-General of the State of North Carolina* (Department of Justice, Edwards & Broughton and E.M. Uzzell, state printers, 1922) provides the following quote from the Honorable E. C. Brooks, State Superintendent Public Instruction, Raleigh, N.C.: "Dear Sir: You ask whether or not a county board of education may adopt a salary schedule for the teachers in the county less than that adopted by the State Board of Education. We think not. ..."

month. Local boards of education were compelled to pay black teachers the same as white teachers with the same training, experience and credentials. In 1909 West Virginian Superintendent Thomas Miller commented on the minimum wage legislation in response to an inquiry from Illinois educators: "The minimum salary law has produced good results in the state and while the average salary is considerably above the minimum, our enactment has prevented many districts from reducing wages below a respectable standard" (Illinois Educational Commission, 1909).

During an era of expanding state equalization funding plans, a number of Southern states did not establish minimum salaries as part of state educational policy. For example, legislation in South Carolina in 1924 established *maximum* amounts the state would allow counties to pay teachers (but no minimum) under the equalization funding as part of a plan meant to ensure a six month term. Florida adopted an equalization plan in 1927 through which part of the revenue in the "Public Free School Fund" was to be disbursed to poorer counties to ensure a 120-day school term, but the revenue quickly proved insufficient (Shiver, 1983). In 1939 Florida revamped this plan and instituted a "State Teachers Salary Fund," requiring counties for the first time to provide written contracts to teachers and adopt a salary schedule. Teacher salaries continued to vary widely, e.g., average annual black teacher salaries in 1939 administrative data in Florida range from $209 to $800 (for equal term lengths). A minimum statewide salary was not introduced in Florida until 1955.[16] Similarly, a number of other Southern states failed to introduce minimum salary standards for teachers until after World War II, including Texas (1945), South Carolina (1945), Virginia (1946), Louisiana (1948), Arkansas (1957) and Missouri (1985). Table A2 summarizes minimum salary legislation for several Southern states.

We use the minimum teacher salary—as it pertained in 1940—as an instrument in our 2SLS border-county regressions. As a statistical matter minimum salaries are strongly predictive of county-level teacher earnings. Figures A2 and A3 illustrate. In these figures the solid dots refer to county observations in states that have minimum salary standards. If there were no measurement error in teachers' earnings (which we take from the 1940 Census) and if all teachers were paid the state minimum or more, all dots would lie on the red line (which has slope 1) or above above that line. Dots below the line suggest some combination of measurement error in earnings and/or lax enforcement of state teacher salary standards. In any event, county average salaries are obviously strongly related to state minimum standards. In these figures, we use hollow dots for observations in states that do not have statutory minimum salary laws, and we set the *de facto* minimum salary to be the 10th percentile of observed teacher earnings.

Figures A4 and A5 provide additional evidence about the impact of state minimum teacher salaries on teacher earnings in our border counties. We show the complete distribution of teacher earnings (from the Census), along with a line representing the minimum

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[16]National Education Association of the United States (1968). *State Minimum-Salary Standards for Teachers,* Washington, DC.

salary or 10th percentile (as applicable) for a subset of our states—the Deep South states and state border the Deep South. The figures show that minimum teacher salaries appear to be pushing up the lower tail of teacher wages for black teachers in a number of Southern states, including Alabama, Delaware, Georgia, and Mississippi. Similarly, it appears that minimum standards is pushing up the lower tail of wages for white teachers in such states as Alabama, Kentucky, Missouri, and North Carolina.

Table A2: Minimum Salary for Teachers, Southern States

State	Year Introduced	Legislative Reference
West Virginia	1882	West Virginia 15th Legislature, Adjourned Session 3(ii), Ch. 101
Maryland	1904	Maryland General Assembly 1904, Ch. 584
Kentucky	1912	Kentucky General Assembly, Regular Session, Ch. 139
Delaware	1919	97th Session, General Assembly, School Code, Art. 9
North Carolina	1919	North Carolina Public Laws and Resolutions, General Assembly 37–604, Ch. 114
Mississippi	1924	Mississippi Regular Session Appropriations, General Legislation and Resolutions 1–627
Tennessee	1925	Tennessee 64th General Assembly, Public Acts 1–708
Alabama	1927	1927 School Code, "Minimum Program Fund"
Georgia	1937	Acts and Resolutions 7-2244, 1937, Title VII, p. 882, "Equalizing Opportunities"
Oklahoma	1939	Oklahoma 17th Legislature, Regular Session, Ch. 34, Art. 14
South Carolina	1945	South Carolina General Assembly, Regular Session 1–1302, Part II, No. 223, Sec. 76
Virginia	1946	Virginia General Assembly, Extraordinary Session 3-126, House Committee Substitute for Senate Joint Resolution No. 6
Louisiana	1948	Louisiana Regular Session, Act No. 155
Texas	1949	Minimum Foundation School Laws (Gilmer-Aikin Laws): Senate Bills 115, 116, and 117
Florida	1955	Florida 35th Regular Session, General Acts 186–187, Ch. 29, 698
Arkansas	1957	Act 39 of 1957
Missouri	1985	"Excellence in Education Act"

