

Carnegie Mellon University

H. JOHN HEINZ III COLLEGE  
School of Public Policy and Management  
TEPPER SCHOOL OF BUSINESS

DISSERTATION

By

**Jeff Lingwall**

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy  
in  
Economics and Public Policy

An Economic History of Compulsory Attendance and Child  
Labor Laws in the United States, 1810-1926

August 26, 2014

Dissertation Committee:

Karen Clay  
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I am in your debt.



# Chapter 1

## Introduction

This dissertation is an economic history of policies affecting childhood education in the United States. The focus is compulsory attendance and child labor laws, though evidence is also drawn from continuation schooling laws, birth registration laws, philanthropic education aid, tax policy, and corporate charters. The essays address the legal foundations for the astonishing growth in human capital accumulation that characterized the development of the United States in the nineteenth and early twentieth centuries (see Goldin and Katz 2008). These legal foundations inform the policymaking of the developing world (see Edmonds 2007, Lopez-Calva 2001, and Basu 1999). An important policy question for the United States in the last two centuries, and for the developing world today, is whether legislation has played or can play a role in human capital acquisition and the decline of child labor.

This work is divided into four essays, each exploring a different aspect of the compulsory attendance and child labor laws that shaped the United States. The first essay builds on prior work by Landes and Solmon (1972) and Lleras-Muney (2002). This prior literature had shown that state compulsory attendance laws were effective after about 1915. This essay uses administrative data and retrospective 1940 data examines whether these laws were effective in bringing children to school between 1895 and 1926. It also explores the related effect of a number of additional policy interventions: minimum age limits for factory work, continuation schooling laws, birth registration laws, and the Rosenwald school program in the South. Using these laws together with wage information from the 1940 census shows a large return to education in the early United States.

The second essay shows the role compulsory attendance laws played in-

side the family—that compelling the school attendance of some children had negative consequences for siblings. This chapter extends and responds to Manacorda (2006), who examined the family effects of compulsory attendance using the 1920 United States census. This essay uses census data between 1880 and 1920 to calculate the proportion of children in each family that were compelled to attend school. When combined with individual school attendance data, this allows exploring the intra-family effects of compulsory attendance. This essay uses both Manacorda’s cross-sectional identification and identification using pairs of census years. It shows that as children came under a compulsory attendance law, the average number attending in the family increased by less than would be predicted by the individual effect of the law, showing that familial allocation of schooling determined the ultimate impact of the law.

The third essay shows the roots of compulsory attendance in efforts to regulate the industrial workplaces of the early nineteenth century, emphasizing the role early corporations played in the development of instruction laws for children—expanding the historical work of Clark (1916), Rorabough (1986), and Dolgin (1997). Compulsory attendance laws were preceded by factory instruction laws, requiring school attendance of working children. These laws were themselves preceded by legislation targeting manufacturing corporations as a means to educate children. This essay is a history of these laws, the corporations they affected, and the factory acts that superseded them. Using archival work, it shows how corporations in Connecticut and New Jersey took on the role of colonial masters with the responsibility of educating their child workers. Using statistical evidence, it then shows factors leading to passage of attendance laws for factory children and later child labor bans.

The final essay adds to prior historical work by Beezer (1983) and LeLoudis (1999). It is an in-depth case study of the laws surrounding compulsory attendance in the context of the South. It shows the interaction between local tax policy, state funding, and compulsory attendance that shaped the growth of an unequal education system in North Carolina. Despite constitutional constraints against unequal funding that led to nearly equal per-capita expenditures on black and white students, the creation of gerrymandered local tax districts enabled the creation of a vastly unequal education system. State funding, targeting the worst-performing districts, and compulsory attendance may have helped slow the growth in inequality in some districts.

These essays draw on data from many sources. The compulsory atten-

dance and child labor age limits are drawn from extensive work in state session laws and statutory compilations. The IPUMS samples of the United States Census between 1870 and 1920 provide individual level data on contemporaneous school attendance. The 1940 and 1950 IPUMS sample allows a retrospective look at completed years of schooling. The Reports of the Superintendent of Public Instruction of the United States give state-level administrative attendance, enrollment, and taxation numbers. For a case study on North Carolina, an extensive dataset on rural education was compiled from state reports. These large datasets were supplemented with data from Fagernäs (2014), Carruthers and Wannamaker (2013), Burnham (1980), and Kousser (1980).

The methodology employed in the essays is a mix of economic and legal history. In the first essay, the primary evidence presented is an econometric model of state education policies interpreted through both a contemporary and retrospective dataset. This is supplemented with accounts of the laws garnered from state historical reports. The second essay is primarily econometric, drawing on the rich family relationship data available in the IPUMS census samples. The third essay relies on material from state and local archives in the Northeast, along with statistical evidence from a combination of census data and state political data. The final essay combines econometric and legal evidence, supplementing statistical evidence based on state education data with evidence from court decisions.

When taken together, these essays show both how the law responded to the emergence of the industrial economy and how the law shaped that economy. As the nature of child employment changed, the law drew on past legal forms as it struggled to adapt. States learned by doing, and over the course of many years the “one best system” (Tyack, 1974) of public school systems, compulsory attendance, and child labor laws emerged. These laws had significant effects on educational attainment, education that then resulted both in increased economic success and, for the South, increased racial inequality.





## Chapter 2

# Did Laws Improve Educational Outcomes? Evidence from Compulsory Attendance and Child Labor Laws in the United States, 1895-1926

### 2.1 Introduction

The United States was an early leader in educating its citizens. In the mid-nineteenth century, American educational attainment far surpassed other countries (Easterlin 1981, Goldin and Katz 2008). A number of authors have examined the effects of state compulsory attendance and child labor laws after 1915 on educational attainment and labor market outcomes (Acemoglu and Angrist 2000, Lleras-Muney 2002, Oreopoulos 2006, Oreopoulos et al. 2006). Less attention has been paid to the pre-1915 period, and the empirical results are mixed (Landes and Solmon 1972, Eisenberg 1988, Margo and Finegan 1996, Puerta 2011, Fagernäs 2014). Yet, understanding this pre-1915 period is arguably critical—it is the period in which nearly all of the compulsory attendance and child labor laws were initially adopted and a period in which educational attainment was rising.

This chapter examines the effect of these laws from 1895-1926 on con-

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\* With Karen Clay and Mel Stephens

temporaneous outcomes—enrollment and attendance—and on total years of schooling using a difference in difference framework with region-cohort fixed effects. The paper draws on new detailed coding of compulsory attendance and child labor laws, data from the 1940 census on years of schooling, and newly digitized administrative data. We begin in 1895, because these are the first laws for which we can confidently use the 1940 census. We end in 1926, after the last state passed its initial compulsory attendance and child labor laws. This ensures that the individuals in the 1940 census had completed their education and facilitates comparison with Lleras-Muney (2002).

This chapter also makes a second contribution to the literature. Compulsory attendance laws were passed in a rich environment of other policies that may have affected education, such as birth registration laws, continuation schooling, and the Rosenwald schools in the South. The literature focuses on subsets of these policies, e.g. birth registration, child labor, and compulsory attendance in Fagernäs (2014), compulsory attendance and continuation school in Lleras-Muney (2002), and compulsory attendance and child labor laws in Margo and Finegan (1996). Little attention has been given to the totality of these policies. This paper considers the effect of compulsory attendance, continuation school, child labor, birth registration, and Rosenwald schools.

This chapter finds that the effect of the laws varied widely by race, gender, and region. The laws generally had a larger impact on educational outcomes for males than females. The effects differed by region: in the Northeast, continuation schooling and child labor laws had the largest effect, rather than the base compulsory attendance age limits. In the Midwest, birth registration laws were effective. In the South, the effects differ between blacks and whites and show positive effects for birth registration and Rosenwald schools. In the West, compulsory attendance was effective. The significant effect in the Northeast on continuation schooling is consistent with a region that already had many compulsory attendance laws in place and used continuation schooling and child labor restrictions to combat industrial child labor problems. The coefficients for child labor laws are negative for the Midwest and West. The negative effects on child labor laws in some regions reflect that these were passed at times of educational expansion in neighboring states. Also, the negative effects are largest in 7th and 8th grades and suggest that the laws acted to allow children to leave earlier than social norms or compulsory attendance laws had permitted.

Using laws as an instrument for schooling, the chapter also examines

returns to education for the 1885-1912 birth cohorts. The F-statistics are low, so one wants to be cautious about the interpretation. Because the 1940 Census does not include self-employment income, the OLS and IV returns to educations are sensitive to the sample. In the full sample, the IV and LIML returns to education are large (around 0.18). For non-farmers who work 40 or more weeks per years, the returns are close to returns from later samples (around 0.13).

Endogeneity of the passage of laws is a potential concern. (See Landes and Solmon 1972.) This chapter provides both historical and econometric evidence that causality ran from laws to educational outcomes. Historical evidence includes quotes from state and local superintendents of education and contemporary observers. The econometric evidence uses placebo tests to show that the timing of the changes followed and generally did not precede passage. It also shows that the attendance laws affected the appropriate groups, increasing completion of grades 8 and below with no significant effects above 8th grade. Further, the effects of the laws were generally larger for males than for females. This is consistent with males having better labor market opportunities at young ages, and thus the laws being more binding for them. The positive effects from continuation school come at 7th through 10th grades, suggesting that these laws successfully brought older children into school. The positive effects for Rosenwald schools are at 4th through 8th grades, consistent with a goal of increasing primary school attainment for children in the South.

The closest paper to this both in empirical approach and in its use of years of schooling from census data is Lleras-Muney (2002). In addition to years of schooling, we use administrative data to show the contemporaneous effects of the law and examine the labor market effects of the laws for working age men (25-54). An important contribution of this chapter is creation of a new detailed data set on compulsory attendance and labor law covering 1895-1926. For both types of law, existing codings and the secondary literature were used as a starting point, and then each age limit change was located in the original state session laws. In the rare case when the original session laws were unavailable, statutory compilations were consulted. Despite differences in the census years (1940 vs. 1960), and the different treatment of child labor laws, our results generally are in line with Lleras-Muney's (2002) main results.<sup>1</sup> Both papers find positive and statistically significant relationships

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<sup>1</sup>A number of other papers in the larger literature examine the South. On the South,

between compulsory attendance laws and years of schooling. Our findings are in line with Margo and Finegan (1996), Eisenberg (1988) and Puerta (2011). The fact that labor laws had positive effects in the North and negative effects in the South may be one reason why Moehling (1999) found no effects of the laws.

This chapter also offers new estimates on returns to schooling for laws passed between 1899 and 1926, that affected the 1885-1912 birth cohorts. The literature on returns to schooling largely focuses on laws affecting later birth cohorts. For example, Angrist and Krueger (1991) consider the 1920-1949 birth cohorts and Staiger and Stock (1997) consider the 1930-1949 birth cohorts. A few papers have cohorts that overlap with ours. Goldin and Katz (2000) provide OLS but not IV estimates for the 1850-1897 birth cohorts in Iowa. Oreopolous and Salvanes (2011) consider the 1899-1982 birth cohorts, and Stephens and Yang (2014) consider the 1905-1954 birth cohorts. All of these papers span very long time periods and they shed little light on the effects of introducing compulsory attendance and child labor laws.

## 2.2 Compulsory Attendance, Child Labor Laws, and Related Policies

The first compulsory attendance law was passed in Massachusetts in 1852.<sup>2</sup> Vermont and the District of Columbia also passed compulsory attendance laws prior to 1870.<sup>3</sup> Compulsory attendance laws became more common after 1870 as popular and legislative attention shifted from the Civil War and Reconstruction to other matters. Attention to and debate about schooling heightened in 1871, as the Republican Party kicked off a “public school crusade.”<sup>4</sup> By 1900 almost all states outside the South had schooling laws and

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see Margo (1990), Greenbaum (2009), and Aaronson and Mazumder (2009).

<sup>2</sup>We differentiate compulsory *attendance* laws from the variety of compulsory *instruction* laws that dated back to colonial times. For example, colonial instruction laws tasked town selectmen to ensure parents were raising literate children but did not mandate school attendance. See Cook (1912) and Ensign (1921).

<sup>3</sup>For a more detailed discussion of schooling in this period, see Cubberley (1919) and Fischel (2009).

<sup>4</sup>See McAfee (1998).

by 1920 every state had a compulsory attendance law.<sup>5</sup>

Compulsory attendance laws commonly stated an age at which students had to begin attending, an age at which they could leave, and a minimum number of weeks that a child had to attend. The first compulsory attendance law, in Massachusetts in 1852, required attendance of 8-13 year olds for 12 weeks. The Appendix contains the text of several laws. In some states, children could leave school before the specified age, provided they were employed. The age at which children were allowed to leave school to work was typically 14. A few states had earlier ages, but most of these states later raised the age at which a child was allowed to leave school. Continuation schooling laws served as a complement to compulsory attendance laws. These required school attendance beyond the age specified in the compulsory attendance law, such as evening school attendance for children working during the day.

Child labor laws were passed either before or after compulsory attendance laws. Both laws were relevant, because the minimum term lengths were short, and schooling laws were not always enforced. Thus, children could easily be working full time or close to full time for most or all of the year. Child labor laws restricted employment in industries for children under a certain age. Industries likely to be targeted were factories and mercantile establishments.<sup>6</sup> Cotton mills were particularly big employers of children. Unlike compulsory attendance laws, which were plausibly binding over a wide age range, child labor laws were most likely to be binding on older children. Affects on contemporaneous outcomes such as attendance and enrollment may have been small, if these are affecting older children, particularly if attendance and enrollment is simultaneously rising for younger children. At the same time, years of schooling may be affected, because older children were permitted to leave school to work.

Compulsory attendance, continuation schooling, and child labor laws may have been strengthened by the advent of birth registration. The passage of laws requiring birth certificates potentially gave bite to any law involving an age limit, since the child's age could be verified independent of a parent's affidavit or a court's discernment. Fagernäs (2014) shows that birth registration laws aided in the decline of child labor.

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<sup>5</sup>Although 1918 is the traditional date for the passage of the last compulsory attendance law (in Mississippi), it was not until 1920 when all the Southern states had non-local option laws. See the Appendix for further notes on county option laws and statewide adoption.

<sup>6</sup>See Loughran (1921) and Nardinelli (1980). The states were behind Britain in this regard.

Rosenwald schools were another potentially significant policy intervention in early twentieth century education. Rosenwald schools were built to improve access to education for southern blacks. Aaronson and Mazumder (2011) use county-level data to examine the effects of Rosenwald schools on educational outcomes, finding large effects on a range of outcomes including attendance, literacy, and years of schooling. They find the effects on males and females are similar. Carruthers and Wanamaker (2013) also find significant effects from Rosenwald schools.

Tables 2.1 and 2.2 summarize the literature on the effects of these laws on educational outcomes. Using a variety of approaches and outcome measures, with the notable exception of Landes and Solmon (1972), most papers have found effects of the laws on educational outcomes. Four of the papers focus on the early time period—the period before 1910—and focus on the introduction of laws. Landes and Solmon raise important issues of endogeneity, which we discuss further later. Their analysis focuses on the period 1870-1890, while our analysis focuses on 1895-1915. Eisenberg (1988), Margo and Finegan (1996) and Puerta (2011) all find some evidence that the laws improved educational outcomes.

Three papers in Tables 2.1 and 2.2 focus on the later time period—after 1910 or 1915—and use both the introduction of laws and changes in the laws to identify effects on years of schooling as reported the 1960 Census. As we discuss in more detail below, our paper follows Lleras-Muney (2002) and Goldin and Katz (2011) in using a difference in difference approach using retrospective census data and including state and cohort fixed effects and regional controls. Fagernäs (2014) uses state and cohort fixed effects and state time trends. These approaches mitigate many of the concerns raised by Landes and Solmon (1972) regarding the endogeneity of laws, because they compare states to themselves or to other states in their region over time.

In Table 2.2 we summarize the literature on child labor. The literature is mixed, but generally suggests that laws were effective at reducing child employment. We do not examine child employment directly. To the extent that employment and schooling are negatively related, our results will have implications for this literature.

Table 2.1: Literature Review of Effects of Laws on Educational Outcomes

Paper	Identification	Data	Laws	Time period	Effects of laws
Landes and Solmon 1972	DD laws-time	Administrative attendance, enrollment	Attendance, labor	1870-1880, 1880-1890	No
Eisenberg 1988	Pre-post county analysis Iowa, Pennsylvania	Administrative attendance, enrollment, school quality	Attendance	1897-1908	Yes for Iowa and Pennsylvania
Margo and Finegan 1996	DD laws-older and younger 14 year olds in 1900	1900 Census In school	Attendance, labor	1900	Yes for states with attendance + labor
Puerta 2011	DD laws-time in border townships/counties	1850-1910 Census In school	Attendance	1850-1910	Yes, bigger for early (1850-1870) than late (1880-1910)
Lleras-Muney 2002	DD Time series State FE, Year FE, Region x year FE	1960 Census Years of schooling	Attendance, labor, continuation schooling	1915-1939	Yes, all laws
Goldin and Katz 2011	DD Time series State FE, Year FE, Region x TT	1960 Census Years of schooling 1910, 1920 working, in school Administrative	Attendance, labor, continuation schooling	1910-1939 (1896-1925 birth cohorts)	Yes, primarily continuation schooling, they note effects modest
Fagernäs 2014	DD laws-time State FE, Year FE, State TT	1960 Census Years of schooling	Attendance, labor, birth registration	1910-1940 (1896-1926 birth cohorts)	Yes, laws increase education more in birth reg. law states
Clay, Lingwall, Stephens 2014	DD Time series State FE, Year FE, Region x Year FE	1940 Census Years of schooling Administrative attendance, enrollment	Attendance, labor, continuation schooling, birth registration, Rosenwald schools	1895-1926 (1881-1912 birth cohorts)	Mixed, vary by gender, region, time

Table 2.2: Literature Review of Effects of Laws on Child Labor

Paper	Identification	Data	Laws	Time period	Effects of laws
Moehling 1996	DDD laws-ages-time	1880-1910 Census Occupation	Labor	1880-1910	No
Manacorda 2006	DD laws-ages	1920 Census Working, In school	Attendance, labor	1920	Yes, laws depress child employment
Bugni 2012	DD laws-time Logit	1880-1900 Census Occupation	Labor	1880-1900	Yes, laws depress child labor
Fagernäs 2014	DD laws-time	1910-1930 Census Working, In school	Attendance, labor, birth registration	1910-1930	Yes, laws depress employment more in birth reg. law states

## 2.3 Data

### 2.3.1 Laws

Data on compulsory attendance laws, child labor laws, and changes in these laws were gathered from the session laws of individual states, based initially on prior compilations in the United States Bureau of Education (various years), Goldin and Katz (2002), Moehling (1996), and Eisenberg (1988).<sup>7</sup> The laws are coded using the date the law went into effect, rather than the date of passage, and matched to individuals based on the laws in place at age 14 in their state (see Lleras-Muney 2002). For child labor laws, this chapter uses the first year a general restriction on work in a wide range of industries (such as factories or manufacturing firms) went into effect. Figure 2.2 shows when initial compulsory attendance and child labor laws became effective.<sup>8</sup>

States were only coded as having a law once the law covered all counties or required counties to specifically opt-out. This issue arises, because a number of Southern states passed laws *permitting* counties to pass laws requiring compulsory attendance. Few counties actually made use of this law and passed compulsory attendance laws. These opt-in states later passed universal laws that covered all counties. In a few cases, the laws permitted counties to vote to opt-out of the law. In this coding convention, the year of passage for some states is later than dates conventionally used in the literature. The Appendix provides the dates and references to the session laws in which states passed universal or opt-out laws.

While the age of entry into school attendance is simple to find in the text of the laws, the exit age from compulsory attendance is more complicated. To find the binding age on children, this paper takes several factors into account. First, the “leave-school-to-work exit age” is calculated as the greater of the age children could leave school to work, and the school entry age plus the years of school or literacy requirements to qualify for the work exit age. Literacy requirements are coded as four years. Some states had an additional method of leaving school early: the “completed-required-years” age is calculated as the lower of the base exit age, and the entry age plus the education required for a general exemption to compulsory attendance.

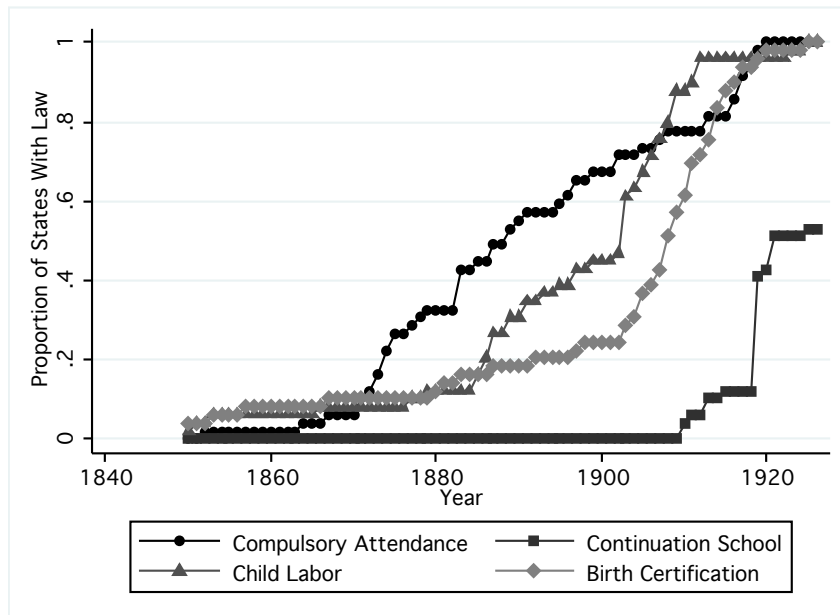
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<sup>7</sup>Birth registration laws are from Fagernäs (2014). Data on Rosenwald schools are from Carruthers and Wanamaker (2013).

<sup>8</sup>For simplicity, the District of Columbia will be referred to as a state.



Figure 2.1: Passage of Compulsory Attendance and Supporting Policies



*Notes:* Figure shows proportion of states with a non-local option, effective compulsory attendance law, continuation schooling law, child labor law, and birth registration law. See Appendix for sources and session law citations.

The minimum age for compulsory attendance is calculated as the lower of the leave-school-to-work age and the completed-required-years age.

Figure 2.2(a) demonstrates this age limit calculation in each year, showing the proportion of states with a given age limit in each year. In 1894, 21 states had not yet passed compulsory attendance laws and 31 states had not yet passed child labor laws. Of states with attendance laws, most permitted children to leave school to work at age 14, although three allowed children to leave at younger ages and four allowed children to leave at older ages. Of states with labor laws, eight set the minimum age for factory work at 14 and 10 set it at younger ages. About half of the attendance law adopters were in the South. The remaining adopters were distributed across the North, Midwest, and West.

The continuation age limits are drawn from a number of state reports and statutory compilations. As with compulsory attendance, continuation schooling laws had exemptions for years of completed schooling or literacy. The continuation schooling age is calculated as the lower of the base continuation schooling age and the entry age plus any educational requirements to be exempt from continuation schooling. Figure 2.2(b) shows the proportion of states with each continuation school age in each year.

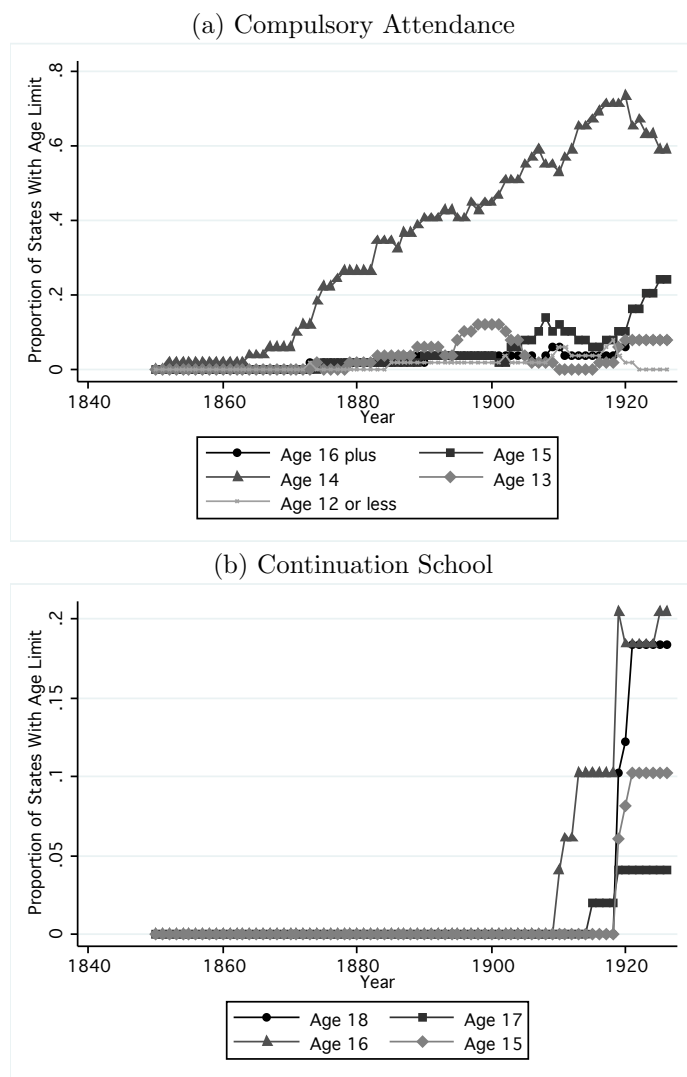
### 2.3.2 Educational Outcomes

Our analysis of educational outcomes draws on contemporaneous administrative data and on retrospective data on years of schooling from the 1940 Census. Beginning in 1870, states submitted data on enrollment and average daily attendance to the United States Office of Education (various years). These data, which were published in the Report of the Commissioner of Education, were used to construct a biennial panel covering 48 states and the District of Columbia. Although states reported these outcomes for different age ranges, for comparability enrollment and average daily attendance are measured relative to the population of children ages 5-17 in the state. This normalization should have very little effect on the outcome, since most states reported similar age ranges and attendance of younger and older children was small. Population is taken from the published census numbers and interpolated for intervening years.<sup>9</sup> If every child between the ages of 5 and 17 were

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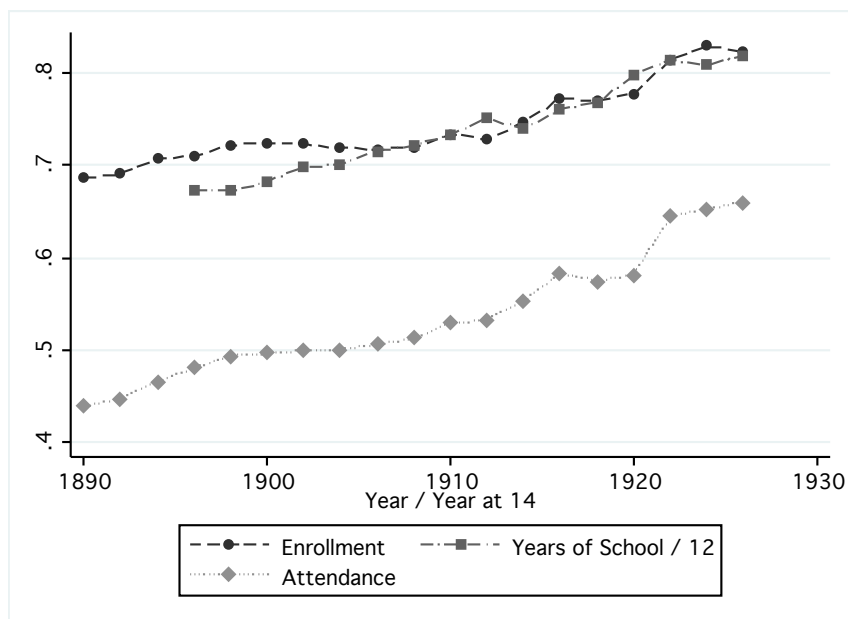
<sup>9</sup>Although many states had school censuses, typically biennially, in order to apportion state funding across school districts, the results of these state population counts in many

Figure 2.2: Compulsory Attendance and Continuation School Age Limits



*Notes:* Figures shows proportion of states with the given age limits. See Appendix for sources and session law citations.

Figure 2.3: Trends in Average Enrollment, Attendance, and Years of School (of 12)



*Notes:* Data in the figure is population weighted. Census data show average years of school completed (of 12) by year at age 14. Enrollment and attendance show national averages by year.

enrolled, enrollment would equal 1. Similarly, if every child attended every day, average daily attendance would be equal to 1.

The 1940 Census was the first census to ask about years of completed schooling and wages. Individuals were asked to report the highest grade completed. As Goldin (1999) notes, they were not always reporting accurately. “I have recently demonstrated that the 1940 census greatly overstates the proportion of Americans who were high school graduates.”<sup>10</sup> To anticipate our estimation strategy, assume the proportion of people in a given state overstating their education is either constant or trending similarly within region. In this case, the overstatement should have limited impact on our

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cases included individuals up to age 21 and are not disaggregated by age in published reports.

<sup>10</sup>Goldin (1999, S67).

estimates of the effect of compulsory attendance laws on schooling outcomes. The reason is that estimation focuses on changes in schooling attributable to the law. Goldin (1999) also discusses the implications of the overestimate for the estimated returns to education.

Our data is from the 1940 IPUMS 1% sample (Ruggles et al. 2010). The census contains information on individuals' sex, race, state of residence, state of birth, age, and whether their parents are foreign born. The sample is limited to blacks and whites.<sup>11</sup> The census also contains information on highest grade attended and on wage income, but not on income from self-employment. In the IV estimates of the returns to education, we conduct a number of robustness tests to examine the effects of omitting self-employment income.

For educational outcomes, the sample covers the 1881-1902 birth cohorts, who were age 14 in 1895-1926. For labor market outcomes, the sample covers the 1890-1902 birth cohorts, who were 27-54 at the time of the 1940 Census.<sup>12</sup> The narrower time frame is intended to capture prime age working men and exclude older men who might be retired or working part time. Although many compulsory attendance laws were passed before 1895, both contemporaries and historians have emphasized the ineffective nature of the early laws.<sup>13</sup> Professor Charles Judd of the University of Chicago wrote in 1918, "The records of school operations in the Northern states show that compulsory education was not really enforced until in the early 80's and later."<sup>14</sup> Lleras-Muney (2002) references the literature suggesting that pre-1915 laws were not effective, but finds that the laws were effective over the period 1915-1939. Figure 2.3 shows that trends in enrollment, average daily attendance, and years of schooling (for children who were 14 in a given year). Over the

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<sup>11</sup>Individual who were foreign born and individuals who were Native American are excluded from the sample. For the former group, it is impossible to determine where they were educated. For the latter group, they may or may not have been affected by state compulsory attendance laws, depending on whether they lived on or off of a reservation. State laws only applied if they lived off the reservations. Both groups may be present in the administrative data, although their numbers are likely to have been small. In 1880, foreign-born children comprised approximately 4 percent of the school-age population, and this dropped to 3 percent by 1920. Native Americans comprised around 0.2 percent of the school-age population in both years.

<sup>12</sup>Year of birth is calculated as 1940-age-1, because the census was taken in April and most individuals had not yet had their birthday.

<sup>13</sup>See Stambler (1968) and Tyack et al. (1987).

<sup>14</sup>Judd (1918, 38).

36-year period, the reported number of years of schooling rose by nearly two years.

