Schooling and Political Activism in the Early Civil Rights Era

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Abstract

Does education lead to greater political engagement? The results in the literature are mixed. Theory suggests that the effects of education may depend on the economic context: Individuals who are unable to take advantage of greater education in the labor market are more likely to engage in political activity. We find empirical support for this idea by studying the rapid geographic expansion of the National Association for the Advancement of Colored People (NAACP) in the American South around World War II. Local NAACP branches increased six-fold and the share of Black Americans living in a county with a branch tripled during this period. We show that this growth was stronger in precisely those areas where Black workers were denied returns to schooling due to occupational discrimination during the Jim Crow era. We further show that a large scale educational intervention, the construction of nearly 5,000 Rosenwald Schools largely during the 1920s, causally led to greater NAACP activity during the 1940s and 1950s when many former students were in their prime working years.

Keywords: education, human capital, social returns to education, NAACP, Rosenwald Schools, civil rights, Civil Rights Movement, political participation

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A question of long-standing interest in economics is the extent to which the social returns exceed the private returns to education (e.g. Marshall (1890), Lucas (1988), Acemoglu and Angrist (2000), Moretti (2004)). This paper focuses on one important potential benefit to society from greater investment in education, namely increased political engagement and participation in large-scale political movements.

Social scientists have proposed several channels by which education may impact political participation. Schooling provides the skills and knowledge that could lower barriers to gathering and processing news and information needed to vote or join a political organization. Social networks that arise among more well-educated members of society could also lead to increased political activity. Yet studies that attempt to identify a causal effect of education on political activity find perhaps surprisingly mixed results.[1] These studies have typically focused on political knowledge and voting behavior, and not on participation in large-scale movements. In any case, one reason for these mixed findings could be that context matters. In a series of papers, Campante and Chor argue that the *opportunity cost* of participating in political, rather than productive, activity can weaken the link between schooling and political activity (Campante and Chor, 2012*a*,*b*, 2014). Returns to education in the form of higher wages may raise the opportunity cost of political activity, altering the likelihood a political movement gains widespread support as well as directly influencing the decisions of organizers and activists. In correlational analysis examining the spread of the Arab Spring, Campante and Chor demonstrate that the effects of education may only be apparent in settings where opportunity cost to spending time in political activities is quite low.

We revisit this issue through one of the most important political developments in U.S. history, the Civil Rights Movement. We focus on how educational gains among Black Americans in the South contributed to the expansion of the preeminent civil rights organization of the first half of the 20th century, the National Association for the Advancement of Colored People (NAACP), and

[1] Dee (2004), Milligan, Moretti and Oreopoulos (2004), Sondheimer and Green (2010), Green et al. (2011) Friedman et al. (2016) and Henderson and Chatfield (2011) find positive effects while Kam and Palmer (2008), Berinsky and Lenz (2011), Persson, Lindgren and Oskarsson (2016), Weinschenk and Dawes (2019), Pelkonen (2012) and Bömmel and Heineck (2020) find null effects.

its rapid growth in activity in the American South during the 1940s and 1950s. Between 1938 and 1946, Southern NAACP branches increased six-fold and the share of Black Americans living in a county with a branch tripled (Aaronson et al., 2023). That this movement emerged during the era of Jim Crow, when occupational segregation by race was a defining feature of Southern society (e.g. Margo (1990*a*), Heckman and Payner (1989), Wright (1999)), makes for an ideal setting to explore how institutional factors in the labor market can mediate the relationship between education and political activity. The confluence of rising education among Southern Black Americans in an era of strong labor market segregation that limited the returns to human capital of Black men closely fits the conditions identified by Campante and Chor.

In the first part of our paper, we directly test whether NAACP activity grew the most in Southern counties where Black men were denied returns to increased schooling due to occupational segregation.[2] We show that, relative to their education and experience levels, Black men in the South were significantly underrepresented in the relatively higher paid operative and kindred worker occupations but significantly over-represented among low-paid farm laborers. We create a proxy for these unrealized returns to human capital through what we call the "income gap." The income gap compares actual occupational earnings of Southern Black men in 1940 to a counterfactual where their earnings instead reflect occupational assignments outside the South. To construct counterfactual earnings, we use the occupational earnings for similarly educated and experienced Black men living in counties outside the South. We conjecture that in counties where the income gap is higher (i.e. where occupational segregation is larger), we would expect to see more NAACP activity during the critical period of the organization's growth between 1938 and 1946.

Indeed, we find a robust positive relationship between unrealized returns to schooling for Black workers due to occupational segregation and increased NAACP activity during this period. We estimate that a one standard deviation increase in the income gap ($55 in 1940 dollars) is associated with a 32 percent increase in the number of Southern rural NAACP branches opening after 1938 and surviving until 1946. Although, the association between the income gap and NAACP growth is

[2]We follow previous researchers such as Card and Krueger (1992), Margo (1990*a*), Aizer et al. (2022) and Ferrara (2022) who have focused on occupation in order to study Black progress during the World War II era.

not a causal relationship, we view the correspondence with the Campante-Chor theory as informative. The most likely sources of bias, especially the higher threats of violent reprisals against Black individuals participating in political activity in counties with more discrimination, should attenuate the relationship between low labor market returns and NAACP activity. Moreover, we find no relationship between NAACP growth and an income gap measure for White workers, suggesting that our results are not due to a spurious correlation with characteristics of the local economy.

In the second part of the paper, we utilize one of the largest educational interventions in U.S. history, the Rosenwald schools, to estimate the causal effects of education on future NAACP activity. Between 1913 and 1931, nearly 5,000 state-of-the-art schools were built to serve rural Southern Black children. This program emerged through a unique partnership between the noted educator Booker T. Washington and the philanthropist Julius Rosenwald. At its peak, more than a third of school age Black children living in rural areas of the South could have attended a Rosenwald school. Previous work has shown that the schools had a tremendous effect on narrowing racial gaps in education and test scores, along with notable effects on fertility, health, and crime.[3]. While there is anecdotal evidence of former Rosenwald students who later became active in the Civil Rights Movement as adults, most famously Congressman John Lewis, there is no systematic research that we are aware of that tie the school program to broader political activity.

The location of Rosenwald schools is reported at the county level and a key concern is whether the schools tended to be built in counties that differed in ways that also made their residents either more or less prone to engaging in political activity. On the one hand, counties clamoring for schools and with more available funds may have been more civic-minded and therefore more likely to develop NAACP branches even without the schools. On the other hand, the Rosenwald Fund targeted disadvantaged areas that may have been less likely to become politically engaged. Partly to address selection, we start with an event-study specification which exploits the precise timing of the roll out of schools. Following World War I, there was an initial surge in the growth of the NAACP that occurred before the vast majority of Rosenwald schools were built. Importantly,

[3]See Aaronson and Mazumder (2011); Aaronson, Lange and Mazumder (2014); Aaronson et al. (2021); and Eriksson (2020).

we do not observe notable differences in patterns of NAACP activity by whether or not a county eventually had a Rosenwald school. This allays concerns about whether Rosenwald counties were either positively or negatively selected based on prior NAACP political activity and serves as an important check on our identification strategy.

To further address concerns about selection bias, we estimate propensity score models with a rich set of pre-program county characteristics to predict the likelihood of a county having a Rosenwald school. We use the results from this model to remove outliers that either had an extremely low or extremely high likelihood of having a school. We also flexibly control for these propensity scores in our statistical models. We show that this approach largely balances our Rosenwald and non-Rosenwald counties in terms of both levels and trends of pre-period NAACP activity.

We then use three related empirical approaches to examine the effect of the Rosenwald schools on NAACP activity during the early Civil Rights Movement. Our first approach looks at how the event study estimates unfold over the decades following the first appearance of a Rosenwald school in a county. Unlike most policy event studies, where the expectation is that an effective intervention would show treatment effects upon impact (or with a short lag), it should take many years after a school is built before former students who attended the school (many starting as early as age 7) would begin to engage in political activity during their adulthood. In our setting, an immediate effect of the schools would imply an alternative mechanism to our hypothesis that it was the long-term effect of accumulated human capital acquisition that led to greater political activity. As expected, we find the effects of school construction takes many years to emerge, and only peak roughly a generation (24 to 35 years) after the first school is introduced in a county.