Figure A2: Minimum Wages and County-Average Earnings of Black Teachers, Southern Border Counties
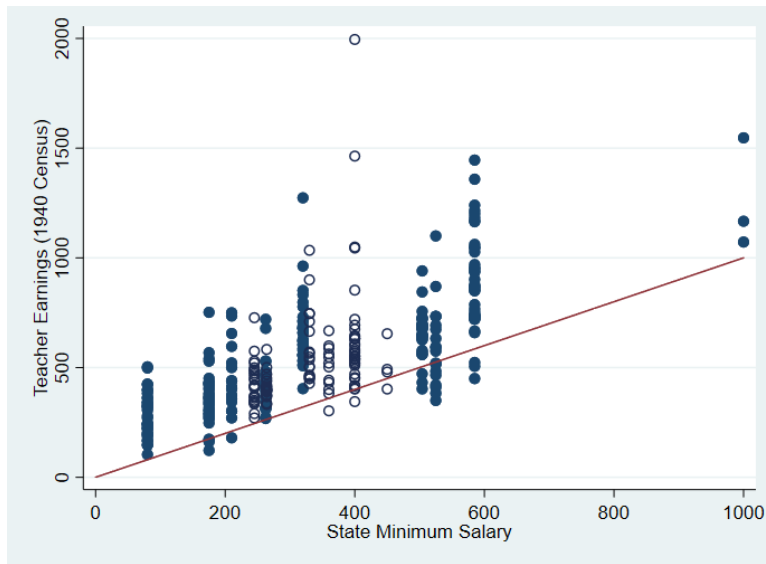
Figure A3: Minimum Wages and County-Average Earnings of White Teachers, Southern Border Counties
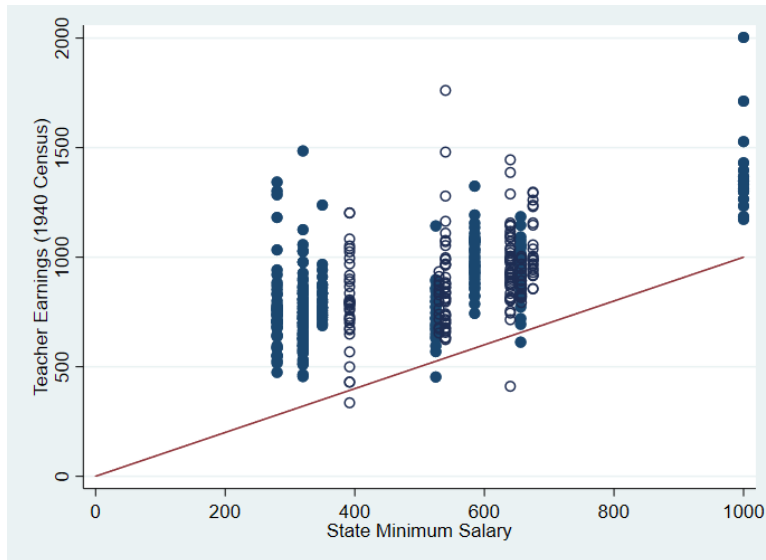
In Figures A2 and A3, teacher earnings are calculated for Southern state border counties using 1940 U.S. Census data. Hollow dots are observations from states for which there is no state minimum teacher salary. For these states we use the 10th percentile of teacher earnings as the *de facto* minimum.