Individuals were matched to the laws based on the laws in place at age 14, the most common age limit in the attendance and labor laws. (For the administrative data, we calculate the proportion of children ages 5-17 required to attend school according to the laws in place in each year and state.) A child was counted as born under a birth registration law if their year of birth was greater than or equal to the date of the first birth registration law in their state of birth. For the Rosenwald schools, we calculate the number of Rosenwald schools per 100,000 children in each year.<sup>15</sup>

## 2.4 Identification

To examine the effects of laws on educational outcomes, we estimate the following equation:

$$y_{isc} = \alpha_0 + \alpha_1 Law_{sc} + \beta_1 state_s + \beta_2 region \times cohort_{sc} + \beta_3 X_i + \epsilon_{st}$$

where  $y$  is the outcome of interest,  $i$  is individual,  $s$  is state, and  $c$  is cohort. For retrospective outcomes such as highest grade completed, cohort is birth cohort. For contemporaneous outcomes such as enrollment and attendance, cohort is year.  $Law$  is a vector of the compulsory attendance years,<sup>16</sup> continuation schooling years,<sup>17</sup> a dummy for the presence of a child labor law, a dummy for whether the child was born with a birth registration law in place, and the number of Rosenwald schools per 100,000 children. Each specification includes state fixed effects and region-cohort fixed effects. Some specifications include  $X_i$ , a vector individual of demographic characteristics: gender, race, and whether at least one parent was foreign-born. All estimates have standard errors are clustered at the state-cohort level.

The effects of laws are identified based on variation within state over time. Region-cohort fixed effects are included, so the counterfactual assumption is

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<sup>15</sup>The base population was calculated similar to that in the administrative data, using the total 5-17 year old population in the 1920 and 1930 census.

<sup>16</sup>The lowest school exit age according to dropout and work-permit exemptions minus the school entry age.

<sup>17</sup>The number of years of required schooling beyond that in the compulsory attendance laws, taking exemptions into account.

that the changes in state educational outcomes would have been the same as other states in the same region. This is the specification used in Lleras-Muney (2002) and in a recent paper by Stephens and Yang (2014) that examines more recent educational outcomes. It is also very similar to the specification used in Goldin and Katz (2011).

Contemporaneous and cumulative outcomes are different, and so the effects of the introduction of laws need not be the same. For example, a compulsory attendance law might show gains in enrollment, but not years of schooling (highest grade attended) if students who would later enroll enrolled earlier but ended up in the same final grade. If enrollment was already quite high, a law might not have any effect on enrollment or attendance, but increase years of schooling. Similarly a law might increase attendance among those enrolled, but have no effect either on enrollment or on years of schooling. A continuation schooling law, because it targeted older ages, might have little contemporaneous effects, particularly if attendance and enrollment were rising for younger ages.

## 2.5 Effects of Laws on Educational Outcomes

Table 2.3 presents the effects of compulsory attendance and related laws. Columns 1 and 2 show the effect of compulsory attendance, continuation schooling, and the Rosenwald schools in the census data (the laws that directly affected school attendance). Columns 3 and 4 show the effect in the administrative data. Columns 5, 6, and 7 are similar but include the child labor and birth registration laws (that indirectly affected school attendance). The final two columns are for a restricted sample (working, non-farm men with positive wages), foreshadowing the later IV estimates. All columns show positive and significant effects from compulsory attendance laws. Continuation schooling is positive and significant in the census data, but insignificant in the administrative data. The Rosenwald schools are consistently positive and significant in the census data, except in the restricted sample when females are omitted. The child labor laws are generally insignificant, or marginally significant and negative. The birth registration laws have a positive and significant effect except in the administrative enrollment data.

The results for compulsory attendance generally accord with those Lleras-Muney (2002) found for the later period. The results for the other laws generally accord with those found in the literature: continuation schooling

is significant, as in Lleras-Muney (2002). The child labor laws are generally insignificant, as found by Moehling (1999). The birth registration laws are positive and significant, as in Fagernäs (2014), and the Rosenwald schools have positive and significant effects, following Carruthers and Wannamaker (2013).

Table 2.4 investigates the effects of years of required attendance on grade completion. We are particularly interested in the effects on grades 8 and below, which are the grades most likely to be affected by compulsory attendance. Generally, the laws appear to be binding on the appropriate groups. Compulsory attendance and Rosenwald schools are effective at 4th through 8th grades and insignificant after, consistent with the aim of increasing primary school enrollment. In contrast, continuation schooling is positive and significant only at 7th through 10th grades, consistent with the aim of increased attendance for older working children. The child labor laws are negative and significant at the end ages of primary school: 7th and 8th grades. In this model, the negative effect appears to stem from children entering the labor force rather than finish the last years of primary school. The birth registration laws have large positive and significant effects at 7th through 12th grades, suggesting they had some binding effect on older children seeking employment.

Table 2.5 shows the effects of the laws on years of schooling for four groups: white males, white females, black males and black females. The compulsory attendance laws are not significant for any group individually, though each coefficient is positive. The continuation schooling laws are significant for white males—there was little pressure for black children to reach anything beyond primary school. The birth registration laws are significant for all groups except black females, suggesting the application of the birth registration process across genders and races. The child labor law is negative for both white and black males, suggesting passage in times of tight labor markets when opportunities existed for male employment outside of school. In general, the gender-specific results show that the laws were more binding on males, who would have had greater employment opportunities outside the home. Interestingly, the effects for Rosenwald schools are only significant for whites, but this may be due in part to a small sample size for blacks in 1940.

Table 2.6 breaks the results out by region and race, examining whites in the Northeast, Midwest, and West, and blacks and whites in the South in separate regressions. In the Northeast, where attendance laws had been established in most states before the sample period, both continuation school,



Table 2.3: Effect of Laws on Years of Schooling, Enrollment, and Attendance, 1895-1926

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sample	Yrs. Sch. Full	Yrs. Sch.	Attend	Enroll	Yrs. Sch.	Attend	Enroll	Yrs. Sch. Restricted	Yrs. Sch.
Comp. Att. Yrs.	0.013** (0.005)	0.012** (0.005)	0.051*** (0.017)	0.062*** (0.020)	0.013** (0.005)	0.049*** (0.017)	0.063*** (0.020)	0.022** (0.011)	0.023** (0.011)
Cont. Sch. Yrs.	0.017** (0.007)	0.016** (0.007)	-0.029 (0.021)	0.015 (0.022)	0.019*** (0.007)	-0.015 (0.020)	0.013 (0.022)	0.025** (0.012)	0.030** (0.013)
Child Labor Law					-0.057* (0.030)	0.007 (0.006)	-0.003 (0.007)		-0.096 (0.064)
Birth Registration					0.062*** (0.013**)	0.013** (0.005)	-0.001 (0.005)		0.095** (0.040)
Rosenwald	0.007*** (0.002)	0.007*** (0.002)	-0.000 (0.000)	0.001* (0.000)	0.007*** (0.002)	-0.000 (0.000)	0.001 (0.000)	0.004 (0.003)	0.004 (0.003)
Covariates		Y			Y			Y	Y
Observations	476,344	476,344	752	752	476,344	752	752	107,194	107,194
R-squared	0.126	0.171	0.927	0.905	0.171	0.928	0.905	0.147	0.147

*Notes:* Years of school are from the 1940 census. Attendance and enrollment are from state administrative data. Administrative data is for years 1895-1926, and census data is for individuals who were age 14 between 1895 and 1926. The restricted sample is limited to working men, and omits farm residents, men who worked less than 40 weeks, and the self-employed. Individuals are matched to laws in place at age 14: "Comp. Att. Yrs." are the years of required attendance according to the compulsory attendance law, using the lower of the work-permit age for child labor and the dropout age. "Cont. Sch. Yrs." are the years of schooling beyond those in "Comp. Att. Yrs." required by the continuation schooling laws. "Child Labor" is a dummy variable for the presence of a child labor law limiting work in factories or manufacturing. "Birth Registration" is a dummy variable for the presence of a birth registration law when the child was born. "Rosenwald" is the number of Rosenwald schools per 100,000 children. Standard errors are clustered by state and year, and regressions are population weighted. Covariates are race, gender, and parents' nativity. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 2.4: Effect of Laws on Grade Completion, 1895-1926

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	Yrs. Sch. 4+	Yrs. Sch. 5+	Yrs. Sch. 6+	Yrs. Sch. 7+	Yrs. Sch. 8+	Yrs. Sch. 9+	Yrs. Sch. 10+	Yrs. Sch. 11+	Yrs. Sch. 12+
Grade Completion									
Comp. Att. Yrs.	0.000 (0.000)	0.001** (0.001)	0.002*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Cont. Sch. Yrs.	-0.001*** (0.000)	-0.001 (0.001)	-0.000 (0.001)	0.002* (0.001)	0.003*** (0.001)	0.005*** (0.002)	0.005*** (0.001)	0.001 (0.001)	0.001 (0.001)
Child Labor Law	0.002 (0.003)	0.001 (0.003)	-0.003 (0.003)	-0.007* (0.004)	-0.009** (0.004)	-0.004 (0.005)	-0.006 (0.005)	-0.003 (0.004)	-0.002 (0.004)
Birth Registration	-0.007*** (0.002)	-0.003 (0.002)	0.001 (0.003)	0.007** (0.003)	0.010*** (0.003)	0.020*** (0.004)	0.016*** (0.004)	0.016*** (0.004)	0.014*** (0.004)
Rosenwald	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	476,344	476,344	476,344	476,344	476,344	476,344	476,344	476,344	476,344
R-squared	0.121	0.165	0.195	0.200	0.196	0.103	0.092	0.073	0.063

*Notes:* Years of school are from the 1940 census, for individuals who were age 14 between 1890 and 1926. See notes to Table 2.3 for explanation of variables. Laws passed between 1890 and 1895 are controlled for with a separate set of unreported variables. Standard errors are clustered by state and year, and regressions are population weighted. Each regression includes state of birth, and region by year of birth fixed effects. Covariates are race, gender, and parents' nativity. Significance is denoted by \* \* \* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 2.5: Effect of Laws by Race and Gender, 1895-1926

	(1)	(2)	(3)	(4)
VARIABLES	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.
Sample	White Males	White Females	Black Males	Black Females
Comp. Att. Yrs.	0.008 (0.007)	0.007 (0.007)	0.019 (0.017)	0.007 (0.019)
Cont. Sch. Yrs.	0.034*** (0.010)	0.008 (0.009)	-0.022 (0.058)	-0.067 (0.059)
Child Labor Law	-0.079* (0.044)	0.000 (0.039)	-0.326*** (0.096)	-0.024 (0.087)
Birth Registration	0.062* (0.032)	0.048* (0.029)	0.335*** (0.080)	0.022 (0.097)
Rosenwald	0.006** (0.003)	0.012*** (0.002)	-0.001 (0.004)	0.004 (0.004)
Observations	212,620	213,437	24,377	25,910
R-squared	0.082	0.077	0.122	0.136

*Notes:* Notes: For children age 14 between 1895 and 1926. Years of school are from the 1940 census. See notes to Table 2.3 for an explanation of the variables. Standard errors are clustered by state and year of birth, and regressions are population weighted. Each regression includes for state and year of birth by region fixed effects. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 2.6: Effect of Laws by Region, 1895-1926

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.
<i>Region</i>	<i>Northeast</i>	<i>Midwest</i>	<i>South</i>	<i>South</i>	<i>West</i>
Race	White	White	White	Black	White
Comp. Att. Yrs.	-0.021 (0.016)	0.005 (0.007)	-0.011 (0.011)	0.019 (0.014)	0.064*** (0.023)
Cont. Sch. Yrs.	0.082*** (0.015)	0.005 (0.008)	-0.029 (0.056)	-0.170* (0.096)	0.036 (0.029)
Child Labor Law	0.316*** (0.102)	-0.102** (0.048)	-0.069 (0.052)	-0.149* (0.080)	-0.050 (0.101)
Birth Registration	0.076* (0.040)	0.132*** (0.032)	-0.027 (0.064)	0.210*** (0.061)	-0.183** (0.082)
Rosenwald			0.008*** (0.002)	0.001 (0.003)	
Observations	125,538	179,719	92,734	42,876	28,066
R-squared	0.042	0.079	0.041	0.072	0.123

*Notes:* For children age 14 between 1895 and 1926. Years of school are from the 1940 census. See notes to Table 2.3 for explanations of variables. Standard errors are clustered by state and year of birth, and regressions are population weighted. Each regression controls for state and year of birth. Covariates are nativity and gender. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

child labor laws, and birth registration laws had positive and significant effects on years of schooling. In the Midwest, only birth registration had positive and significant effects. For whites in the South, only the Rosenwald schools had positive and significant effects. For blacks in the South, only birth registration had a positive effect. In the West, compulsory attendance has a large positive and significant effect that appears to be attributable to the passage of the laws at a time when the school system was expanding rapidly. Interestingly, birth registration in the West has a negative and significant coefficient, perhaps reflecting that many birth registration laws began affecting children in the west around the time of the first World War.

Table 2.7 is a robustness check. The first column repeats column 3 from Table 2.3. In column 2, the analysis is extended to include laws back to 1890, showing similar results when including the older cohorts. Following Lleras-Muney (2002), in column 3 attention is restricted to individuals whose

state of birth and state of residents are the same. With this subsample, we are more certain that the individual was subject to compulsory attendance laws. For movers, if they moved before or during school, they were subject to another state's laws. The effects for non-movers are quite similar to the full sample. In column 4, the analysis is replicated for the 1950 Census. By 1950 the 1940 sample is 10 years older, and some individuals have died. The death of older individuals is likely to attenuate effects for the 1895-1914 period. The coefficients are very similar to those from the 1940 census, but only compulsory attendance is significant.

## 2.6 Endogeneity

A significant concern in the literature is that laws are being passed and educational outcomes are rising, but the laws are not causing educational outcomes to rise. This is central to Landes and Solmon's (1972) critique and has been investigated by other authors, notably Lleras-Muney (2002). Our estimation approach is designed to address this endogeneity by including both state fixed effects and region-cohort effects, so changes within state over time are identifying effects and states are being compared to other states in their region. To further allay concerns, Table 2.8 uses placebo tests to examine endogeneity. If the laws reflected increases in compulsory attendance pre-passage, then treating the laws as passed five or ten years prior should yield positive coefficients. In column 2, we treat the laws as passed five years prior to their actual date. The results are each lower in size or significance, although compulsory attendance remains marginally significant at the 5-year lead level. The Rosenwald coefficient remains similar to that in column 1, perhaps reflecting the growth of Southern education systems in the years before Rosenwald schools were built. Column 3 extends this analysis to ten years prior to the actual passage dates. In this column, every variable except the Rosenwald schools is insignificant, and the coefficient for Rosenwald schools drops in half. In general, the laws do not appear to have been passed in response to immediately rising educational attainment.

Qualitative evidence supports the findings in this section. Although much of the historical evidence is mixed, local authorities in many of the post-1895 states reported positive effects from the laws. Kentucky passed a law in 1896. The 1897 school report remarked "this largely increased enrollment and attendance . . . were undoubtedly due, in a large measure, to the . . .

Table 2.7: Robustness Checks

	(1)	(2)	(3)	(4)
<b>VARIABLES</b>	<b>Yrs. Sch.</b>	<b>Yrs. Sch.</b>	<b>Yrs. Sch.</b>	<b>Yrs. Sch.</b>
<i>Sample</i>	<i>1940 Full Sample</i>	<i>1940 Full Sample</i>	<i>1940 Non-Movers</i>	<i>1950 Census</i>
<i>Years</i>	1895-1926	1890-1926	1895-1926	1895-1926
Comp. Att. Yrs.	0.013*** (0.005)	0.011** (0.004)	0.015** (0.006)	0.020* (0.010)
Cont. Sch. Yrs.	0.019*** (0.007)	0.019*** (0.007)	0.016* (0.009)	0.019 (0.016)
Child Labor Law	-0.057* (0.030)	-0.056** (0.027)	-0.087** (0.035)	-0.070 (0.060)
Birth Registration	0.062*** (0.023)	0.069*** (0.021)	0.058** (0.026)	0.060 (0.051)
Rosenwald	0.007*** (0.002)	0.007*** (0.002)	0.006** (0.003)	0.003 (0.005)
Observations	476,344	513,314	327,143	132,372
R-squared	0.171	0.174	0.191	0.160

*Notes:* Dependent variable is years of school from the 1940 / 1950 census. Census data (for both samples) are for individuals who were age 14 between 1895 and 1926. “Non-movers” resided in their state of birth in 1940. See notes to Table 2.3 for explanations of variables. Standard errors are clustered by state and year of birth, and regressions are population weighted. Covariates are race, gender, and parents’ nativity. Each regression includes state of birth, and region by year of birth fixed effects. The 1950 census asked only sample-line individuals about highest grade attainment, reducing the available sample size. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 2.8: Placebo Tests

	(1)	(2)	(3)
VARIABLES	Yrs. Sch.	Yrs. Sch.	Yrs. Sch.
<i>Lead</i>	<i>0 Years</i>	<i>5 Years</i>	<i>10 Years</i>
Comp. Att. Yrs.	0.013** (0.005)	0.012* (0.007)	0.015 (0.010)
Cont. Sch. Yrs.	0.019*** (0.007)	0.007 (0.008)	0.007 (0.009)
Child Labor Law	-0.057* (0.030)	0.006 (0.043)	0.089 (0.072)
Birth Registration	0.062*** (0.023)	0.039* (0.023)	-0.010 (0.021)
Rosenwald	0.007*** (0.002)	0.006*** (0.002)	0.003*** (0.001)
Observations	476,344	476,344	476,344
R-squared	0.171	0.171	0.171

*Notes:* Column 1 is identical to column 5 in Table 2.3. Columns 2 and 3 treat each law as passed x years prior, with dummies (not shown) controlling for the laws use in column 1. Dependent variable is years of school from the 1940 census. Census data are for individuals who were age 14 between 1895 and 1926. Standard errors are clustered by state and year, and regressions are population weighted. Each regression includes state of birth, and region by year of birth fixed effects. Covariates are race, gender, and parents' nativity. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Compulsory Law.”<sup>18</sup> Indiana passed a law in 1897. The law was not notably successful in the rural districts, but Indianapolis saw increases. The laws “have succeeded in placing many children in the Indianapolis schools who probably would otherwise not have been there . . . .”<sup>19</sup> Missouri passed its first attendance law in 1905, and the law “increase[ed] the school enrollment, particularly in rural schools.”<sup>20</sup> In North Carolina, “[d]uring the first year of the operation of this compulsory attendance law, the attendance upon the public schools of the state was increased . . . mainly attributable to the compulsory attendance law.”<sup>21</sup>

## 2.7 Returns to Education

Returns to education are of broad interest to economists. Table 2.9 summarizes the results on returns to education from a number of papers. The papers vary in their time periods, specifications, and whether they find an effect. Our paper follows the schooling literature and Stephens and Yang (2014) by including region-cohort fixed effects.

We use the laws as instruments for years of schooling to measure returns to education for working men ages 27-54 in 1940. Because this is a shorter time period than our previous analysis, we replicate our analysis of the effects of laws on years of schooling for the entire United States, and for the North where the laws were the most effective. The dependent variable is log of weekly wages. The weekly wage is the ratio of annual wage and salary income to annual weeks worked, both of which are measured for the prior calendar year (1939). Annual wages are censored at the 98th percentile, and values above the 98th percentile are replaced with 1.5 times 98th percentile value. Weeks worked in the 1940 Census are reported as “equivalent full-time weeks.”<sup>22</sup>

Table 2.10 returns to the issue raised earlier—the 1940 Census asked

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<sup>18</sup>Biennial Report of the Superintendent of Public Instruction of Kentucky, for the Two Years Beginning July 1, 1895 and ending June 30, 1897, p. 17.

<sup>19</sup>Indiana Department of Public Instruction (1901, 508).

<sup>20</sup>Report of the Commissioner of Education (1913, 219).

<sup>21</sup>Biennial Report of the Superintendent of Public Instruction of North Carolina (1914, 41).

<sup>22</sup>In order to report “equivalent full-time weeks,” respondents were asked to convert the weeks in which they worked less than full-time into full-time equivalents.



about wage but not self-employment income.<sup>23</sup> The first stage, OLS, and IV results are presented for the full sample of working men and for a subsample, including only non-farmer men who work 40 or more weeks per year. The IV and LIML estimates of returns to education are high for the full sample, around 0.18, and are closer to contemporary results for non-farmers who work 40 or more weeks per year, around 0.13. For these estimates, the Findlay and Magnusson confidence intervals for the IV estimates exclude zero and the OLS estimates in the full sample, and exclude zero but include the OLS estimates in the restricted sample.<sup>24</sup>

## 2.8 Conclusion

This chapter contributes to the growing literature on the history of compulsory attendance, child labor laws, and related policies in the United States. Using the 1940 census along with state administrative data on enrollment and attendance, it shows that compulsory attendance laws between 1895 and 1926 were effective in many states. Continuation schooling and Rosenwald schools each contributed to the growth in educational attainment. Birth registration laws had positive effects, while child labor laws generally had insignificant or negative effects. The effects are robust when limited to individuals who did not move from their state of birth and use of the 1950 census. The effects differ by region, race, and gender. It also confirms what the prior literature has found: the laws passed after 1915 were increasingly effective in increasing enrollment and educational attainment, and that large returns to schooling existed in the early United States.

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<sup>23</sup>See Goldin (1999) and Goldin and Katz (2000) for further discussion of the 1940 Census.

<sup>24</sup>The first-stage F-statistics are low for each sample (2.82-4.59), so the results should be treated with some caution.

Table 2.9: Literature Review on Returns to Education

Paper	Identification	Data	Laws	Time period	Effects of laws
Angrist and Krueger 1991	IV time series	1970-1980 Censuses	Quarter of birth attendance	1920-1949 birth cohorts	Yes, IV larger than OLS
Staiger and Stock 1997	IV time series	1980 Census	Quarter of birth attendance	1930-1949 birth cohorts	Yes, IV larger than OLS
Goldin and Katz 2000	Cross sectional	1915 Iowa Census		1850-1897 birth cohorts	Smaller for primary school, larger for high school/college
Oreopoulos and Salvanes 2011	IV time series	1950-2000 Censuses, ACS 2001-2007	Attendance	1899-1982 birth cohorts	Yes, IV larger than OLS
Stephens and Yang 2014	IV time series State FE, Year FE, Region x year FE	1960-1980 Censuses	Attendance	1905-1954 birth cohorts	No, if controls for Region x Year FE are included
Clay, Lingwall, Stephens 2014	IV Time series State FE, Year FE, Region x year FE	1940 Census	Attendance, labor	1890-1912 birth cohorts	Yes, OLS in line with previous studies (Card 1999), IV larger than OLS

Table 2.10: IV Estimates of Returns to Schooling

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Years of School	Ln(Wage)	Ln(Wage)	Years of School	Ln(Wage)	Ln(Wage)
Comp. Att. Yrs.	0.014 (0.009)			0.019* (0.011)		
Cont. Sch. Yrs.	0.027** (0.011)			0.026** (0.013)		
Child Labor Law	-0.168*** (0.055)			-0.104 (0.070)		
Birth Registration	0.095*** (0.034)			0.097** (0.041)		
Rosenwald	0.003 (0.003)			0.005 (0.003)		
Yrs. Sch.		0.082*** (0.001)	0.177*** (0.046)		0.066*** (0.001)	0.127*** (0.047)
F-stat	4.59			2.82		
Observations	158,010	158,010	158,010	101,081	101,081	101,081
R-squared	0.163	0.250	0.111	0.146	0.284	0.190
LIML Coefficient			0.177*** (0.046)			0.136** (0.054)
FM LM-J 95% CI			[.095, .308]			[.033, .310]

Notes: For working men at age 14 between 1899 and 1926. The restricted sample omits farm residents, men who worked less than 40 weeks, and the self-employed. See Table 2.3 for explanation of variables. Standard errors are clustered by state and year of birth, and regressions are population weighted. Each regression includes state of birth, and region by year of birth fixed effects. Covariates are race and parents' nativity. The Findlay-Magnusson LM-J upper and lower bounds are for a 95% confidence interval. Significance is denoted by \* \* \* at the 1% level, \*\* at the 5% level, and \* at the 10% level.



## Chapter 3

# Compulsory Attendance and Intra-Family Resource Allocation: Evidence from the United States, 1880-1920

### 3.1 Introduction

Do families strategically allocate schooling among children? Understanding how families distribute schooling and work among children aids in understanding the consequences of legislation. For compulsory schooling and child labor laws to be effective, and to know whether such mandates should exist at all, policymakers must make assumptions about the causes and consequences of school attendance and child labor. If policymakers assume that “child labor in developing countries is nearly always a form of child abuse” (Edmonds 2004), and that compulsory attendance and child labor laws might shift economies toward more desirable equilibria (see Basu and Van 1998), then legislation appears justified. But, if parents use the labor of a child to advance the interests of the child’s siblings, policy interventions might backfire, as the ability of families to optimally allocate work and schooling among their children is reduced. This chapter exploits variation in state compulsory attendance age limits between 1880 and 1920 to examine the strategic allocation of work and schooling among children.

State education laws in the United States have long been of interest to

scholars, both from a historical perspective and as a laboratory for policy experiments. Economists have used variation in historical state policies affecting children to explore fertility decisions (Puerta 2009), the results of child labor laws (Moehling 1999), and the effects of compulsory attendance (Margo and Finegan 1996). One area of more recent attention is the use of variation in state laws to explore how the employment of children affects the labor market and schooling outcomes of their siblings. Manacorda (2006) compares households with varying numbers of children under compulsory attendance restrictions in 1920. He finds evidence of positive spillovers from the labor supply of children affecting the school attendance and employment of siblings.

This chapter contributes to the literature on household allocation of work and schooling by extending Manacorda's work. It considers not just the 1920 census, but every prior census year where compulsory attendance laws were plausibly effective. It adds analysis of continuation schooling laws. And, it extends the identification strategy to include changes in the laws over time.

Using difference-in-difference estimation across states and over time, this chapter first gives evidence that compulsory attendance and accompanying laws increased attendance and decreased child labor. Using self-reported attendance data from the census, this chapter shows that compulsory attendance laws increased the probability of attending school by up to 4% and decreased the probability of a child working by up to 5%. Administrative data confirms this result, showing that laws increase attendance by up to 3% and enrollment up to 5%. Using this variation in family schooling decisions induced by the law, the effect of compulsory attendance laws on the individual is then compared to the influence of the average number of children in the home affected by a law. An economic model of parental decision making predicts that compulsory schooling laws should change the cost and benefit of schooling for *all* children in the home. Using census data on household relationships, evidence is given that some increased attendance came at the cost of siblings' attendance. Specifically, as children came under compulsory attendance and child labor laws, the average number attending (working) in the family increased (decreased) by less than would be predicted by the individual effect of the law, showing that family allocation of schooling determined the ultimate impact of the law.

The next section presents a model of parental decision-making, gives an introduction to the laws and census data, and examines the direct effect of the laws. The following sections show the family spillover effects. The final

section concludes.

## 3.2 Model, Laws, and Data

### 3.2.1 A Model of Parental Decision-Making

A simple model of parental decision making, adapted from Edmonds (2007), illustrates the basic reasoning behind the analysis in the chapter. Consider a family of one parent with some exogenous income  $Y$  and utility over the family's standard of living and the quality of children.<sup>1</sup> For simplicity, fertility is exogenous.<sup>2</sup> The parent's utility function is represented with  $u(S, \overline{V}_K)$ , where  $S$  is the current standard of living, and  $\overline{V}_K = V_1 + \dots + V_K$  is the sum of the future welfare  $V_k$  of each of the  $K$  children. Each child's time constraint is represented by  $E_k + M_k + H_k = 1$ , where  $E_k$  is time spent on education of child  $k$ ,  $M_k$  is market work, and  $H_k$  is household work.

The child's future welfare is a function of education, given by  $V_k = R(E_k)$  with  $R' > 0$ ,  $R'' < 0$ . In other words, there are positive but diminishing returns to education. In the market each child can earn wage  $w_k$ , where the wage is increasing with the age of the child. Each child also costs the family  $p_k$  to support. The household consumes a good  $c$ , which must be greater than some subsistence level  $\underline{c}$  and faces a budget constraint net of all child income and costs

$$\underline{c} \leq c \leq Y + \sum_k w_k M_k - \sum_k p_k \quad (3.1)$$

The standard of living  $S$  is a function of consuming  $c$  and the sum of home production  $H$ ,  $S = F(c, \sum_k H_k)$ . The parent thus faces the following problem:

$$\max_{E_k, M_k, H_k, K} u\left(F\left(Y + \sum_k w_k M_k - \sum_k p_k, \sum_k H_k\right), \sum_k R(E_k)\right) \quad (3.2)$$

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<sup>1</sup>See also Lafourtune and Lee (2014) (proposing a model of household decisionmaking where parents finance education through the labor of older siblings).

<sup>2</sup>The number of children  $k$  could be incorporated into the model by considering two different periods of decision making. In period 1 parents decide on the number of children based on their expectations of future standards of living and costs of schooling. For example, in the first period, if all future children were expected to work, then the parent might be expected to have more children than a parent in later years when child labor declined and compulsory attendance laws made it increasingly costly to have children. Puerta (2009) discusses the effect of compulsory schooling on fertility in the United States.

subject to the constraint on each child’s time use and the budget constraint. If the parent places no value on the future welfare of the children then children will perform market work unless home production is more valuable.<sup>3</sup> More generally, and ignoring home production, a child will attend school instead of working if

$$\frac{\partial u}{\partial V} \frac{\partial R}{\partial E_k} \geq \frac{\partial u}{\partial S} \frac{\partial S}{\partial c} w_k \quad (3.3)$$

that is, if the marginal utility from the extra consumption brought by the child’s work is less than the marginal utility from their school attendance.

Since  $w_k$  is increasing with age, older children will be more likely to work. Assuming that only income effects exist, as any one child works family income rises and the marginal benefit of wage labor from other children decreases. Since policies targeting some children in the household change the marginal cost and benefit of schooling for all children, policies targeting a subset of the children indirectly affect their siblings. For example, consider the effect of a compulsory attendance law. If the attendance law moves  $w_k$  to zero for a child, then the child no longer works.<sup>4</sup> Family income decreases, and the marginal benefit of wage labor from siblings not constrained by a law increases. The probability of the siblings attending school declines.

### 3.2.2 State Compulsory Attendance and Supporting Laws

As discussed in the prior chapter, states attempted to regulate how children passed their time through compulsory attendance and child labor laws. These laws may have been passed for a variety of reasons. For example, Catholic immigrants from Europe needed education in public schools—assimilating foreign-born children into American Protestant culture. Compulsory attendance would remove children from problematic employment in factories (see Richardson 1980, Eisenberg 1988, and Lleras-Muney 2002 on the passage of compulsory schooling laws).

Compulsory attendance laws gave an entry age to be in school and a maximum age to leave school, with exceptions for extenuating circumstances

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<sup>3</sup>This model omits the possibility of immediate returns to education, that is, if a child would have immediately higher wages as a consequence of some school attendance then parents would have an additional reason to send them to school.

<sup>4</sup>This is a simplification, since many early compulsory schooling laws only required attendance for part of the year and allowed work during the remainder.



such as having a widowed mother. Child labor laws, as used here, represent the minimum age for work in factories or manufacturing establishments. Dangerous or immoral industries were separately regulated, and blanket bans on child employment (across *all* industries) were rare during this period. As discussed in the prior chapter, data on age limits were gathered from individual states session laws between 1850 and 1926, giving coverage during each census year used in this chapter. The Appendix details the source for each change in a compulsory attendance and child labor age limit during this period.

The compulsory attendance laws differed widely between states. For example, New Jersey required 20 weeks of attendance from ages 7 to 12 in 1900, while Kentucky required 8 weeks of attendance from ages 7 to 14. In many states, compulsory attendance laws contained an exemption that allowed working children to leave school earlier than others. This lower “work-permit” age is believed to be the more relevant age limit (see Goldin and Katz 2011). The Appendix contains details on the calculation of the lowest age at which a child could leave school, and Table 3.1 shows the distribution of this age in 1880, 1900, and 1920 (coded as *minage* in the Appendix). Each cell shows the number of states with the given age. The modal age of the state laws in most years is 14, the age pushed by the National Child Labor Committee as a standard age at which children should be allowed to work. Continuation schooling laws gave an increased age limit applicable to some children. To differentiate between the continuation age limit and the compulsory attendance age limit, a child was counted as under the continuation age only if they were also at or above the compulsory attendance age.