As described earlier, the burst of NAACP activity largely occurs during and after World War II and since our main interest is in quantifying the role of Rosenwald schools in explaining this time pattern of effects, our second approach moves away from event time to outcome time using a difference-in-difference model. These models compare Rosenwald to non-Rosenwald counties without regard for the timing of Rosenwald entry into the county. Our difference-in-difference estimates indicate that there were meaningful causal effects of Rosenwald schools on NAACP

activity that only begin to emerge after 1938. We find that these effects appear to be largest in the early 1950s when many former Rosenwald students would be in their 30s or 40s. For example, by 1950, we find that a county with a Rosenwald school would have about 0.25 more branches. This implies an enormous effect size of roughly 300 percent relative to the sample mean of 0.082 branches in the South in 1938 and suggests that the presence of a Rosenwald school in a county may explain about half of the six-fold increase in NAACP branches from 1938 to 1946.

Our third approach leverages the *intensive* margin of the Rosenwald program and asks whether an increase in Rosenwald coverage in a county in 1931 leads to an increase in NAACP branches in later years. This may identify a "dose-response" function where more schools in a county might lead to even larger effects. Prior to 1938, there is no association between Rosenwald coverage and NAACP branches, consistent with our other specifications. A significant relationship only begins to emerge during the 1940s and grows larger with time, peaking in 1956, the final year in our analysis and approximately the beginning of the classical Civil Rights Movement.[4] The intensive margin effect of schooling displays a more gradual increase than the difference-in-difference results, appearing earlier and growing consistently over time. We conjecture that related but distinct mechanisms govern the effect of the presence of Rosenwald-educated individuals during the period of rapid change in the early 1940s versus the accumulation of local human capital, represented by coverage of the Rosenwald schools multiplied by the number of cohorts of age to have attended these schools. We discuss these issues further in the final section of the paper.

Finally, we return to our income gap analysis and test whether there are especially strong effects of deprived labor market opportunities in *Rosenwald* counties. Here we interact our income-gap variables with measures of Rosenwald access. We find that the strongest effects of the income gap are found in high Rosenwald coverage counties, though we lack the statistical power to draw strong conclusions on this point. We find a strong effect of having a Rosenwald school on NAACP branches, irrespective of whether there is an income-gap due to discrimination. This suggests a

[4] After 1956, many Southern states target the NAACP with retaliatory action or outright bans, while other civil rights organizations, such as the Southern Christian Leadership Conference, take important leadership roles in the Movement.

direct effect of schooling on political activity and a separate channel due to the low opportunity cost of political activity from deprived opportunities in the Jim Crow South. Of course, our income gap is only a proxy for this mechanism and may not cleanly distinguish the two channels.

Overall, our findings suggest that education was an important contributor to the growth of the early Civil Rights movement in the 1940s and 1950s and that the Rosenwald schools had a meaningful causal role. Returning to the Campante-Chor model and their theory of rising opportunity costs, the increase in education need not have had a positive relationship with political activism. The theoretical concern that education during the Jim Crow era may have reduced incentives for political action echo the debate in the early 20th Century between Booker T. Washington and W.E.B. Dubois, the leading Black intellectual behind the creation of the NAACP. We would highlight that the strength of the effect of education on political activity in our setting is driven in part by the institutional context of the Jim Crow South where occupational discrimination prevented educational gains from being reflected in economic opportunities.

More generally, our work contributes some of the first evidence of the causal effects of a large-scale educational intervention on the formation of a political movement. We view our setting as an especially important one because it involved very high cost activity among political participants and involved deep changes to society. Our work also contributes to the very large and growing literature on the educational progress of Black Americans over the 20th Century and the closing of economic gaps, a sampling of which includes Welch (1974), Smith (1984), Margo (1990*b*), Donohue III and Heckman (1991), Card and Krueger (1992), Aaronson and Mazumder (2011), Bayer and Charles (2018), Derenoncourt (2022), and Althoff and Reichardt (2022).

1 NAACP: Historical Background and Data

1.1 Brief Background

Post-reconstruction attempts to organize civil rights groups, at least beyond Black churches, were broadly unsuccessful. One prominent and especially relevant example was the Niagara Movement,

founded by W.E.B. DuBois and other Black activists in 1905. Financial challenges and internal discord led to it's disbandment within three years. Soon thereafter though, DuBois and a biracial and well-connected group of civil rights leaders founded the NAACP in 1909.[5]

From its origin, the NAACP was committed to fighting racial segregation through many channels but ultimately its principal successes were achieved through the courts. While the first legal cases appeared in the mid-1910s, progress particularly accelerated in the 1930s, including a series of employment discrimination lawsuits involving public service occupations like postal workers and teachers. Donohue, Heckman, and Todd (2002) and Cascio and Lewis (2022) show that this litigation forced local school districts to equalize Black and White teacher pay and thereby lowered racial gaps in access to quality schools.

The NAACP's early legal, as well as legislative and national public outreach efforts, were developed and coordinated through its NYC headquarters and Washington D.C. law offices. Still, organizational leaders made plans early on to establish local branches throughout the country as well. One reason to do so was that local branches served as a principal means to raise funds. For many years, half of the annual $1 member dues collected by local branches were sent to the national office, with the remaining half used to fund local operations and organize events and activities.

But most leaders also considered political activity at the grassroots level to be vital. One way to view the scope of these local activities is through the writings of the NAACP Directors of Branches, the individual responsible for corresponding with local branches, facilitating interaction between the local branches and national offices, and traveling to local branches to aid membership drives and revive lapsed branches. This correspondence touches on many idiosyncratic protests and boycotts, including most famously around the film Birth of a Nation (Ang, 2023). Still the threat of political violence, especially in the South (e.g. Tolnay and Beck 1995), greatly limited the scope of local action in the NAACP's early years. Consequently, local activity tended to concentrate on monitoring lynchings and other violence against Black Americans, reports of which served to identify cases of interest for the legal defense arm of the NAACP.

[5]For a detailed history of the NAACP, see Kellogg (1973), Meier and Bracey (1993), and especially Sullivan (2009).

1.2 Growth of the NAACP Branch Network

Given the salience of the NAACP in the pre-1960s civil rights movement, we use temporal and spatial variation in branches as a measure of the political participation of Black Americans. These data were collected from the historical administrative files of the NAACP's national office, which are housed at the Library of Congress. The 1919 to 1938 data are taken from annual lists recording branch names (i.e. county).[6] For certain years, data are also available on number of members and dues collected but these tend to be sporadically assembled and noisy. Therefore, we focus most of our attention on the presence and number of branches. After 1938, we were able to locate complete annual reports on local branches, both presence and membership, for 1942, 1946, and most years from 1950 to 1956.

Nationally, the size of the branch network went through three distinct phases. The first major push occurred during WWI, when the NAACP was able to take advantage of the energy created as Black soldiers returned from the War. In total, 221 new branches opened during this membership drive, comprising 75 percent of the 295 active branches at the end of 2019 and nearly all of the 155 active branches in the South.

But after that initial success, the organization struggled to gain a foothold; the number of Southern branches declined notably during the first half of the 1920s and remained below 1919 levels through 1938 (Figure 1a). There was little growth outside the South either. As a result, the fraction of Blacks Americans living in a county with an NAACP branch fell, especially in the South (Figure 1b). Although new branches appeared nearly every year, this was offset by a significant amount of annual exit (Figure 1c). Indeed, the half-life for branches opened in the 1920s was only 2 to 5 years (Aaronson et al 2023).

The third phase, which this paper focuses on, begins in the late 1930s. Legal victories, powerful in principle but constrained by the realities of enforcement, began to pile up and the growing power of the national office was matched by a surge in the reach and scope of local support. In less than a

[6]National data on the 1910s is available from a concurrent effort by researchers at the University of Washington, which is available at NAACP History and Geography 1909-1980 - Mapping American Social Movements (washington.edu).

decade, the number of Southern branches grew by sixfold and the number outside the South nearly doubled.[7] The half life of a branch opened in the late 1930s rose to over 15 years. The activities of local branches changed a great deal during this time as well. Ella Baker, a legendary figure in the civil rights movement, took over as traveling secretary in 1938 and Director of Branches in 1943. Baker's letters describe her unfailing belief in the importance of grassroots support for the organization, which she did not believe was reciprocated by national leadership.