Figure A4: Distribution of Black Teacher Earnings, Border Counties
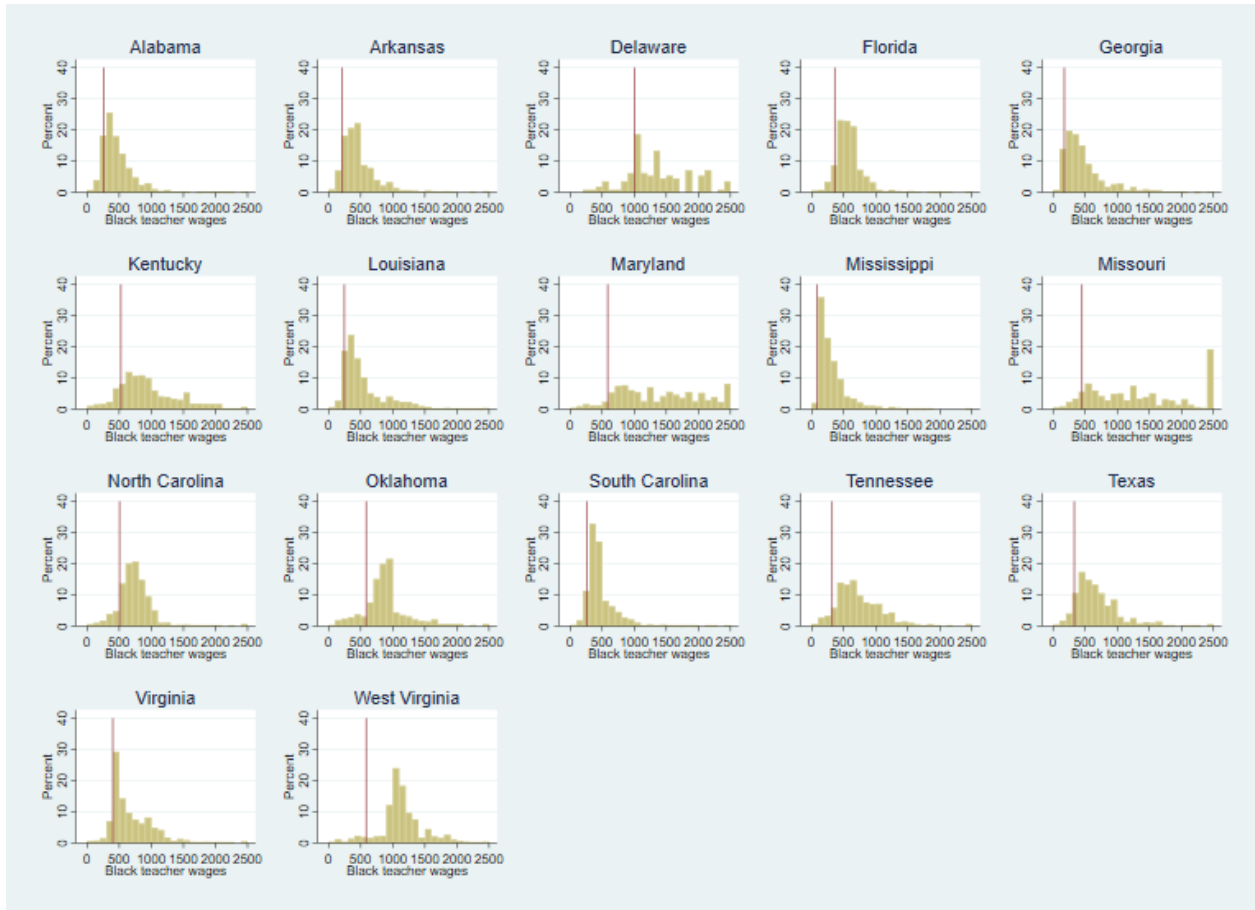
Figure A5: Distribution of White Teacher Earnings, Border Counties
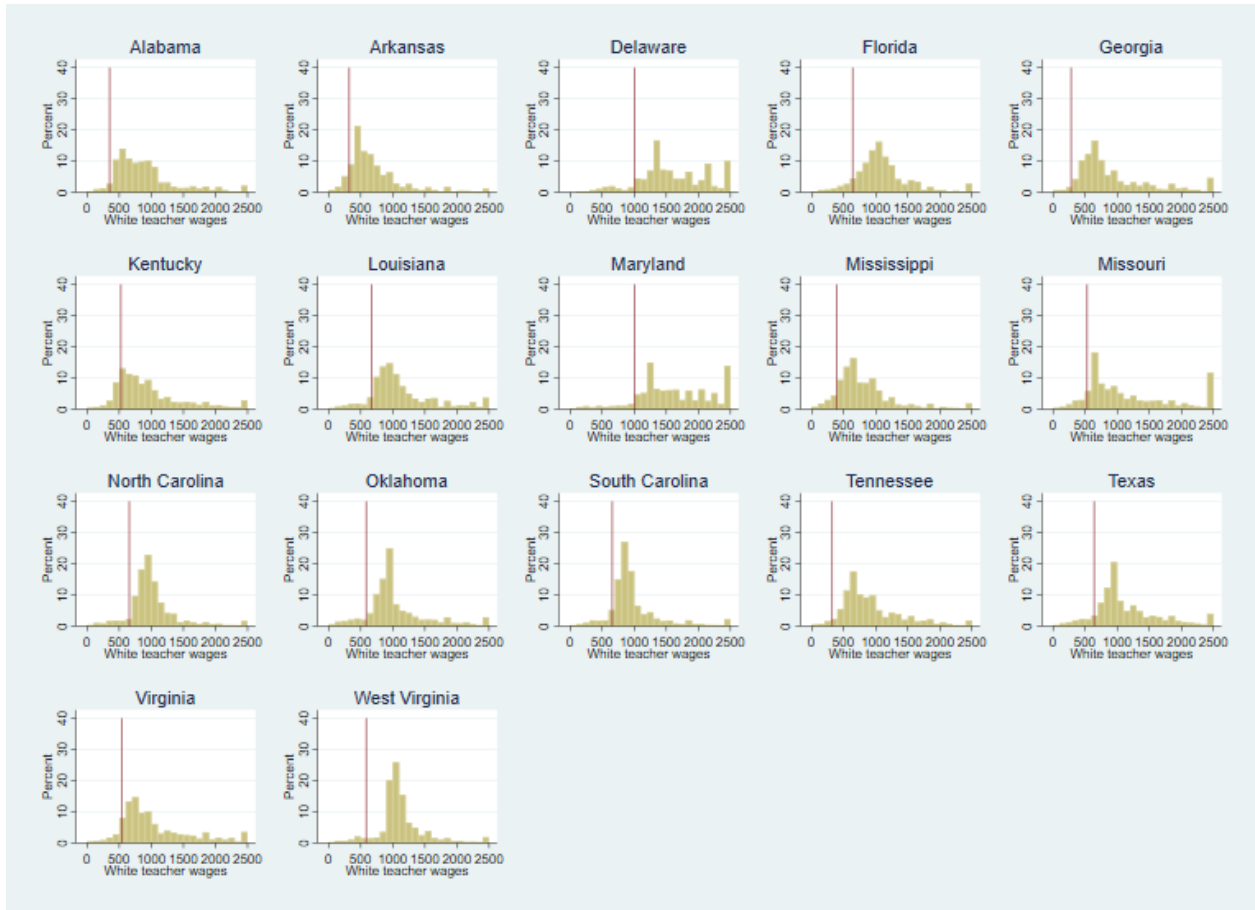
Appendix B. Additional Tables

This appendix provides a sequence of tables that provide supplemental statistics for analyses in our paper, and tables that evaluate robustness of key findings.

Summary Statistics for Samples Used in our Analyses

Table B1 provides summary statistics about schooling attainment, by parental education, for samples used in our analyses. These tables show a striking relationship between parental education and educational progress among children. The column providing "proportion in school" is useful for assessing the extent of censoring in our Tobit models.

Coefficients for the Tobit Model (White Families)

Table B2 gives estimated coefficients for selected examples of the Tobit model (7), i.e., censored regression model, for white families. For some of our analyses we estimated this model for 22 parental education groups (see Tables B3, B4, and B5 below). In Table B2 we provide first-state Tobit coefficients for three of these parental education groups (grades 3–4, grade 8, and grade 12), for sons and daughters.

Estimated School Quality Effects in Models with Narrowly-Defined Parental Education Groups

Table B3 and B4 provides estimates for models that are comparable to Table 2 but with very narrowly-defined parental education groups. Importantly, we find that school quality effects decline as parental education increases. Figure B1 (at the very end of this appendix) plots coefficients—showing a near-monotonic decline in the absolute value of estimate school quality effects.

Unweighted State-Level Regressions (White Families)

Some analysts prefer unweighted regressions. Table B5 provides estimates for unweighted versions of regressions from Table B3 and B4. Estimated coefficients are very similar for weighted and unweighted regressions.

Adding Covariates to State-Level Regressions (White Families)

In Tables B6 and B7 we add some covariates to our state-level regressions—average education among whites aged 25–55, the state-level unemployment among white males aged 16 and older, average income among whites (in hundreds), and average housing values (in thousands). School quality coefficients are reported in Table 2. Here we also show estimates of coefficients on our covariates. Note that the effects of the pupil-teacher ratio is

somewhat attenuated when we add covariates; the effects of teacher salaries are affected very little.