The child labor laws also differed between states. Table 3.1 shows the distribution of the minimum age for child labor (*factorylow* as detailed in the Appendix), calculated as the lower of the minimum age for work in factories and manufacturing and the (sometimes contradictory) age limit for child employment specified in the attendance laws. Again, 14 is the modal age, though age-12 limits were common as late as 1910.

The final legal variable used in the regressions is whether a child was born with a birth registration law in place. The date that birth registration was established in each state is drawn from Fagernäs (2014). Birth registration laws may have helped with enforcement of compulsory attendance, continuation school, or child labor laws by giving documentary evidence of a child’s age.

Table 3.1: The Minimum Age for Compulsory Attendance, Continuation School, and Child Labor

Panel A: Compulsory Attendance Laws

Age	1880	1900	1910	1920
0	33	16	11	0
11	0	0	1	0
12	0	1	2	1
13	1	6	0	4
14	13	22	26	36
15	1	2	6	5
16	1	2	3	3
Total	49	49	49	49

Panel B: Continuation School

Age	1880	1900	1910	1920
0	49	49	47	28
15	0	0	0	4
16	0	0	2	9
17	0	0	0	2
18	0	0	0	6
Total	49	49	49	49

Panel C: Child Labor Laws

Age	1880	1900	1910	1920
0	43	26	6	2
10	2	2	0	0
12	2	7	9	1
13	1	2	0	1
14	1	11	29	36
15	0	1	4	7
16	0	0	1	2
Total	49	49	49	49

*Notes:* Author's calculation based on the interaction between child labor and compulsory attendance laws, including exemptions based on years of attendance. See Appendix for sources of state law and details on calculation.

The historical record on the effect of compulsory attendance laws is mixed. In some states, the laws were not well-enforced. For example, the 1890 Report of the Commissioner of Education of the United States provides summaries of compulsory attendance in many states up to that point. The compulsory attendance law was a “dead letter” in California, Kansas, Montana, Nevada, New Hampshire, Washington, Washington DC, and Wyoming. This view dominates the perspective of traditional historians (see Stambler 1968 and Tyack 1987).

In other states, schooling laws appear to have been taken seriously. In Colorado, “Compulsory education [was] much more effectively enforced” by 1896 (CRE 1898). The Connecticut Board of Education reported success in using truant officers to bring Italian immigrants to school (Connecticut 1894). In Kentucky, the 1895 school report remarked that “this largely increased enrollment and attendance . . . were undoubtedly due, in a large measure, to the . . . Compulsory Law” (Kentucky 1897). In Pennsylvania a “strenuous effort” was made to enforce compulsory schooling on the children of immigrants (Pennsylvania 1906). In Utah, pressure from the federal government helped make schools both free and compulsory in 1890, and the Governor reported in 1892 that, “In Salt Lake City the number of pupils seeking admission is beyond the capacity of the school buildings, and the trustees are compelled to rent private buildings” (Secretary of the Interior 1892, 393).

### **3.2.3 Census Data**

Data on the schooling and employment of children come from the IPUMS public use samples of the United States Census (Ruggles et al., 2010). Each of the census from 1870 to 1920 contained a simple question about school attendance to the effect of “Did this person attend school?” The 1900 census was an exception to this rule, recording months of school attendance. For comparability between years, school attendance is measured in 1900 as an individual being listed with positive months of attendance and school attendance in other years as a positive response to the school question. The timeframe considered in the response to the school question differed by year, from the previous four months to the previous twelve months. Families were also asked about the employment of their children (for children over 9 in 1880 and 1900). Table 3.2 summarizes the data used for each census year. For the years used in this chapter, the samples contain information on between 1 in

Table 3.2: Census Data on Child Labor and Schooling

Year	Sample	Enumeration	School time period	Occupation
1870	1 in 100	June	June to June	All children
1880	1 in 10	June	June to June	Children over 9
1900	1 in 20	June	June to June	Children over 9
1910	1 in 100	April	September to April	All children
1920	1 in 100	January	September to January	All children

*Notes:* Census data are from the IPUMS samples of the United States census (Ruggles *et al.* 2010).

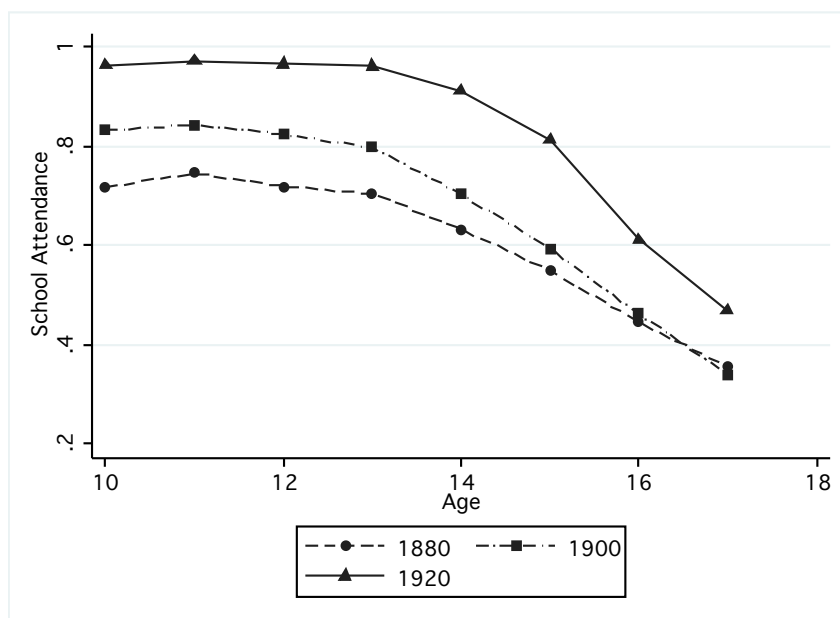
10 and 1 in 100 children in the United States.

To give a brief description of attendance across the country over this period, Figure 3.1 uses census data to show attendance rates between 1880 and 1920. In each census year shown, attendance levels remain similar for ages 10 through 12, and then decrease at each age. By age 17, only around 40% of children attend school even once a year. Between 1880 and 1900 attendance increases for children between the ages of 10 and 14 and remains similar for other ages. Attendance (at least as measured by the census) at all ages increases dramatically between 1900 and 1920.

The census also asked about employment, recording occupations for all children in some years and those of a certain age in others. Figure 3.2 shows employment rates by age. Employment increases almost linearly with age between 1880 and 1900, reaching around 45% employment by age 17. By 1920, employment rates remain low until around age 13 before increasing sharply, reaching levels similar to 1880 by age 17.

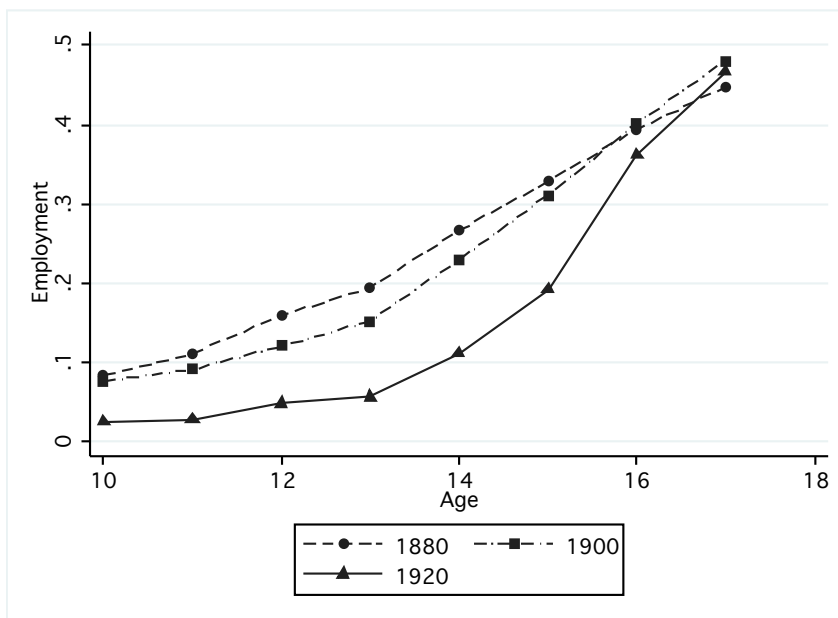
The census data are not without problems. Moehling (2003) notes the emphasis of the occupation question changed between census years and that in 1910 children were more particularly questioned about occupation, introducing possible differences between years due to changes in wording or enumerator instructions. Margo (1990) finds evidence of an undercount of black school attendance in 1900 based on the wording of the attendance question. Finally, the school attendance question is itself unsatisfying—giving no information about length of attendance, type of school, or grade.

Figure 3.1: School Attendance by Age, 1880-1920



Source: IPUMS public use samples of the 1880, 1900, and 1920 census.

Figure 3.2: Employment by Age, 1880-1920



Source: IPUMS public use samples of the 1880, 1900, and 1920 census.

### 3.2.4 Were Compulsory Attendance Laws and Supporting Laws Effective?

The prior chapter showed the effectiveness of the introduction of attendance laws using administrative data and retrospective data from the 1940 census. This section uses difference-in-difference estimation on contemporaneous census data to examine whether compulsory attendance laws were effective. The regressions compare the change in attendance rates of children of the same age across states that passed or changed laws to those that did not. The specification is:

$$y_{asti} = \beta_0 + \beta_1 Law_{ast} + state_s \times age_a + year_t \times age_a + year_t \times region_r + X_{asti} + u_{asti} \quad (3.4)$$

where  $y_{asti}$  is the outcome, (either school attendance or work) of a child  $i$  of age  $a$  in state  $s$ , at time  $t$ .  $Law_{ast}$  indicates whether a compulsory attendance law affected children of that age, in each state and year. Region by year fixed effects are included to account for differences in educational trends in different areas of the country—controlling for, as an example, the delayed trajectory of public education in the South. State and year fixed effects are included, each interacted with age, so that the coefficient on  $Law$  is the pooling of a difference-in-difference estimate on each age and region. The estimate compares the change in attendance for children of age  $a$  and region  $r$  in states that passed laws affecting them with the change in rates for children of age  $a$  and region  $r$  in states that did not pass laws. The year fixed effects serves as the counterfactual change in attendance, what the treated children of age  $a$  would have experienced in the absence of the change in a compulsory attendance age limit.

Finally,  $X$  contains a vector of covariates that might affect the relationship between attendance laws and school attendance. Covariates include whether the child was foreign born or had foreign born parents, was black, lived in an urban area, lived on a farm, the number of siblings, the age of the household head, the occupational class of the household head, and the proportion of children in the home in each age by sex cell. Standard errors are clustered by state. These regressions are for children ages 10-17, living with both parents, both to parallel the later family level regressions, and because poverty exemptions in schooling laws allowed children of widows out of school.

Table 3.3: Effect of Laws in Contemporaneous Census Data, 1880-1920

Panel A: Compulsory Attendance Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome Years	School 1880-1900	School 1900-1910	School 1910-1920	Work 1880-1900	Work 1900-1910	Work 1910-1920
Comp. Att. Yrs.	0.031*** (0.011)	0.022** (0.010)	0.016* (0.008)	-0.011** (0.005)	-0.014** (0.007)	-0.015 (0.010)
Observations	1,129,144	556,297	225,161	1,129,144	556,297	225,161
R-squared	0.207	0.252	0.261	0.272	0.295	0.296

Panel B: All Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome Years	School 1880-1900	School 1900-1910	School 1910-1920	Work 1880-1900	Work 1900-1910	Work 1910-1920
Comp. Att. Yrs.	0.033*** (0.009)	0.027** (0.012)	0.015* (0.008)	-0.009 (0.006)	-0.022*** (0.008)	-0.011 (0.008)
Cont. Sch. Yrs.		0.037 (0.029)	0.020** (0.009)		-0.053** (0.022)	-0.026*** (0.009)
Child Labor Law	0.017 (0.012)	0.009 (0.008)	0.008 (0.007)	-0.012 (0.007)	-0.008 (0.011)	-0.028 (0.017)
Birth Registration	0.016 (0.014)	0.024 (0.024)	-0.015 (0.012)	0.008 (0.009)	-0.009 (0.015)	0.003 (0.009)
Observations	1,129,144	556,297	225,161	1,129,144	556,297	225,161
R-squared	0.207	0.252	0.261	0.272	0.295	0.296

*Notes:* For children ages 10-17. See Table 2.3 for explanation of variables. Standard errors are clustered by state. Covariates include nativity, urban status, sex, whether the child was black, proportion of children in each age by sex cell within the family, and age and occupational category of the household head. Each regression has state by age, year by region, and year by age fixed effects. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.



Table 3.3 shows the results of this regression for pairs of census years between 1880 and 1920. The first three columns show the results for school attendance, and the last three columns show the results for child labor. Based on this specification, the attendance laws in Panel A had a positive and significant effect on attendance in each time period, with a larger effect in the earlier decades. The effect of the attendance laws on labor is more ambiguous—the coefficients are each negative but only pre-1920 regressions coefficients are significant. This difference between the schooling and work results reflects that child time use was not dichotomous between school and work. For example, being employed did not mean a child could not meet the loose definition of school attendance used in the census. Panel B includes the full specification of laws: compulsory attendance, continuation school, child labor, and birth registration. The compulsory attendance laws retain their significance for school attendance in each year, but are now only significant for work between 1910 and 1920. Continuation school has a positive and significant effect on school attendance between 1910 and 1920, and a significant negative effect on employment between 1900 and 1920. Child labor laws have a consistently positive but insignificant effect on school attendance, and have a consistently negative and insignificant effect on employment. The birth registration laws show mixed signs and are insignificant.<sup>5</sup>

To confirm the results from the self-reported census data, Table 3.4 shows a similar specification to that in Table 3.3 but using state administrative data (and focusing on the introduction of the laws). The attendance laws have a significant impact on both enrollment and attendance between 1900 and 1910, and have positive but insignificant coefficients in the other years. Continuation school is again a significant predictor of school attendance between 1910 and 1920. The child labor laws have either no significant effect, or a negative effect, on either administrative outcome in any time period. The birth certification results are mixed, showing a negative effect on attendance and a positive effect on enrollment. Given the insignificant, or ambiguity in the effects of the birth registration and child labor laws, the remainder of this chapter shows results for compulsory attendance years and continuation schooling laws.

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<sup>5</sup>In contrast, the birth registration laws had positive and significant coefficients in the previous chapter. This may be due in part to the restricted ages in this table— Table 2.4 showed a significant positive effect from birth registration laws out till 12th grade, which may not be captured by the 10-17 year olds in this sample. See also Table 3.4 (positive and significant effects on enrollment).

Table 3.4: Effect of Laws in Administrative Data, 1880-1920

## Panel A: Compulsory Attendance Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome	Attendance	Attendance	Attendance	Enrollment	Enrollment	Enrollment
Years	1880-1900	1900-1910	1910-1920	1880-1900	1900-1910	1910-1920
Comp. Att.	0.008 (0.009)	0.029** (0.014)	0.024 (0.018)	0.007 (0.009)	0.049* (0.024)	0.028 (0.020)
Observations	281	282	282	281	282	282
R-squared	0.930	0.920	0.930	0.943	0.937	0.921

## Panel B: All Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome	Attendance	Attendance	Attendance	Enrollment	Enrollment	Enrollment
Years	1880-1900	1900-1910	1910-1920	1880-1900	1900-1910	1910-1920
Comp. Att.	0.008 (0.011)	0.030** (0.013)	0.024 (0.018)	0.003 (0.011)	0.049** (0.024)	0.028 (0.020)
Cont. Sch.		0.002 (0.009)	0.013** (0.006)		-0.006 (0.005)	-0.006 (0.007)
Child Labor Law	-0.015 (0.019)	0.001 (0.011)	0.002 (0.012)	-0.010 (0.015)	0.006 (0.012)	-0.053** (0.023)
Birth Registration	-0.003 (0.008)	0.031 (0.038)	0.016 (0.015)	-0.019* (0.011)	0.017* (0.009)	0.025** (0.011)
Observations	281	282	282	281	282	282
R-squared	0.931	0.921	0.932	0.945	0.937	0.924

*Notes:* For children ages 5-17. Laws used are dummies for the presence of each type of law. Standard errors are clustered by state. Each regression has state and region by year fixed effects. Regressions are population weighted. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

### 3.3 Compulsory Attendance and the Family

Since compulsory attendance laws appear to have influenced the school attendance of children, they provide exogenous variation in school attendance within families. This can be used to study how families allocate schooling among children. Compulsory attendance laws in families play two roles. First, for a child under the age limit there is a direct effect of compulsion, increasing the probability of school attendance. Second, there is an indirect effect on the other siblings not under the age limit. Since full-time school attendance restricts the labor of some children, for the family to achieve the same level of income other siblings might need to work, decreasing their attendance. In terms of the economic model presented earlier, compulsory schooling laws change the marginal cost and benefit of schooling for all children in the family, not only the children of ages targeted by the law.

To assess this possibility, this chapter follows and extends Manacorda (2006). School attendance is regressed on both individual school compulsion and the proportion of children in the home under a compulsory schooling law. In particular:

$$y_{asti} = \beta_0 + \beta_1 Law_{ast} + \beta_2 \overline{Law}_{sth} + state_s \times age_a + year_t \times age_a + year_t \times region_r X_{asti} + u_{asti} \quad (3.5)$$

where  $y_{asti}$  indicates whether child  $i$  of a household of age  $a$  in state  $s$  is at school,  $Law_{ast}$  is the presence of a law (or vector of laws) affecting children of age  $a$ , and  $\overline{Law}_{sth}$  is the proportion of children in household  $h$  under a compulsory attendance law (or vector of compulsory attendance and continuation schooling). The coefficient  $\beta_1$  is a measure of the direct impact of the law on those targeted by the law. The effect of the laws is identified as a difference-in-difference estimate within region and age, as in the prior section. Then,  $\beta_2$  is a measure of the indirect impact of the law on family members. In  $X$ , the specification is the same as before, controlling for household demographics, family structure, and for the proportion of 10-17 year old children in the home in each age by sex cell. This last controls for the effect of child age structure on family decision making.

The coefficient  $\beta_2$  on  $\overline{Law}$  tests for indirect effects of the laws on family members, giving evidence of how families allocated schooling in response to a law. The coefficient is identified from the interaction of the age structure of the children in the home with compulsory attendance laws. After controlling

for the direct effect of the law on individuals,  $\overline{Law}_{sth}$  asks what the effect of average compulsion was in the family. A negative coefficient (for school attendance), or a positive coefficient (for employment) indicates that trade-offs occurred in the family, with the increased attendance of some children paid for by the decreased attendance of others.

To better understand the identification on  $\beta_2$ , consider a regression of average attendance on average compulsion within the family.

$$\overline{y}_{sth} = \delta_0 + \delta_1 \overline{Law}_{sth} + state_s \times age_a + year_t \times age_a + year_t \times region_r + X_{sthi} + u_{sti} \quad (3.6)$$

where  $\delta_1$  is an estimate for the effect of average within-family schooling restriction on average attendance rates. The effect of  $\overline{Law}$  on the individual becomes the difference  $\delta_1 - \beta_1 = \beta_2$ , the difference between the effect of a law across households and on the individual within households.<sup>6</sup> Manacorda (2006) attributes this difference between the individual and average effect of the law to positive spillovers in the labor supply of children in the home, with consequences for school attendance.

Panel A in Table 3.5 contains estimates of Equation 3.5 for children ages 10-17. The sample is restricted to those who lived with both parents, since different factors would have influenced the attendance of orphan children or the children of widows. The structure of the table parallels Table 3.3. Columns 1, 2, and 3 show the effect on the probability of school attendance, and columns 4, 5, and 6 show the effect on the probability of employment. For school attendance, the coefficients on  $\overline{Law}$  are negative and significant for all census year pairs, consistent with an economic model of the family with tradeoffs between the attendance of siblings. The effect of the laws and the corresponding effect of  $\overline{Law}$  are largest between 1880 and 1900 and decrease after, consistent with rising attendance rates giving less bite to the minimum dropout age. Similarly, the coefficient on employment is positive and significant between both 1880-1900 and 1900-1910, although the 1910-1920 coefficient is close to zero and insignificant. Across many households affected by compulsory schooling laws, this represents a large decrease in the number of children attending school, which came in spite of the larger numbers brought to school by the direct effect of the law.

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<sup>6</sup>One can also think of Equation 3.6 as the reduced-form equation of a two-stage least squares regression of individual school attendance on average school attendance in the family, using the proportion in the family under a law as an instrument for the proportion of children attending school.

Table 3.5: Intra-Family Effects of Laws, 1880-1920

## Panel A: Compulsory Attendance Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome	School	School	School	Work	Work	Work
Year	1880-1900	1900-1910	1910-1920	1880-1900	1900-1910	1910-1920
Law (CA)	0.064*** (0.010)	0.043*** (0.010)	0.030*** (0.011)	-0.033*** (0.007)	-0.029*** (0.009)	-0.016 (0.011)
$\overline{\text{Law}}$ (CA)	-0.048*** (0.009)	-0.034*** (0.010)	-0.029*** (0.010)	0.031*** (0.007)	0.024*** (0.007)	0.002 (0.010)
Observations	1,129,144	556,297	225,161	1,129,144	556,297	225,161
R-squared	0.207	0.252	0.261	0.272	0.295	0.296

## Panel B: All Laws

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome	School	School	School	Work	Work	Work
Year	1880-1900	1900-1910	1910-1920	1880-1900	1900-1910	1910-1920
Law (CA)	0.064*** (0.010)	0.050*** (0.012)	0.031*** (0.009)	-0.033*** (0.007)	-0.039*** (0.009)	-0.018** (0.008)
$\overline{\text{Law}}$ (CA)	-0.048*** (0.009)	-0.037*** (0.009)	-0.029*** (0.009)	0.031*** (0.007)	0.027*** (0.006)	0.002 (0.011)
Law (Cont)		0.056*** (0.020)	0.022*** (0.008)		-0.077*** (0.016)	-0.031*** (0.010)
$\overline{\text{Law}}$ (Cont)		-0.038** (0.015)	-0.004 (0.011)		0.043*** (0.010)	0.007 (0.008)
Observations	1,129,144	556,297	225,161	1,129,144	556,297	225,161
R-squared	0.207	0.252	0.261	0.272	0.296	0.296

*Notes:* For children ages 10-17. Standard errors are clustered by state. Covariates include nativity, urban status, whether the child was black, sex, proportion of children in each age by sex cell within the family, and age and occupational category of the household head. Each regression has state by age, year by region, and year by age fixed effects. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Panel B in Table 3.5 uses the compulsory attendance and continuation school, with the proportion in the family affected by the law calculated for each variable. Since no continuation schooling law existed by 1900, columns 1 and 4 are the same as in Panel A. The continuation schooling laws have significant spillover effects between 1900 and 1910, on both attendance and labor, as do the compulsory attendance laws. Between 1910 and 1920, both the continuation schooling and compulsory attendance laws have insignificant coefficients, with the exception of spillovers from school attendance under the attendance law.

### 3.4 Discussion

In a short piece in the 2006 *American Economic Review*, Manacorda proposed the basic methodology used in this chapter, pairing the laws from Goldin and Katz (2002) with the 1920 census. He finds evidence of family effects for child labor and school attendance using a cross-sectional difference-in-difference design, differencing across ages and states instead of comparing changes in states over time. The prior section showed evidence of similar family effects, using a differencing strategy exploiting changes over time to identify the effect of the laws. As additional evidence, and as a robustness check, Table 3.6 uses Manacorda's cross-sectional identification, extending it to additional census years before 1920. By using this stronger assumption about exogeneity (that age profiles across states differ only through the effect of an attendance law), Panel A shows large effects (up to 12%) from compulsory attendance on the probability of school attendance and employment in each year. Panel B shows the full vector of laws. Compulsory attendance remains significant in most years, but becomes insignificant with the introduction of continuation school in the model in 1910.

Table 3.7 shows the spillover effects from compulsory attendance alone, and then from the full set of laws. The coefficient on  $\overline{\text{Law}}$  for attendance in Panel A is negative and significant in each cross-section, confirming the existence of family effects in Table 3.5. For employment, the coefficient is positive and significant for two of the four census years, and positive but insignificant for the other years. The results in Panel B are consistent with those in Panel A. Compulsory attendance and continuation school each have positive and significant effects on school attendance and negative effects on child labor, with the results generally decreasing with the passage of time

between columns. The spillover effects are also consistent with Panel A, reducing the overall effect of each law by a significant amount—although continuation schooling in this cross-section only has significant spillover effects on employment.

The existence of family effects on schooling is also consistent with evidence from studies of contemporary families. Emerson and Souza (2002) find that first-born Brazilian male children are more likely to work and last born male children are more likely to attend school. Chesnakova and Vaithianathan (2006) similarly show that families in Mexico are likely to have the oldest child work to fund the education of younger siblings. Khanam and Rahman (2005) find similar results in Bangladesh. The evidence in the prior section suggests that families in the developing United States made similar tradeoffs between the education and labor of their children.

One further issue is the effect of compulsory attendance laws on fertility, since families decide on both the number of children and how to employ existing children. Table 3.8 shows the changes in fertility from 1880 to 1920. Total fertility rates for whites dropped from 4.24 children per woman to 3.17. Column 2 shows the average number of 10 to 17 year olds in the home, given that a family had any 10 to 17 year old children and was included in the sample used in the chapter. This stays relatively constant over the years of the study.

Despite large changes in fertility, it seems reasonable to assume that fertility decisions are orthogonal to the empirical results. Given that a family had a child of age 10 to 17, the average number of children per family stays relatively constant at slightly greater than 2 children for every census year. For this reason, comparing sibling effects between years are not confounded by large differences in the number of siblings in the family in the age range considered. As an additional check for the influence of changing family sizes, the regressions control for the number of siblings of each child.

### **3.5 Conclusion**

This chapter offers evidence that early compulsory attendance laws in the United States had unintended consequences. Since compulsory attendance affected children with siblings, as the laws moved some children into school their siblings may have suffered as a consequence. For families with tight budget constraints, compelled school attendance for some might mean more

Table 3.6: Cross-Sectional Effect of Laws by Census Year

Panel A: Attendance Laws

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	1880	1900	1910	1920	1880	1900	1910	1920
Variable	School	School	School	School	Work	Work	Work	Work
Compulsory Attendance	0.100*** (0.033)	0.120*** (0.022)	0.086*** (0.022)	0.019** (0.008)	-0.065** (0.025)	-0.071*** (0.019)	-0.061*** (0.020)	-0.022*** (0.008)
Observations	677,025	452,119	104,178	120,983	677,025	452,119	104,178	120,983
R-squared	0.177	0.209	0.226	0.262	0.275	0.259	0.301	0.239

Panel B: All Laws

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	1880	1900	1910	1920	1880	1900	1910	1920
Compulsory Attendance	0.100*** (0.033)	0.120*** (0.022)	0.098*** (0.022)	0.020 (0.014)	-0.065** (0.025)	-0.071*** (0.019)	-0.077*** (0.021)	-0.021 (0.019)
Continuation School			0.068*** (0.016)	0.002 (0.023)			-0.093*** (0.015)	0.002 (0.035)
Observations	677,025	452,119	104,178	120,983	677,025	452,119	104,178	120,983
R-squared	0.177	0.209	0.227	0.262	0.275	0.259	0.302	0.239

*Notes:* For children ages 10-17. Standard errors are clustered by state. Each regression includes age and state fixed effects. Covariates include nativity, urban status, whether the child was black, sex, proportion of children in each age by sex cell within the family, and age and occupational category of the household head. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.



Table 3.7: Cross-Sectional Family Effects by Census Year

Panel A: Attendance Laws

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	1880	1900	1910	1920	1880	1900	1910	1920
Variable	School	School	School	School	Work	Work	Work	Work
Law (CA)	0.119*** (0.036)	0.139*** (0.025)	0.101*** (0.025)	0.032*** (0.010)	-0.078*** (0.028)	-0.082*** (0.021)	-0.069*** (0.024)	-0.028*** (0.011)
$\bar{\text{Law}}$ (CA)	-0.042*** (0.009)	-0.044*** (0.008)	-0.034*** (0.011)	-0.030*** (0.010)	0.029*** (0.008)	0.025*** (0.005)	0.019 (0.012)	0.014 (0.011)
Observations	677,025	452,119	104,178	120,983	677,025	452,119	104,178	120,983
R-squared	0.177	0.209	0.226	0.262	0.275	0.259	0.301	0.239

Panel B: All Laws

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	1880	1900	1910	1920	1880	1900	1910	1920
Law (CA)	0.119*** (0.036)	0.139*** (0.025)	0.114*** (0.024)	0.033*** (0.015)	-0.078*** (0.028)	-0.082*** (0.021)	-0.088*** (0.024)	-0.031 (0.020)
$\bar{\text{Law}}$ (CA)	-0.042*** (0.009)	-0.044*** (0.008)	-0.037*** (0.011)	-0.030*** (0.010)	0.029*** (0.008)	0.025*** (0.005)	0.024*** (0.011)	0.023* (0.013)
Law (Cont)			0.077*** (0.021)	0.003 (0.024)			-0.107*** (0.018)	-0.006 (0.035)
$\bar{\text{Law}}$ (Cont)			-0.022 (0.015)	-0.002 (0.010)			0.032*** (0.011)	0.017** (0.008)
Observations	677,025	452,119	104,178	120,983	677,025	452,119	104,178	120,983
R-squared	0.177	0.209	0.227	0.262	0.275	0.259	0.303	0.239

Notes: For children ages 10-17. Standard errors are clustered by state. Each regression includes age and state fixed effects. Covariates include nativity, urban status, whether the child was black, sex, proportion of children in each age by sex cell within the family, and age and occupational category of the household head. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 3.8: Fertility in the United States from 1880 to 1920

	(1)	(2)
Year	TFR	10 to 17
1880	4.24	2.29
1900	3.56	2.32
1910	3.42	2.31
1920	3.17	2.25

*Sources:* TFR is for whites, from Haines (2008). Averages in (3) and (4) are from the IPUMS samples of each census.

work for other children. This chapter shows these effects for children between 1880 and 1920, using identification relying both on changes through time and through cross-sectional comparison. Compulsory attendance had both significant positive effects on school attendance, and resulted in negative spillovers within the family, decreasing school attendance and increasing employment of some children. Along with compulsory attendance, continuation schooling increased the probability of school attendance and resulted in negative spillovers within the family. The policy implication for a government concerned with education or child labor is that compulsory attendance laws might have the unintentional effect of decreasing attendance among those children who are not compelled to attend, decreasing overall social welfare gains from the legislation.

## Chapter 4

# Corporate Charters and Factory Acts: Compulsory Attendance for Working Children, 1810-1870

### 4.1 Introduction

A common maxim about the rise of public schooling in the developed world is that public schools both mirrored the factory system and socialized children for the factory floor (see, e.g. Cantor 1996 and Windsor 1993). This chapter reveals the depth of the relationship by examining the roots of compulsory attendance in efforts to regulate the industrial workplaces of the nineteenth century. Although states had recognized an interest in public education since their founding, adopting compulsory attendance had a high cost. It meant abrogating the right of parents to direct how children used their time, a right parents were likely to exercise, as shown by the unintended consequences of compulsory attendance discussed in the prior chapter. This chapter shows how the cost to adopting compulsory attendance was lowered through a series of legal precedents involving corporations and factory children.