It is plausible that Baker's leadership directly led to an expansion of branches just prior to and during the War. But factors external to the NAACP itself are likely salient. Indeed, Baker's letters convey her belief that growth in the early 1940s reflected a surge in demand for the NAACP, rather than a shift in the strategy of the national office. Historians and social scientists have suggested several plausible explanations for this increase in demand for political change at this time.[8]

First, many historical accounts emphasize the constant threat of political violence faced by Black communities in the early 20th century (e.g. Tolnay and Beck 1995). By World War II, this threat may have declined as many young White men who traditionally served as the enforcers of the racial hierarchy in the South left to serve in the military (e.g. Ferrara 2022). Racial tensions may have also been reduced by wartime messaging that encouraged national unity and other shifts in attitudes related to the War (Sitkoff 1971).[9] Second, some researchers have noted the War's impact on labor demand (CITES). The theoretical effect of a labor demand shock on political activism is ex-ante ambiguous. An increase in wages could lead to a reduction in the amount of time spent on political activity (a substitution effect). However, an increase in resources from higher wages also has an offsetting income effect that could lead to an increase in political activity. Finally, pre-existing local patterns of political activity, e.g. the Communist Party and social networks, especially the Black churches (Morris 1986; McAdam 1999), could have been exacerbating

[7] A dormant phase followed by a sudden burst of activism is a common pattern of development among mass political movements (Kuran 1989).

[8] See Aaronson et al (2023) for a fuller discussion.

[9] However, see Mormino's (1994) description of racial tensions at Florida's military bases and surrounding towns during the War and the NAACP's involvement in these situations. Mormino also notes that Black servicemen, especially those born in the North, helped lead the fight against Jim Crow at the local and state levels.

factors.[10]

Branch growth continued through the mid-1950s and the organization's crowning legal achievement, *Brown v. Board of Education* in 1954. At that point, nearly 90 percent of urban Black residents and two-thirds of rural Black residents lived in a county with a NAACP branch. The success of the organization led to the formation of several competitors, including the Congress of Racial Equality and Martin Luther King's Southern Leadership Conference, and ultimately led to some dwindling popularity of the NAACP.

2 Black-White Occupation Gaps and NAACP Branch Activity

Our empirical strategies are designed to test the connection between human capital accumulation, labor market returns, and political participation in the nascent early years of the Civil Rights Movement. Our first approach is descriptive in nature. We test whether NAACP branch activity increases more in areas where Black Americans were denied returns to schooling due to occupational segregation. We focus on NAACP growth during the 1938 to 1946 period, when there was explosive momentum in local participation following years of stagnation. The extent of NAACP growth varied widely throughout the South, and it is this geographic variation that our statistical model seeks to describe. We focus on occupational standing, both to reflect that Black men were denied access to certain occupations in the Jim Crow South (see e.g. Margo (1990*a*); Heckman and Payner (1989); Ferrara (2022)), and that occupational discrimination played a role in the suppression of the returns to education (e.g. Mohammed and Mohnen (2021)). An additional practical reason to focus on occupation is because it has less measurement error than individual income in the 1940 Census.

To test the hypothesis that the suppression of labor market returns to education is associated with political activism, we correlate branch growth in Southern counties to the prospective increase

[10]For modern examples of the importance of social factors in global activism, see Cantoni et al (2019); Manacorda and Tesei (2020); and Bursztyn et al (2021). Networks also may have played a role in the Great Migration (Stuart and Taylor 2021; Derenoncourt 2022).

in income of Southern Black men that would occur under the hypothetical that Southern occupations were racially integrated to the same extent as in the non-South. Our counterfactual does not assume political activism achieves race-blind occupational assignment, which did not exist anywhere in the U.S. at the time, but rather that such assignment is the same in the South as outside of it. Changes in migration during the war, increases in national radio programming, as well as the exchange of information in the racially-segregated but nationally-integrated military likely all served as conduits for information about regional differences in economic outcomes of Black Americans that would be relevant for considering whether to participate in political activities, like joining the NAACP.

This exercise requires us to construct a hypothetical distribution of occupations for Black men in the South. We focus on men to avoid issues related to labor force participation and family status that strongly influence women's occupations and incomes in this era. We refer to the aggregate difference between the observed and our predicted distribution of occupational employment, weighted by an occupation's predicted income, as the county income gap. This gap reflects the differential returns to human capital for Black men in the South relative to the non-South, and it is what we ultimately associate with NAACP branch growth to measure the reduced form association between grassroots political activism and labor market discrimination.

The construction of the county income gap requires several steps. First, we run a multinomial logit regression of county-level occupational assignment for all 25 to 50 year old Black men living outside the South using the 1940 full count Census:

$$Pr(Occupation_{ic} = o) = \alpha^0 + \sum_j \alpha_j^1 I[Education_i = j] + \sum_k \alpha_k^2 I[Age_i = k] + \varepsilon_i \quad (1)$$

where $Pr(Occupation_ic = o)$ is the probability of individual i being in occupation o, $\sum_j I[Education_i = j]$ is a set of indicators for having completed j years of schooling, and $\sum_k I[Age_i = k]$ is age in years as a proxy for potential labor market experience. Occupations are binned into eight groups: professionals and managers, clerical kindred workers, salesmen, craftsmen, operatives and kindred

workers, farm laborers and foremen, service workers, and non-farm laborers.[11] To further support that labor market norms of the South were not part of estimated occupational assignment in our non-South sample, we exclude border states along the Mason-Dixon Line.[12]

Next, for each Southern county with a positive Black population, we difference the share of Black men in occupation o in county c, $\sum_i I[Occupation_{ic} = o]$ with the predicted share of Black men in occupation o in county c, $Pr(\widehat{Occupation}_{ic} = o)$:

$$\Delta Pr(Occupation_{oc}) = Pr(\widehat{Occupation}_{ic} = o) - \sum_i I[Occupation_{ic} = o] \tag{2}$$

where the predicted shares are based on the education and age of Black men in Southern county c and the α coefficients from equation 1 that determine, in a reduced form sense, occupational assignment of Black men in the non-South. The difference between the observed and predicted shares reflects the degree to which Southern Black men are restricted from occupations that Black men outside of the South would enter with a similar level of human capital.

The eight differenced occupation probabilities are then summed and weighted by the predicted income of each occupation-county, to arrive at the county income gap measure, $\widehat{IncomeGap}_c$:

$$\widehat{IncomeGap}_c = \sum_o \Delta Pr(Occupation_{oc}) * \widehat{Income}_{oc}. \tag{3}$$

$\widehat{Income}_{oc}$ is the predicted income of each county-occupation and is computed from a regression of the form:

$$Income_{oc} = \beta_0 + \sum_r \beta_r I[Occupation_o = r] + \sum_s \beta_s I[State_c = s] + \mu ShareRural_c + \eta_i, \tag{4}$$

using all 25 to 50 year old men in the 1940 Census, regardless of race. $\sum_s I[State_c = s]$ is a set of

[11] We exclude unpaid family workers and farmers and farm managers from the estimation of equation 1 because of a lack of reliable earnings in the 1940 Census, which we will use to construct weights for our income gap measure. We cannot use occupation-based imputed income scores from Collins and Wannamaker (xx) because their measure does not vary by county.

[12] The excluded border states are Delaware, Maryland, Kentucky, Missouri, West Virginia, Tennessee, and Oklahoma.

state dummies and $ShareRural_c$ is the share of the county's population that lives in a rural location with less than 2,500 people. We use predicted income, rather than actual income, to weight the county income gap in order to mitigate noise from small county-by-occupation cells. It also allows us to purge potentially endogenous factors like local share of White workers in an occupation that are correlated with local income of Black workers in the same occupation. Lastly, we winsorize $\widehat{IncomeGap}_c$ at the 5th and 95th percentiles.

Table 1 decomposes the occupational pieces that make up the income gap. Rows 1 and 2 report the average observed ($Occupation_{ic}$) and predicted ($Pr(\widehat{Occupation}_{ic})$) share of Black men in each of the eight occupation groups, and row 3 shows the observed-predicted difference. Row 4 reports the mean predicted wage of each occupation in 1940 dollars ($\widehat{Income}_{oc}$), which is used to weight the occupations into a single income gap measure.