Analysis of Ninth Grade Attainment in White Families with Parental Education 5–8 Grades

As an alternative to our main design, which has educational attainment as the dependent variable, we re-estimated our first stage models using an ordered probit specification, and then analyzed the statewide marginal effects for "having completed at least ninth grade" in families where parental education is 5–8 grades. Notice that this is a measure of upward mobility in education because children will have exceeded parental education. Remarkably, these estimated effects have a 0.95 correlation with the estimated statewide effects from the Tobit regression (7). When we use these as our dependent variables, results are as reported in Table B8.

Coefficients for the Tobit Model (Black Families)

Table B9 gives estimated coefficients for the Tobit model (7), i.e., censored regression model, for black families.

Unweighted State-Level Regressions (Black Families)

Table B10 provides estimates for unweighted versions of regression (3), which are reported in the middle two columns of Tables 3. Estimated coefficients are quite similar for weighted and unweighted regressions.

Adding Covariates to State-Level Regressions (Black Families)

In Table B11 and B12 we add some covariates to our state-level regressions. Estimated coefficients do not change much when we do so, but many key coefficients are not statistically significant at convention levels; this is not surprising for multiple regressions when $n = 18$.

Analysis of Ninth Grade Attainment in Black Families

As with white sons and daughters, we use an alternative to our baseline design (which has educational attainment as the dependent regression); we re-estimated our first stage models using an ordered probit specification, and then analyze the statewide marginal effects for having completed at least ninth grade. When we use these as our dependent variables, results are as reported in Table B13. Results are consistent with baseline analyses reported in Table 3.

Out-Migration of Families with School Age Children, 1930–1940, and County Teacher Salaries

Some black families likely migrated out of the South because of poor educational prospects, and as we discuss above such migration was plausibly largest in counties with poor schools. If so this could lead to complications in interpretation of results. For each county we measure out-migration among families with school age children by constructing the ratio of black 14–18 year olds in 1940 relative to 4–8 year olds in 1930—and looking for a relationship between out-migration and black teacher wages. See Panel A of Figure 13, which shows that there was no relationship between our measure of out-migration and teacher earnings (Panel B does the same for whites.) Table B14 gives corresponding regressions, showing no statistically significant relationship between out-migration and teach wage in the cross section of our counties or in the border-pair counties.

Table B1: Summary Statistics for Samples Used in Tables 2–5

A. White Families

| Parental Education | Sons Aged 14–18 | | | | Daughters Aged 14–16 | | | |
| | Years of Schooling | | | Proportion | Years of Schooling | | | Proportion |
	Mean	Median	Mode	in School	Mean	Median	Mode	in School
≤ 2	5.30	5	4	0.39	5.67	6	7	0.57
3–4	6.33	6	7	0.46	6.67	7	7	0.66
5	6.93	7	8	0.52	7.19	7	8	0.72
6	7.47	8	8	0.58	7.59	8	8	0.78
7	7.86	8	7	0.64	7.92	8	9	0.82
8	8.64	9	8	0.71	8.39	8	8	0.87
9	8.78	9	9	0.77	8.54	9	9	0.91
10	9.07	9	9	0.80	8.71	9	9	0.93
11	9.21	9	9	0.83	8.82	9	9	0.94
12	9.43	10	9	0.85	8.91	9	9	0.94
> 12	9.71	10	9	0.89	9.08	9	9	0.96

B. Black Families

| Parental Education | Sons Aged 14–18 | | | | Daughters Aged 14–16 | | | |
| | Years of Schooling | | | Proportion | Years of Schooling | | | Proportion |
	Mean	Median	Mode	in School	Mean	Median	Mode	in School
≤ 4	4.72	4	4	0.47	5.36	5	4	0.71
5–8	6.37	6	6	0.62	6.79	7	7	0.82
> 8	8.07	8	9	0.75	8.10	8	9	0.90

Note: Authors' analysis, 1940 Census.

Table B2: Tobit Model (White Families), Dependent Variable is Educational Attainment

	Estimates for Sons by Parental Education			Estimates for Daughters by Parental Education		
	Grade 3–4	Grade 8	Grade 12	Grade 3–4	Grade 8	Grade 12
Urban	0.978	0.716	0.324	1.036	0.858	0.394
	(0.035)	(0.019)	(0.019)	(0.056)	(0.033)	(0.041)
Farm	-0.600	-0.746	-0.766	-0.769	-0.851	-0.859
	(0.032)	(0.020)	(0.023)	(0.047)	(0.032)	(0.046)
Mother Only	0.554	0.587	-0.125	0.610	0.504	-0.262
	(0.042)	(0.021)	(0.024)	(0.062)	(0.035)	(0.053)
Father Only	0.610	0.545	-0.219	0.582	0.476	-0.396
	(0.047)	(0.025)	(0.046)	(0.070)	(0.042)	(0.099)
Moved within State Since 1935	-0.818	-0.685	-0.509	-0.791	-0.662	-0.436
	(0.027)	(0.015)	(0.016)	(0.040)	(0.025)	(0.034)
Moved to a New State Since 1935	-1.401	-1.018	-0.592	-1.302	-0.975	-0.553
	(0.077)	(0.041)	(0.038)	(0.120)	(0.069)	(0.077)
One Parent Born in a Different State	0.261	0.172	-0.044	0.280	0.274	-0.022
	(0.044)	(0.024)	(0.020)	(0.066)	(0.038)	(0.042)
Both Parents Born in a Different State	0.486	0.130	-0.060	0.514	0.223	0.010
	(0.049)	(0.026)	(0.023)	(0.074)	(0.043)	(0.049)
Age 15	-0.219	0.094	0.534	-0.282	0.035	0.448
	(0.050)	(0.032)	(0.035)	(0.052)	(0.034)	(0.043)
Age 16	-0.878	-0.446	0.525	-1.022	-0.615	0.204
	(0.046)	(0.029)	(0.033)	(0.048)	(0.032)	(0.043)
Age 17	-1.226	-0.783	0.304	–	–	–
	(0.046)	(0.029)	(0.032)			
Age 18	-1.493	-1.134	-0.367	–	–	–
	(0.045)	(0.028)	(0.033)			
Constant	7.232	9.695	10.113	7.468	9.984	10.780
	(0.251)	(0.159)	(0.157)	(0.331)	(0.242)	(0.243)
ln(sigma)	1.092	1.017	1.043	1.147	1.104	1.329
	(0.004)	(0.003)	(0.005)	(0.006)	(0.006)	(0.010)
Observations	75,178	250,652	360,574	43,445	145,553	224,646