The first part of this chapter uses archival work in the northeastern United States to explore the use of corporate charters as a vehicle for educating chil-

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\* An expanded version of the first part of this chapter appeared in the *Journal of Law and Education* (2014).

dren. This practice began in the 1810s as instruction laws for apprentices were adapted to emerging textile mills. Corporations were treated as “masters” and held responsible for the instruction of child workers in the same manner as the masters of craft apprentices. The charters for these corporations included specific clauses requiring the education of child workers. As the colonial master was required to ensure his charge was literate, so these early corporations were required to ensure that child laborers were educated. This part documents the history of these corporations and examines their significance in the legal development of compulsory attendance. This contributes to both the history of compulsory attendance laws in Richardson (1980) and Eisenberg (1988), and to understanding the historical role of public purpose in corporate law (especially relevant in light of the Supreme Court’s decision in *Burwell v. Hobby Lobby Stores, Inc.*).<sup>1</sup>

The second part show how, in the 1830s and 1840s, states began passing laws that required working children to attend school. These laws preceded compulsory attendance laws, and perhaps due to their quick overshadowing by compulsory attendance, have received little attention from economic and legal historians. This ignores the long efforts of states to compel the education of working children, efforts that are particularly meaningful today as developing nations experiment with novel ways to increase school attendance (see Stalzer 2009). These statutes represent a crucial step in the legal development of compulsory attendance, providing precedent for overcoming parental rights and requiring instruction for a broad class of children. This part assembles data on manufacturing and employment in cotton textiles to show that states experimented with factory attendance laws when two conditions were met: schools were already widely available, compared to other states, and manufacturing levels, especially cotton textiles, were comparatively high.

Finally, this chapter shows how factory attendance laws were themselves superseded by general employment age limits and attendance laws in the second half of the nineteenth century. These laws began the comprehensive regulation of child behavior, covering both employed and non-employed children. A series of hazard models evaluates factors leading to the passage of these laws, showing how high levels of manufacturing employment, and especially the high rates of female child labor, led to legislation.

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<sup>1</sup>134 S. Ct. 2751 (2014).

## 4.2 The Context: Colonial-Era Law

This section gives a brief background in colonial education law, and in the use of corporations after the Revolution. Colonial-era education law was rudimentary. A colony might require that towns maintain a school, that parents instruct their children, or that masters ensure their apprentices were literate. For example, in 1642, Massachusetts required that children and apprentices learn “perfectly to read the English tongue . . . upon penalty of twenty shillings for . . . neglect.”<sup>2</sup> In 1650, Connecticut required parents and masters to instruct children.<sup>3</sup> In 1712, New Hampshire required town selectmen to check the literacy of children over 10.<sup>4</sup> Pennsylvania’s 1683 charter required the provincial council to ensure “the good education of youth.”<sup>5</sup>

Apprentices were presumably subject to these general instruction laws, along with any education laws that applied specifically to apprentices. For instance, New York in 1665 required that apprentices be taught “matters of religion and the laws of the country.”<sup>6</sup> Even in states without statutory instruction requirements,<sup>7</sup> educational requirements for apprentices appear to have been common. For example, in North Carolina, inclusion of literacy requirements in individual indentures was the “customary agreement with the courts.”<sup>8</sup> In the District of Columbia, apprentice indentures from the Orphans Court in the early nineteenth century generally required some form of book learning, such as six months of night school, being “reasonably educated in reading and writing” or “schooling to the rule of three.”<sup>9</sup>

As with educational requirements for children, early American corporate law was thin—and again, corporations were mainly a Northern phenomenon. The corporate form had existed in America from its European settlement,

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<sup>2</sup>The Colonial Laws of Massachusetts 136 (Boston 1889).

<sup>3</sup>J. Hammond Trumbull, *The Public Records of the Colony of Connecticut Prior to the Union with the New Haven Colony* 520-21 (1850).

<sup>4</sup>2 Laws of New Hampshire: Province Period, 1702-1745, at 115 (Albert Stillman Batchellor, ed., 1913).

<sup>5</sup>Frame of Government of Pennsylvania, Feb. 2, 1863.

<sup>6</sup>Reported in Seybolt (1917).

<sup>7</sup>See Morris (1946, 381) (“South of Philadelphia less stress was placed upon general education for apprentices.”).

<sup>8</sup>Knight (1916, 20).

<sup>9</sup>National Archives and Records Administration (NARA); Washington, D.C.; Indentures of Apprenticeship Recorded in the Orphans Court, Washington County, District of Columbia, 1801-1811; Publication #: M2011; Roll #:1.

but grew dramatically in the United States after the Revolution.<sup>10</sup> Although post-Revolution states were initially reluctant to give individuals special privileges, they were also reluctant to tax. This meant relying on corporations to carry out projects that required some sort of public finance.<sup>11</sup> This led to two defining features of corporations in early America. First, incorporation was mainly a New England phenomenon, since the wealth held by Southern planters made legal help to accumulate capital less necessary.<sup>12</sup> Second, an essential feature of early corporations was a public purpose.<sup>13</sup>

Since infrastructure was undeveloped, many early corporations formed for the public purpose of constructing turnpikes, bridges, and canals. Manufacturing served a less clear public purpose, and manufacturing corporations were a distinct minority of those chartered. The charter of the Union Manufacturing Company of Maryland, for example, seems to have found a public purpose through “carrying on and encouraging, manufactories of all the useful and necessary articles which have heretofore been imported from foreign countries.”<sup>14</sup>

The next section shows how the attempt to adapt apprenticeship law to the factory floor (at a time when a public purpose was still a factor in the incorporation process), led to the requirement that manufacturing corporations educate their workers. The charters of these corporations, and the laws that followed in the 1840s and 1870s, show a progression from the colonial apprentice educated by his master, to the corporation serving as master to its child workers, to the child worker as wage-laborer required to attend school.

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<sup>10</sup>Gordon Wood notes, “The states issued 11 charters of incorporation between 1781 and 1785, 22 more between 1786 and 1790, and 114 between 1791 and 1795. Between 1800 and 1817 they granted nearly 1,800 corporate charters. Massachusetts alone had [30] times more business corporations than the half dozen or so that existed in all of Europe” (Wood 1993, 321). See also Maier (1993, 51-52). “State legislatures, which now held exclusive rights to incorporate, a power once held by the monarch, handed out corporate charters with abandon” O’Melinn (2000, 126).

<sup>11</sup>Wood (2009, 460-61). For example, the Constitution was left deliberately silent on the power to incorporate out of fear of public opposition. *Id.* at 461 n.78.

<sup>12</sup>Maier (1993).

<sup>13</sup>Maier (1993, 80-81); Evans (1948, 21) (“The character of the early corporations may reflect a contemporary belief that the corporate form should not be resorted to unless the public interest was involved. The link between the corporation and the numbers enterprises of a public nature that a large and rabidly developing country needed may in part explain the early growth of the corporation in this country, which appears phenomena when compared with the British and continental Europe experience.”).

<sup>14</sup>1808 Md. Acts Ch. XLIX.

## 4.3 Education Clauses in Corporate Charters

### 4.3.1 Corporate Charters in Connecticut

Corporations in Connecticut centered around public purposes, as did most eighteenth century and early nineteenth century corporations in the United States. The most common types of corporations formed were turnpikes and banks, followed by fire insurance companies and those clearing rivers or building aqueducts. Even if chartered for a public purpose, these organizations also had more explicit clauses serving the public interest or enforcing public morality. For example, in an 1807 bank charter, schools and other charitable societies were able to elect their own director to the board.<sup>15</sup> Or, the corporation formed to build a turnpike was required to allow free travel for church attendance.<sup>16</sup>

In 1810, the legislature continued this practice by inserting educational clauses in the charters of two manufacturing companies, the Humphreysville Manufacturing Company and the Middletown Manufacturing Company. The charter for the Humphreysville company in 1810 required:

That it shall be the duty of the president and directors of said corporation, to provide an instructor, for at least three months in each year, for the purpose of teaching the children employed in said manufactory, to read and write, and also the first rules of arithmetic, and in religion, morals, and manners, as is by law directed to be taught in other schools.<sup>17</sup>

The charter for the Middletown company came later in 1810 and was similar, but put the burden to provide education on the directors alone: “It shall be the duty of the directors to procure for the children employed in said manufactory, instruction in a school, in which they shall be taught, reading, writing and arithmetic, and shall be instructed in religion.”<sup>18</sup> Later, in 1813, Connecticut passed a more general instruction law affecting “all factories

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<sup>15</sup>1807 Conn. Pub. Acts 767.

<sup>16</sup>1807 Conn. Pub. Acts 769.

<sup>17</sup>1810 Conn. Pub. Acts 28. The schooling clause was added as an addendum at the end of the draft charter, referenced by an asterisk from a section that had been written then crossed out. It appears that the education requirement was either added or lengthened at the last minute. Connecticut State Archives, RG001:010, Industry, second series, I:129.

<sup>18</sup>1810 Conn. Pub. Acts 41.

which now are, or hereafter shall be legally incorporated” and “all other manufacturing establishments in this state.”<sup>19</sup> The president and directors of the incorporated factories, and the unincorporated manufacturers, were to “cause that the children employed in such factory or establishment . . . be taught to read and write.”<sup>20</sup>

Connecticut’s educational requirements for working children were an adaptation of apprenticeship law to the factory.<sup>21</sup> As considered in the prior section, colonial laws requiring the education of apprentices were common across the Northern colonies. Now, however, the traditional close apprenticeship setting, with apprentices who “labored together in a craft workshop for a master,” had begun to change.<sup>22</sup> Textile factories were vastly larger than early cottage industries and employed larger workforces. Connecticut responded to these changes by adapting apprenticeship law in ways that began to require mass instruction.

Archival work and the 1813 law itself give evidence of this outgrowth of apprenticeship law. First, despite the application to a factory setting, the title of the 1813 was “An Act in addition to an Act, entitled ‘An Act relating to masters and servants, and apprentices.’”<sup>23</sup> The Act also straddled the line between employer and master by using language applicable to both. The law structured the educational requirements for employed children “whether bound by indenture, by parol agreement, or in any other manner.” The first section of the statute opens by charging the president and directors of factories to educate children, but ends by referring both to “masters” as well as “employers” when requiring attendance at public worship services. David Humphreys, the incorporator of the first mill, appears to have held both views of his workers. He paid the female workers at his mill as wage laborers but gave the male workers room and board with no wages, referring to them as apprentices.<sup>24</sup>

The enforcement of the act provides an additional extension of colonial apprenticeship law. Section 2 says that the “select-men” of the town were to “carefully to examine, and to ascertain whether the requisitions of this

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<sup>19</sup>1813 Conn. Pub. Acts 117.

<sup>20</sup>*Id.*

<sup>21</sup>Victor Clark, in an early twentieth century history of manufacturing, briefly discusses this possibility, along with the contribution of David Humphreys (Clark 1916, 266).

<sup>22</sup>Dolgin (1997, 1124).

<sup>23</sup>1813 Conn. Pub. Acts 117.

<sup>24</sup>Crawford (1995, 16).



act, which relate to the instruction and the preservation of the morals of the children employed . . . be duly observed.” Town selectmen in Connecticut had long carried a duty to visit families to ensure the instruction of children, and the language in this statute follows closely with the colonial law—Connecticut’s 1650 law required the “Select men of every town” to “have a vigilant eye” to ensure that “Children and Apprentices” learn to read.<sup>25</sup>

The principle advocate for the attempt to adapt apprenticeship law to the emerging factory system in Connecticut was David Humphreys. Other states had both growing manufacturing interests and a history of compulsory instruction for apprentices, yet did not experiment with this extension of apprenticeship laws. For both Connecticut, and New Jersey (below), the presence of a legislative advocate seems to have played an important role.

David Humphreys was a general in the Revolutionary war, but is also remembered for first bringing Merino sheep to America when he returned from an ambassadorship to Spain.<sup>26</sup> Humphreys used the sheep to start a woolen mill, attempting to kickstart a finer cloth industry in America (potentially stemming from George Washington’s dissatisfaction with the homespun suit he wore to his inaugural in 1789).<sup>27</sup>

The introduction of Spanish sheep into New England had clear industrial implications, especially for children, as a letter written from “A Farmer” and published in the *Berkshire Reporter* in 1807 stated: “the raising of Sheep would [lead to] an accession of hands [being] gained for the manufacturing branches, and all females and children would find abundant employment at all seasons, which would have a good effect on the morals of the community.”<sup>28</sup>

Humphrey’s mill in Connecticut attempted to fulfill the good “moral” effects of labor envisioned by the Berkshire farmer. In 1808, he petitioned the legislature for tax privileges and exemptions from military service at the mill. Although he “desired no undue preferences should be given by Legislative Authority to one species of Industry over another,” he thought that the employment of “Widows and Orphans” from would help develop “a richer mine of wealth . . . in . . . morals and industry” in “these classes

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<sup>25</sup>Trumball (1850).

<sup>26</sup>Humphrey’s gravestone, for example, cites his sheep alongside service as a general and ambassador as one of his principal achievements.

<sup>27</sup>Cifelli (1982, 109).

<sup>28</sup>Letter from A Farmer to The Respectable Farmers of the County of Berkshire, *Berkshire Reporter*, Dec. 26, 1807, at 1.

of inhabitants than had ever before been explored.”<sup>29</sup> In the opinion of the committee reviewing the petition, Humphrey’s attempt “to imbue the minds of the youth with useful knowledge [is] an example, highly deserving the imitation of all persons, having the charge of extensive manufacturing establishments.”<sup>30</sup>

Humphrey’s approach to capitalism may be explained by his background. He was an educator: after graduating from Yale he spent time teaching school and working as a private tutor.<sup>31</sup> Then, soon after receiving the corporate charter, the mill served both as a competent school and a workplace. Humphreys took children from a New York almshouse and neighboring towns as indentured apprentices,<sup>32</sup> including the well-off and the poor.<sup>33</sup> These children were then educated at the mill.

Humphreys later wrote that, “If in any thing I have had an opportunity of being useful to my Country . . . [it was] by setting an example of education Youths at the Humphreysville Establishment, than in any other way.”<sup>34</sup> For locals that were not employed at the mill, the legislature noted in 1808 that “the exertions of Col. Humphreys . . . have not been limited to these, who are placed under his immediate Care. He has for several months employed a School Master, at his own expense, for the Education of poor Children.”<sup>35</sup>

The Connecticut Herald, in 1811, published an account of a visit of selectmen to the woolen mill. They found a school serving over fifty pupils who “were examined in reading, spelling, and writing; and acquitted themselves honorably.”<sup>36</sup> The report optimistically noted that, “Should Manufactories ever become the nurseries of ignorance and vice in this country, the example will not have been set at Humphreysville.” Children were taught both after work and on Sundays, by “professional teachers who checked the boys’ progress with regular examinations.”<sup>37</sup> The Humphreysville mill even earned recognition in a report by the United States census on manufacturing, where

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<sup>29</sup>Petition of David Humphreys for exemption from taxes and military service, Oct 20, 1808, Connecticut State Archives, RG001:010, Industry, second series, I:41.

<sup>30</sup>*Id.*

<sup>31</sup>Cifelli (1982, 1).

<sup>32</sup>Cifelli (1982, 115) (quoting Stephens (1880)).

<sup>33</sup>Communication, *New Haven Herald*, July 10, 1810, at 3.

<sup>34</sup>David Humphreys to James Monroe in 1816. Cited in Cifelli (1982, 115).

<sup>35</sup>Petition of David Humphreys for exemption from taxes and military service, Oct 20, 1808, Connecticut State Archives, RG001:010, Industry, second series, I:41.

<sup>36</sup>Education and Morals in a Factory, *Connecticut Herald*, Feb. 12, 1811, at 3.

<sup>37</sup>Crawford (1995, 16).

the authors noted,

The system adopted at the manufactory of Humphreysville, in Connecticut, with respect to education, manners, morals, and religion is an interesting evidence, that the people of the United States may quicken and increase the virtues of the rising generation and reform the degenerate of later years, by a humane and politic system, in the large manufactories.<sup>38</sup>

The legislature extended the Humphreysville education requirement in the charter of the Middletown Manufacturing Company. The Middletown Manufacturing Company was also a woolen mill, famous for being one of the first steam powered mills in the United States.<sup>39</sup> Joel Barlow, one of the incorporators of the Middletown company, was an associate of David Humphreys in the “Hartford Wits,” a group of satirists and poets who published in Barlow’s newspaper, the *American Mercury*.<sup>40</sup> Both Barlow and Humphrey’s manufacturing companies included clauses calling for the education of child laborers, though compared to Humphrey’s idealism, one study of the Middletown company points to a less utopian reason for incorporating the education clause, that this was offered as “an incentive offered to attract child labor.”<sup>41</sup>

But bringing children to work, even for their cheap labor, and educating children were not necessarily incompatible goals. As opposed to the later nineteenth century child labor movement which earnestly sought to remove children from the workplace, early nineteenth century thinkers were more likely to see labor and education as dual causes for celebration. The tradition of apprenticeship education was still strong, and, as discussed above, these child laborers could still be considered more as apprentices than wage laborers. Apprenticeship entailed education requirements—in Middletown itself, as early as 1793 the common printed form for apprenticeship indentures included a clause that the apprentice “if he be capable to learn, also [be taught] to read and write, and the common rules of arithmetic.”<sup>42</sup>

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<sup>38</sup>Coxe (1814, lii).

<sup>39</sup>The mill employed up to eighty people and produced \$70,000 of woolen cloth a year. Purcell (1918, 31).

<sup>40</sup>Encyclopedia of Connecticut Biography 202 (1917).

<sup>41</sup>Dickman (1972, 52)

<sup>42</sup>Middletown Historical Society, Box Apprenticeship Papers 1760-1850. Earlier charters required merely instruction in the specified art. The literacy requirements in indentures continued through 1813.

The incorporators at Middletown envisioned a happy child worker being both educated and employed. Arthur Magill, the lead incorporator, as part of a local manufacturing society, saw imported foreign cloth as an evil which would destroy the work of children:

An evil of great moment; one, of whose extent few appear to be aware, results from the unprotected state of American Manufactures and the consequent influx of foreign Woolen and Cotton fabrics. This evil is the alarming diminution of our Household Manufactures; by which very many families formerly supplied themselves with the principal articles of their clothing . . . . [T]hey were chiefly made by women and children at leisure hours, when their time would have been otherwise unproductive; such occupations wonderfully promoted habits of industry and frugality.<sup>43</sup>

The Connecticut Society for the Encouragement of American Manufactures shared this view. Alexander Wolcott, another incorporator at Middletown, served as a vice president. In a society publication from 1817, the virtue of child labor was clear:

Manufacturing establishments are not, as some imagine, adverse to morality. . . . Women, children, the aged, the infirm, those whose labour is now either wholly or nearly lost to themselves and the community, would be usefully employed. The cheapness of their work would place our fabrics on fair competition with those imported . . . . In Europe, where there is an excess of inhabitants, these machines are sometimes prejudicial to the poor-here, where there is a comparative deficiency of hands, they prejudice not the poor, and benefit the public.<sup>44</sup>

This useful employment of children was supplemented by education, and members failing to educate their child workers were to be shunned: “Should any manufacturer neglect to educate the youth employed by him, in conformity with the laws of this State, it shall be the duty of every member to withdraw from such manufacturer his countenance and support.”<sup>45</sup>

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<sup>43</sup> Letter from Middletown citizens to the United States Congress, Middletown Historical Society Box MFG #2 (Nov. 27, 1819).

<sup>44</sup> Address of the Connecticut Society for the Encouragement of American Manufactures 6-7 (1817), Middletown Historical Society Box MFG #2.

<sup>45</sup> *Id.* at 24.

Humphreys wrote the legislature about employment at the mill in 1808, saying that it offered “profitable employment to whole families, not possessed of much landed property and not occupied in handy-craft arts; and particularly to the women and children of such families as are in the most helpless and indigent circumstances of any in Society.” The legislature responded with language that drew on the tradition of binding out poor children as apprentice labor:

By the combination of means [employment of women and children with labor saving machinery], he overcomes the dearness of labour, and at the same time, in mode, very honorable to himself, . . . converts into an active capital, exertions of persons, who would otherwise be idle, and in many instances a burden to the Community either from the bias of temper, habit, infirmity of body, or some other cause.<sup>46</sup>

Connecticut strengthened the relationship between child labor and education in 1813, when Humphrey’s influence extended beyond the Humphreysville charters when serving in the state legislature from 1813-14.<sup>47</sup> There, he extended the responsibility to educate child workers into more general legislation by “recommend[ing]” the 1813 law concerning masters and apprentices.<sup>48</sup> The 1813 act, as discussed above, charged all manufacturers, incorporated or not, to educate their child workers in reading, writing, and rudimentary arithmetic.

The next iteration of employment regulation for children in 1842 furthered the progression from apprentice to wage labor in Connecticut’s regulations. The 1842 act, although still entitled “[R]elating to Masters and Servants,” removed the references to children being bound or under indenture that appeared in the 1813 law, simply referring to children “employed to labor.” Children were no longer to be educated by the corporation itself in its capacity as master, now children needed to attend “some public or private day school where instruction is given by a teacher, qualified to instruct in orthography, reading, writing, English grammar, geography, and arithmetic, at least three months.”<sup>49</sup>

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<sup>46</sup>Petition of David Humphreys for exemption from taxes and military service, Oct 20, 1808, Connecticut State Archives, RG001:010, Industry, second series, I:41.

<sup>47</sup>Cifelli (1982, 116).

<sup>48</sup>Clark (1916, 266).

<sup>49</sup>1842 Conn. Pub. Acts 40.

While the language of the Act omitted references to apprentice concepts such as indentures or masters, the ideal of master and apprentice still retained some power in the state. A month before the 1842 act was signed into law, Connecticut's governor addressed a letter to the state legislature outlining his support for the measure. He reported, "I am aware of the delicate nature of this subject, and of the objection which may be urged to an interference with the authority of the parent over the child—the master over the apprentice."<sup>50</sup> But, he was persuaded that the interests of educating children were more important than any remaining rights of control in the master-apprentice relation which existed for children employed in manufacturing establishments.<sup>51</sup>

The transition from the colonial apprentice being taught to read by his master, through the corporation as master being responsible for the child's education, to the corporation merely employing a child required to attend an outside school, was complete. The next transition for Connecticut would be to forbid all employment under a certain age while requiring school attendance of all children, in 1872.<sup>52</sup>

For the particular manufacturing companies targeted by the earliest laws, the Humphreysville Company continued after Humphreys' death in 1818. Several years later, John DeForest purchased the mill. In 1822 the legislature granted a new charter to the company, and the mill switched from woolens to cotton.<sup>53</sup> For the Middletown Manufacturing Company, the end of the War of 1812 brought a resumption of British imports, and the business closed soon after.<sup>54</sup>

### 4.3.2 Corporate Charters in New Jersey

New Jersey joined Connecticut in experimenting with educational provisions in corporate charters between 1810 and 1820. The emergence of educational clauses in corporate charters in New Jersey is similar to that of Connecticut,

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<sup>50</sup>Chauncey F. Cleveland, Message, *Connecticut Courant*, May 15, 1842, at 1.

<sup>51</sup>*Id.*

<sup>52</sup>In 1872 Connecticut passed its first compulsory attendance law, requiring all children between the ages of eight and fourteen to attend some public or private day school for three months. 1872 Conn. Acts 43.

<sup>53</sup>Bagnall (1893, 360).

<sup>54</sup>History of Middlesex County, Connecticut, with Biographical Sketches of Its Prominent Men 96 (1884).

with state legislator John Simpson playing a role comparable to that of David Humphreys.<sup>55</sup> John Simpson was a Princeton graduate and “a great friend of education and internal improvement,” and “[i]t was owing mainly to his influence that the State of New Jersey was stimulated to take the part she did in promoting the cause of common school education” (Alexander 1872). In 1808, Simpson and one Dod, another educational advocate,<sup>56</sup> served on a committee that was assigned a “bill to incorporate Manufacturing Societies.”

The legislature failed to act in that case—incorporating manufacturers was seen as a concern by some. A writer to the *New England Palladium* summed up the arguments:

Every year brings forth something new, plausible and attractive, which runs the short-sighted and unwary. Bank mania was, last year, the rage; the bubble at length burst, and thousands were directly and indirectly ruined. At the present moment the rage for domestic manufacturers appears to have the ascendancy, and it is called patriotism to engage in their establishment. . . . It is believed that this forced encouragement of manufacturers is impolitic . . . . It is a known and well attended fact, that in no part of England is there so much inequality in the people; so much poverty and wretchedness, as in the manufacturing towns. . . . Children at a tender age are employed because they can support themselves; but this very employment precludes the acquirement of even the rudiments of a common education.<sup>57</sup>

Unlike this view in the *Palladium*, others took a more optimistic approach to the education of factory children, as one author in *New Jersey* wrote in the *Sentinel of Freedom*: “The extensive factories of Europe are so many tyrannies for the oppression of the poor and unprotected. Let every factory in the United States which has employment for children be attended with its correspondent school, where their little hearts shall receive the benefit earned by their little hands.”<sup>58</sup> Simpson brought this idea before the legislature in 1814, when he proposed that “a committee be appointed to enquire

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<sup>55</sup>For a brief outline of the history of corporations in New Jersey and the 1816 law, see Cadman (1949).

<sup>56</sup>Earlier in the 1808 session, Dod introduced a resolution “relative to a general and permanent system of education.” *New Jersey Legislature: House of Assembly*, Thursday, November 17th, *Sentinel of Freedom*, Dec. 6, 1808, at 2.

<sup>57</sup>Manufacturers, *New-England Palladium*, Mar. 9, 1810, at 1.

<sup>58</sup>A Stranger, Arlington Sheep Shearing, *Sentinel of Freedom*, Apr. 14, 1811, at 2.

into the propriety of providing that the children employed in manufacturing establishments in this state be suitably educated.”<sup>59</sup>

After this, three manufacturing companies in 1814-1816 had placeholders inserted into their charters, stating that if the legislature were to make rules concerning the education of employed children, these rules would be binding on the corporation. The Mendham Cotton and Woolen Factory was incorporated in 1814 and its apprentices were subject to the following clause in its charter: “That the officers, apprentices, servants, and workmen that may be employed in said manufactory, shall be subject to such rules and regulations as may hereafter be enacted and established by law, for the instruction, control, and government of apprentices, servants and workmen so employed.”<sup>60</sup> The West-Bloomfield Manufacturing Company<sup>61</sup> and the Franklin Manufacturing Company<sup>62</sup> had the same clause inserted in their charters.

The inclusion of such clauses was not universal in New Jersey. Other manufacturing company charters passed in the same session lacked education provisions.<sup>63</sup> The difference may have been the educational leanings of the incorporators and their ability to ignore profit-maximization for social welfare purposes. The incorporators were wealthy,<sup>64</sup> and they were noted either for their interest in education or public welfare generally. The Franklin Manufacturing Company was founded by Israel Crane, a “public-spirited” man who “rendered valuable service to the . . . educational interest of the town.”<sup>65</sup> Prior to incorporating the woolens factory, Crane had arranged for a two-story stone schoolhouse to be built in the town in 1812 that attracted students from the surrounding region.<sup>66</sup>

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<sup>59</sup>Votes and Proceedings of the Thirty-Ninth General Assembly of the State of New Jersey, Being the First Sitting 12 (1814).

<sup>60</sup>1814 N.J. Laws 13.

<sup>61</sup>1814 N.J. Laws 8.

<sup>62</sup>1815 N.J. Laws 153.

<sup>63</sup>For example, the Passaic Manufacturing Company (1814 N.J. Acts 112) and a cotton and woolen company in Newark (1814 N.J. Acts 115) did not include this clause.

<sup>64</sup>Israel Crane of the Franklin Manufacturing Company and John Ralston of the Mendham Factory in particular are noted for their wealth. Crane was “said to be the wealthiest man in the community” and Ralston was “a man of wealth . . . and had a valuable landed property.” Edwin Shuttleworth, III, *Life in Early Montclair* 2 (1968), in Albert Payson Terhune Library archives, Montclair, NJ; Letter from J.H. Ralston to R.G. Ralston, July 22, 1880, in Mendham Borough Library Archives Folder 107 “Nesbitt.”

<sup>65</sup>Phillip Doremus, *Reminiscences of Montclair* (1908), available at <http://www.rootsweb.ancestry.com/~genepool/montnj17.htm>.

<sup>66</sup>Edwin Shuttleworth, III, *Schoolhouses of the Early 19th Century* 8 (1972), in Albert



These optional inclusions of educational requirements ended in 1816, when the legislature followed through with an educational requirement allowing manufacturers to incorporate without an express act of the legislature.<sup>67</sup> For the next five years, companies could be formed in order to produce a variety of manufactured goods so long as the charter spelled out certain corporate requirements, such as the amount of capital stock and the number of shares. The last section of the act directed:

That the Presidents and Directors as superintendents of such factories as may become incorporated under this act, shall cause that the children hereafter employed in such factory, or establishment whether bound by indenture or parol agreement, to be taught in reading, writing, and arithmetic, at least one hour in each and every day.

The 1816 act was urged by the citizens of Paterson, New Jersey, a city with roots in industrial utopia-building but now found itself in the midst of the post War of 1812 depression.<sup>68</sup> Paterson had been an early experiment with a manufacturing town urged on by Alexander Hamilton, who knew the site for the city based on a Revolutionary War lunch with Washington near the falls.<sup>69</sup> Paterson's incorporation as a city had been provided for in the charter for Hamilton's Society for the Encouragement of Useful Manufacturers (SUM).<sup>70</sup> While Hamilton may have had ambitions for "children performing useful labor and being educated simultaneously" in Paterson, the Society ultimately settled for a hired schoolmaster to teach the children on Sunday.<sup>71</sup>

By the end of the 1790s, Hamilton's Society for the Encouragement of Useful Manufacturers had floundered and the cotton mill was for sale, but industry in Paterson continued and prospered during the War of 1812. In

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Payson Terhune Library archives, Montclair, NJ.

<sup>67</sup>1816 N.J. Laws 17.

<sup>68</sup>*The Centinel of Freedom*, Feb. 13, 1816 ("By Mr. Day, from the inhabitants of Paterson, praying for a general law for the incorporation of manufactories.").

<sup>69</sup>Chernow (2004, 373).

<sup>70</sup>Maier (1993, 67). The SUM also raised a debate about the role of corporations in American life. In contrast to David Humphrey's view of such organizations as manifesting the fruits of independence, some saw the SUM as increasing the privilege of the wealthy and against republican principles.

<sup>71</sup>Chernow (2003, 386).

the post-war depression, Paterson “shrank almost into nothingness,” until the tariff of 1816 increased the demand for domestic goods.<sup>72</sup> Based on that increased demand, the citizens of Paterson urged a general incorporation law, which incorporated the educational elements Simpson had implemented earlier in the decade and fulfilled, at least in part, the utopian educational elements from its founding.

### 4.3.3 Apprenticeship, Corporations, and the Factory System in Other States

While Connecticut and New Jersey included explicit educational clauses in corporate charters, they did so in a community of states that either considered doing so or engaged apprenticeship for the education of factory children in some other manner. One difficulty states faced in regulating during this period was that employment relations in the new factories were not uniform—some child laborers in factories had apprentice indentures, while others did not.<sup>73</sup> State regulation of such children was likewise diverse: a state might draw on older law, through binding out mistreated factory workers as apprentices, or look forward to compulsory attendance, by explicitly requiring school attendance outside the factory.

Vermont was a state that initially looked to the past when faced with the task of educating factory children. An 1839 law tasked town selectmen to

inquire into the treatment of minors employed in any manufacturing establishments in their respective towns; and if, in their opinion, the education, morals, health, food or clothing of such minor, is unreasonably neglected, or he is treated with improper severity or abuse, or is compelled to labor at unreasonable hour or times . . . they shall, if such minor is not a servant or apprentice, . . . and if he has no parent or guardian residing in this state, discharge him from such employment, and with his consent, bind him as a servant or apprentice to some other person.<sup>74</sup>

In Delaware, the legislature in 1817 passed an act to incorporate a school for manufacturing children, contemplating that the provision of schools “in

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<sup>72</sup>Clayton (1882, 407).