Two occupations stand out. Given their observed human capital, Black men in the South were significantly underrepresented in operative and kindred worker occupations; only 12 percent of Black workers are in these relatively well-paid jobs, compared to our model's expectation of 19 percent. In addition, Black men are significantly over-represented among low-paid farm laborers, who earn 36 percent below non-farm laborers and 53 percent below services workers. Consequently, operatives and kindred workers and farm laborers contribute meaningfully to the county income gap.[13] These patterns of occupational segregation are consistent with Ferrara (2022), who also finds that Southern Blacks were underrepresented in semi-skilled occupations before the war.

On average, the 1940 county income gap is economically substantial. The median gap was $81, compared to the median annual salary and wage for a non-white non-farming family in the rural South of $396,[14] suggesting that Black men may have earned roughly 20 percent more if the return to human capital for Black men in the South was similar to that earned by Black men in the non-South. Moreover, while the gap is positive throughout the South (Figure 4), it is especially large in pockets, including Southern Louisiana, Georgia, and parts of Maryland, Virginia, and eastern

[13]The excess of Black men in professional and managerial occupations is largely explained by teachers.

[14]Data from 1940 Census summary statistics:https://www2.census.gov/library/publications/decennial/1940/population-families/41272167ch7.pdf. For farmers, it was $236.

North Carolina.

2.1 Was Local NAACP Activity Stronger in Counties with Larger Income Gaps?

We find a strong positive correlation between a county's income gap in 1940 and growth in NAACP branches during the early- to mid-1940s. The first way we show this is in Figure 5, which plots county-level residualized branch growth between 1938 and 1946 and the 1940 income gap. Both measures are adjusted for the average number of NAACP branches between 1915 and 1938 and demographic characteristics from the 1940 Census, including the percent of Black farmers, population size, population density (population divided by land area), and urban share. County observations are binned into 20 equal groups.[15] The best-fit regression line indicates that an additional $100 in the income gap (slightly larger than the median of $81) is associated with an additional 0.17 (0.04) branches in a county.

This relationship holds in a generalized linear model (GLM) with a Poisson linking function to account for count data:

$$\begin{aligned} Branches_{c,1946} = &\alpha_0 + \alpha \widehat{IncomeGap}_c + \beta Branches_{c,1938} + \gamma_1 AvgBranches_c + \\ &\gamma_2 BlackFarmers_{c,1940} + \gamma_3 Pop_{c,1940} + \gamma_4 PopDensity_{c,1940} + \\ &\gamma_5 Urban_{c,1940} + X_c' \Omega + \eta_i \end{aligned} \tag{5}$$

Our coefficient of interest, α, is presented in Table 2 using number of branches (Panel A) and presence of a branch (Panel B). We show the results conditioned on the same base set of controls used in Figure 5, as well as with controls for several WWII measures – the number of public war facilities, the war casualty rate among semi-skilled white men, and the enlistment rate among semi-skilled white men – and political controls – including indicators for black senators and representatives in 1870, the average Republican vote share (demeaned by national share) between 1868

[15] The results are not dependent on the number of bins.

and 1987, the average Republican vote share between 1880 and 1916, plantation share in 1890, cotton share in 1860, Black Church share in 1916, protestant share in 1916, and Boll Weevil pre and post 1915.[16]

Regardless of controls, there is a strong association between the county income gap and county NAACP branch growth in rural counties. Our discussion focuses on number of branches reported in Panel A but is consistent with the results for presence of a branch in Panel B as well. As we step in controls across columns 1 to 3, the estimated coefficient remains around 0.4, with a standard error around 0.1. Using our full set of controls, in column 3, we estimate that a $100 increase in the income gap (in 1940 dollars) is associated with a 40 percent increase in the number of NAACP branches opening after 1938 and surviving until 1946.[17] These estimates are economically large. For example, changing the income gap from the 25th percentile of $44 to the 75th percentile of $115 raises the probability of an NAACP branch in the average Southern county by 24 percent. For context, the mean Southern county has 0.5 branches.

In column 4, we extend our branch growth outcome to 1956 and find a statistically significant but weaker 26 percent effect. We might expect a diminished effect at a longer time horizon, as the economic forces encoded in the 1940 income gap were surely transformed by the dramatic changes in the U.S. economy during and after WWII. Nevertheless, the 1940 income gap continues to have a persistent relationship with NAACP activity well into the 1950s. In column 5, we extend the sample to also include urban Southern counties. The percentage effect is still present but is a bit weaker. The moderated effect likely reflects the higher number of branches in urban counties in 1938 and the greater economic opportunities and higher income for Southern Black men in cities.

In the final column of the table, we conduct an important check by examining the association between an income gap for White men and NAACP activity. Specifically, we compute an income gap for White Southern men under the counterfactual that their occupational assignment follows

[16] See Aaronson et al. (2023) for a detailed discussion of predictors of NAACP growth between 1938 and 1946 and, specifically, the role of WWII spending, enlistment, and political background on local civil rights activism.

[17] The 0.17 estimate in Figure 5 refers to branch levels, whereas the 40 percent estimate from Table 2 refers to percent growth in branches. A back-of-the-envelope translation would multiply 40 percent by the mean number of branches of 0.45 which equals 0.18.

the patterns of assignment for White men outside the South. This is not exactly a placebo check, as local White income gaps are likely related to local Black income gaps, and hence, to NAACP activity. It would be, however, concerning if White income gaps predicted NAACP activity in a similar way to Black income gaps; such a result would be consistent with a race-neutral feature of the local economy, such as local industrial composition, predicting NAACP activity. Appendix Table A.1 shows that the model provides a good fit for White occupation shares, with Southern White men overrepresented among Professionals and Managers and under represented among Operatives and Kindred Workers, albeit by far less than Black men. In column 6, we find a negative and statistically insignificant relationship between a county's income gap for White men and NAACP growth during the crucial period around WWII. Thus, it appears that NAACP activity occurs in places with specific labor market features affecting Black but not White men. Those features appear to be partly driven by local investment in human capital and restrictions on labor market opportunities, which are associated with subsequent political activity.

3 Rosenwald Schools: Background, Data, and Selection

Our second empirical strategy uses a case study, the construction of thousands of Rosenwald schools in the rural South at the beginning of the 20th century, to identify a causal relationship between human capital investment and political activity.

3.1 The Rosenwald Schools

The Rosenwald School program was designed to tackle the unmistakably inadequate resources provided to Black children in the rural South at the turn of the 20th century.[18] In contrast to calls for racial integration from many prominent contemporaneous voices, Booker T. Washington, the Principal of Alabama's Tuskegee Institute, imagined a network of modern schools for rural Black

[18] See Aaronson and Mazumder (2011) and especially Ascoli (2006) and Hoffschwelle (2006) for much more detail.

schoolchildren.[19] Partnering with Julius Rosenwald, a prominent philanthropist and businessman from Chicago, they began a matching grant program to fund schoolhouse construction projects in 1913.[20] Despite Washington's untimely death in 1915, nearly 5,000 Rosenwald schools were built across 14 Southern states by Rosenwald's death in 1932.

The Rosenwald program represented an increase in school quality as much as an increase in the quantity of completed schooling (Aaronson and Mazumder 2011). The schools were radically different from what they replaced, featuring modern principles of spacing, lighting, ventilation, and sanitation design that were conducive to learning. In addition, the schools provided adequate equipment (e.g., desks, blackboards, and books), some teacher training (Kreisman 2017), and longer school terms. Their focus was on primary education but high school instruction, which was virtually nonexistent in the rural South prior to the Fund's involvement, was introduced in 1926.[21]

A variety of papers have shown that exposure to a Rosenwald school had an economically important impact on school attendance, years of completed education, cognitive ability, migration, fertility, life expectancy, and crime (Aaronson and Mazumder 2011, Aaronson, Lange, and Mazumder 2014, Eriksson 2020, and Aaronson, Mazumder, Sanders, and Taylor 2021). Yet, Mohammed and Mohnen (2021) find that improvements to human capital had minimal impact on improving the occupational standing of Black men, at least beyond occupations like storekeepers and teachers with a long history of Black male employment. This is consistent with other research that has documented the crippling effects of occupational discrimination in this era (CITES).[22]

[19] Washington believed that the education and economic needs of the Black community had to be addressed before challenging segregation, a view that led to significant conflict with many of his contemporaries, including those at the NAACP.