Note: Authors' analysis, 1940 Census. Sons included are aged 14–18 and daughters are aged 14–16. All regressions also include controls for parental age. Finally the Tobit regression include state dummies; these estimates are used for subsequent analysis.

Table B3: The Relationship between State-Level School Quality Measures and Educational Attainment—White Daughters

Parent's Education	Regressions (1) and (2)		Regression (3)		
	Pupil-Teacher Ratio	Teacher Salary	Pupil-Teacher Ratio	Teacher Salary	Percent in Population
Grades <=2	-0.226***	0.371***	-0.121***	0.333***	1.60
	(0.046)	(0.048)	(0.043)	(0.050)	
Grades 3-4	-0.180***	0.281***	-0.115***	0.247***	4.64
	(0.038)	(0.026)	(0.031)	(0.023)	
Grade 5	-0.109***	0.205***	-0.067**	0.186***	4.33
	(0.036)	(0.026)	(0.027)	(0.023)	
Grade 6	-0.109***	0.183***	-0.071**	0.165***	6.04
	(0.037)	(0.024)	(0.028)	(0.019)	
Grade 7	-0.084**	0.156***	-0.051*	0.143***	8.62
	(0.036)	(0.025)	(0.028)	(0.020)	
Grade 8	-0.085**	0.126***	-0.071***	0.117***	30.23
	(0.033)	(0.025)	(0.024)	(0.018)	
Grade 9	-0.063***	0.107***	-0.046***	0.099***	8.00
	(0.018)	(0.015)	(0.015)	(0.014)	
Grade 10	-0.050***	0.071***	-0.042***	0.065***	8.42
	(0.018)	(0.014)	(0.015)	(0.012)	
Grade 11	-0.019	0.041***	-0.013	0.034***	4.25
	(0.015)	(0.012)	(0.015)	(0.011)	
Grade 12	-0.031*	0.048***	-0.026	0.046***	13.11
	(0.017)	(0.014)	(0.016)	(0.012)	
Grade >12	-0.008	0.019	-0.005	0.019	8.41
	(0.016)	(0.013)	(0.015)	(0.012)	

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from equation (7), and reflects years of child schooling. (1) and (2) are bivariate regressions; (3) are multiple regression. $n = 49$. Significance: ***$p < 0.01$, **$p < 0.05$; *$p < 0.10$.

Table B4: The Relationship between State-Level School Quality Measures and Educational Attainment—White Sons

| Parent's Education | Regressions (1) and (2) | | Regression (3) | | Percent in Population |
	Pupil–Teacher Ratio	Teacher Salary	Pupil–Teacher Ratio	Teacher Salary	
Grades <=2	-0.259***	0.352***	-0.160***	0.299***	1.75
	(0.038)	(0.035)	(0.035)	(0.036)	
Grades 3-4	-0.213***	0.269***	-0.148***	0.223***	4.93
	(0.031)	(0.033)	(0.023)	(0.030)	
Grade 5	-0.160***	0.216***	-0.112***	0.181***	4.54
	(0.026)	(0.027)	(0.019)	(0.024)	
Grade 6	-0.138***	0.175***	-0.101***	0.148***	6.21
	(0.025)	(0.025)	(0.017)	(0.022)	
Grade 7	-0.118***	0.149***	-0.087***	0.126***	8.67
	(0.026)	(0.023)	(0.020)	(0.020)	
Grade 8	-0.102***	0.133***	-0.087***	0.121***	30.43
	(0.025)	(0.025)	(0.016)	(0.020)	
Grade 9	-0.074***	0.117***	-0.057***	0.108***	7.79
	(0.018)	(0.020)	(0.012)	(0.018)	
Grade 10	-0.058***	0.082***	-0.048***	0.076***	8.15
	(0.013)	(0.015)	(0.010)	(0.014)	
Grade 11	-0.032**	0.061***	-0.024**	0.057***	4.09
	(0.013)	(0.014)	(0.011)	(0.014)	
Grade 12	-0.035***	0.054***	-0.030***	0.051***	12.8
	(0.012)	(0.011)	(0.009)	(0.011)	
Grade >12	0.007	0.020**	0.008	0.021**	8.31
	(0.010)	(0.009)	(0.010)	(0.009)	

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from equation (7), and reflects years of child schooling. (1) and (2) are bivariate regressions; (3) are multiple regression. $n = 49$. Significance: ***$p < 0.01$, **$p < 0.05$; *$p < 0.10$.