<sup>73</sup>Quigley (1997, 11); Barnard (1907, 16).

<sup>74</sup>1839 Vermont Acts 345. See Quigley (1997, 11).

the vicinity of extensive manufactories, is calculated, not only to promote the instruction of the youth, in those useful establishments, in the first rudiments of learning, but to conduce greatly to their good and orderly behavior.”<sup>75</sup> The school contemplated in the act, the Brandywine Manufacturers’ Sunday School, was part of a tradition of providing secular education to children on the Sabbath dating back to Samuel Slater’s provision of a Sunday School at his mill in Rhode Island.<sup>76</sup> The Pennsylvania legislature gave a similar nod to the education of working children, though this did not arise to the level of mandatory instruction. In 1820, an act “To Incorporate the Apprentices’ Library Company of Philadelphia” was passed which would “promote orderly and virtuous habits, diffuse knowledge and the desire for knowledge, improve the scientific skill of our mechanics and manufacturers, [and] increase the benefits of the system of general education” by providing books for the use of apprentices in Philadelphia and neighboring areas.<sup>77</sup>

## 4.4 Factory Attendance Laws and Compulsory Education

### 4.4.1 The Decline of Apprenticeship Over the Nineteenth Century

Once precedent had established the possibility of a corporation educating child workers, the next step towards overcoming parental-rights objections was to shift the emphasis of the law from mandating *instruction* to mandating *attendance*. Factory children were again the target. By the mid-nineteenth century, the apprentice relationship was disappearing. The experiment with corporate charters diverged into three sets of laws: first, attendance laws for working children, and later, child labor laws and general compulsory attendance laws. This section describes the decline in apprenticeship and the growth of factory education laws, giving econometric evidence on factors

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<sup>75</sup>1817 Del. Laws 230.

<sup>76</sup>Crawford (1995, 21). Slater abandoned the school after other churches established themselves in the area.

<sup>77</sup>1820 Pa. Laws 200. Apprentice libraries appear to have been a response to the depression beginning in 1819, which left apprentices without work. These libraries were established throughout the country, though only a small fraction of apprentices took advantage. Rorabough (1986, 121-22).

leading the emergence of compulsory attendance and child labor laws.

To give an idea of the decline in apprenticeship relative to other employment relations for children, Table 4.1 shows data from the United States censuses from 1860 to 1920.<sup>78</sup> The table shows data for employed white males between the ages of 10 and 20 who lived in urban areas, a group that was likely to have been apprenticed. In 1860, nearly one in five such employed children listed themselves as an apprentice, and this share drops to around one in thirty by 1920. To look at the decline in the classical notion of an apprentice living away from his family with a master, Table 4.1 also shows the share of apprentices who reported living with a non-relative. This declines from about one in three in 1860 to one in twenty in 1920. The decline in both numbers was sharpest between 1860 and 1880, so by 1880 apprenticeship was the method of training only a small fraction of young children, and apprenticeships requiring children to leave the home had nearly disappeared.

Part of the decline in apprenticeship was the rise of wages for apprenticed children. This had legal significance, since wages implied a new form of labor law. Indentures came with the remedies from English law, while wage labor had fewer protections.<sup>79</sup> Early apprentices usually received money (or clothing) at the end of the apprenticeship, and receiving wages at intervals was not the dominant practice.<sup>80</sup> In colonial America, even journeymen receiving cash wages was rare,<sup>81</sup> though in England by the 1700s paying wages near the end of apprenticeship, when the apprentice had bargaining power, was common.<sup>82</sup> Later, wages were needed to compete with the possibility of receiving wages for factory work.<sup>83</sup> By 1830, many apprentices in the United States were receiving wages for their service.<sup>84</sup> By the end of the nineteenth century, apprentices were compensated in a manner that was close

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<sup>78</sup>While 1850 was the first census to ask about occupations, the classification of children as apprentices seems incomparable with the later censuses.

<sup>79</sup>Steinfeld (1991, 58-59).

<sup>80</sup>Dolgin (1997, 62 n.54).

<sup>81</sup>Rorabough (1986, 8).

<sup>82</sup>Humphries (2006, 85). For an example in the United States, T.W. Dyott was the owner of a glass factory in Pennsylvania. In 1833 he published a pamphlet detailing the treatment of his apprentices, and wrote, among other things, that the apprentices, though not paid wages for ordinary work, were paid cash for overtime work, which might be spent on “fine clothes for Sunday and holiday suits, or to buy watches . . .” Barnard (1907, 6-7).

<sup>83</sup>Rorabough (1986, 6-7).

<sup>84</sup>See Whitman (2009, 54).

Table 4.1: Proportion of Employed Children in Apprenticeships, 1860 to 1920

Year	Apprentices	Apprentices Outside Home
1860	0.17	0.28
1870	0.15	0.15
1880	0.06	0.09
1900	0.04	0.07
1910	0.05	0.04
1920	0.03	0.04

*Notes:* Calculations from the IPUMS public use census samples, based on the *occ1950* variable. Numbers are for employed, urban, white males between the ages of 15 and 20 (the 1860 census recorded occupation from age 15 on). Percentages are similar for ages 10 to 20 in years when census asked occupation to age 10. Institutional inmates are excluded from the sample.

to standard wage labor.<sup>85</sup>

This legal change in the treatment of the employment of children paralleled a broader change in the way work was structured in the United States. Labor contracts had lost criminal enforcement by around the 1820s, and the right to receive payment for services completed before quitting was on the rise over the century. Eventually the “employment at will” doctrine was adopted across the United States, mostly between 1870 and 1900.<sup>86</sup>

The decline of the apprentice system in the United States has been the subject of numerous theories, which generally describe either social reasons stemming from the American Revolution or economic reasons caused by the industrial revolution. Other theories include uncertain economic conditions which made the long-term commitment to an apprentice unappealing, religious revivals which put more authority in God than in a master, an increase in printed material which disseminated the knowledge of a trade without the need of a master’s oral instruction, or a highly mobile population which made long-term investments by employers unpractical.<sup>87</sup>

<sup>85</sup>Jacoby (1991, 908).

<sup>86</sup>Morriss (1994) gives dates for the adoption of employment at will in every state.

<sup>87</sup>E.g. (Wood 2004, 195), Steinfeld (1991, 59-175), and Rorabough (1986, 31-33). The mobility point is Lebergott’s (Jacoby 1991).

Under the broad heading of industrial causes for the decline in apprenticeship, industries where production could be concentrated lost apprenticeship first. Rorabaugh documents this transition in the shoe industry based in Lynn, Massachusetts. As a nationwide market for shoes developed in the 1830s, master shoemakers began to invest in machinery which required low skill levels to operate, so that apprentices were no longer accepted in the 1840s. Instead, boys were hired to operate the machinery rather than receive skilled craft training. This eroded the traditional apprentice structure—factory tasks were so subdivided and specialized that training all-purpose employees in the mysteries of a trade was too expensive. In the textile industry, the adoption of the power loom in the United States in the first half of the nineteenth century changed the work inside mills and made apprenticeships less attractive to mill owners.<sup>88</sup>

In summary, the use of corporate charters as a vehicle for educating children disappeared along with the apprentice system, due in part technological change and the rise of the factory system. It was replaced by a system of public schools and wage-labor contracts, and the law, instead of focusing on the duty of a particular individual or corporation to educate children, changed to require outside school attendance of working children.

#### 4.4.2 The Passage of Attendance Laws for Factory Children

As the practice of inserting school attendance clauses in corporate charters ended, states still faced the problem of educating child workers. This section examines what led states to pass the first school attendance laws for factory children—laws that required that working children attend school. As with compulsory attendance, Massachusetts provided precedent. Massachusetts had considered legislation to ensure education for mill children in 1816, when New Jersey was passing its corporate education law, but the legislature did not act for twenty years.<sup>89</sup> It considered targeting corporations, as had the earlier states, but ultimately opted for a broader mandate that included “any manufacturing establishment.”<sup>90</sup> The final language of the act required

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<sup>88</sup>Rorabaugh (1986, 59-64), Jacoby (1991, 892), Clark (1916, 540).

<sup>89</sup>Handlin & Handlin (1969, 231).

<sup>90</sup>*Newburyport Herald*, Apr. 22, 1836, at 2 (“Attention to this law cannot be directed too early, particularly as the word ‘incorporated’ originally appearing in the bill was subsequently stricken out, and the provisions apply to all manufacturing establishments what-

that “no child under the age of fifteen years shall be employed to labor in any manufacturing establishment, unless such child shall have attended some public or private day school, where instruction is given by a teacher qualified according to [statute], at least three months of the twelve months next preceding any and every year, in which such child shall be so employed” (1836 Mass. Acts 950).

A handful of other states passed similar factory education acts before the 1850s. Table 4.2 shows the dates of these laws along with statistics on manufacturing, cotton textiles, and schools across the United States. In 1820, manufacturing comprised a significant fraction of the workforce in many states, though employment in cotton textiles was minimal except in Rhode Island and Delaware. By 1840, manufacturing generally, and employment in cotton textiles in particular was much higher, with a significant employment levels in a number of northeastern states. These states tended to pass factory attendance laws. The four states with the highest level of cotton textiles each passed a factory attendance act by 1846, and six of the ten states with the highest level of employment in cotton textiles passed a factory attendance act before 1850.

These laws may have been responsive to the changing internal organization of the cotton mill as well as levels of manufacturing generally. As the nineteenth century progressed, “More processes were performed in one establishment; the capacity of individual mills was enlarged . . . . Technical and commercial limitations no longer restricted the size of factories so much as formerly; but most mills, and most spindles, even in old manufacturing districts, were still moved by small water-powers . . . . [N]ew factories were usually built where there was sufficient water to move big plants, and groups of small mills in one neighborhood were merged into single establishments” (Clark 1916, 543). As mills grew larger and assumed more aspects of textile production, the specter of English-style child labor conditions loomed. Especially in Massachusetts, where mills were larger than those in southern New England, employers placed child workers in a situation far removed from the traditional artisinal shop.<sup>91</sup>

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ever.”).

<sup>91</sup>Southern New England mills were smaller than mills further North: “Our principal textile areas continued to be near the New England coast and in the valleys of the Hudson and the Delaware, but within this region three districts having different manufacturing practice had arisen. North of Boston, Waltham precedents governed organization and technical processes. Cotton factories were large and controlled by big corporations . . .

Table 4.2: Level of Employment in Manufacturing and Cotton Textiles with Date of Factory Education Act

	(1)	(2)	(3)	(4)	(5)	(6)
	Manuf.	Cotton	Manuf.	Cotton	Schools	Passage
	1820	1820	1840	1840	1840	Date
Rhode Island	0.07	0.03	0.20	0.11	0.02	1840
Massachusetts	0.06	0.00	0.12	0.03	0.02	1836
New Hampshire	0.04	0.00	0.06	0.02	0.03	1846
Connecticut	0.06	0.00	0.09	0.02	0.02	1842
Delaware	0.12	0.02	0.05	0.01	0.01	
New Jersey	0.06	0.00	0.07	0.01	0.01	
Maryland	0.05	0.00	0.05	0.00	0.01	
Pennsylvania	0.04	0.00	0.06	0.00	0.01	1848
New York	0.04	0.00	0.07	0.00	0.02	
Maine	0.03	0.00	0.04	0.00	0.03	1846
Virginia	0.03	0.00	0.04	0.00	0.01	
Vermont	0.04	0.00	0.05	0.00	0.03	
Tennessee	0.02	0.00	0.02	0.00	0.01	
South Carolina	0.01	0.00	0.02	0.00	0.01	
Ohio	0.03	0.00	0.04	0.00	0.01	
North Carolina	0.02	0.00	0.02	0.00	0.00	
Missouri	0.03	0.00	0.03	0.00	0.01	
Mississippi	0.01	0.00	0.01	0.00	0.01	
Michigan			0.03	0.00	0.02	
Louisiana	0.04	0.00	0.02	0.00	0.00	
Kentucky	0.02	0.00	0.03	0.00	0.01	
Iowa			0.04	0.00	0.01	
Indiana	0.02	0.00	0.03	0.00	0.01	
Illinois	0.02	0.00	0.03	0.00	0.01	
Georgia	0.01	0.00	0.01	0.00	0.01	
Florida			0.02	0.00	0.01	
Arkansas			0.01	0.00	0.01	
Alabama	0.01	0.00	0.01	0.00	0.01	
<i>Mean</i>	0.04	0.00	0.05	0.01	0.01	1843

*Source:* Manufacturing data from the ICPSR census summaries, employment in the cotton industry from Jeremy (1981) and the manuscripts of the 1840 census.

*Notes:* Sorted by level of employment in cotton textiles in 1840, and limited to states with non-negligible levels of manufacturing.



While these laws likely had little measurable effect on school attendance, they were legally significant by laying the foundation for broad compulsory attendance and child labor laws passed in the next half of the nineteenth century. The great legal hurdle to the establishment of universal compulsory attendance laws was the idea that parental rights trumped the state's interest in education. But, the argument went, working children were an exception to this rule. In 1847, Horace Mann wrote that

there is one remark which applies alike to all these classes of employers. They use the services of children not their own. Now, it must be conceded that there exists a well-grounded reluctance, on the part of free governments, to any such interference with parental relations as is not made necessary by the nature of the government itself, or by the criminal conduct or culpable neglect of the parents. But those who employ other men's children for their own profit, cannot intrench themselves behind the sacredness of parental rights.

Manufacturing was particularly problematic. The Pennsylvania legislature followed this reasoning while considering factory legislation:

It may be asked, Why confine this inquiry exclusively to manufacturing and not extend it to business of other kinds? The answer is that in most occupations the apprenticing system prevails. In our factories there is no such thing: no indenture is executed to secure to the child its trade; no provision is made for its education. This deficiency is peculiar to the factory system alone and here is the point where legislative interposition seems to be necessary.<sup>92</sup>

Connecticut concurred: the governor noting the problem of "interference with the authority of the parent over the child [and] the master over the apprentice" but finding an exception for children employed in manufacturing establishments.<sup>93</sup> Passing a law that affected children in the workplace,

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. In southern New England and in the upper Hudson Valley mills of more moderate size were operated by individual proprietors or small stock companies" (Clark 1916, 551).

<sup>92</sup>Barnard (1907, 16), quoting a legislative committee in 1837.

<sup>93</sup>Chauncey F. Cleveland, Message, *Connecticut Courant*, May 15, 1842, at 1.

and particularly in manufacturing, avoided the parental-rights hurdle, establishing precedent that lowered the cost of establishing general compulsory attendance laws.

### 4.4.3 Comprehensive Regulation of Working Children

With legal precedent provided by school attendance laws for factory children, state began passing generally applicable child labor and compulsory attendance laws. The passage of compulsory attendance laws has been the subject of some study. Eisenberg (1988) and Lleras-Muney (2002) each study the passage of compulsory attendance laws. Eisenberg considers the politics of compulsory schooling laws at length, finding that states with already high attendance and Republican legislatures and their “crusading moralism” were more likely to pass laws. Lleras-Muney finds the number of blacks in states to be significantly related to the passage of work permit laws. Earlier, Richardson (1980) found that having a lower proportion of men working in agriculture, coupled with a low child to adult ratio, helped explain the passage of attendance laws. This section expands this literature to consider the factory along with the schoolhouse, showing factors leading to the passage of minimum age limits for factory employment and their pairing with compulsory attendance.<sup>94</sup> This section examines factors leading to both child labor laws and the comprehensive regulation of child time-use: the pairing of compulsory attendance and child labor laws.

The primary source for state level data in this section is the IPUMS public use sample of the 1870 census. Only a handful of states had factory age limits or compulsory attendance laws in 1870, so data from 1870 are potentially predictive of passage in the vast majority of states. The census data are supplemented with data on state-level political competition and governing party composition (Burnham 1980). Table 4.3 shows summary

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<sup>94</sup>As a doctrinal matter, the pairing of compulsory attendance and child labor furthered the shift towards institutional instruction of children. Colonial laws, although they provided schools in some places, placed the responsibility of educating children on the parent or master. Clauses in corporate charters requiring the company to educate children functioned in the same way. The introduction of laws calling for the school attendance of factory workers began to change this, by imposing a duty to send the child to school rather than to be educated in-house. The general compulsory attendance laws that followed furthered this transition by stressing attendance of children at public or private schools, although they sometimes retained the compulsory instruction nature of the colonial laws by leaving open the possibility for instruction elsewhere.

Table 4.3: State Level Summary Statistics, 1870 Census

Variable	Obs	Mean	Std. Dev.	Min	Max
Child Labor (male)	42	0.25	0.12	0	0.58
Child Labor (female)	42	0.07	0.05	0	0.21
School (male)	42	0.46	0.24	0	0.81
School (female)	42	0.44	0.23	0	0.80
Urban	42	0.17	0.17	0	1.00
Foreign Parentage	42	0.71	0.11	0.57	0.96
Manufacturing	42	0.05	0.05	0	0.23
Child Ratio	42	0.62	0.18	0.10	0.83
Democrat	32	0.47	0.27	0.08	1.00
Ranney Index	32	0.66	0.11	0.50	0.97

*Notes:* Data on child labor (ages 10-17), schooling (ages 5-17), nativity (=1 if either parent was born outside the United States), manufacturing (percent of employed adults between 25 and 40) and urban status from the IPUMS 1870 census sample. Political variables from Burnam's Partisan Division of American State Governments Series at ICPSR. The observation with urban = 1.00 is the District of Columbia.

statistics. The child labor rate is calculated for children ages 10 to 17 by gender, and the school attendance rate is calculated for children ages 5 to 17. Foreign parentage is counted if either parent was born outside the United States. Manufacturing is calculated from the IPUMS *ind1950* variable.

Table 4.4 uses the 1870 data to find factors predictive of the passage of a factory age limit. Political data are missing for many of the states in the West, so the final two columns of the Table are limited to 32 states. The data are analyzed using Cox proportional hazards model, which allows the estimation of coefficients without specifying the underlying hazard rate.<sup>95</sup> The female child labor rate is positive and significant at the 1% level, while the male child labor rate is only significant in column 1. This difference is unsurprising, as male and female child labor was perceived differently. For instance, female child labor rates were much lower than male rates, and states

<sup>95</sup>The model here fits well—an analysis of the martingale residuals shows an approximately exponential distribution with a hazard rate of one.

regulated male and female child labor differently.<sup>96</sup> The coefficient becomes insignificant when the Western states are dropped and the political data added. The political factors themselves are not significant predictors. With the Western states dropped, the percentage of workers in manufacturing is the largest predictor. As in the discussion of Table 4.2, this is not surprising—manufacturing levels were lower in the West, which lacked the large textile mills of the east with their specter of English-style industrialism.

Table 4.5 uses the same model to examine factors predicting the passage of states' first comprehensive regulatory scheme for child work and education. The dependent variable is the years from 1870 until a state combined a compulsory attendance law with an age limit for factory work. The most consistent predictors of passage, across models, are girls' employment and school attendance rates, along with the proportion white (reflecting later Southern passage). With Western states dropped in columns 4 and 5, the proportion of workers employed in manufacturing is positive and significant, with levels similar to that in 4.4. The ratio of children to adults is also significant and similar to that in 4.4.

As discussed previously, the child labor and education laws considered in this section had their roots in the corporate charters of New England. There, specific individuals with philanthropic intents moved legislation that targeted specific corporations. In contrast, the statistical results in Tables 4.4 and 4.5 show that later legislation for working children was responsive to widespread employment conditions. Higher child labor rates, especially among girls, predicts quicker passage of minimum age limits for factory employment. Outside the western states, high levels of manufacturing strongly predict quick passage of both factory age limits and comprehensive regulations for child labor and school attendance. Political factors do not seem appear to be crucial for either factory age limits nor their combination with attendance laws.

## 4.5 Conclusion

The nineteenth century brought radical changes in the way children were employed and educated in the United States. As the factory system emerged and

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<sup>96</sup>For example, some states passed higher age limits for girls than for boys, such as New Jersey in 1883 and Washington in 1909. Legislators were also preoccupied with the length of time girls spent on their feet at work.

Table 4.4: Factors Influencing the Passage of Factory Age Limits, 1870

	(1)	(2)	(3)	(4)	(5)
Child Labor (male)	2.685** (1.110)	2.102 (1.395)	1.082 (1.545)	2.955 (3.987)	3.344 (4.600)
Child Labor (female)	4.925* (2.559)	6.007** (2.802)	6.284** (2.921)	-2.405 (11.406)	-2.778 (11.755)
School (male)	1.754* (0.946)	2.568 (1.794)	3.252 (2.378)	-7.326 (5.770)	-7.863 (7.942)
School (female)	0.935 (0.788)	0.794 (1.428)	0.989 (1.699)	13.020** (6.364)	13.704 (9.204)
Urban		-0.307 (0.556)	-0.086 (0.594)	-0.492 (5.718)	-0.519 (7.169)
Foreign Parentage		-0.048 (2.435)	0.503 (2.493)	7.094** (3.376)	7.438 (5.184)
Manufacturing		-1.824 (3.894)	-0.424 (4.228)	39.069*** (13.736)	39.636*** (14.209)
Child to Adult Ratio		1.366 (1.350)	1.662 (1.437)	10.094*** (2.935)	10.013*** (3.388)
South			0.879 (0.750)	1.758 (1.456)	1.868 (1.622)
Democrat					0.013 (1.374)
Ranney Index					-0.553 (2.250)
Observations	42	42	42	32	32

*Notes:* Dependent variable is time from 1870 until date first factory labor age limits became effective. Regressions run using a Cox proportional hazards model. Data on child labor (ages 10-17), schooling (ages 5-17), nativity (=1 if either parent was born outside the United States), manufacturing and urban status from the IPUMS 1870 census sample. Political variables from Burnam's Partisan Division of American State Governments Series at ICPSR. Coefficients are shown rather than hazard ratios. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level.

Table 4.5: Factors Influencing the Passage of Comprehensive Labor and Education Regulation, 1870

	(1)	(2)	(3)	(4)	(5)
Child Labor (male)	0.669 (2.002)	1.352 (2.054)	4.546** (1.905)	4.971* (2.990)	3.377 (4.631)
Child Labor (female)	4.912 (3.041)	5.398* (3.249)	5.625** (2.733)	4.166 (7.370)	10.036 (10.271)
School (male)	3.927 (2.405)	5.287 (3.808)	5.417* (2.974)	-9.606 (6.535)	-19.086** (9.076)
School (female)	2.287 (1.650)	1.353 (2.409)	-0.225 (2.023)	10.951* (6.461)	22.324** (9.249)
Urban		0.577 (0.653)	1.633*** (0.601)	3.669 (2.735)	-1.534 (5.030)
Foreign Parentage		3.108 (2.045)	1.738 (2.325)	5.446 (3.624)	11.117** (4.619)
Manufacturing		3.992 (3.775)	2.912 (3.429)	22.590** (10.234)	28.182*** (10.497)
Child to Adult Ratio		2.128 (1.404)	0.680 (1.553)	4.725* (2.731)	7.037** (2.763)
White			4.982*** (1.808)	14.162*** (3.637)	15.797*** (5.009)
Democrat					2.482 (1.846)
Ranney Index					-2.301 (1.814)
Observations	42	42	42	32	32

*Notes:* Dependent variable is time from 1870 until the date a set of both factory labor and general compulsory attendance laws went into effect. Regressions run using a Cox proportional hazards model. Data on child labor, schooling, nativity, manufacturing and urban status from the IPUMS 1870 census sample. Political variables from Burnam's Partisan Division of American State Governments Series at ICPSR. Coefficients are shown rather than hazard ratios. Significance is denoted by \*\*\* at the 1% level, \*\* at the 5% level, and \* at the 10% level. Observations drop between columns 3 and 5 due to missing political variables. Column 4 is included for comparability.

brought increasing numbers of child laborers into textile mills and manufacturing companies, legislatures responded by experimenting with a number of ways to educate this new form of child worker. In some places, apprentice law from the eighteenth century was drawn on, either treating the child laborer as an apprentice (with its attendant educational requirements) or binding out abused factory children to outside apprenticeships. At the same time as apprenticeship law was adapting to the new industrial economy, corporations themselves were changing from the old monopolies of the eighteenth century to the private business corporations of the nineteenth. At the nexus of these two transformations, some states merged these areas of law by writing educational requirements directly into the charters of manufacturing companies.

In both Connecticut and New Jersey, education clauses in corporate charters represent a halfway point in the evolution of several strands of American law. In education law, they illustrate the evolution of colonial instruction laws, such as Massachusetts's famous Old Deluder statute, to modern compulsory attendance. In corporate law, they inform the transition from the public monopolies granted in the eighteenth century to the private corporations of the nineteenth (see Maier 1993). In labor law, they show how states attempted to adopt the notion of apprenticeship relationship to the factory floor as part of the broad nineteenth century shift to wage labor and employment at will (see Jacoby 1991). By the end of the nineteenth century the "public purpose" view of the corporation had disappeared, with general incorporation statutes allowing any kind of business to be incorporated. Corporate education clauses represent a midpoint in this progression. While manufacturing corporations employing child laborers did not provide the same kind of public good as a turnpike, they were held to the social responsibility of educating the children they employed.

This semi-public responsibility of early nineteenth century corporations provides the backdrop for today's increased emphasis on corporate social responsibility. Institutions such as IBM and General Motors have embraced the "modern" idea that a corporation may, or must, concern itself with the welfare of a constituency beyond its shareholders.<sup>97</sup> Yet, these modern innovations are only echoes of what David Humphreys intended at the beginning of the nineteenth century. To him, capitalism was much more essentially civic: the fruit of an organized manufacturing and agricultural establishment

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<sup>97</sup>See Kitzmueller and Shimshack (2012).

was the creation of “useful Citizens.”<sup>98</sup>

For the many factory owners who viewed children primarily as a cheap source of labor, child labor became an abusive system and the source of public outcry. States, especially those with high levels of manufacturing and cotton textile production, responded with factory acts, requiring school attendance of working children. These acts overcame parental-rights objections to attendance laws by targeting children in the workplace, and laid the foundation for later compulsory attendance laws that applied to all children.

The next chapter examines what “all” meant, as compulsory attendance and public school reform confronted the issue of race in the South.

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<sup>98</sup>Committee response to petition of David Humphreys for exemption from taxes and military service, Oct 20, 1808, Connecticut State Archives, RG001:010, Industry, second series, I:41.



## Chapter 5

# Creating the Gap: Courts, Compulsory Attendance, and the Rise of an Unequal Education System in the American South

### 5.1 Introduction

Before the start of the twentieth century, the relative status of black and white schoolchildren in North Carolina defied the norms of the South, with per capita expenditures for black children even exceeding that for whites. This did not last—by 1910 black children received less than half the per capita amount of white children. In a short span, the surprising equality that offered an exception to post-Reconstruction Southern education disappeared.<sup>1</sup> This chapter uses examines the role local tax policy and compulsory

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<sup>1</sup>The conventional story that might be told about black education before Brown is that hope of equality ended alongside Reconstruction, that *Plessy* and *Cumming* constitutionalized an unequal status quo, and this remained until the NAACP created pressure for reform. See, e.g., Howard (1999, 25) (“The kind of demoralization occasioned by the Court’s systematic destruction of reconstruction . . . did not begin to lift until a new generation of blacks came on the political stage around the turn of the century.”); Taylor (1977, 121-23) (discussing how Reconstruction was followed by large growth in inequality in public schooling in South Carolina, which lasted until reform in came “largely as a

education played in overcoming a constitutional mandate against educational discrimination.

Prior econometric studies of education in North Carolina focus on the effects of disenfranchisement or Northern philanthropy. Carruthers and Wanamaker (2013) find positive effects of the Rosenwald schools across the South, including North Carolina, starting in the 1920s. Ng and Halcoussis (2003) use North Carolina counties as part of a larger panel of seven Southern states taken at five year intervals between 1885 and 1930. They find evidence of discrimination in funding, with greater differentials in counties with higher black population, with discrimination generally increasing with disenfranchisement. Walters, James and McCammon (1997) perform a similar study across the South and conclude that disenfranchisement increased inequality in school enrollment between 1890 and 1910. Kousser (1980) studies North Carolina specifically, using a county-level dataset of education variables between 1880 and 1910. He finds that discrimination in expenditures on education increased after disenfranchisement, especially in areas with higher concentrations of blacks. Poor whites also suffered relative to middle class whites, so that “‘progressivism’ was, as a consequence of disfranchisement, for middle-class whites only.”

Outside of disenfranchisement, Card and Kreuger (1996) perform a comparison of North and South Carolina in a study on the effect of school quality, finding that school quality differences between the races accounted for a significant fraction of the gap in black and white earnings. Margo (1984) studies teacher salaries in Florida, Louisiana, and North Carolina in 1910 and finds severe discrimination in teacher quality. Collins and Margo (2006) provide statistics on educational inequality across the South, including North Carolina, and summarize many of the economic perspectives on racially unequal schooling.

This chapter extends this literature by giving a quantitative account of the creation of an unequal education system in North Carolina, showing specific mechanisms by which the status of black children relative to whites declined in the face of court-backed constitutional mandates of equality. To accomplish this, the bulk of the inquiry focuses on what occurred in the rural schools of North Carolina, although panel data from across the South gives supporting evidence. This serves several purposes. North Carolina has been considered “a bellwether state for understanding changes that took place in

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result of pressure from the NAACP and other civil rights forces”).

the South,”<sup>2</sup> one that was at the “forefront of educational changes”<sup>3</sup> during the Progressive era and boasted the South’s leading educational reformists. Prather (1979, 11). A close look at how reform played out in the hands of these officials informs a broader discussion of education reform, state control of education, and the road from Reconstruction to *Brown*.<sup>4</sup> Also, progressive education reform, such as increased state-level funding came with exceptional county-level data published in the state’s *Biennial Report of the Superintendent of Public Instruction*.<sup>5</sup> This enables a fine-grained look at the role state policy played in the creation of unequal schools.

The main methodology used to discern the effect of state and local policies is a difference-in-difference approach identified from variation in funding across counties and time. This accounts for any unobserved heterogeneity stemming from differences between counties that remained constant over time, or, in specifications with county time trends, that changed at a constant rate over time within counties. Using this technique, the effects of state and local policies are shown to be complex. At the local level, the creation of special tax districts increased differentials in term length, teacher salary, and the number of teachers per child between blacks and whites. Later state policy may have helped mitigate the growing inequality: pairing compulsory attendance with increased state funding appears to have reduced inequality among some districts.

The results in this chapter strengthen and caution two defining features of modern education reform. First, the role local control of school taxes played in the creation of the achievement gap gives weight to legal and political efforts to equalize school funding at the state level. Second, this chapter supports the essential role tracking the achievement gap must play in state accountability systems. In North Carolina, even strong constitutional precedent and a tradition of equality were undermined by the power of localities

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<sup>2</sup>Beezer (1983).

<sup>3</sup>Lange and Craig (2006, 40).

<sup>4</sup>Another question that may be asked is why statistical education outcomes such as term length or teacher pay matter when the holding of *Brown* was that de jure segregation itself was unconstitutional. The answer suggested by Morgan Kousser and Bob Margo is that if the “failure to enforce the equal part” of separate-but-equal amounted to a great loss in the economic lives of blacks, then the failure of courts to enforce equality was immoral in the same sense as segregation itself. Margo (1990, 72). Although physical inequality in education was declining when *Brown* was decided, decades of unequal education blessed by the courts had created chasms in economic wellbeing between blacks and whites.

<sup>5</sup>Hereinafter referred to as the Biennial Reports.

to manipulate school finance during a period of education reform. A public focus on the performance of minorities at the local level will help prevent enthusiasm for reform from creating similar results today.

The following section provides background on the North Carolina Supreme Court and the politics of disenfranchisement that set the stage for progressive reform in 1900. The third section details state and local funding, along with the court cases that sanctioned discrimination. The following section gives econometric evidence of the growth and results of unequal education. The final section concludes.