[20] Of note, Julius Rosenwald contributed to the NAACP organization during his lifetime and the Rosenwald Fund was a considerable donor after Rosenwald's death in 1932, particularly towards the litigation that culminated in *Brown vs Board* (Ascoli (2006)).

[21] To take two extreme examples, according to internal Rosenwald Fund records, Alabama and South Carolina had no accredited four year Black high schools in 1925. By 1932, roughly 500 Rosenwald schools offered at least 2 years of high school instruction (Donohue, Heckman, and Todd 2002).

[22] Wright (1999) discusses how occupational discrimination impacted Rosenwald curriculum decisions: "When the Rosenwald Fund sought to provide financial support for black high schools in the South during the 1920s and 1930s, the fund sponsored a series of surveys of "Negro jobs" in various cities, so as to adapt the curricula to the jobs actually available. In place after place the response indicated that there were no black jobs for which a high school education would be useful. Thus, black schools typically did not offer training in such subjects as stenography, accounting, bookkeeping, printing, or typing. The fund's curriculum expert acknowledged: "If commercial courses were offered in the negro school there would no doubt be tremendous pressure to get into them and the only result would be keen

Following the previous literature, our research design takes advantage of two sources of Rosenwald School variation: its roll-out throughout the South during the 1910s and 1920s and substantial across-county variation in the presence of the schools. The share of Southern counties with a Rosenwald school rose from XX percent in 1919 to XX percent by 1925. By 1931, up to XX percent of Black children in the rural South lived in a county with at least one Rosenwald school. Nevertheless, in most counties the number of schools was insufficient to serve all potential students. Aaronson and Mazumder (2011) estimate that seating capacity had expanded to accommodate, on average, roughly 36 percent of the Southern rural black school-age population at its peak. The interquartile range of student capacity ranged from just under 20 to over 45 percent, highlighting the substantial across-county variation in access. Figure 3 reports the geographic distribution of whether a county was ever home to a Rosenwald school or a NAACP branch. There is both considerable county overlap in the two institutions, but also counties with just one or neither.

3.2 Rosenwald Data

The Rosenwald school data comes from the Rosenwald Fund archives housed at Fisk University. Information on individual schools come from index cards used to track construction projects. Each card includes the county, year of construction, size of the building (i.e. number of classrooms), and a breakdown of who paid for construction costs (Rosenwald Fund, local government, Black residents, and White residents). The database includes 4,932 schools in 888 Southern counties, with the capacity to educate students in 13,746 classrooms. See Aaronson and Mazumder (2011) for more details.

3.3 Propensity Score Model of Rosenwald County Selection

Our analysis is primarily, although not exclusively, based on a comparison of counties with and without a Rosenwald school, a design that allows for a clear contrast against which we can detect

disappointment for nearly everyone." Understandably, the black high school in the textile center of Greenville, South Carolina, excluded textiles entirely."

the slow accumulation of the schools' effects. However, it also introduces selection into treatment, as the location and timing of school openings were almost surely not random. Indeed, Julius Rosenwald would not invest in a community unless its local citizens matched his Foundation's contribution.[23] Such a funding mechanism suggests that students from communities that were particularly open to improving schools for Black children might have experienced better outcomes even in the absence of the Rosenwald program.

To address this possible bias, we estimate a propensity-score model to control for the evolution of differences between treated and never-treated counties. Specifically, following Wainwright, Hastie, and Tibshirani (2015), we estimate a penalized logit model of the probability of ever opening a Rosenwald school, p_c, on an extensive set of pre-Rosenwald variables, their quadratic terms, and their first order interactions.[24]

The distribution of the full sample propensity score, p_c, is plotted in Figure A.2. Consistent with selection, the statistical model predicts many counties are highly likely, and highly unlikely, to open a school. Following Crump, Hotz, and Imbens (2010), we drop those counties, which we define as those with propensity scores below 0.1 or above 0.9. We then reestimate the propensity score model on the trimmed sample to obtain the final predicted propensity scores $\hat{p_c}$. Note that the distribution of the trimmed Rosenwald and non-Rosenwald county samples, shown in Figure 6, now overlap in the middle of the unit interval, suggesting a balanced groups of counties in the treatment and control groups that we will use for estimation.

Panel (a) in Figure 7 shows that, prior to the late-1930s, NAACP presence in Southern counties was consistently higher in Rosenwald counties, although the trends between Rosenwald and non-Rosenwald counties were similar. Trimming to rural counties with $\hat{P_c} \in [0.1, 0.9]$, panel (b)

[23]The Rosenwald contribution was a matching grant. The Rosenwald Fund contributed about 25 percent of costs in the early years of the program and 10 to 15 percent in the later years and the Fund played a significant role in helping to win financial and nonfinancial support from local White and Black communities (Hoffschwelle 2006).

[24]The variables are constructed from 1910 full count Census, separately for the Black and White population and include: log urban population, the school attendance rate, the literacy rate, the mean adult occupational income score, mean adult occupational education score, and the ratio of teachers to adults. In addition, we also include the following non-Census measures: indicators for Black state rep and senator in 1870, the Republican vote share from 1868 to 1876 and 1880 to 1916 (demeaned by the national vote share), the plantation share in 1890, the cotton share in 1860, the Black Church share in 1916, the protestant share in 1916, distance to Montgomery, Alabama in miles, and Boll Weevil pre- and post-1915. The sources of these data are listed in the Appendix.

reports negligible differences in both levels before 1930 and pre-trends, though post-WWII differences stay robust.[25] Thus, trimming extreme propensity score counties supports the validity of the research design that uses never treated counties; the lack of observable pre- existing difference in NAACP presence is consistent with quasi-random assignment of Rosenwald schools conditioning on the propensity score.

4 Results on School Construction and NAACP Growth

We present three related analyses of the relationship between Rosenwald schools and NAACP growth. In the first, we use an event study model to test whether the initial appearance of a Rosenwald school in a county is associated with NAACP activity. In the second, we use difference-in-difference models to compare local NAACP activity in counties that ever built a Rosenwald school to similar counties which never built a school. In the third, we examine how the evolution of NAACP activity differs based on the share of local Black youth who could attend a Rosenwald school. In each, our focus on Southern rural counties mirrors the Rosenwald program footprint.

4.1 Event Study Evidence

The event study framework estimates the time pattern of responses to the initial Rosenwald school opening on later growth of the NAACP in that county. Let e_c denote the year of the first Rosenwald School in county c. The event study model takes the form:

$$Y_{ct} = \alpha_c + \gamma_t + \sum_{k=-1}^{5} \beta_k \, I[t = e_c + k] + \underline{\beta} \, I[t = e_c - 1] + \overline{\beta} \, I[t > e_c + 5] + \sum_{m=1}^{5} \hat{p}_m \gamma_t + \varepsilon_{ct} \qquad (6)$$

where t indexes 4-year intervals of time, α_c are county fixed effects and γ_t are year period fixed effects. The $\sum_{m=1}^{5} \hat{p}_m \gamma_t$ are interactions between time fixed effects and indicators for quintiles of a propensity score that we estimate to account for extensive margin selection into the receipt of any

[25] Figure A.3 shows the same plot by whether the county was treated with Rosenwald early vs. late and again demonstrates a similar pattern.

Rosenwald school (see details in section 3.3). The interactions of indicators of quintiles of $\hat{p}_c$ with period effects allows for flexible, year-specific, semi-parametric controls of remaining observable long-run differences between treated and control counties. The sample includes Southern counties with Black children aged 7-13 in the 1910 to 1930 Censuses.