Table B5: The Relationship between State-Level School Quality Measures and Educational Attainment—White Families, Unweighted Estimates

Parental Education	White Sons		White Daughters	
	Pupil-Teacher Ratio	Teacher Salary	Pupil-Teacher Ratio	Teacher Salary
Grades ≤ 2	-0.202***	0.294***	-0.131***	0.325***
	(0.031)	(0.038)	(0.037)	(0.054)
Grades 3-4	-0.176***	0.223***	-0.119***	0.219***
	(0.023)	(0.032)	(0.027)	(0.024)
Grade 5	-0.110***	0.174***	-0.065**	0.184***
	(0.022)	(0.025)	(0.025)	(0.025)
Grade 6	-0.104***	0.145***	-0.065***	0.160***
	(0.016)	(0.021)	(0.022)	(0.019)
Grade 7	-0.099***	0.135***	-0.039*	0.134***
	(0.020)	(0.022)	(0.022)	(0.023)
Grade 8	-0.087***	0.127***	-0.057***	0.100***
	(0.013)	(0.017)	(0.017)	(0.016)
Grade 9	-0.059***	0.123***	-0.051***	0.101***
	(0.013)	(0.017)	(0.015)	(0.015)
Grade 10	-0.048***	0.084***	-0.043***	0.066***
	(0.010)	(0.013)	(0.014)	(0.013)
Grade 11	-0.023*	0.060***	-0.003	0.029*
	(0.012)	(0.013)	(0.018)	(0.016)
Grade 12	-0.030***	0.055***	-0.021	0.050***
	(0.008)	(0.010)	(0.015)	(0.013)
Grade > 12	0.013	0.021**	-0.000	0.018
	(0.009)	(0.009)	(0.013)	(0.013)

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from regression (7). These regressions correspond to regression (3) in Tables 2 and 3. $n = 49$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B6: Relationship between School Quality Measures and Educational Attainment, with Additional Covariates, White Daughters

| | Parental Education | | | |
	Grades 0–4	Grades 5–8	Grades 9–12	Grades >12
A. Baseline Model				
Pupil-Teacher Ratio	-0.113***	-0.084***	-0.041***	-0.005
	(0.034)	(0.025)	(0.014)	(0.015)
Teacher Salary	0.273***	0.160***	0.066***	0.018
	(0.029)	(0.019)	(0.012)	(0.013)
B. Model with Additional Covariates				
Pupil-Teacher Ratio	-0.063**	-0.036*	-0.018	0.002
	(0.033)	(0.021)	(0.013)	(0.014)
Teacher Salary	0.231***	0.137***	0.047**	0.004
	(0.059)	(0.031)	(0.017)	(0.020)
Education (Whites)	0.753***	0.599***	0.277***	0.115
	(0.218)	(0.157)	(0.094)	(0.099)
Income (Whites)	-0.185	0.108	0.112	0.091
	(0.186)	(0.109)	(0.063)	(0.077)
House Values	0.022	-0.024*	-0.016**	-0.014
	(0.024)	(0.014)	(0.008)	(0.007)

Note: Authors' calculations, 1940 U.S. Census. Robust standard errors in parentheses. $n = 49$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B7: Relationship between School Quality Measures and Educational Attainment, with Additional Covariates, White Sons

| | Parental Education | | | |
	Grades 0–4	Grades 5–8	Grades 9–12	Grades >12
A. Baseline Model				
Pupil-Teacher Ratio	-0.155***	-0.116***	-0.050***	0.008
	(0.027)	(0.016)	(0.010)	(0.010)
Teacher Salary	0.254***	0.162***	0.080***	0.021**
	(0.032)	(0.023)	(0.014)	(0.009)
B. Model with Additional Covariates				
Pupil-Teacher Ratio	-0.107***	-0.068***	-0.019**	0.020**
	(0.030)	(0.016)	(0.009)	(0.009)
Teacher Salary	0.259***	0.169***	0.082***	0.015
	(0.057)	(0.031)	(0.014)	(0.017)
Education (Whites)	0.630***	0.554***	0.345***	0.149
	(0.213)	(0.122)	(0.064)	(0.072)
Income (Whites)	-0.109	0.085	0.111*	0.036
	(0.141)	(0.082)	(0.059)	(0.052)
House Values	-0.007	-0.031***	-0.026***	-0.007
	(0.005)	(0.010)	(0.007)	(0.005)

Note: Authors' calculations, 1940 U.S. Census. Robust standard errors in parentheses. $n = 49$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B8: The Relationship between State-Level School Quality Measures and Educational Attainment, Probit Model Estimates

Parental Education	White Sons		White Daughters	
	Pupil-Teacher Ratio	Teacher Salary	Pupil-Teacher Ratio	Teacher Salary
Grades 0–2	-0.063***	0.080***	-0.042***	0.062***
	(0.008)	(0.012)	(0.009)	(0.012)
Grades 3–4	-0.051***	0.067***	-0.036***	0.048***
	(0.005)	(-0.010)	(0.008)	(0.007)
Grade 5	-0.043***	0.051***	-0.023***	0.038***
	(0.007)	(0.008)	(0.006)	(0.007)
Grade 6	-0.037***	0.045***	-0.028***	0.033***
	(0.005)	(0.007)	(0.005)	(0.006)
Grade 7	-0.032***	0.042***	-0.021***	0.026***
	(0.005)	(0.006)	(0.005)	(0.006)
Grade 8	-0.033***	0.045***	-0.026***	0.031***
	(0.004)	(0.005)	(0.004)	(0.004)
Grade 9	-0.024***	0.037***	-0.016***	0.022***
	(0.004)	(0.005)	(0.004)	(0.004)
Grade 10	-0.019***	0.027***	-0.011***	0.015***
	(0.004)	(0.004)	(0.004)	(0.003)
Grade 11	-0.011***	0.023***	-0.001	0.007**
	(0.003)	(0.003)	(0.004)	(0.003)
Grade 12	-0.013***	0.018***	-0.004	0.007*
	(0.003)	(0.003)	(0.004)	(0.004)
Grade > 12	-0.004	0.008*	0.002	0.000
	(0.004)	(0.004)	(0.005)	(0.005)

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from a probit regression. These are multiple regressions (which include both covariates). $n = 49$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B9: Tobit Model (Black Families), Dependent Variable is Educational Attainment