## 5.2 Background

### 5.2.1 North Carolina in the Context of the South

Figure 5.1 shows the status of expenditures for blacks versus whites across the South. In most states shown in the Figure, expenditures per black child are around 50% of those for white child in 1890, and decline to between 20 and 30% by 1910. North Carolina is a notable exception. Expenditures per black child are even with those per white child in the 1880s, declining to between 80 and 90% by 1900, before dropping steadily to around 50% in 1910. Something occurred in North Carolina to create an education gap during these years, and Figure 5.2 offers a suggestion.

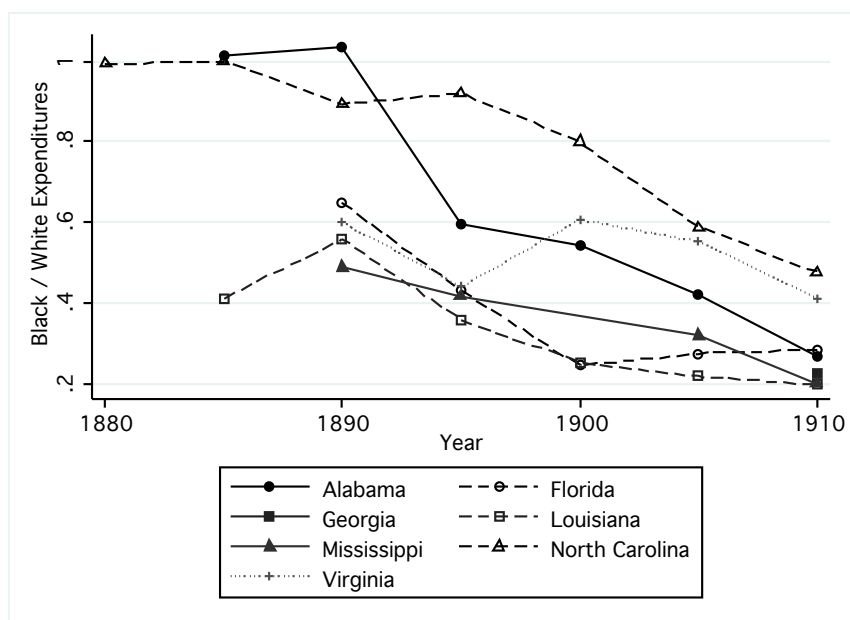
Figure 5.2 shows sources of school funds across the South as reported to the federal Superintendent of Public Instruction between 1885 and 1910. Again, North Carolina stands out. Compared to other states in the South, North Carolina reported uniquely low levels of local funding for public schools which then increased after the turn of the century. With a few exceptions, Southern states received between 40 and 100% of their funding from local sources, and this proportion stayed relatively constant for most states between 1880 and 1910. North Carolina, in contrast, dramatically increased its share of funding reported from local sources over this time period.<sup>6</sup>

While it would be incorrect to draw casual inferences between school taxation policy and educational inequality from these Figures, they are suggestive. North Carolina appears to buck the general trend of expenditures

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<sup>6</sup>Figure 5.2 draws on data reported in the national *Reports of the Commissioner of Public Instruction*, and appears to combine what is reported as money from the county level school fund along with purely local taxation for North Carolina.

Figure 5.1: Ratio of Expenditures per Black Child to Expenditures per White Child in the South, 1880-1910



*Notes:* Author's calculations using data from Ng (2001) (originally drawn from a county-level dataset compiled by J. Morgan Kousser).

in the South, at least until the turn of the century, and appears to change the way schools were financed at the same time as inequality increased. The next sections elaborate on these ideas, showing how school funding decisions stemmed from a political and legal environment that supported some educational equality for blacks until the turn of the century.

### 5.2.2 *Puitt*, Fusion Politics, and Steps Toward Equal Schools

Post-Reconstruction education for blacks was promising in North Carolina, with per-capita spending on black education actually exceeding that of whites at one point.<sup>7</sup> The legal basis was provided by the Reconstruction-era state constitution that prohibited discrimination in education against either race. This was evidently an ambitious clause, as attacks on black education came as early as state statutes in the 1880s.<sup>8</sup> First, a law was passed in 1883 allowing school districts to vote on dividing taxes by race, so that property taxes collected from whites would fund white schools and (much lower) taxes from blacks would go toward colored schools.<sup>9</sup> Since blacks owned much less property than whites, the result would be lower funding levels for black schools.

The all-white state Supreme Court responded to this with a surprising decision in 1886, in *Puitt v. Commissioners of Gaston County* that held the tax law unconstitutional.<sup>10</sup> The court reasoned that such a tax was not a uniform tax as required by the state constitution and “marks a color line among the qualified voters of the same territorial district. . . . Those derived from one class are devoted to the education of the children of that

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<sup>7</sup>See Klarman (1998, 379).

<sup>8</sup>See the Appendix for a timeline of major events.

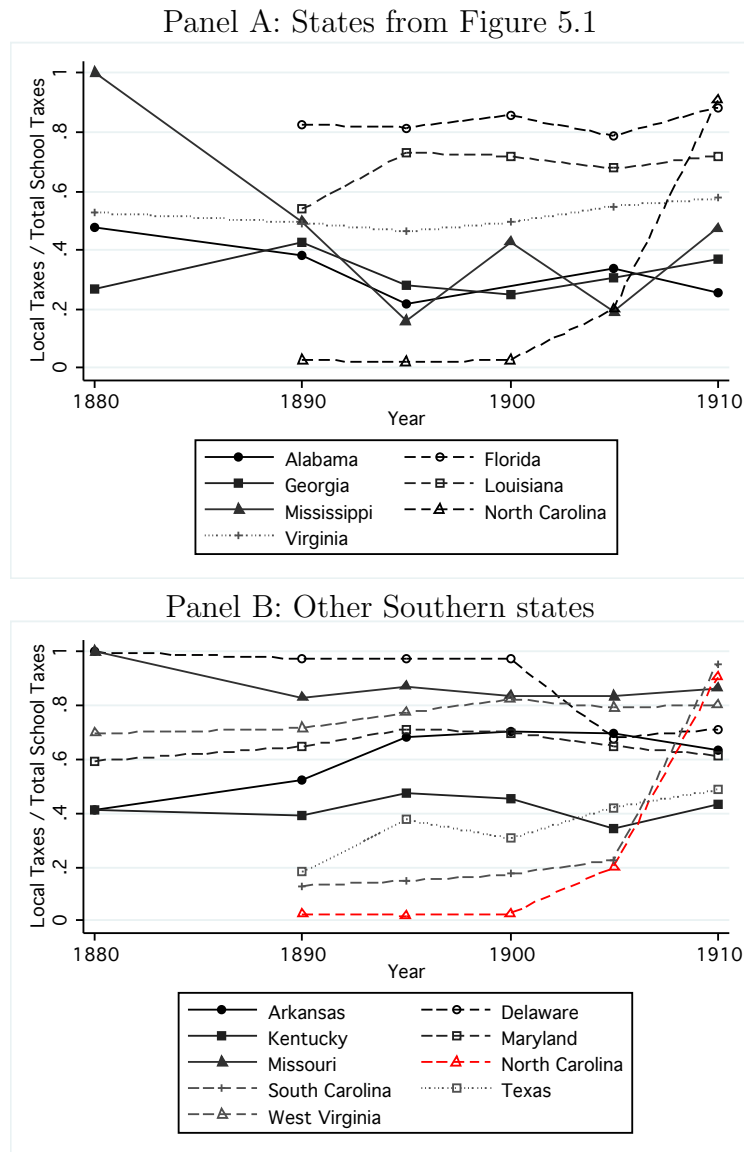
<sup>9</sup>See Beezer (1983, 217).

<sup>10</sup>94 N.C. 709 (1886). The court continued to show egalitarianism with respect to public schools, holding in *City of Greensboro v. Hodgkin* that

the constitution intends and requires that the state and county school funds shall be distributed to the several school-districts in the county in such way as to extend to all the children thereof, as nearly as practicable, equal school opportunities and advantages, and as to make the school term or terms in each district in every year, as nearly as may be, equal with the same of every other district in the county.

106 N.C. 182 (1890).

Figure 5.2: Local Taxation for Public Schools in the South



Notes: Author's calculations using data from the Biennial Reports.

class only, and denied to the children of the other, a distinction which finds no countenance in the Constitution.”<sup>11</sup>

The court specifically referenced the racial nature of the law, that it “admit[ed] only the votes of white men in the white district, and colored men in the colored district. . . . [so that the] discrimination rests wholly upon race.”<sup>12</sup> Two policy arguments bolstered the constitutional holding. First, the law would be “subversive of the equality and uniformity recognized in the system of public schools, which looks to a fair participation of all its citizens in the advantages of free education.” Then, the court reasoned that if this tax were upheld, further lines might possible be drawn. “[W]hy may it not be between children of different sexes, or between natives and naturalized persons of foreign birth, or even between the former and citizens of other States, removing and settling in this State?”<sup>13</sup>

The motivations of the Supreme Court are difficult to parse. The Chief Justice and author of the opinion, William Nathan Harrel Smith, had been a Whig before the Civil War, and had proposed tolerant legislation during Reconstruction.<sup>14</sup> When questioned about his avoidance of the Republican party, his reply was “that is the natural place of the southern Whigs, but you Republicans render it impossible.”<sup>15</sup> He was joined on the court by Thomas Ashe, a reliable conservative vote,<sup>16</sup> and Augustus Merrimon, a favorite of conservative Democrats,<sup>17</sup> who as a quorum somehow became “relatively liberal on racial matters.”<sup>18</sup>

This liberality showed in the cases that accompanied *Puitt*. In *Britton v. Atlanta & Charlotte Air-Line Railway Co.*, the court held a railway liable for ejecting a previously-seated black passenger from a car.<sup>19</sup> The court also reiterated the holding of *Puitt* in *Riggsbee v. Town of Durham*, where the judges invalidated a statute dividing taxes by race for the construction of schools in the town.<sup>20</sup> Yet, the North Carolina Supreme Court was hardly

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<sup>11</sup> *Id.* at 714-15.

<sup>12</sup> *Id.* at 715.

<sup>13</sup> *Id.*

<sup>14</sup> Hon. W. N. H. Smith, Chief Justice of the Supreme Court of North Carolina, 8 *N.C. Univ. Magazine* 96-97 (1889)

<sup>15</sup> Ashe et al. (1908, 432).

<sup>16</sup> Yearns (1979, 55-56).

<sup>17</sup> Dowd (1888, 90-91).

<sup>18</sup> Ranney (2002, 23).

<sup>19</sup> 88 N.C. 536 (1883).

<sup>20</sup> 94 N.C. 800 (1883).



“an island of racial enlightenment in the late nineteenth century South. *Puitt* did not guarantee, and was not intended to guarantee, equal funding for black and white schools, and the *Britton* court did not challenge the legality of segregation in any way.”<sup>21</sup>

Reaction to *Puitt* was negative but short lived. Some localities simply ignored the ruling and continued with racially divided tax schemes. Others closed their public schools, and some newspapers thought the judges would lose their chances to be reelected. These were all temporary retorts, though, as the public schools reopened and all three justices won reelection. Apparently, had *Puitt* been decided otherwise whites would have faced higher taxes, and lower tax rates were sufficient consolation to preserve the tenure of the justices (Douglas 1995, 11).

Democrats had also anticipated trouble with the provision. In 1885, the Assembly added to the 1883 law by requiring previously elected school board members be appointed by county officials. Since justices of the peace and county superintendents were appointed by a Democrat-controlled Assembly, this meant that blacks were implicitly removed from leadership positions in local school districts. The 1885 school law gave these white county officials “broad discretion over one-third of their school funds.”<sup>22</sup> After two-thirds was distributed on a per-capita basis, county officials (appointed by white leaders) could spend the remaining third “in such manner as to equalize school facilities to all districts of the country, as far as may be practicable and just to all concerned.”<sup>23</sup> This meant that school boards were practically free to distribute a substantial portion of school funds as they pleased, with frequently harsh results for black schoolchildren.

At the national level, *Plessy v. Ferguson* was decided in 1896 to little fanfare.<sup>24</sup> In early twentieth century North Carolina, at least, it was “a doctrine then popular only among constitutional lawyers” (Harlan 1957, 189). *Plessy* was followed with *Cumming v. Richmond County Board of Education* in

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<sup>21</sup>Ranney (2002, 22-23). Other examples of the court working against black interests are its enforcement of a promissory note for a slave and miscegenation laws. *Id.*

<sup>22</sup>Leloudis (1999). Most Southern states passed similar laws (Bullock 1967, 86). See generally *State v. Wolf*, 59 S.E. 40 (N.C. 1907) (“We have sustained every act of the General Assembly enacted for the purpose of making the public school system elastic and adjustable to local conditions and needs.”).

<sup>23</sup>*Id.*

<sup>24</sup>163 U.S. 537 (1896). “*Plessy* drew little press attention at the time it was handed down” (Howard 1999, 24-25).

1899, where advocates for black education actually relied on the holding in *Plessy* to argue that black children were receiving unequal treatment and deserved judicial relief.<sup>25</sup> The issue in *Cumming* was a black high school which had been closed, while tax funds supported two white high schools. The plaintiffs sued to prevent collection of the tax, and Justice Harlan (ironically, the dissenter in *Plessy*), failed to find a violation of the Equal Protection Clause. He wrote that “any interference on the part of Federal authority with the management of such schools cannot be justified except in the case of a clear and unmistakable disregard of rights secured by the Supreme law of the land.”<sup>26</sup>

*Cumming* showed the South that litigation attacking the “equal” lines of *Plessy* was futile where education was concerned,<sup>27</sup> and courts did not question whether separate schools implied unequal treatment. Bruce Beezer studied court decisions in North Carolina between 1880 and 1920 and concluded that the practice of separate facilities was never questioned.

During the period under study, the North Carolina Supreme Court never discussed or considered whether separate schools denied anyone equality, and in some decisions the attitude was that blacks were better off because if the schools were not segregated, in all likelihood there would be no schools for anyone. Such a situation, the court said, would hurt blacks more than whites, and the “separate but equal” standard was the only approach to achieve the necessary relations between races.<sup>28</sup>

In 1903 Democrats attempted to overturn *Puitt* through a constitutional amendment, but Governor Aycock troubled supporters in his own party by

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<sup>25</sup>175 U.S. 528 (1899).

<sup>26</sup>*Id.* at 545. See generally Howard (1999, 151-54) (discussing the history of *Cumming*).

<sup>27</sup>Kousser describes the effect of *Cumming*:

[T]he results of *Cummings* were very clear. The case gave the southern and other states a green light to heighten discrimination in publicly funded activities and discouraged black litigants from seeking redress in the federal courts. After all, if the court would not overturn a system which flatly denied to blacks a service which it offered to whites, it would surely not intervene to adjust mere discrepancies in teachers’ salaries, school and other facilities, and the like.

Kousser (1980b, 42-43).

<sup>28</sup>Beezer (1983, 216).

opposing it (one newspaper editor wrote that “It would be blessing to the state if our Educational Governor would be stricken with lockjaw”<sup>29</sup>). Aycock’s stance on black education may have been a way to please Northern philanthropists, whose support he desired for education reform. Aycock promised that “the schools of the disfranchised Negroes would have protection from hostile state legislation through the power and prestige of his high office” in exchange for the philanthropists acceptance of Jim Crow (Harlan 1957, 192). Or, Aycock may have realized that white supremacy could only be taken so far before blacks left the state en masse<sup>30</sup> or intervention came from Washington.<sup>31</sup> If Northern attention was drawn to North Carolina over the smaller issue of the school fund, attention might be drawn to disenfranchisement which formed the basis of Democrat politics (Kousser 1980, 185-86).

Regardless of the machinations of the Democrats and perhaps in spite of *Plessy, Puitt* appears to have had positive effects on black education funding. Due to the constitutional restriction on race-specific taxation, white and black schools in North Carolina were among the most equal in the South at the turn of the century, and black schools in the state received more funding than any other state in the South.<sup>32</sup> Figure 5.3 shows both the initial equality and the later inequality through comparing the expenditures for black and white children. The expenditures are roughly even from 1880 to 1900 before they diverge rapidly after 1900. The next section explores how disenfranchisement set the stage for this reversal of fortunes.

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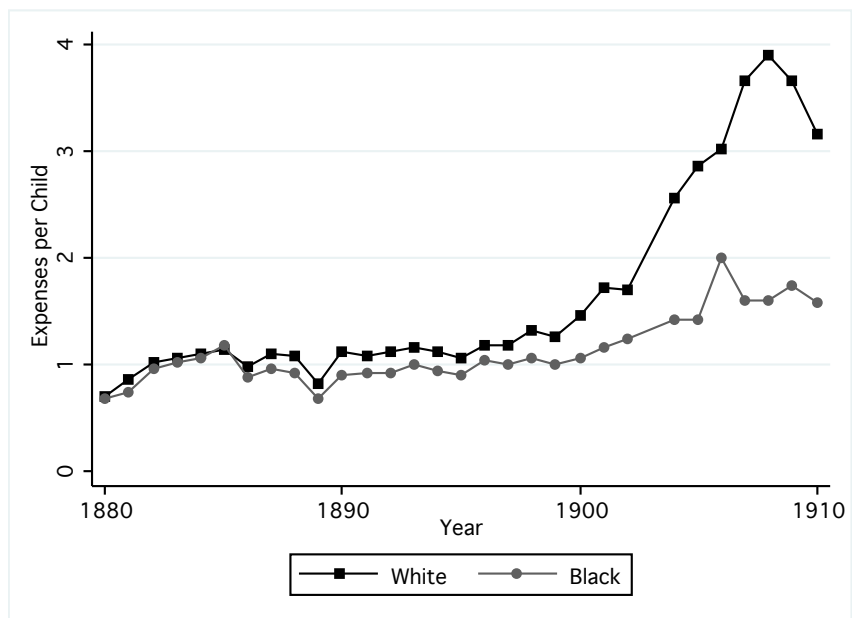
<sup>29</sup>Prather (1979, 222).

<sup>30</sup>In his departing remarks as Governor, Aycock said that “apart from our sense of obligation to his weaker race, I am impressed with the necessity of causing all agitation and estrangement of the negro, for the reason that as this estrangement and this embitterment increase large amounts of them will go out from among us. The greatest need of North Carolina today is more labor.” Governor’s Message, *Charlotte Observer*, Jan. 6, 1905, at 7.

<sup>31</sup>Leloudis (1999). “To the governor’s way of thinking, the state’s real need was for a more flexible and adroit racial policy one that joined the active subordination of blacks with an effort to cultivate among them some measure of collaboration and consent.” “Statesmanship,” not “passion and prejudice” was needed. *Id.*

<sup>32</sup>Douglas (1995, 12). In 1890, for example, the ratio between white and black school funding was 1.01. Collins and Margo (2006, 107).

Figure 5.3: Expenditure per Child in North Carolina, 1880-1940



Notes: Author's calculations using data from J. Morgan Kousser

### 5.2.3 Disenfranchisement

After Reconstruction, blacks were steadily disenfranchised across the South, with predictable results for local policy school policy.<sup>33</sup> This was accomplished through a combination of informal pressure, violence, and a host of laws such as poll taxes, increased registrar discretion, and constitutional amendments.<sup>34</sup> Early twentieth-century education policy in North Carolina is best understood as both part of this movement and as a reaction to politics of the 1890s, where the Fusion movement, an uneasy merger between Populists and Republicans, managed to throw the Redeemer Democrats out of office.<sup>35</sup> North Carolina was the only southern state to manage this achievement (Beckel 2010, 176). The Fusion movement lent itself to education reform, but the time the government had to implement reforms was short. Democrats were determined to fix their failure at the ballot box, and they created a potent campaign of their own education reform efforts combined with militant white supremacy.<sup>36</sup> Their campaign was both violent and effective. The Red Shirts terrorized voters, and notorious Ben Tillman came up from South Carolina to campaign for the Democrats (Prather 1979, 133). The resulting racial tension resulted in the death of at least 60 blacks, and the campaign succeeded.

Once in office, Democrats proceeded to enact Jim Crow legislation that North Carolina had been spared to that point. The Democrat's approach to solving public education problems was the provision of \$100,000 from the state treasury, ostensibly to lengthen the school term to the constitutionally mandated four months.<sup>37</sup> The funding was introduced with "fanfare," but

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<sup>33</sup>See Ng and Halcoussis (2003) (showing a link between the level of black political participation and education rates).

<sup>34</sup>For a discussion of the passage and effect of disenfranchisement laws across the South, see Kousser (1974).

<sup>35</sup>See Prather (1979, 10).

<sup>36</sup>Westin (1966, iv) ("[M]istakes in the Fusionist educational program helped to drive many whites back to the Democratic party. To regain power, the Democrats allied themselves with the advocates of public education and became committed to a policy of school support.") The Fusion education reforms "either were mechanically faulty or were effective only in the long run; hence they created little but antagonism." *Id.* at viii-ix.

<sup>37</sup>1899 N.C. Acts 836. A short school term compounded other problems: "With short school terms . . . we cannot hope to command and retain first-class talent in this business of teaching the rural schools, however good or however accessible the opportunities for improving teachers may be made." 1904 Biennial Report, at 57. A longer school term would also increase attendance. 1902 Biennial Report, at XLVII.

reformers knew it would “add only a few hours to the school term (Prather 1979, 175).” This lukewarm commitment to education reform would reverse course when trying to disenfranchise blacks become a central platform of their campaign in 1900.

Once the Democrats had regained control of state politics, they resolved on a plan to ensure they would not again lose control. The mechanism they chose was disenfranchisement. The 1899 legislature reversed election reforms the fusionists had passed and enacted a voter registration requirement that gave broad power to registrars to disenfranchise, although the primary method would be a constitutional amendment. This was patterned after Louisiana’s 1898 constitution, which introduced the famous “grandfather clause,” where education requirements would not remove suffrage from those whose fathers or grandfathers could vote in 1867. North Carolina’s amendment took this as inspiration but differed in two ways. First, North Carolina did not limit the grandfather clause to grandchildren, any “lineal descendent” would qualify for the exemption. Second, the grandfather clause was qualified by setting a specific date after which the exemption would sunset. After December 1, 1908, men who came of age, white and black, would be required to pass a literacy test to vote.<sup>38</sup>

Since the constitutional amendment would at least facially disenfranchise illiterate whites beginning in 1908, Republicans made this a part of their campaign, appealing to fears of disenfranchisement among poor whites in the western part of North Carolina where literacy rates were low. Beckel (2010, 203). Democrats soon responded with a message of educational reform, with gubernatorial candidate Aycock promising to eliminate illiteracy and “for every child in the state to get an education.”<sup>39</sup> The Democrat platform was to “pledge ourselves to increase the school fund so as to make at least a four months school term in each year in every school district in the state.”<sup>40</sup> Education now became foundational for white supremacy: Aycock’s convention

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<sup>38</sup>The amendment provided, “But no male person, who was, on January 1, 1867, or at any time prior thereto, entitled to vote under the laws of any State in the United States wherein he then resided, and no lineal descendant of any such person shall be denied the right to register and vote at any election in this State by reason of his failure to possess the educational qualifications herein prescribed: Provided, he shall have registered in accordance with the terms of this section prior to December 1, 1908.” N.C. CONSTITUTION amend. 61 (1900).

<sup>39</sup>Aycock, quoted in Beeby (2008, 205).

<sup>40</sup>Quoted in Prather (1979, 184); see also Beeby (2008, 199).

speech promised that education was the “foundation of white supremacy”<sup>41</sup> and that “universal education of the white children of North Carolina will send us forward with a bound in the race with the world.”<sup>42</sup>

The “embryonic” issue of education, in a state with poor public education even by Southern standards, had now become a major political concern. At the same time, it was white education with which politicians concerned themselves—even the Republicans and Populists who opposed the amendment did so out of concern it would disenfranchise whites rather than blacks. They feared the amendment would enable urban, literate blacks to vote while disenfranchising rural, poor whites after 1908.<sup>43</sup>

After such encouragement as “if you find the Negro out voting, tell him to leave the polls and if he refuses, kill him,” Aycock and the amendment won the election. The constitution was then amended in 1900. Some school reformers, who favored the disenfranchisement amendment due to the literacy requirement welcomed disenfranchisement, since requiring a literacy test before allowing a person to vote was a mild form of compulsory attendance.<sup>44</sup>

As education reformers had feared, the newly elected Democrats found it difficult to fulfill their promises made during the 1900 campaign. Aycock had trouble convincing wealthy residents to pay new taxes for schools, and funding for even a small measure to increase the school term was objected to by the railroads, a needed Democrat booster.<sup>45</sup> They managed to allocate a further \$100,000 from the state treasury towards the schools, but this did not satisfy education reformers. To fill the void, a conference was held in Raleigh in 1902, where representatives from state educators, Northern philanthropists, and the governor met. They gathered with “the purpose of organizing a thoroughgoing educational campaign and of uniting all the educational forces of the State” (Knight 1916). This board established the “Central Campaign Committee for the Promotion of Public Education” and resolved on a “Declaration against Illiteracy,” and generally began what would become two decades of education reform.

Disenfranchisement thus turned state officials into education reformers, since illiterate whites faced losing the vote in 1908.<sup>46</sup> Then, since blacks were

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<sup>41</sup> *Id.*

<sup>42</sup> Aycock, quoted in Prather (1979, 184).

<sup>43</sup> Prather (1979, 9-10, 181).

<sup>44</sup> Leloudis (1999, 136-38).

<sup>45</sup> Prather (1979, at 144, 207).

<sup>46</sup> Whether whites would have been disenfranchised in actuality in 1908 is an open ques-

removed from political power progressive educational reformers may have felt more free to extend funding to Southern schools.<sup>47</sup> With the backing of the state government, “New South boosters crushed their opponents and cleared the way for the new education to take possession of the countryside. . . . Fortified by the wealth of northern philanthropists, they set out to win the hearts and minds of rural children.”<sup>48</sup> The result was a flood of money for rural education in the state which could be diverted away from black schools because of disfranchisement and local school funding control. The following sections examine how localities channeled this flood towards white schools with the blessing of the previously sympathetic Supreme Court.

### 5.3 Funding and Inequality

The prior section outlined the causes of the rise in unequal schools: the result of a white supremacist reaction to Fusion politics of the 1890s, and the resulting disenfranchisement and flood of money towards education reform. This and the following section use data from the biennial reports of the state superintendent to show how and where this money was created and diverted to white children. They describe how a combination of progressive reform and cooperative courts allowed local tax districts and state money to fund white schools over blacks despite the limitations imposed on racial taxation by *Puitt*. To analyze this, yearly data were entered at the county level, for both rural and urban areas, from the Biennial Reports.<sup>49</sup> Data were entered from 1905 to 1919, when a consistent series on rural schools exists (the rural data become available in 1905 and the method of apportioning state funds changed in 1920 with the creation of the State Public School

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tion, as white would have administered the actual literacy tests. At the least, the opposition movement was able to use the fear of white disenfranchisement to their advantage.

<sup>47</sup> Klarman (1998, 383-84) (“Black disfranchisement essentially extinguished any political constraints on racially discriminatory administration of the public school fund. Soon thereafter (and not unrelatedly), the Progressive educational campaigns that swept the South from 1900 to 1915 poured much larger sums of money into public education, which administrative officials were now largely free to divert to white schools.”).

<sup>48</sup> Leloudis (1999, xiv).

<sup>49</sup> Data were entered for the rural areas and the county average, with average urban numbers backed out from the two series.



Fund<sup>50</sup>), and before state officials began a more active attempt to improve the quality of black schools.<sup>51</sup> As some counties urbanized during this period, and thus began splitting their urban and rural numbers in the middle of the time period, data for those counties are limited to years containing both the urban and the rural data.

While using aggregate data has problems, such as limiting the analysis of variables within the county, and its inability to differentiate between homogenous and heterogeneous enrollment and attendance, it offers several advantages over the alternative—the IPUMS census samples. First, the data are at much higher frequency than the ten-year census samples. Second, they contain a breadth of information on funding, schoolhouses, and term length that are unavailable in the census numbers. The race-specific variables collected are teacher salary, number of teachers, the school term, number of schools, enrollment, attendance, and population.<sup>52</sup> The non-race-specific variables collected are local funds, county funds, the amount of state aid under various names, and total funds.

### 5.3.1 Local Tax Districts, *Heward*, and *Lowery*

Soon after the disenfranchising amendment was passed in 1900, the legislature turned its attention to public school reform, as the specter of disenfranchising illiterate whites in 1908 loomed. In 1901 an act was passed that outlined a new structure for the public education system, providing for the allocation of state funding, the duties of county superintendents, etc. For funding the public schools, the legislature both paid heed to the prior decisions of the state Supreme Court while creating a way to divide funds by race. With *Barksdale v. Commissioners of Samspon County*<sup>53</sup> in mind, an earlier decision that limited the amount of taxes that could be raised for educational purposes, the state required counties possessing schools maintained for less than a four-month term to impose a special tax, with care to “observe the

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<sup>50</sup>1919 N.C. Sess. Laws 277. Also, counties that either were newly formed during this period or divided into new counties are omitted. When the state reports were clearly in error, such as when reporting a number an order of magnitude larger than surrounding data points, a conservative attempt was made to adjust the observation.

<sup>51</sup>Westin (1966).

<sup>52</sup> A small number of Native Americans were included in the black population numbers in some years.

<sup>53</sup>93 N.C. 472 (1885).

constitutional equation of taxation.”<sup>54</sup> That was the case for county taxes, but *Jones v. Commissioners of Person* in 1890 had established that the constitutional limit on taxation did not apply to municipalities, since the language in Article 5 specifically referenced state and county taxes.<sup>55</sup>

Since municipalities had greater freedom to tax, the 1901 school law allowed both cities and towns to levy school taxes as well as the creation of “special tax districts” which could cross township lines. Since blacks had been disenfranchised, special taxes could be passed in white majority areas, and the special tax districts could be gerrymandered to support white schools. In this way, the legislature created a way to effectively overrule the court’s decision in *Puitt*. Taxes could not be directly raised from whites to pay for white schools, but special tax districts could accomplish much of this without blatantly violating the 1876 constitutional amendment that “there shall be no discrimination made in favor of, or to the prejudice of, either race.”<sup>56</sup> Superintendent Joyner outlined how this was to be done:

The committee could not . . . apportion to the white schools the money paid by the white race and to the colored schools the money paid by the colored race, but, considering the fact that the colored schools would not require as well qualified teachers and their teachers would not and ought not to be paid as large salaries because they are not as well qualified as a rule and because their expenses are not as great . . . the committee could so apportion the money as to do substantial justice to the colored race and satisfy them by giving them about as many months of school without having to apportion to them anything like their per capita part of the special tax money.

The North Carolina Supreme Court confirmed the legality of such inequality multiple times. For the question of whether gerrymandered special tax districts were legal, in *Heward v. Heward*, the court refused to overturn an obvious gerrymandered tax district, holding that it was a political question, since “[w]hen the citizens voted, they voted not only for the tax, but for the district. Hence the question presented is in its analysis a political one, to be fought out on the hustings.”<sup>57</sup> In addition, the legislature had

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<sup>54</sup>1901 N.C. Sess. Laws 45.

<sup>55</sup>107 N.C. 248 (1890).

<sup>56</sup>Amendment 47. See Pritchett (1985) for further discussion of the 1901 law.

<sup>57</sup>66 S.E. 571 (N.C. 1909).

granted reviewing power to the county board of education, not to the court. This added two layers of protection from black control of local taxing: disenfranchised blacks could not vote for tax districts where it would benefit their children, and reviewing power for districts created by whites lay with the white county boards of education.