An event study is especially useful for understanding temporal patterns and in particular two timing issues that are important in this setting. First, we test whether counties that built schools in the 1920s and early 1930s were more likely places where NAACP branches were operating concurrently. On one hand, a specific concern is that NAACP branches may have facilitated the openings of schools. If this is the case, the timing of school openings would be positively correlated with pre-existing NAACP branch activity. On the other hand, Rosenwald schools may be placed in needy areas with a low level or declining trend in the capacity of local black communities, in which case we may expect a negative association between Rosenwald entry and local NAACP presence. Crucially, we benefit from significant county variation in branch growth during the 1920s (Figure A.1), which allows us to examine possible pre-trends while also absorbing time-invariant county characteristics through county fixed effects.

Second, we are interested in effects immediately after the first school is built. In many event study applications, effects that appear immediately after treatment are interpreted as evidence of the efficacy of a treatment. However, in our setting, an immediate effect working through the human capital channel is implausible as treated children are not likely joining an adult organization like the NAACP. For example, we know that schools sometimes operated as community centers (Reed 2004); in that capacity, they might have encouraged branch organization by providing a safe, easily accessible meeting site. While this is potentially an important use of the building, it is not a direct effect of the education provided within. Instead, if education causes political participation, we would expect to see NAACP growth accumulate slowly over time, building as enough former students become politically engaged. This process is likely to take a decade or more after the first school was built in a county.

Figure 8 reports the event study results for all Southern counties (Panel A) and Southern

rural counties with an estimated propensity score within the 0.1 and 0.9 range (Panel B). For each sample, there is little evidence that school construction is correlated with pre-existing NAACP activity; the number of NAACP branches present in a rural county increases by less than 0.03 between the 4-year periods before and concurrent with the appearance of the first Rosenwald school in a county, an economically small and statistically insignificant association.[26] NAACP presence between the 4-year period in which the first school opens and the subsequent two 4-year periods is flat. If there is an association between the initial school opening and NAACP activity, it is modest for the decade before and after the first school is opened. Taken together, there is little role for a joint determination of Rosenwald school entry into a county and NAACP activity or a near- or medium-term impact of the introduction of a school.

Moving further in event time, there are growing effects of the Rosenwald school program on NAACP activity. The effects are usually larger in the full sample, indicating that places that were especially likely to build schools earlier in the Rosenwald program had faster NAACP growth a decade after the initial appearance. Nevertheless, the event study shows a similar pattern in the trimmed sample. The event study estimates increase with each 4-year interval, reaching 0.06 branches at 12-15 and 16-19 years after the first school is built in a county in the trimmed sample. The largest effects occur 20 to 23 years after the first school was built, when the initial cohorts of Rosenwald students would be in their late 20s to mid 40s. At this horizon, the counties which received a Rosenwald school have 0.14 additional NAACP branches in the trimmed sample. The final reported coefficient in Figure 8, 24 or more years beyond Rosenwald's introduction, reflects the unbalanced outer bin of the event study. While the unbalanced nature of the sample implies that this coefficient cannot be directly interpreted as the effect of school construction at this horizon, the large estimate suggests that effects continue to grow.[27] The pattern of NAACP branches growing over time with the largest increase in later periods is consistent with an accumulating effect of

[26] Standard errors are clustered by county throughout the Rosenwald analyses.

[27] Extending the sample to later years would not solve the problem, as the start of the classic Civil Rights Movement in the late 1950s fundamentally transforms the NAACP and the interpretation of the data. Reactionary policies, such as outright bans of the NAACP, make it difficult or impossible to form counterfactuals for earlier periods using data from this later era. Additionally, the time since Rosenwald first entered a county becomes less relevant several decades after the start of the program, as changes in the national or regional environment, e.g. WWII, become much more important.

education as students age and become involved in civic activism and effects growing over time as more cohorts attend the initial and subsequent schools in a county.

4.2 Difference-in-Difference Analysis

While the event study is useful for examining pre-trends and estimating effects on impact, it is not the best fit for longer-run inferences because growth in the 1940s and 1950s are at the edge of the sample and, hence, outside the balanced event window. It is also important to document effects within periods, as the NAACP wanes during the 1930s and then grows explosively in the 1940s.

Our preferred method to identify the long-run effects of Rosenwald schools on branch growth, Y_{ct}, is a difference-in-difference model:

$$Y_{ct} = \alpha_c + \gamma_t + R_c \sum_s \delta_s I[s = t] + X'_{ct}\Omega + \varepsilon_{ct}. \tag{7}$$

The coefficients of interest, δ_s, reflect the effect of Rosenwald school presence, R_c, on outcomes over time. Treatment is defined by whether a county ever had a Rosenwald school by the conclusion of new school construction in 1931. County, α_c, and time effects, γ_t, account for persistent differences in counties and the secular trend in branch activity, respectively. X_{ct} include covariates used in estimating the propensity score and the interaction of quintiles of propensity score with period fixed effects. We continue to focus on the Southern rural counties with propensity scores between 0.1 and 0.9, i.e. the trimmed sample introduced earlier.

We report the results for branch presence and the number of branches in Figure 9. For both outcomes, we cannot reject no effect of a county's Rosenwald status on NAACP activity in the 1920s and 1930s. These results further support the findings from the event study that a county's Rosenwald status and NAACP activity had little relationship during the period of active school construction.

Our primary interest is in outcomes that begin once the earliest sizable cohorts of Rosenwald students, born in the mid- to late-1910s, are in their prime working years. Effects in the late 1930s

are still small and statistically insignificant, again, suggestive of a modest or no effect of the schools to that point. But the effects begin to grow during WWII, at the time that more cohorts of former students are entering the workforce. Rosenwald counties have 0.05 additional branches in 1942. In 1946, a banner year for the NAACP, Rosenwald presence in a county leads to 0.16 more branches and an 11 percent increase in the probability of any branch being present. By 1950, we find that a county with a Rosenwald school has 0.24 more branches, on average, and a 15 percent higher probability of having at least one branch. It is noteworthy that the branch effects of Rosenwald grow between 1946 and 1950, as the number of NAACP branches showed little growth after 1946 (see Figure 2). The pattern of effects is consistent with an expanding influence of education on this political movement throughout the 1940s and not simply a secular increase in NAACP branches immediately after WWII.

The effects of Rosenwald plateau or even slightly diminish after 1950, however. Between 1950 and 1956, branch presence and the number of branches show similarly sized estimates to the 1940s. One possibility is that the end of school construction in 1931 resulted in a slowdown in the impact that Rosenwald schools could have had on human capital by the 1950s. Indeed, Aaronson and Mazumder (2011) show that the Black education gap between the North and South roughly closed for cohorts born in the 1940s. The moderating of the effects in the 1950s may also reflect the national stagnation of NAACP growth due to increased membership dues beginning in 1949 and the entrance of new civil rights organizations in the mid-1950s.

In Table 3 we report the difference-in-difference estimates, standard errors, and p-values on the joint significance of the 1946, 1949-1950, and 1955-1956 estimates. We address threats to identification by estimating the model with period fixed effects, the interaction of propensity score quintiles with periods, county fixed effects, and the full set of covariates used in estimating the propensity score. The p-value on the test of significance strongly rejects the null that Rosenwald school presence in a county was not related to NAACP growth between the end of WWII and the *Brown* decision.

Additional results appear in the Appendix. First, Appendix Table A.2 adds results on NAACP

membership. We do not focus on this outcome in the main analysis as the data requires significant imputations. Nevertheless, the membership results follow those on branches. An additional 35 NAACP members are present in a county in 1946 as a result of Rosenwald school construction. Membership declines after 1946, again possibly due to higher NAACP dues. Second, Table A.3 shows tests for heterogeneity by including interactions of Rosenwald with whether the county is above or below the median of several key variables: percentage Black children in school and percentage Black population in 1910, Republican vote share in 1868, plantation share in 1890, and percentage slave in 1860. None of the interactions show consistent patterns. Third, in Appendix Figure A.3 we split Rosenwald counties into those that received a school before 1927 ("early adopters") and those with a first school after 1926 ("late adopters"). We find that early adopter counties had more NAACP activity post-WWII, consistent with counties treated with Rosenwald for longer having a larger effect.