	Estimates for Sons by Parental Education (Grades)				Estimates for Daughters by Parental Education (Grades)			
	0–4	5–8	> 8	All	0–4	5–8	> 8	All
Urban	1.285	1.219	1.161	1.642	0.916	1.241	0.949	1.470
	(0.038)	(0.034)	(0.076)	(0.025)	(0.127)	(0.062)	(0.055)	(0.041)
Farm	-0.821	-0.863	-1.262	-1.075	-0.862	-0.498	-0.525	-0.727
	(0.032)	(0.030)	(0.079)	(0.023)	(0.136)	(0.056)	(0.051)	(0.039)
Mother Only	-0.216	-0.269	-0.915	-1.267	-0.728	-0.529	-0.356	-1.550
	(0.045)	(0.035)	(0.080)	(0.027)	(0.138)	(0.079)	(0.060)	(0.045)
Father Only	0.114	0.240	-0.372	-0.961	-0.753	-0.215	-0.189	-1.405
	(0.051)	(0.054)	(0.149)	(0.035)	(0.266)	(0.090)	(0.091)	(0.060)
Moved within State Since 1935	-0.602	-0.782	-1.172	-0.950	-1.240	-0.671	-0.820	-1.004
	(0.024)	(0.022)	(0.053)	(0.017)	(0.092)	(0.044)	(0.039)	(0.030)
Moved to a New State Since 1935	-1.194	-1.466	-1.284	-1.420	-1.629	-1.698	-1.752	-1.843
	(0.103)	(0.088)	(0.193)	(0.069)	(0.287)	(0.154)	(0.133)	(0.103)
One Parent Born in a Different State	0.017	-0.075	-0.133	-0.034	-0.357	0.003	-0.122	-0.122
	(0.046)	(0.036)	(0.078)	(0.028)	(0.133)	(0.081)	(0.061)	(0.048)
Both Parents Born in a Different State	0.181	0.078	0.000	0.019	-0.196	0.186	-0.058	-0.094
	(0.055)	(0.042)	(0.088)	(0.033)	(0.154)	(0.096)	(0.070)	(0.056)
Age 15	-0.378	-0.441	-0.247	-0.451	-0.400	-0.494	-0.433	-0.497
	(0.044)	(0.040)	(0.104)	(0.030)	(0.120)	(0.055)	(0.048)	(0.037)
Age 16	-0.835	-1.062	-1.054	-1.077	-1.041	-1.057	-1.004	-1.144
	(0.041)	(0.037)	(0.096)	(0.029)	(0.116)	(0.052)	(0.046)	(0.035)
Age 17	-1.205	-1.589	-1.845	-1.597	–	–	–	–
	(0.041)	(0.036)	(0.093)	(0.028)				
Age 18	-1.506	-1.876	-2.299	-1.945	–	–	–	–
	(0.039)	(0.036)	(0.092)	(0.027)				
Constant	6.600	8.245	10.709	8.676	11.532	8.332	9.493	10.005
	(0.206)	(0.147)	(0.333)	(0.120)	(0.537)	(0.333)	(0.239)	(0.195)
ln(sigma)	1.060	1.131	1.368	1.212	1.473	1.258	1.288	1.375
	(0.003)	(0.003)	(0.006)	(0.002)	(0.014)	(0.005)	(0.005)	(0.004)
N	77,913	131,700	43,819	253,432	28,343	46,307	83,036	157,686

Note: Authors' analysis, 1940 Census. Sons included are aged 14–18, and daughters are aged 14–16. All regressions also include controls for parental age. Finally the Tobit regression include state dummies; these estimates are used for subsequent analysis.

Table B10: The Relationship between State-Level School Quality Measures and Educational Attainment—Black Families, Unweighted Estimates

Parental Education	Black Sons		Black Daughters	
	Pupil-Teacher Ratio	Teacher Salary	Pupil-Teacher Ratio	Teacher Salary
Grades 0–4	-0.109***	0.100**	-0.100**	0.100**
	(0.034)	(0.036)	(0.035)	(0.036)
Grades 5–8	-0.103***	0.086**	-0.089**	0.102***
	(0.0288)	(0.032)	(0.037)	(0.033)
Grades > 8	-0.082***	0.083**	-0.074**	0.060**
	(0.0271)	(0.032)	(0.026)	(0.025)
All	-0.085**	0.068*	-0.082***	0.046*
	(0.029)	(0.035)	(0.025)	(0.026)

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from regression (7). These regressions correspond to weighted versions of regression (3), without covariates, in Table 3. $n = 18$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B11: Relationship between School Quality Measures and Educational Attainment, with Additional Covariates, Black Daughters

| | Parental Education | | | |
	Grades 0–4	Grades 5–8	Grades > 8	All
Pupil-Teacher Ratio	-0.068**	-0.067**	-0.076*	-0.085*
	(0.028)	(0.032)	(0.030)	(0.039)
Teacher Salary	0.186**	0.112*	0.061	0.181*
	(0.070)	(0.057)	(0.067)	(0.077)
Education (Whites)	0.397	0.168	0.068	0.419
	(0.300)	(0.250)	(0.361)	(0.386)
Income (Whites)	-0.099	-0.050	0.122	-0.155
	(0.152)	(0.190)	(0.163)	(0.230)
House Values	-0.023	-0.014	-0.023	-0.021
	(0.031)	(0.031)	(0.026)	(0.039)

Note: Authors' calculations, 1940 U.S. Census. Robust standard errors in parentheses. $n = 18$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B12: Relationship between School Quality Measures and Educational Attainment, with Additional Covariates, Black Sons

| | Parental Education | | | |
	Grades 0–4	Grades 5–8	Grades > 8	All
Pupil-Teacher Ratio	-0.061**	-0.056**	-0.066	-0.071*
	(0.024)	(0.024)	(0.042)	(0.036)
Teacher Salary	0.220**	0.179**	0.126	0.234**
	(0.080)	(0.069)	(0.087)	(0.096)
Education (Whites)	0.296	0.185	0.087	0.377
	(0.245)	(0.220)	(0.390)	(0.340)
Income (Whites)	-0.106	-0.033	-0.115	-0.169
	(0.193)	(0.150)	(.170)	(0.219)
House Values	-0.030	-0.034	-0.005	-0.028
	(0.031)	(0.026)	(0.027)	(0.036)