For the legality of discriminatory tax districts themselves, the court in *Lowery v. Board of Graded School Trustees in Town of Kernersville*<sup>58</sup> allowed the creation of a tax district to proceed, reasoning that

Much must be left to the good faith, integrity, and judgment of local boards in working out the difficult problem of providing equal facilities for each race in the education of all the children of the state. Local conditions, relative numbers, and other well-recognized factors enter into the problem, and must be dealt with in a spirit of justice to all concerned, and to promote the honor and welfare of the state. In no sphere of our system of local self-government, under the guidance of a general superintendence and constitutional limitations, is the capacity of the people to govern themselves more strongly illustrated.

The court confirmed this a year later in *Smith v. Board of Trustees of Robersonville Graded School*.<sup>59</sup> In considering a local tax district, the court optimistically held that the “defendants in their sworn answer aver that they have no desire or intent but to administer their trust in accordance with the law of the land . . .” and that there were “no facts or data given by which the court may determine whether the contemplated expenditure is or is not an unequal and unlawful disbursement of the school funds.”

Along with the confirmation of their legality, local taxation became a favorite cause of progressive education reform. State Superintendent of Education Joyner repeatedly pushed for local taxation. In 1904 he wrote that existing districts would be “a standing object lesson” for others.<sup>60</sup> The Southern Education Board provided funds for speakers to visit localities and campaign for local taxation.<sup>61</sup> In his 1908 report, Joyner trumpeted that the

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<sup>58</sup>52 S.E. 267 (N.C. 1905).

<sup>59</sup>53 S.E. 524 (N.C. 1906).

<sup>60</sup>1904 Biennial Report, at 7.

<sup>61</sup>1906 Biennial Report, at 10. “The campaign for education [including local tax districts] by bulletin, through the press and by public addresses has been carried on without

“school terms in the newly established local-tax districts have been greatly lengthened, in many instances doubled.”<sup>62</sup>

The result of local taxation was greater freedom to create unequal schools. Pritchett (1985) compared the term length of districts in 1914 and concluded that local taxing could explain about 75% of the difference between black and white term length, with the relatively more equal distribution of county funds causing the remaining inequality. For a first look at the effect of local taxation, Figure 5.4(a) first shows a basic measure of equality, the proportion of counties where school was held for an average of at least four months, the constitutional requirement. The data are divided by race, and by whether the county had achieved a four-month term in 1905. Low performing white counties experienced a large increase between 1905 and 1909, while the proportion of constitutionally-compliant black schools increased at a much slower pace before increasing sharply after the comprehensive school reform act of 1913.

Figure 5.4(b) also shows data from 1905 to 1919 in the same manner, but focusing on the low performing white counties. The right axis shows the proportion of white schools achieving a four-month term, as reported in the county-level data. The left axis shows the proportion of such counties where money had been collected from local taxation. The correlation is 0.96, suggesting that local tax districts contributed significantly to increasing term length for whites, with less of an effect on blacks, as might be expected from the politics behind their creation.

### 5.3.2 County and State Funds, and *Collie*

After local taxation, the two major areas of funding recorded in the Biennial Reports are county funds and several categories of state aid. The county fund contained money from an 18c property tax and election polls and constituted the majority of school funding. The 1901 school reform bill eased the way to discrimination by revising how counties were allowed to allocate funds. After 1901, counties were to distribute funds “so as to give each school in said township for each race the same length of school term . . . .”<sup>63</sup> Since, as Superintendent Joyner highlighted in the prior section, black terms could

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cessation.” *Progress of Education in North Carolina*, Winston-Salem Journal, Mar. 17, 1907, at 2.

<sup>62</sup>1908 Biennial Report, at 7.

<sup>63</sup>1901 N.C. Sess. Laws 45; see Pritchett, (1985, 282).

be provided much more cheaply at the discretion of the school board, this opened the path to move funds away from a more per-capita basis and shift funding toward whites.

At Governor Glenn's inaugural address in 1905, he elaborated on this colorable equality. He "dissent[ed] most emphatically from the views of those who demand that the school fund should be distributed per capita between the white children and the negro children," yet he also "disagree[ed] with . . . giving [black children] only the taxes accruing from his own property." Since white schools cost more money, it was equitable to give them a larger share of the school fund.<sup>64</sup> Such freedom was an invitation to discriminate, yet it may have been limited compared to local tax districts created especially for such purposes, as Pritchett (1985) finds that the county fund contributed much less to differences in term length.

The ability of counties to tax increased with a decision of the North Carolina Supreme Court in 1907. By around 1907 most counties in the state had reached the *Barksdale* limit on taxation for school purposes.<sup>65</sup> *Collie v. Commissioners of Franklin County*<sup>66</sup> was a test case prepared to challenge Barksdale's limitation. In *Collie*, the court reasoned that the limit on taxation written into the 1868 constitution did not apply to holding a four-month term, since a four-month term was part of the constitutional text. The constitutional limitation "applied to legislative creations" not to "those expenses especially directed by the Constitution itself."

In addition to the larger county fund, the state appropriated funds for schools through the 1901 law.<sup>67</sup> Under that legislation, the state allocated \$100,000 on a per-capita basis, and an additional \$100,000 to bring districts up the constitutional minimum of a four-month term. This second \$100,000 was released as districts *requested* it, resulting in problems for the state staff as requests built, exceeded the amount, and had to be scaled back. Additionally, counties with larger tax bases received much from the fund because they could tax property at a lower rate. Joyner was not pleased with this aspect of the law and pushed for changes which were implemented in the 1913 law as greater restrictions were imposed on the use of state

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<sup>64</sup>Robert B. Glenn, New Governor Inaugurated, *Charlotte Daily Observer*, Jan. 12, 1905, at 1.

<sup>65</sup>1908 Biennial Report, at 38.

<sup>66</sup>145 N.C. 170. Joyner believed this "assures at least a four-months school in every school district." 1908 Biennial Report, at 9.

<sup>67</sup>1901 N.C. Acts 749.

funds.<sup>68</sup>

### 5.3.3 1913 School Reform

In response to Joyner's efforts, the decision of the Court in *Collie*, and agitation from the Farmer's Educational and Cooperative Unions and the United Order of American Mechanics, a bundle of school reforms were passed in 1913.<sup>69</sup> Reform coupled statewide compulsory attendance,<sup>70</sup> increased state funding, and a push for a six-month school term. Support for the bill was evidently strong, as the bill passed unanimously in the state senate. After 1913, both categories of state aid (one distributed on a per-capita basis and one distributed to needy districts based on whether schools were holding a four-month term) increased substantially and came with more state strings attached. This was based on districts *first* levying a special tax to try and meet the four-month minimum,<sup>71</sup> a special tax that was constitutional under *Collie*.<sup>72</sup>

This bundle of reforms was considered highly effective by contemporaries,

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<sup>68</sup>Westin (1966, 170-74).

<sup>69</sup>Based on petitions recorded in the 1913 Senate Journal.

<sup>70</sup>Compulsory attendance in North Carolina differed from much of the country, in that it was initially implemented gradually at the county level. In 1901, Mitchell County received compulsory attendance from the state legislature, and this was followed in 1903 for Macon County, Cherokee County, Washington City in Beaufort County, and (for whites only) Camden County. 1901 N.C. Sess. Laws 988; 1903 N.C. Sess. Laws 1011, 1030, 1036, 1152. In 1907, the legislature passed an act entitled "An Act to Require Attendance Upon Public Schools for Sixteen Weeks in Each Year," though the act fell far short of requiring attendance for any number of weeks. Instead, the act allowed the county education board, at their discretion, after a voter petition, to put compulsory attendance in the county to a vote. As of November of 1907, the Charlotte Daily Observer reported that compulsory attendance was being enforced in at least one area of the state: "The authorities are now enforcing compulsory attendance on school, and arrests for violation of the compulsory education law are being made . . . it is probably a large number of arrests will be made unless parents at once conform to the law and compel their children to attend school." Six Capital Cases. This an Important Week in Buncombe Superior Court, Criminal Term, *Charlotte Daily Observer*, Nov. 19, 1907. In 1913, attendance was finally made compulsory across the state.

<sup>71</sup>1913 N.C. Sess. Laws 58.

<sup>72</sup>Joyner himself made the connection to *Collie* in a 1916 letter to county superintendents and boards of education. May 19, 1916, reprinted in 1916 Biennial Report, at 166. The 1917 school law improved allocation of funds to poor counties by first allocating funds to them. Westin (1966, 267).

resulting in “the largest increase in enrollment and attendance and in length of public school term during any one year in the history of North Carolina.”<sup>73</sup> For at least low-performing black schools in Figure 5.4, the sharp jump in completion of a four-month term at 1913 indicates that the bundle of reforms succeeded in increasing school terms to the constitutional minimum.

## 5.4 Econometric Evidence

### 5.4.1 Effect of Special Local Tax Districts

#### Model

This section presents econometric evidence on how local funding, as construed by Lowery and Smith, county funds as revised in the 1901 school reform act, 1913 school reform, and state funding contributed to the growth of inequality in education. This section utilizes detailed county-level data from rural areas, where progressive school reform focused, and then proceeds to match the rural data to later life literacy in the 1930 census.

To show the increase in inequality, Figure 5.5 shows the increasing divide in term length and teachers per child. While school reform focused on the rural areas, the numbers for urban areas are included for comparison. Term length for urban areas remained flat at a roughly constant level of inequality, while term lengths for blacks and whites in rural areas both increased and diverged. The divergence in educational equality is most clear from Panel (b), where teachers per rural child in the county is plotted over time. Starting from roughly equal numbers in 1905, the number of black rural teachers increased from slightly under 1.5 teachers per 100 children to slightly over 1.5 in 1919. The largest increases for blacks come after 1913 school reform, while for white children teachers per child increased nearly linearly from 1.5 in 1905 to about 2.2 in 1919.

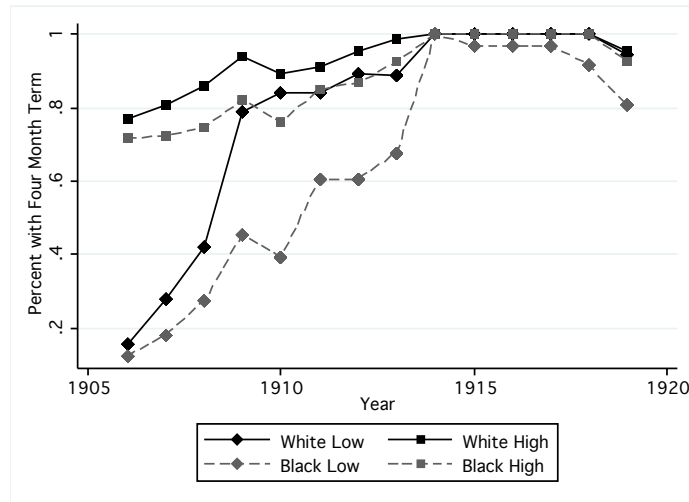
The effect of funding on inequality, and consequently the effect of the court cases that made their use legitimate, are identified from differences in funding per child across counties and time using the following difference-in-difference specification:

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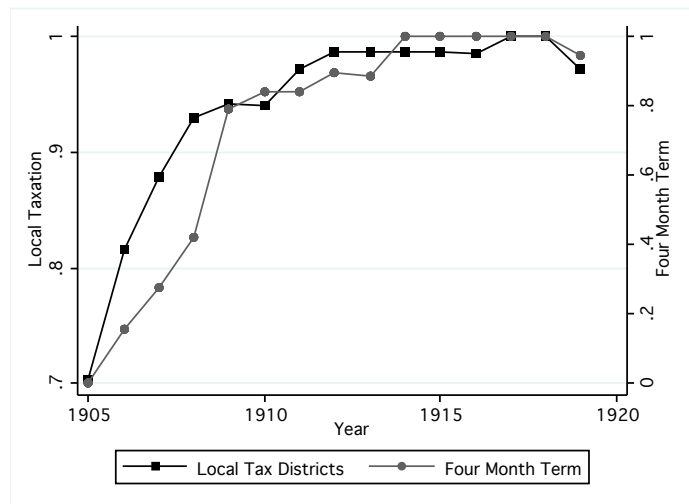
<sup>73</sup>1914 Biennial Report, at 10.

Figure 5.4: Local Taxation and a Four-Month School Term in North Carolina

(a) Completion of a Four-Month Term in Rural Areas, by Race



(b) White School Term and Local Taxation, Low-Performing Counties



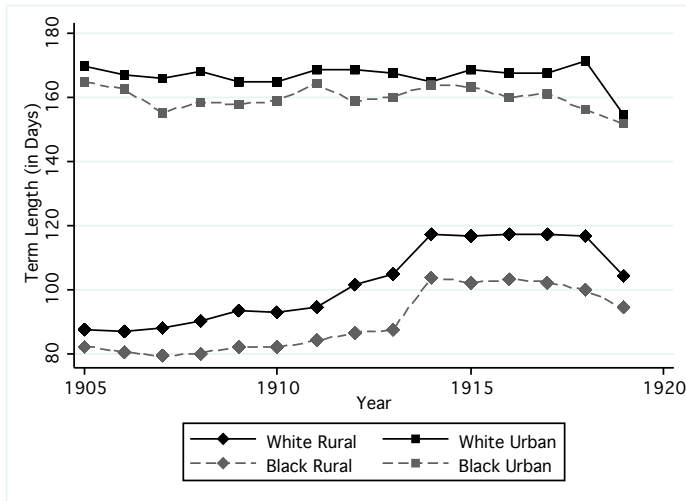
Source: Biennial Reports [various years].

Notes: For rural areas. “Low” and “High” divides by whether counties reporting less than a four-month term in 1905. Figure (b) shows counties reporting less than a four-month term for whites in 1905.

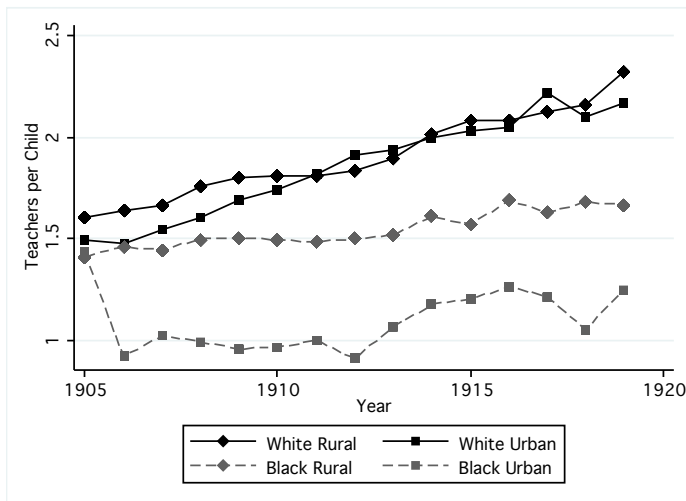


Figure 5.5: Term Length and Teachers per Child in North Carolina

(a) Term Length by Race and Urban/Rural Status



(b) Teachers per Child, by Race and Urban/Rural Status



Source: Biennial Reports [various years].

Notes: Teachers per child of school age in the county (x 100).

$$y_{ctw} - y_{ctb} = \beta_0 + \beta_1 haslocal_{ct} + \beta_2 local_{ct} + \beta_3 ctyfund_{ct} + \beta_4 state_{ct}xPre1913 + \beta_5 state_{ct}xPost1913 + county_c + year_t + X_{ct} + \epsilon_{ct} \quad (5.1)$$

where  $y_{ctw}$  is the educational outcome, such as term length, for whites in county  $c$  at year  $t$ , and  $y_{ctb}$  is similarly defined for blacks. The (logged) level of funding per child is given in *local*, *ctyfund*, and *state*. The variable for state funding is interacted with a dummy variable for before and after 1913, when the statutory funding scheme was modified to remove elements of local choice from the allocation of state funds. The variable *haslocal* is a dummy variable indicating whether any local funding existed, as local taxation was gradually adopted across the state. County and year fixed effects are included to control for constant heterogeneity at the county level and constant differences in funding across years.

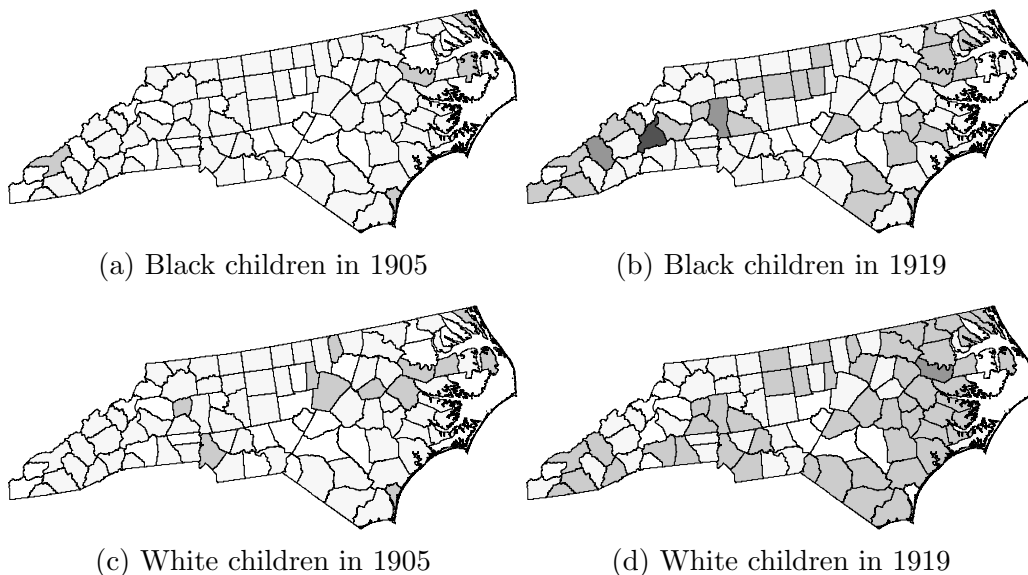
Covariates are included in  $X$ : the percent of the rural population that was black, the proportion of children living in rural areas within the county, and population density. These control for whether a small county did not need special rural tax districts because of a nearby city, and the ability of districts with larger numbers of blacks to siphon more state funding from black students. Standard errors are clustered at the county level. In some specifications the year fixed effects are dropped and county time trends are included, to control for possible county level trends in outcomes unrelated to funding.

Whether these estimates represent causal effects depends on the presence of omitted variables that are unaccounted for through the county fixed effects and time trends.<sup>74</sup> If a county was both more likely to discriminate against blacks in an unobservable manner, and more likely to create special local tax districts, for example, then county fixed effects should account for this county-level difference unless this propensity changed over time, or changed over time in a significantly non-linear fashion not captured by individual level county time trends. The consistency of many of the results across models and outcome variables suggests that these might not be unreasonable assumptions.

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<sup>74</sup>And on the impact of endogenous county choices to request state funding, if those requests were correlated with the decision to create local tax districts in a way not captured through the fixed effects.

Figure 5.6: Child Days Attended in North Carolina, by County and Race



*Notes:* Child days attended calculated as attendance rate times term length over 180 days. Map shows 1910 county boundaries. White-colored counties either lack data or lie in an area that changed county boundaries during the sample period. The four levels of shading show child days attended at the 0-25%, 25-50%, 50-75%, and 75-100% levels. Blanks areas are missing data.

*Sources:* County boundaries are from NHGIS, child days attended compiled from the Biennial Reports.

Conceptually, the difference-in-difference identification can be seen in Figure 5.6. The Figure shows the level of child days attended in 1905 and 1919, by race. The data are aggregated to the county level, using 1910 county boundaries from the National Historical Geographic Information System. The level of shading shows the number of child days attended out of a half-year term (the attendance rate multiplied by the term length over 180 days). There is considerable variation between counties, both for whites and blacks, in the cross-section and through time. Both whites and blacks attended for more days in 1919 than in 1905, though the relative increases differed.

## Results

Table 5.1 shows the results for term length in the rural dataset between 1905 and 1919, Table 5.2 similarly shows the results for teacher salaries, and Table 5.3 shows the results for teachers per child. For term length, both the presence of local taxation and the amount of money raised from local taxes significantly increases the differential between white and black terms. The presence of local taxation meant an increase in the term differential between blacks and whites of between four and seven days, evidence that the court's admonition in *Lowery* that “[m]uch must be left to the good faith, integrity, and judgment of local boards” meant that white schools would see the largest benefit from local tax districts. Local tax districts may have been “working wonders for North Carolina,” but they were primarily wonders for whites.<sup>75</sup>

There is little effect from changes to the county fund, and state aid shows mixed results. State aid before 1913 shows a consistent negative coefficient, but positive and insignificant for post-1913 aid across every model. This is consistent with the notion that aid from the state was at least marginally controlled by those with more egalitarian leanings, at least as to the ability to influence term length at the local level, though the negative effects before 1913 would indicate that state pressure helped black schools a decade before it has been supposed.

Since the aspiration of much of the state aid was to increase all term lengths to four months, and most white schools already had four-month terms, the negative coefficients may indicate that these funds ended up at their targeted schools. The three insignificant coefficients for post-1913 state aid may indicate that once a minimal level of term length was achieved for black schools there was less pressure to use state money for their benefit.

Table 5.2 shows the results for teacher salary, specifically, for teacher salary per day of term (controlling for differential salaries that were only due to longer white school terms). The amount and presence of local taxation are positive and significant in three of the four specifications—the effect of local tax districts was to increase the salaries of white teachers above that of blacks, consistent with the results for term length in Table 5.1. In contrast to Table 5.1, however, aid from the state treasury after 1913 is positive and significant in two of the four specifications: state aid may have increased the black term relative to whites (from Table 5.1) since this was a constitutional requirement, while educational *quality* for blacks, in terms of teacher salary,

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<sup>75</sup>Great is Local Tax, *Winston-Salem Journal*, Mar. 25, 1910, at 5.

Table 5.1: Effect of Funding on Differentials in Term

	(1)	(2)	(3)	(4)
VARIABLES	Term	Term	Term	Term
Has Local Tax	4.08*	4.01*	6.81***	3.13
	(2.26)	(2.25)	(2.51)	(2.32)
Local Tax Value	2.18**	2.15**	2.65***	1.83**
	(0.86)	(0.85)	(0.98)	(0.82)
County Fund	-1.06	-0.66	2.56	-1.31
	(1.75)	(1.70)	(1.92)	(2.01)
State Fund (Pre-1913)	-2.82**	-2.74**	-1.50*	-2.25*
	(1.28)	(1.24)	(0.89)	(1.29)
State Fund (Post-1913)	0.49	0.71	-2.99***	1.00
	(1.42)	(1.37)	(0.66)	(1.13)
Proportion Black		16.37	20.54	21.33
		(23.25)	(24.58)	(24.29)
Proportion Rural		1.38	-20.80	-11.03
		(17.33)	(23.95)	(24.68)
Population Density		0.35	1.05*	0.83
		(0.50)	(0.54)	(0.59)
County Fixed Effects	Y	Y	Y	Y
Year Fixed Effects	Y	Y		Y
County Time Trends			Y	Y
Observations	2,442	2,442	2,442	2,442
R-squared	0.555	0.556	0.631	0.657

*Notes:* Dependent variable is difference in length of rural white and black term length. Regressions are weighted by population, with standard errors are clustered at the county level. Funds are in logs of county funds per child, in 1900 dollars. “State Treasury” includes the sum of special state appropriations, labeled in the Biennial Reports as the First State 100k, the “Second State 100k,” the “State Equalizing Fund,” and the “State 250k.”

was ignored. This is especially interesting in light of the language of the 1913 law, which provided that county officials were “forbidden to sign any voucher for the payment of any part [of the state funds] for any other purpose than for the payment of teachers’ salaries as and for the period designated.”<sup>76</sup> If state funds were increasing the differential between white and black salaries *per day* of term, then state funds were either being used against the language of the act, or enabled other funds to more freely flow to white teachers.

Next, Table 5.3 looks at one of the most direct measures of educational quality: the number of teachers per child. There is a significant increase in inequality from both the presence and level of local taxation, in two of the four models, with no significant effect from county and local funds.<sup>77</sup> The presence and amount of local taxation are only significant in specifications without county time trends, so that once a linear trend in teachers per child is taken into account local taxation failed to contribute to either rising or lowering inequality. Consistent with Table 5.2, state aid both before and after the 1913 reforms did not significantly increase education quality for rural blacks. In general, it appears that funding decisions had little impact on this core measure of educational quality.

Next, Table 5.4 looks more comprehensively at the effects of the court’s decision in *Collie* through the education reform package passed in 1913. In the same year, compulsory attendance was made mandatory across the state and state funding increased dramatically, both through the creation of the State Equalizing Fund to increase term lengths and an increase in the per-capita amount of state aid. State aid was also conditioned on local taxation, so that districts had to levy a special tax before qualifying for aid from state taxes. The dependent variable in Table 5.4 is again the differential between white and black outcomes, and the effect of this bundle of policies is modeled as the average post-1913 deviation from a linear county time trend, interacted with the pre-treatment outcome level. That is, the model in Table 5.4 assumes that growth in inequality would proceed linearly in the absence of a jump beginning after 1913. And, this potential jump at 1913 is modeled separately for the various quartiles of the data, so that if a larger change at 1913 occurred for the most unequal schools (those near the 100th quartile), it will be reflected in the coefficient on that quartile.

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<sup>76</sup>1913 N.C. Acts 58.

<sup>77</sup>Regressions using enrollment and attendance differentials as the dependent variable yielded consistently insignificant results. This may be due to the noisier nature of the enrollment and attendance data when compared to term length or teacher salary.

Table 5.2: Effect of Funding on Differentials in Teacher Salary

	(1)	(2)	(3)	(4)
VARIABLES	Salary	Salary	Salary	Salary
Has Local Tax	0.21** (0.09)	0.21** (0.09)	-0.06 (0.08)	0.16* (0.08)
Local Tax Value	0.09*** (0.02)	0.09*** (0.02)	0.02 (0.02)	0.07*** (0.02)
County Fund	0.09 (0.07)	0.10 (0.07)	-0.02 (0.05)	0.19*** (0.06)
State Fund (Pre-1913)	0.13*** (0.05)	0.12*** (0.04)	0.04 (0.03)	0.05 (0.04)
State Fund (Post-1913)	0.00 (0.06)	0.02 (0.06)	-0.01 (0.04)	0.03 (0.07)
County Fixed Effects	Y	Y	Y	Y
Year Fixed Effects	Y	Y		Y
County Time Trends			Y	Y
Covariates		Y	Y	Y
Observations	2,442	2,442	2,442	2,442
R-squared	0.540	0.543	0.612	0.636

*Notes:* Dependent variable is difference between rural white and black teacher salary per day (as yearly salary depended on the length of term). Regressions are weighted by population, with standard errors are clustered at the county level. Funds are in logs of county funds per child, in 1900 dollars. “State Treasury” includes the sum of special state appropriations, labeled in the Biennial Reports as the First State 100k, the “Second State 100k,” the “State Equalizing Fund,” and the “State 250k.”

Table 5.3: Effect of Funding on Differentials in Teachers per Child

VARIABLES	(1)	(2)	(3)	(4)
	Teachers	Teachers	Teachers	Teachers
Has Local Tax	0.15** (0.07)	0.13* (0.06)	0.02 (0.06)	0.06 (0.07)
Local Tax Value	0.06* (0.03)	0.05* (0.03)	0.01 (0.02)	0.02 (0.02)
County Fund	-0.02 (0.10)	-0.01 (0.08)	0.01 (0.08)	0.06 (0.08)
State Fund (Pre-1913)	0.07 (0.06)	0.08 (0.05)	0.03 (0.03)	0.02 (0.04)
State Fund (Post-1913)	-0.06 (0.07)	0.00 (0.06)	0.01 (0.04)	0.02 (0.05)
County Fixed Effects	Y	Y	Y	Y
Year Fixed Effects	Y	Y		Y
County Time Trends			Y	Y
Covariates		Y	Y	Y
Observations	2,442	2,442	2,442	2,442
R-squared	0.802	0.830	0.868	0.869

*Notes:* Dependent variable is difference between rural white and black teachers per child. Regressions are weighted by population, with standard errors are clustered at the county level. Funds are in logs of county funds per child, in 1900 dollars. “State Treasury” includes the sum of special state appropriations, labeled in the Biennial Reports as the First State 100k, the “Second State 100k,” the “State Equalizing Fund,” and the “State 250k.”



Table 5.4: Effect of Compulsory Attendance and Other 1913 Reforms

	(1)	(2)	(3)	(4)	(5)	(6)
Difference in:	CDA	Term	Salary	Teachers	Enrollment	Attendance
25th Quartile * Year $\geq$ 1913	-0.02 (0.01)	1.44 (2.46)	-0.19 (0.15)	0.05 (0.10)	-0.07*** (0.02)	-0.06*** (0.02)
50th Quartile * Year $\geq$ 1913	-0.01 (0.01)	1.70 (1.54)	0.09 (0.05)	0.04 (0.05)	-0.01 (0.03)	-0.02 (0.01)
75th Quartile * Year $\geq$ 1913	0.00 (0.01)	1.53 (1.76)	0.13* (0.07)	0.05 (0.03)	-0.03* (0.02)	-0.01 (0.02)
100th Quartile * Year $\geq$ 1913	0.03* (0.01)	-2.02 (2.78)	0.14** (0.07)	-0.01 (0.05)	0.00 (0.03)	0.01 (0.03)
County Fixed Effects	Y	Y	Y	Y	Y	Y
County Time Trends	Y	Y	Y	Y	Y	Y
Covariates	Y	Y	Y	Y	Y	Y
Observations	2,442	2,442	2,442	2,442	2,442	2,442
R-squared	0.571	0.607	0.614	0.868	0.426	0.470

*Notes:* Dependent variable is difference between rural white and black child outcomes. Child days attended is the term length times the average attendance rate over 180 days. Salary is teacher salary per day of term. Quartiles are based on level of dependent variable in 1913 (e.g. the most unequal counties lie in the 76th to 100th quartiles). Regressions are weighted by population, with standard errors are clustered at the county level. Covariates included are proportion black, proportion rural, and population density.

The result of a combination of reform efforts appears to have been reduced inequality in some counties. For both enrollment and attendance, there is a significant decrease in inequality in the least unequal counties.<sup>78</sup> If one considers the extensive and intensive margins of education reform, Table 5.4 shows reductions in inequality on the extensive margin (bringing raw number of children to school, lengthening the term), and smaller (or no) reductions along the intensive margin (the quality of teachers as reflected through salary and the number of teachers per child). Also, the effects appear to be mainly through routes other than direct increases in state funding, as the reductions in inequality shown in Table 5.4 are not reflected in the post-1913 coefficients on state funds in most specifications in Tables 5.1-5.3. The additional sticks in the bundle of reforms, such as compulsory attendance or triggers to those state funds, may have thus been of greater importance than increased dollars from state funds.

Finally, that the 1913 school reforms had equalizing effects on some districts should not surprise, when one recalls the large overall increases in inequality. According to the record from the decennial census, black illiteracy fell from 38% to 17% (for 15-25 year olds) between 1900 and 1920, while black term lengths and teacher-child ratios improved. Yet, the effect of discrimination meant that improvement was less than occurred for whites, especially along dimensions of educational quality, an issue that didn't face constitutional strictures to force spending on blacks.

## Discussion

To summarize Tables 5.1-5.4, the freedom the North Carolina Supreme Court granted local tax districts to discriminate resulted in more unequal terms, teacher salaries, and number of teachers per child. The presence of special local tax districts in a county, and the amount of funds raised from those districts, are the most consistent predictors of unequal education from among the various funding mechanisms in the model. The leeway the legislature granted counties in 1901 to allocate county funds so that terms were equal resulted in coefficients that were almost entirely positive but insignificant, indicating a weaker relationship between inequality and county funds than

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<sup>78</sup>The specification here is sensitive to whether reforms are counted as first affecting the 1912-1913 school year data, or the 1913-1914 school year data. The prior, used here, appears the more conservative result. Using the latter specification shows significant decreases in inequality among the more unequal counties.

special local tax districts. For state aid stemming from the 1901 appropriations, term lengths may actually have been made more equal, but a consistent set of positive coefficients on salary indicates that aid from the state increased differentials in quality by about the same level as the effect from local taxation. Finally, the bundle of 1913 reforms, including much larger amounts of state aid, appears to have had positive effects on inequality for at least some districts.