4.3 Rosenwald Coverage

Thus far, we have concentrated on the extensive margin effects of school construction. Next, we move to the intensive margin using an estimate of the share of local Black youth in a county who could attend a Rosenwald school at the program's peak in 1931. Following Aaronson and Mazumder (2011), our potential student coverage measure is:

$$ROSE_{cb} = \frac{1}{7} \sum_{t=b+7}^{t=b+13} \frac{T_{ct} * 45}{N_{ct}}$$

The numerator is the number of potential Rosenwald schools seats in county c and year t, which we compute from the number of Rosenwald teachers, T_{ct} and an assumed average student-teacher ratio of 45. The denominator, N_{ct}, is the number of rural Black children between the ages of 7 and 17 in the county in each year. The number of teachers is taken from the Rosenwald Fund records and the number of school-age children is computed from the 100 percent 1920 and 1930 censuses and interpolated for non-census years.

The analysis follows the specifications and county samples used in the previous Rosenwald analyses. County observations are weighted by the square root of the average number of Black rural children in 1910-1930. The results are reported as binscatter plots for each of the 4 years of interest by grouping counties into 30 quantiles of Rosenwald coverage and plotting the bin-adjusted average presence against coverage. We then obtain OLS-fitted lines for each of the periods between 1942 and 1956 by regressing residualized NAACP presence on the 1931 coverage measure.

Figure 10 shows the evolution of the relationship between NAACP branch growth and Rosenwald coverage over time. The figures depict the binscatter plot, OLS fitted lines, and smoothed lines based on the quantile mean. The results in the first two panels, reflecting the relationships in 1922 and 1931, again confirm that there is minimal evidence of a pre-existing relationship between NAACP activity and the Rosenwald program. The slopes are precisely estimated zeroes in both of these years.

The effects of the coverage of Rosenwald schools after 1931 are depicted in the final four panels of Figure 10. NAACP growth and Rosenwald coverage show a growing positively correlation with effects of exposure increases over time. In 1938, there is a positive relationship between coverage and NAACP branch presence in a county, with a 10 percent increase in coverage associated with a 0.66 percent increase in the probability of a local branch. This is a somewhat surprising pattern, in that total branch growth display no sign of the coming explosive growth in this year (as in Figure 2) and the difference-in-difference results show no meaningful effect in this year. Around 12 percent of rural Southern Blacks live in a county with an NAACP branch in 1938 and the interquartile range in exposure is around 40 percent, implying a meaningful effect of Rosenwald schools in the pre-WWII era. Again, this is evidence of a causal effect of Rosenwald operating independently of the large shifts in NAACP growth across periods.

The relationship between coverage and branch presence continues to grow in the 1940s and 1950s. The visual relationship and OLS coefficient on coverage grow in 1942, however, a large increase in variance These patterns suggest that schooling was one of many factors that led to the period of rapid growth in the 1940s. In 1946 and 1950, the overall relationship continues to

grow in magnitude but remains noisy. By 1956, the relationship is clearly positive throughout the distribution of coverage. The coefficient of 0.27 implies that an additional 10 percent of local Black youth who could attend a Rosenwald school in 1931 leads to 2.7 percent increase the in the probability of NAACP presence; the relationship is statistical significant at $p < 0.01$. Again, the time pattern of the coverage effects departs from the overall patterns in NAACP growth and are consistent with an effect of accumulating human capital. The growth of the effect and reduction in noise in 1956 can also implies that schooling facilitated the maintenance of NAACP growth that occurred in the 1940s. Stated differently, idiosyncratic forces during WWII appear to have driven a burst a growth which was sustained in later years in exactly those places with greater exposure to Rosenwald schools.

Together, these results show that a larger share of local Black children eligible to attend Rosenwald schools in 1931 had a growing association with NAACP activity over the subsequent 25 years. Recall that the coverage measure reflects children ages 7 to 13 in 1931, meaning that they will be young adults over the period in which a relationship emerges. Most Rosenwald schools had been open for 10 years or less, in 1931, so older cohorts in these counties were also partially exposed to Rosenwald. While we lack the ideal cohort-level data on exposure to Rosenwald and participation in the NAACP, it is noteworthy that the Rosenwald schools had educated a growing share of adults over this time period.

The propensity score controls in the figures serve as an important but likely incomplete control for differences between rural Southern counties that ever received a Rosenwald school. We can see this in the leftmost dot in Figure 10, which is usually situated well above the OLS fit line. If zero-coverage counties were comparable to low-coverage counties, we would expect this bin to lie on the fit line. Were we to exclude this point from the figures, we would find similar patterns but a stronger relationship between coverage and branch growth. In the Appendix, we report the same figures without the inclusion of the propensity-score control. The results grow over time, but are weaker and statistically insignificant in all years before 1956. These patterns are consistent with negative selection of counties into the Rosenwald program relative to the predictable component

of NAACP growth. Consequently, our results are likely biased downwards if any omitted variables have the same relationship with NAACP activity as those included in the propensity score.

Taken together, the evidence indicates that the intensive margin effect, Rosenwald coverage, takes longer than the extensive margin of Rosenwald presence to manifest. This may be explained by what is known about mass political movements. Theories of political activism suggest that different mechanisms associate the initial appearance of activist movements and their persistence McAdam (1999). If idiosyncratic returns to a small number of individuals lead to the creation of new branches, while broader population characteristics influence their overall success and mass participation, then we would expect intensive margin effects to lag extensive margin effects. Such a relationship would hold if the first pioneers of Rosenwald students (those experiencing extensive margin effects) grew up and become leaders who galvanize the movement (as did John Lewis, Rosa Parks, etc.). In contrast, the intensive margin serves to measure the cohort-level flow, an accumulating force that takes longer to be realized. It is noteworthy that the NAACP was in a period of relative stagnation and churn of local branches in the late 1940s and early 1950s. The fact that the intensive margin effects of Rosenwald show up in this period, but not earlier, is also consistent with the idea that the coverage of the schools affects the survival of branches more than their formation.

5 Income Gap and Rosenwald

In this final section of empirical analysis, we examine whether we find larger effects of Rosenwald schools on political activism in places with larger income gaps. The economic theory of political activism implies that the increase in education generated by Rosenwald will have the largest effects on activism in places with more discriminatory labor markets, represented by larger income gaps.

To test this idea, we incorporate the intensive and extensive margin effects of Rosenwald into the income gap analysis in Equation 3 using indicators for whether county ever had Rosenwald. We then examine the main effects and the interactions of school construction with the income gap

measure. It is important to note that the 1940 income gap will itself be a function of previous school construction, since the schools increase the overall quantity of education (captured in the income gap) and its quality (omitted from the income gap). Hence, one interpretation of these regressions is as an interaction between increases in school quality due to Rosenwald and the shortfall in labor returns based on quantity.

Table 4 reports how the effects of Rosenwald on NAACP differ by income gap and Rosenwald coverage. Column 1 repeats the base specification from Table 1. Column 2 then shows the independent effect of Rosenwald schools in 1946. In Column 3, we control for the income gap and their interaction. The presence of the Rosenwald program in a county is strongly predictive of NAACP activism, while the strong positive correlation between income gap and NAACP activity in Column 1 falls in magnitude and becomes statistically insignificant once we control for Rosenwald in Column 3. These results are consistent with the Rosenwald program explaining an important share of the income gap—which is natural, given that the program was an important source of education in this era.

The association of the Rosenwald program and NAACP is robust across all the columns of the table, even conditional on inclusion of the income gap. One interpretation is that the Rosenwald indicator captures an increase in the quality of schooling. The income gap is calculated based on the number of years of completed education without regard to its quality, while the Rosenwald program was responsible for an increase in both quantity and quality of schooling. A second interpretation is that the Rosenwald effect conditional on the income gap captures other channels by which education increases NAACP activity beyond the promise of convergence between labor market opportunities in the North and South.

We next turn to the interactions between the income gap and Rosenwald program reported in the bottom rows of the table. The interaction in Column 3 is sizable but statistically insignificant; this pattern is repeated across the specifications with alternative controls. The same relationship is marginally significant when we include all Southern counties in Column 6, but not so when we include the full set of controls in Column 7. In panel (b), we repeat the analysis with branch

presence as the outcome. Here, the base effect of the income gap survives the inclusion of the Rosenwald control. The interaction terms remain positive but statistically insignificant.