Note: Authors' calculations, 1940 U.S. Census. Robust standard errors in parentheses. $n = 18$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B13: The Relationship between State-Level School Quality Measures and Educational Attainment, Probit Model Estimates

Parental Education	Black Sons		Black Daughters	
	Pupil-Teacher Ratio	Teacher Salary	Pupil-Teacher Ratio	Teacher Salary
Grades 0–4	-0.034***	0.029***	-0.030***	0.031***
	(0.006)	(0.007)	(0.006)	(0.006)
Grades 5–8	-0.035***	0.027***	-0.031***	0.034***
	(0.006)	(0.007)	(0.006)	(0.007)
Grade > 8	-0.032***	0.021**	-0.027***	0.025***
	(0.007)	(0.007)	(0.006)	(0.007)
All	-0.027***	0.019**	-0.020**	0.020**
	(0.008)	(0.008)	(0.007)	(0.007)

Note: Authors' calculations, 1940 U.S. Census. Dependent variable is the state fixed effect from a probit regression. These are multiple regressions (which include both covariates). $n = 18$. Significance: ***$p < 0.01$; **$p < 0.05$, *$p < 0.10$.

Table B14: Effect of County Teacher Pay on County-Level Ratio of 14–18 Year Olds in 1940 to 4–8 Year Olds in 1930, Southern Border Counties

	All Counties	n	County Pair Differences	n	n_c
Black Population	-0.002 (0.003)	284	-0.001 (0.004)	185	28
White Population	0.000 (0.003)	377	-0.001 (0.006)	272	32

Note: Authors' calculations, 1930 an 1940 Census. The first set of regressions treats all border counties as individual observations. The second set is for border county pairs. For whites controls include fraction urban, fraction farm, parental income of whites, parental education of whites. Controls for blacks additionally include Rosenwald exposure and parental education of blacks. Sample is restricted to counties with a sample size of 14 to 18 year olds larger than 5, and a border pair difference in the educational attainment of whites of less than one year. Observations are weighted using the sample size of 14-18 year olds, or difference in sample sizes for the county pair analysis. Robust standard error in parentheses for the analysis including all counties, and clustered standard errors at the state pair level for the border pair analysis.

Figure B1: Relationship between State-Level School Quality Measures and Educational Attainment—Parameter Estimates for Bivariate Regression Models
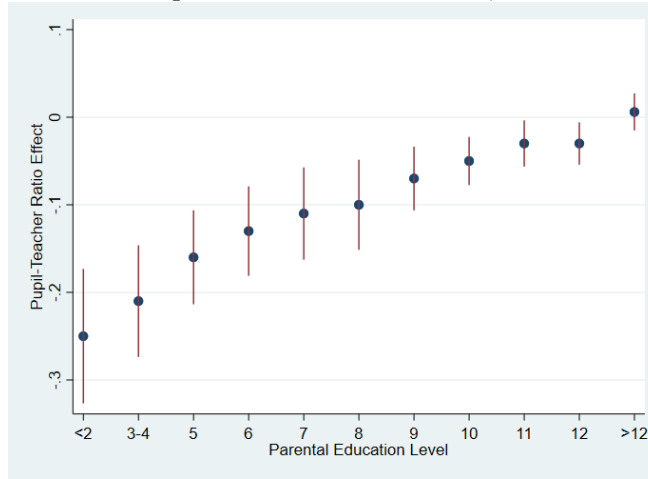
Panel A. Pupil-Teacher Ratio Effects, White Daughters
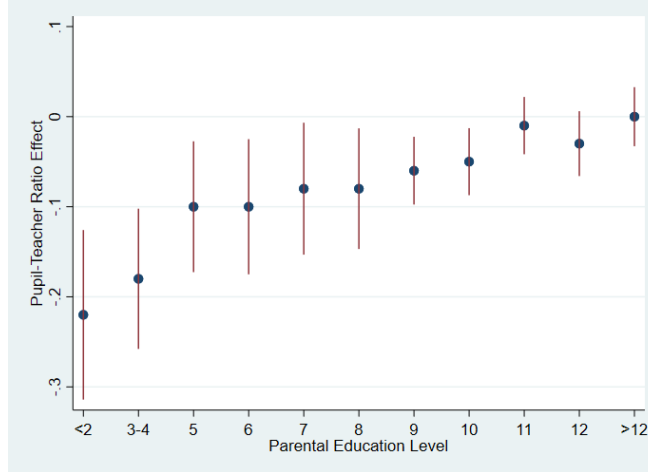
Panel B. Teacher Wage Effects, White Daughters
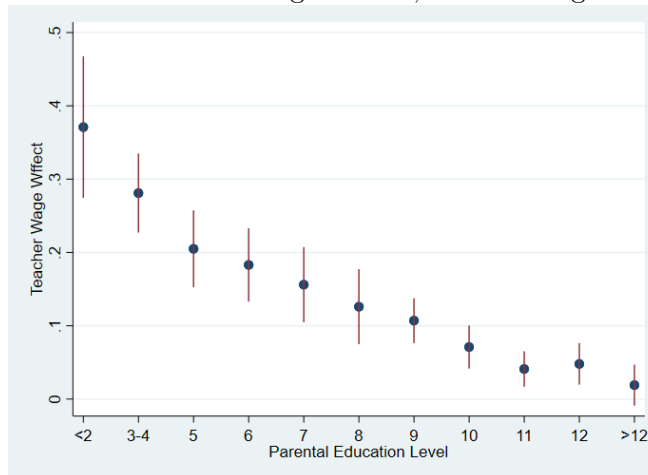
Panel C. Pupil-Teacher Ratio Effects, White Sons

Panel D. Teacher Wage Effects, White Sons