This ambiguity in the results of state aid reflect the complex views white leaders had toward black education, evidenced by the debate over “Myrdal’s Paradox” (the question of why whites continued to fund black schools after they had been disenfranchised). On one hand, education was a tool to control unrest both from the white and colored side, a way to keep white supremacy within bounds and to teach blacks their proper place. Schools were a place to “renegotiate the black place in a white South” and “the classroom stood as a last refuge for claims to common citizenship.”<sup>79</sup> Superintendent Joyner wrote that

Ignorance in chains is dangerous enough, but it is safer than ignorance in liberty. It is my deliberate conviction that in a few generations, without education, the great mass of the negro race would sink to a state of animal brutality. . . . without the power to restrain them that comes alone from proper education . . . our only safety will lie in extermination.

1902 Biennial Report, at IX. At the same time, education for blacks meant a certain kind of education. Blacks were to be given an industrial education to establish an “open-hearted, sympathetic negro, contended in his place, full of gossip and comradeship, the companion . . . standing in kindly dependence that is the habit of his blood” (Grady, quoted in Anderson 1973, 114). White industrialists saw black education as a way to produce a useful workforce, and as in the rest of the South, shifting blacks towards industrial education, instead of eliminating black education entirely, became the standard. This need to educate blacks, to a point, appears reflected in the coefficients for state funding. The most basic aspect of education, the length of term regardless of quality, was an acceptable use of state funds, while the same funds increased measures of educational quality when applied to white children.

If the results serve as a guide to slowly overturn constitutional mandates

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<sup>79</sup>Leloudis (1999, xiv).

of equality in minority education, the path that served white leaders successfully in North Carolina was to give lip service to equal provision in state statutes while allowing broad discretion at the local level over both the distribution of state funds and the creation of special tax districts to benefit the majority. This local discretion, along with courts that refused to find evidence of discrimination, meant a long, slow, and constant erosion of the equality that *Puitt* and Fusion politics of the 1890s had promised.

### 5.4.2 The Role of Northern Philanthropy

One question that might be raised is whether the funding variables used above are confounded with role of Northern philanthropy in providing for black education in the South. The answer appears to be that the role of Northern philanthropy in education for blacks in this period was limited, with philanthropy focused on improving backward Southern white education.<sup>80</sup> The justification seemed to be that the educated white man would turn and provide brotherly protection for blacks. “[W]e cannot do anything for the Negro until his white friend is convinced of his responsibility to him.”<sup>81</sup> In 1901 Governor Aycock wrote Northern educators that “If the negro is ever to be educated, it will be by the aid of Southern white men . . . Education of the white will precede the education of negroes. Philanthropists in the North may think they can educate the negro without the help of Southern whites, but they are mistaken.”<sup>82</sup> Northern reformers “decided . . . that the best way to assure the sale [of black education reform] was to emphasize its value to the purchaser [by focusing on education for whites]” (Bullock 1967, 93).

Whether by choice or necessity, Northern philanthropy then focused their efforts during this period on white education. The executive secretary of Rockefeller’s General Education Board put their view succinctly: “if equal philanthropy for the Negro was advocated . . . we shall err and invite defeat.”<sup>83</sup> The traditional story is that the reform movement’s lobbyists at the Southern Education Board similarly capitulated: since campaigning for black education would negate their ability to aid white education, the Board chose “a middle path between equalitarianism and racialism, and resigned itself by

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<sup>80</sup>This is consistent with the mixed effect for Rosenwald schools in the second chapter.

<sup>81</sup>Walter Hines Page of the Southern Education Board, cited in Prather (1979, 222).

<sup>82</sup>*Id.*

<sup>83</sup>Cited in Prather (1979, 224).

default to the growth of separate and unequal schools.”<sup>84</sup> As a result, the efforts did little to help black schools.

What impact Northern philanthropy did have on black education was focused on industrial training (Majouiski 2011), in line with the Joyner’s view that education for blacks was essential, but education of a different quality, and providing some state staff to attend to black schools.<sup>85</sup> The small Slater fund concerned itself only with black industrial training at the college level until 1910, while the larger General Education Board and Peabody fund focused on whites (Prather 1979, 258). The Southern Education Board had little effect on black education and the Peabody Fund dissolved without allocating blacks their full share of principle (Harlan 1957, 201). It was only after the momentum for white education declined that Northern philanthropy began to focus on blacks. Even then, the combined resources of the Slater Fund, the Jeanes Fund, and the Rosenwald Fund at the time were less than \$2,500,000, and these were hardly organizations with a strong advocacy program for blacks: the notably racist Jabez Curry sat on the boards of all three.<sup>86</sup> Curry’s position does not surprise, as white philanthropy in general agreed with white supremacists that blacks should hold an inferior role in the South.<sup>87</sup>

## 5.5 Conclusion

In contrast to much of the South, education in North Carolina before the turn of the twentieth century held the promise of equality. The 1868 constitution had prohibited racial discrimination in education, and this was strengthened by a post-Reconstruction court that managed to put teeth into the provision. As blacks were disenfranchised at the turn of the century and membership in the state Supreme Court changed, this near equality was undone. Un-

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<sup>84</sup>Harlan (1957, 198).

<sup>85</sup>Northern philanthropy allowed “Joyner to hire officials to work in the field of Negro education. These officials became well acquainted with the problems and desired to see improvements made. In the second decade the Department, through these new officials, would begin to take seriously the problems faced by Negro schools” (Westin 1966, 168).

<sup>86</sup>Prather (1979, 281). Booker T. Washington was the only black to serve on all three boards, and the Jeannes fund was the only one to have other blacks on the board. *Id.*

<sup>87</sup>Anderson (1988, 92) (“White supremacists themselves, northern reformers were not perturbed by southern racism per se. They also viewed blacks as an inferior and childlike people”).

der pressure to increase white education before disenfranchisement became threateningly universal for the illiterate in 1908, money began pouring into education in North Carolina, particularly rural education. An important innovation was the creation of local tax districts that could tax in excess of constitutional limits, in places whites pleased. The court refused to find evidence of discrimination in the use of local tax districts, giving whites an easy path towards the creation of unequal schools.

This chapter employs a unique dataset on rural schools to examine the effects funding laws and the court cases that interpreted them had on educational equality. Special local tax districts significantly increased inequality across term length, teacher salary, and the number of teachers per child. State funding likewise increased differentials in teacher quality, while managing to mitigate inequalities in term length. For some districts, 1913 education reform and compulsory attendance appeared to help blacks, though not enough to reverse the overall trend of rising inequity.

As modern education reform continues to struggle in finding the proper balance between local and state control of education, these results give a word of caution. When local discretion combines with animus towards a group of students, even strong constitutional protections can be overcome through local control and an energized reform movement. State accountability systems must weigh the granting of increased local autonomy with protections to ensure that a new gap in educational quality is not formed through reform.

# Chapter 6

## Appendix

### 6.1 Data Appendix

This database attempts to capture every compulsory attendance and child labor age limit between 1850 and 1926. Much prior work exists in this area, particularly the compilations developed by Goldin and Katz (2007) (attendance laws from 1910-1939, with some coverage to 1900), Moehling (1996) (child labor laws in census years between 1880 and 1910), Loughran (1921) (child labor and attendance laws from 1800 to 1918), and Hindman (2002) (child labor laws). These compilations primarily aggregate prior historical compilations, such as those assembled by the Department of Education in various years. In this database, prior compilations were used as a starting point, but the age limit changes are almost universally drawn from state session laws. By returning to the session laws, this database corrects many errors not captured through reliance on prior aggregations.

To capture the essential elements of the regulatory landscape, this work follows Goldin and Katz (2007) and Lleras-Muney (2002) by coding the text of the laws into a number of variables.

- *entryage*: The age at which compulsory school attendance began.
- *exitage*: The age at which a child was unconditionally free to leave full-time school attendance (e.g. ignoring continuation or evening school laws). This is sometimes referred to as the “general school exit age or the general attendance age limit.”
- *earlyyrs*: The number of years of schooling required to leave school

early. These laws would allow exit before *exitage* once the educational requirements had been met. The educational requirement was sometimes conditional on the following variable, *earlyyrs-condition*.

- *earlyyrs-condition*: In some states, the education required to drop out was conditioned on reaching a specific age. That is, the unconditional exit age might be 16 (*exitage*) with the ability to dropout after eight years of schooling (*earlyyrs*), provided the child was at least 14 (*earlyyrs-condition*).
- *labage*: The age one could work while schools were in session as an exemption to *exitage* and *factoryage*. This variable depends on *labysr* in many states.<sup>1</sup> In some states, the attendance law directly allowed exit from school when employed at this age. In other states, the labor law appears to allow full-time employment despite the language of the attendance law.<sup>2</sup>
- *labysr*: The educational requirements required to for a *labage* exception to the *exitage* and *factoryage*.
- *reference*: This contains the page number of the session law. If no year is given, the year of the session law corresponds to the year of the age limit change.

In several states (Arizona, Michigan, and Texas), a law was temporarily introduced, repealed after a short time, and no other law was passed for many years. For simplicity, these temporary introductions are ignored. Where one age applied to cities and towns and another to the rest of the state, we have generally used the age for cities and towns. Similarly, when one age applied to boys and another to girls, we have used the age for boys. The great majority

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<sup>1</sup>Specifically, *labage* codes the exemptions to the base age limits in *factoryage* and *exitage*. In a handful of states, the general factory age limit itself contained two ages: an age for employment generally and an age for employment during school hours. Where the school hour age limit was higher, *factoryage* and *labage* both use the age that applied to school hours rather than employment generally. E.g. New Hampshire in 1901, New Mexico in 1925, Ohio in 1898.

<sup>2</sup>For example, see the Oregon code in 1930. The attendance law required attendance till 16 unless eight years of schooling had been completed. The labor law forbid employment during the school term only until age 14, with a literacy requirement until age 16. I assume a literate 14 year old would be allowed to exit school to work.



of the laws had exceptions for poverty, or by special order of a local judge or school board. We generally ignore these exceptions. When a law was optional at the county level, or passed county by county, we have tried to use the age adoption was statewide or in a large number of counties. These were complex laws, and these and other special cases required discretionary coding. The database contains notes on the interpretation of particular statutes.

Two variables, beginning after 1910, are drawn from independent work by Mel Stephens:

- *contsch*: Whether continuation schools were mandatory
- *contage*: The age to which continuation schooling was required.
- *contyrs*: The number of years of schooling to be exempt from continuation school requirements.
- *continuationage*: The minimum age for continuation school, taking the exemption in *contyrs* and *entryage* into account.

Child labor and compulsory attendance laws began as relatively separate areas of regulation, but became increasingly entwined as time passed. From the base variables above, we constructed a number of additional variables to reflect the interaction between the various age limits and conditions.

- *exitage-low-school*: The lowest age one could leave school according to *earlyyrs* and *earlyyrs-condition*. This is the higher of *entryage* + *earlyyrs* and *earlyyrs-condition*.
- *exitage-low-work*: Similar to *exitage-low-school*, this codes the lowest age one could leave school according to *labyrs* and *labage*. This is the higher of *entryage* + *labyrs* and *labage*.
- *continuationage*: the minimum of *contage* and *entryage* + *contyrs*.
- *minage*: the lower of *exitage-low-school* and *exitage-low-work*. This represents the earliest one could leave school, by either the work allowance in *labage* or completed years exception in *earlyyrs*.
- *factorylow*: the minimum age for employment in factories or manufacturing (during school, if attendance laws existed). This is a combination of *factoryage*, *entryage*, and *labyrs*. If no minimum age limit

for factory work existed, it is set to zero. If an age limit for factory work existed, with no compulsory attendance laws, the age limit for factory work is used. If compulsory attendance laws existed, the lower of *factoryage* and  $\max(\textit{labage}, \textit{entryage} + \textit{labyrs})$  is used. This reflects the lower of the age limit for factory work according to the (sometimes contradictory) child labor and compulsory attendance laws.

Table 6.1: Session Law References

<b>State</b>	<b>Year</b>	<b>Reference</b>
Alabama	1903	68
Alabama	1917	1915 at 534
Alabama	1919	615, 867
Alabama	1923	Alabama Code Sections 3494-3527 (1923)
Alabama	1924	Id.
Alabama	1926	Id.
Arizona	1875	40
Arizona	1883	50
Arizona	1899	14
Arizona	1912	77, 399
Arizona	1921	Arizona Code Sections 1029-33, 1362-68 (1928); 1921 Ariz. Acts 321
Arkansas	1903	213
Arkansas	1907	1230
Arkansas	1909	701
Arkansas	1915	1505
Arkansas	1917	1509
California	1874	751
California	1889	4
California	1901	631
California	1905	11
California	1911	910, 949
California	1913	364
California	1919	406, 415
California	1921	1673
Colorado	1889	59
Colorado	1899	340
Colorado	1903	418
Colorado	1911	232
Connecticut	1872	43
Connecticut	1885	456
Connecticut	1886	624
Connecticut	1895	504

Connecticut	1899	995
Connecticut	1909	1047
Connecticut	1921	3190
Delaware	1905	210
Delaware	1907	213
Delaware	1914	1913 at 429
Delaware	1917	749
Delaware	1921	507
District of Columbia	1864	13 Stat. 187
District of Columbia	1906	34 Stat. 219
District of Columbia	1908	35 Stat. 420
District of Columbia	1925	43 Stat. 806
Florida	1907	194
Florida	1914	1913 at 301
Florida	1919	59
Georgia	1906	1906 at 98
Georgia	1907	Id.
Georgia	1908	Id.
Georgia	1915	1914 at 88
Georgia	1917	1916 at 101
Georgia	1920	1919 at 358
Georgia	1926	1925 at 291
Idaho	1887	1887 at 131
Idaho	1907	248
Idaho	1909	224
Idaho	1917	28
Idaho	1921	427
Illinois	1883	167
Illinois	1889	237
Illinois	1891	87
Illinois	1893	99, 178
Illinois	1903	187
Illinois	1907	520
Illinois	1917	511
Illinois	1921	435
Indiana	1897	101, 248

Indiana	1901	470
Indiana	1913	616
Indiana	1921	337
Iowa	1902	78
Iowa	1906	71
Iowa	1913	1913 Code Section 2477; 1913 session laws at 272
Iowa	1915	339
Kansas	1874	194
Kansas	1903	650
Kansas	1905	432
Kansas	1917	318
Kansas	1919	367
Kansas	1923	1923 code Sections 38-601, 72-4801
Kentucky	1896	67
Kentucky	1902	44
Kentucky	1910	233, 256
Kentucky	1914	212
Kentucky	1920	191
Louisiana	1887	1886 at 55
Louisiana	1916	59
Maine	1875	21
Maine	1887	121
Maine	1888	Id.
Maine	1899	90
Maine	1901	197
Maine	1903	197
Maine	1907	45
Maine	1909	57
Maine	1915	323
Maine	1919	227, 114
Maine	1921	6
Maryland	1902	377
Maryland	1904	1902 at 821
Maryland	1912	339, 1212
Maryland	1916	435, 1047
Massachusetts	1852	170

Massachusetts	1866	253
Massachusetts	1873	708
Massachusetts	1874	155
Massachusetts	1880	1878 at 210
Massachusetts	1888	301
Massachusetts	1898	447, 451
Massachusetts	1906	1905 at 238; 1906 at 248
Massachusetts	1907	1906 at 248
Massachusetts	1908	Id.
Massachusetts	1913	796
Massachusetts	1919	224
Michigan	1871	251
Michigan	1881	198
Michigan	1883	149
Michigan	1885	37
Michigan	1889	398
Michigan	1893	210
Michigan	1895	203
Michigan	1901	119
Michigan	1905	296
Michigan	1907	80
Michigan	1915	449
Michigan	1923	319
Michigan	1925	469
Minnesota	1885	261
Minnesota	1895	386
Minnesota	1905	398
Minnesota	1909	476
Minnesota	1911	483
Minnesota	1912	44
Mississippi	1908	88
Mississippi	1918	312
Mississippi	1920	216
Mississippi	1924	464, 541
Missouri	1897	143
Missouri	1905	146

Missouri	1911	132
Missouri	1919	682
Montana	1883	56
Montana	1903	92
Montana	1907	244
Montana	1919	96
Nebraska	1887	613, 669
Nebraska	1899	363
Nebraska	1901	454
Nebraska	1903	549
Nebraska	1907	258, 430
Nebraska	1921	226
Nevada	1873	89
Nevada	1908	147
Nevada	1912	RL 1912 Section 6824
Nevada	1921	233
New Hampshire	1871	511
New Hampshire	1879	340
New Hampshire	1887	422
New Hampshire	1901	550
New Hampshire	1903	13
New Jersey	1851	321
New Jersey	1874	135
New Jersey	1875	105
New Jersey	1883	59
New Jersey	1885	280
New Jersey	1903	59, 386
New Jersey	1908	445
New Jersey	1913	399
New Mexico	1891	59
New Mexico	1903	59
New Mexico	1919	144
New Mexico	1923	318
New Mexico	1925	117
New York	1875	1874 at 532
New York	1886	629

New York	1889	751
New York	1894	1682
New York	1909	880
New York	1913	239, 1354
North Carolina	1904	1903 at 1819
North Carolina	1908	1907 at 670, 1284
North Carolina	1913	267
North Carolina	1919	273
North Carolina	1923	See notes.
North Dakota	1883	66
North Dakota	1887	137
North Dakota	1890	213
North Dakota	1909	181
North Dakota	1911	461
North Dakota	1917	291
North Dakota	1923	147
Ohio	1877	57
Ohio	1885	161
Ohio	1889	333
Ohio	1892	389
Ohio	1898	123
Ohio	1902	615
Ohio	1908	30
Ohio	1910	310
Ohio	1913	898, 907
Ohio	1921	377
Oklahoma	1908	1907-1908 at 393
Oklahoma	1909	629
Oklahoma	1914	1913 at 561
Oklahoma	1919	93
Oregon	1889	111
Oregon	1903	79
Oregon	1905	343
Oregon	1907	133
Oregon	1911	185, 428
Oregon	1923	9



Pennsylvania	1887	287
Pennsylvania	1893	276
Pennsylvania	1895	72
Pennsylvania	1897	248
Pennsylvania	1901	658
Pennsylvania	1905	352
Pennsylvania	1909	283
Pennsylvania	1921	1034
Rhode Island	1853	245
Rhode Island	1883	146
Rhode Island	1894	29
Rhode Island	1902	84
Rhode Island	1905	22
Rhode Island	1907	1905 at 22
Rhode Island	1910	9
Rhode Island	1917	62
Rhode Island	1922	158
Rhode Island	1923	173
South Carolina	1903	113
South Carolina	1904	Id.
South Carolina	1905	Id.
South Carolina	1917	1916 at 655
South Carolina	1919	205
South Dakota	1883	66
South Dakota	1887	137
South Dakota	1891	138
South Dakota	1907	252
South Dakota	1913	332
South Dakota	1915	353
South Dakota	1921	298
Tennessee	1893	315
Tennessee	1901	49
Tennessee	1909	782
Tennessee	1911	108
Tennessee	1913	19
Tennessee	1919	537

Tennessee	1925	365
Texas	1870	113
Texas	1871	57
Texas	1876	199
Texas	1903	40
Texas	1911	15
Texas	1916	1915 at 92
Utah	1890	135
Utah	1896	514
Utah	1905	111
Utah	1911	289
Utah	1919	282
Vermont	1867	1867 at 48
Vermont	1889	1888 at 33
Vermont	1894	22
Vermont	1904	211
Vermont	1906	54
Vermont	1911	1910 at 81
Vermont	1912	85
Virginia	1909	1908 at 542
Virginia	1910	Id.
Virginia	1918	752
Virginia	1922	641
Washington	1872	29
Washington	1873	419
Washington	1878	1877 at 278
Washington	1886	27
Washington	1890	382
Washington	1899	280
Washington	1909	364, 948
West Virginia	1887	18
West Virginia	1891	22
West Virginia	1897	205
West Virginia	1903	106
West Virginia	1908	147
West Virginia	1911	151

West Virginia	1919	94, 141
Wisconsin	1877	601
Wisconsin	1879	155
Wisconsin	1889	729
Wisconsin	1891	126, 217
Wisconsin	1901	344
Wisconsin	1903	279
Wisconsin	1907	83, 405
Wisconsin	1911	567
Wisconsin	1921	1921 code ch. 83
Wyoming	1873	247
Wyoming	1907	160
Wyoming	1910	36
Wyoming	1923	51, 57

*Notes:* Unless otherwise indicated, “Reference” gives the page number of the session law of the year of passage.

## 6.2 First Compulsory Attendance and Child Labor Laws

Table 6.2: Dates of First Compulsory Attendance and Child Labor Laws

State	Year (CA)	SL Ref.	Year (CL)	SL Ref.
Alabama	1917	1915 at 534	1903	68
Arizona	1899	14	1912	77, 399
Arkansas	1917	1509	1903	213
California	1874	751	1889	4
Colorado	1889	59	1903	418
Connecticut	1872	43	1886	624
Delaware	1907	213	1905	210
District of Columbia	1864	13 Stat. 187	1908	35 Stat. 420
Florida	1919	59	1907	194
Georgia	1917	1916 at 101	1906	1906 at 98
Idaho	1887	1887 at 131	1907	248
Illinois	1883	167	1891	87
Indiana	1897	101, 248	1897	101, 248
Iowa	1902	78	1906	71
Kansas	1874	194	1905	432
Kentucky	1896	67	1902	44
Louisiana	1916	59	1887	1886 at 55
Maine	1875	21	1887	121
Maryland	1902	377	1912	339, 1212
Massachusetts	1852	170	1866	253
Michigan	1871	251	1885	37
Minnesota	1885	261	1895	386
Mississippi	1920	216	1908	88
Missouri	1905	146	1897	143
Montana	1883	56	1903	92
Nebraska	1887	613, 669	1899	363
Nevada	1873	89	1912	RL 1912 6824
New Hampshire	1871	511	1879	340
New Jersey	1874	135	1851	321
New Mexico	1891	59	1925	117
New York	1875	1874 at 532	1886	629
North Carolina	1913	267	1904	1903 at 1819
North Dakota	1883	66	1904	1903 at 1819
Ohio	1877	57	1885	161
Oklahoma	1908	1907-1908 at 393	1909	629
Oregon	1889	111	1903	79
Pennsylvania	1895	72	1848	278

Rhode Island	1883	146	1853	245
South Carolina	1919	205	1903	113
South Dakota	1883	66	1891	138
Tennessee	1913	19	1893	315
Texas	1916	1915 at 92	1903	40
Utah	1890	135	1911	289
Vermont	1867	1867 at 48	1889	1888 at 33
Virginia	1918	752	1909	1908 at 542
Washington	1878	1877 at 278	1909	364, 948
West Virginia	1897	205	1887	18
Wisconsin	1879	155	1877	601
Wyoming	1873	247	1923	51, 57

*Notes:* Year (for the compulsory attendance (CA) laws) is the first year a compulsory attendance law went into effect, covering every county in the states. Year (for the child labor law (CL)) shows the first year a restriction on employment in a wide range of industries, such as factories or manufacturing firms, was passed. Session law references (SL Ref.) show the page number of the session laws (or statutory compilation) of the given year, unless a different year is noted.

## 6.3 Text of Typical Attendance Laws

### *Massachusetts's 1852 Law*<sup>3</sup>

SECT. 1. Every person who shall have any child under his control, between the ages of eight and fourteen years, shall send such child to some public school within the town or city in which he resides, during at least twelve weeks, if the public schools within such town or city shall be so long kept, in each and every year during which such child shall be under his control, six weeks of which shall be consecutive.

SECT. 2. Every person who shall violate the provisions of the first section of this act shall forfeit, to the use of such town or city, a sum not exceeding twenty dollars, to be recovered by complaint or indictment.

SECT. 3. It shall be the duty of the school committee in the several towns or cities to inquire into all cases of violation of the first section of this act, and to ascertain of the persons violating the same, the reasons, if any, for such violations, and they shall report such cases, together with such reasons, if any, to the town or city in their annual report; but they shall not report any cases such as are provided for by the fourth section of this act.

SECT. 4. If, upon inquiry of the school committee, it shall appear, or if upon the trial of any complaint or indictment under this act it shall appear, that such child has attended some school, not in the town or city in which he resides, for the time required by this act, or has been otherwise furnished with the means of education for a like period of time, or has already acquired those branches of learning which are taught in common schools, or if it shall appear that his bodily or mental condition has been such as to prevent his attendance at school, or his acquisition of learning for such a period of time, or that the person having the control of such child, is not able, by reason of poverty, to send such child to school, or to furnish him with the means of education, then such person shall be held not to have violated the provisions of this act.

SECT. 5. It shall be the duty of the treasurer of the town or city to prosecute all violations of this act. [*Approved by the Governor, May 18, 1852.*]

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<sup>3</sup>1852 Mass. Acts 170.

*Michigan's attendance law of 1871*<sup>4</sup>

Section 1. The People of the State of Michigan enact, That every parent, guardian, or other person, in the State of Michigan, having control and charge [of] any child or children between the ages of eight and fourteen years, shall be required to send any such child or children to a public school for a period of at least twelve weeks in each school year, commencing on the first Monday of September, in the year of our Lord one thousand eight hundred and seventy-one, at least six weeks of which shall be consecutive, unless such child or children are excused from such attendance by the board of the school district in which such parents or guardians reside, upon its being shown to their satisfaction that his bodily or mental condition has been such as to prevent his attendance at school or application to study for the period required, or that such child or children are taught in a private school, or at home, in such branches as are usually taught in primary schools, or have already acquired the ordinary branches of learning taught in the public school: Provided, In case a public school shall not be taught for three months during the year, within two miles by the nearest traveled road of the residence of any person within the school district, he shall not be liable to the provisions of this act.

Sec. 2. It shall be the duty of the director of every school district, and president of every school board within this State, to cause to be posted three notices of this law in the most public places in such district, or published in one newspaper in the township, for three weeks, during the month of August in each year, the expense of such publication to be paid out of the funds of said district.

Sec. 3. In case any parent, guardian, or other person shall fail to comply with the provisions of this act, said parent, guardian, or other person shall be liable to a fine of not less than five dollars or more than ten dollars for the first offense, nor less than ten or more than twenty dollars for the second and every subsequent offense. Said fine shall be collected by the director of said district, in the name of the district, in an action of debt or on the case, and when collected shall be paid to the assessor of the district in which the defendant resided when the offense was committed, and by him accounted for the same as money raised for school purposes.

Sec. 4. It shall be the duty of the director or president to prosecute any offense occurring under this act, and any director or president neglecting to prosecute for such fine within ten days after a written notice has been served

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<sup>4</sup>1871 Mich. Acts 251.

on him by any taxpayer in said district, unless the person so complained of shall be excused by the district board, shall be liable to a fine of not less than twenty or more than fifty dollars, which fine shall be prosecuted for and in the name of the assessor of said district, and the fine when collected shall be paid to the assessor, to be accounted for as in section three of this act.

Approved April 15, 1871.

*Oregon's compulsory attendance law of 1889*<sup>5</sup>

Section 1. Every parent, guardian, or other person in this State having control or charge of a child or children between the ages of eight and fourteen years shall be required to send such child or children to a public school for a period of at least twelve weeks in each school year, of which at least eight weeks' school be consecutive, unless the bodily or mental condition of such child or children has been such as to prevent his or her or their attendance at school or application to study for the period required, or unless such child or children are taught in a private school or at home in such branches as are usually taught in primary schools, or have already acquired the ordinary branches of learning taught in the public schools; provided, in case a public school shall not be taught for the period of twelve weeks, or any part thereof during the year, within two miles by the nearest traveled road of the residence of any person within the school district, he or she shall not be liable to the provisions of this Act.

Section 2. Any parent, guardian or other person having control or charge of any child or children failing to comply with the provisions of this Act shall be liable to a fine of not less than five dollars nor more than twenty-five dollars for the first offense, nor less than twenty-five dollars nor more than fifty dollars for the second and each subsequent offense, besides the cost of the prosecution.

Section 3. It shall be the duty of the directors and clerk of each school district to make diligent effort to see that this law is enforced in their respective districts.

Section 4. Justices of the peace shall have concurrent jurisdiction with the circuit court in all prosecutions under this Act.

Section 5. Inasmuch as many children are now permitted to remain away from school without cause and to their great detriment, this law shall take

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<sup>5</sup>1889 Ore. Acts 111.



effect and be in force from and after its approval by the Governor.

Approved February 25, 1889.

*Iowa's 1906 Child Labor Law*<sup>6</sup>

SECTION 1. No person under fourteen years of age shall be employed with or without wages or compensation in any mine, manufacturing establishment, factory, mill, shop, laundry, slaughter house or packing house, or in any store or mercantile establishment where more than eight persons are employed, or in the operation of any freight or passenger elevator.

SEC. 2. No person under sixteen years of age shall be employed at any work or occupation by which, by reason of its nature or the place of employment, the health of such person may be injured, or his morals depraved, or at any work in which the handling or use of gun powder, dynamite or other like explosive is required, and no female under sixteen years of age shall be employed in any capacity where the duties of such employment compel her to remain constantly standing.

SEC. 3. No person under sixteen years of age shall be employed at any of the places or in any of the occupations recited in section 1 hereof before the hour of six o'clock in the morning or after the hour of nine o'clock in the evening . . . .

SEC. 4. Every person, firm, or corporation having in its employ, at any of the places or in any of the occupations recited in section 1 of this act, any persons under sixteen years of age, shall cause to be posted at some conspicuous location at the place of such employment, and where same shall be accessible to inspection at all times during business hours, a list of the names of such persons, giving after each name, the date of the birth of such person and the date when employed.

SEC. 5. Any parent, guardian or other person, who having under his control any person under sixteen years of age causes or permits said person to work or be employed in violation of the provisions of this act, or any person making, certifying to, or causing to be made or certified to, any statement, certificate or other paper for the purpose of procuring the employment of any person in violation of this provisions of this act, or who makes, files, executes or delivers any such statement, certificate or other paper containing any false statement for the purpose of procuring the employment of any person

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<sup>6</sup>1906 Iowa Acts 71.

in violation of the provisions of this act, or for the purpose of concealing the violation of this act in such employment . . . shall be deemed guilty of a misdemeanor, and upon being found guilty thereof, shall be fined not to exceed one hundred dollars or be imprisoned in the county jail not to exceed thirty days.

SEC 6. It shall be the duty of the commissioner of the bureau of labor statistics to enforce the provisions of this act . . . . It shall be the duty of the county attorney to investigate all complaints made to him of the violation of this act, and to attend and prosecute at the trial of all cases for its violation upon any information that may be filed within his county.

SEC 7. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

Approved April 10, A. D. 1906.

## 6.4 Timeline of Events in North Carolina

- 1868: Reconstruction-era constitution mandates four-month school term, forbids racial discrimination
- 1885: *Barksdale* constitutionally limits the amount of taxation for educational purposes
- 1886: *Puitt* holds that discriminatory school tax law is unconstitutional
- 1898: White supremacist campaign returns Redeemer Democrats to power
- 1900: Blacks disenfranchised through constitutional amendment, literacy made a condition of voting as of 1908
- 1901: Education act allows creation of local tax districts and discretion in distribution of school fund
- 1902: Raleigh conference kicks off campaign for education
- 1905: *Lowery* upholds discriminatory local tax districting
- 1907: *Collie* establishes that constitutional limit on taxation may be exceeded to hold a four-month school term
- 1907: Initial compulsory attendance law passed, optional at the county level
- 1909: *Heward* upholds gerrymandered local tax districting
- 1913: Large education reform bill passed: compulsory attendance made mandatory, state aid increased and tied to special local taxation
- 1918: Constitutional amended to require a six-month school term
- 1919: State school funding revised with creation of the State Public School Fund



# Chapter 7

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