Overall, these findings provide evidence consistent with the the idea that Rosenwald effects were even more pronounced where occupation discrimination by race was the most severe. In the Appendix, we also test include Northern counties in Appendix Table A.5. The results are similar when Northern counties enter as an additional control.

6 Discussion and Conclusion

In this paper, we study how the large gains in Black education in the first half of the 20th Century influenced the initial emergence of the Civil Rights Movement. The context, in which an increase in human capital in the face of a labor market the offered few opportunity for Black workers to find skilled and semi-skilled jobs, closely corresponds to the conditions identified by the economic theory of political activism in Campante and Chor. The findings support the central predictions of the model: education leads to activism in those situations where the offsetting increase in the opportunity cost of time through higher wages does not operate. We conclude that the labor market mediates the relationship between education and political activism and the emergence of political movements.

Several important issues deserve additional discussion. The emergence of political movements, such as the Civil Rights Movement, are complex, multi-step processes that depend on difficult to observe expectations about the future evolution of economic, political, and institutional environments. By examining the initial appearance of the Civil Rights Movement, we abstract from questions about the endogenous formation of expectations regarding the likelihood of a successful movement. It seems clear from the time series of NAACP branches and particularly the rapid growth during WWII that the changes during the war precipitated an early tipping point in the formation of the movement. Our evidence indicates that the events of the early 1940s led to an expression of latent demand for activism based on the accumulation of Black education over the

preceding decades.

It is also worth commenting on the role of the NAACP and how we should interpret changes in its activities from a theoretical perspective. Theories of political activism emphasize the distinction between activists, who serve as the vanguard and initiators of activism, and the broader participants in an on-going mass movement. The collective action problem implies that idiosyncratic returns drive the participation of activists, who engage in activism without a clear expectation that the movement will be a success. Once a movement gains momentum and the expectation of successful change emerges, however, membership can grow based on the marginal individuals' desire to share in the returns to the movement, for example, through the expanding social network of members. These two phases of the movement approximately correspond to an extensive and intensive phase of activism.

As the evidence presented in this paper focuses on the initial explosion of activism that led the Civil Rights Movement, it largely reflects the extensive phase of activism. It is important to remember that even though the NAACP was a large organization, a relatively small share of Southern Blacks were ever members. We interpret our evidence as indicative of a causal effect of education on the activists who could, by the early 1940s, foresee the growing benefits and possibility for social change realized over the next several decades. Our main findings, that activism occurs in places with larger Black-White income gaps due to occupational discrimination and in response to the Rosenwald school building program, both align with theories of activism that emphasize the potential returns to political activism as an key driver of the latent demand for activism.

Just as political activism occurs in both the extensive and intensive phases, education may have differing effects across the (latent) distributions of education and activism. The presence of a school may have been sufficient to educate the activists and leaders of a prospective movement, even if the school only served a small share of the overall population. And indeed, we find Rosenwald presence has a strong and early relationship with the appearance of mid-century NAACP growth, particularly during WWII, when the economic prospect of Black workers expanded rapidly. As the share of local youth who can attend school rises, i.e. mass education takes

off, the effects of education on the intensive phase of activism can behave quite differently than effects on the activists who start the movement. Consistent with a distinct effect of mass education, the empirical analysis shows a growing effect of Rosenwald coverage, with the largest effects of the share of local youth who could attend a Rosenwald school found at the end of the sample period, in 1956. Taken together, the dynamics of the relationship between education and NAACP growth are consistent with a distinct role for the NAACP as a organization of activists and civil rights pioneers in the 1940s, as expectations of a successful civil rights movement emerged, and a later period in which a mass movement began to emerge.

Lastly, a crucial element of the historical episode we study is the outbreak of World War 2, and the host of subsequent changes in the economic, political, and institutional environment. Both the descriptive evidence on the rapid growth of activism and causal estimates associating long-run human capital forces with the sudden appearance of treatment effects demonstrate that the war led to the expression of a latent demand for activism and created the possibility for changes that would unfold over the next two decades. We have largely set aside the direct questions about how wartime changes triggered the social changes which permitted the growth of the NAACP. As in the self-immolation of a fruit vendor in Tunisia in 20101, the arrest warrant for Miguel Hidalgo in 1810, or the march of 700 British soldiers to Concord in 1775, an external event may have been required to expose the deeper forces pushing towards change. Future research may inquire into how the war created a window of opportunity for this early stage of the Civil Rights Movement.

References

Aaronson, Daniel, and Bhashkar Mazumder. 2011. "The Impact of Rosenwald Schools on Black Achievement." *Journal of Political Economy*, 119(5): 821–888.

Aaronson, Daniel, Bhashkar Mazumder, Seth G. Sanders, and Evan J. Taylor. 2021. "Estimating the Effect of School Quality on Mortality in the Presence of Migration: Evidence from the Jim Crow South." *Journal of Labor Economics*, 39(2): 527–558.

Aaronson, Daniel, Fabian Lange, and Bhashkar Mazumder. 2014. "Fertility Transitions along the Extensive and Intensive Margins." *American Economic Review*, 104(11): 3701–24.

Aaronson, Daniel, Jala Abner, Mark Borgschulte, and Bhashkar Mazumder. 2023. "The Early Origins of the Civil Rights Movement in the United States: An Analysis of the Growth of the NAACP."

Acemoglu, Daron, and Joshua Angrist. 2000. "How Large Are Human-Capital Externalities? Evidence from Compulsory Schooling Laws." *NBER Macroeconomics Annual*, 15: 9–59.

Aizer, Anna, Ryan Boone, Adriana Lleras-Muney, and Thomas Vogl. 2022. "The Persistent Effects of Decreasing Labor-Market Discrimination: Evidence from WWII policies." UCLA Working paper.

Althoff, Lukas, and Hugo Reichardt. 2022. "Jim Crow and Black economic progress after slavery."

Ang, Desmond. 2023. "The Birth of a Nation: Media and Racial Hate." *American Economic Review*, 113(6): 1424–60.

Ascoli, Peter M. 2006. *Julius Rosenwald: The man who built Sears, Roebuck and advanced the cause of Black education in the American South.* Indiana University Press.

Bayer, Patrick, and Kerwin Kofi Charles. 2018. "Divergent paths: A new perspective on earnings differences between black and white men since 1940." *The Quarterly Journal of Economics*, 133(3): 1459–1501.

Berinsky, A.J., and G.S. Lenz. 2011. "Education and Political Participation: Exploring the Causal Link." *Political Behavior*, 33: 357–373.

Bömmel, Nadja, and Guido Heineck. 2020. "Revisiting the Causal Effect of Education on Political Participation and Interest." IZA Working Paper 13954.

Campante, Filipe R., and Davin Chor. 2012*a*. "Schooling, Political Participation, and the Economy." *The Review of Economics and Statistics*, 94(4): 841–859.

Campante, Filipe R., and Davin Chor. 2012*b*. "Why was the Arab World Poised for Revolution? Schooling, Economic Opportunities, and the Arab Spring." *The Journal of Economic Perspectives*, 26(2): 167–187.

Campante, Filipe R., and Davin Chor. 2014. ""The people want the fall of the regime": Schooling, political protest, and the economy." *Journal of Comparative Economics*, 42(3): 495–517.

Card, David, and Alan B Krueger. 1992. "School quality and black-white relative earnings: A direct assessment." *The quarterly journal of Economics*, 107(1): 151–200.

Dee, Thomas S. 2004. "Are there civic returns to education?" *Journal of Public Economics*, 88(9): 1697–1720.

Derenoncourt, Ellora. 2022. "Can you move to opportunity? Evidence from the Great Migration." *American Economic Review*, 112(2): 369–408.

Donohue III, John J, and James Heckman. 1991. "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks." *Journal of Economic Literature*, 29(4): 1603.

Eriksson, Katherine. 2020. "Education and Incarceration in the Jim Crow South: Evidence from Rosenwald Schools." *Journal of Human Resources*, 55(1): 43–75.

Ferrara, Andreas. 2022. "World War II and black economic progress." *Journal of Labor Economics*, 40(4): 1053–1091.

Friedman, Willa, Michael Kremer, Edward Miguel, and Rebecca Thornton. 2016. "Education as Liberation?" *Economica*, 83(329): 1–30.

Green, Donald P, Peter M Aronow, Daniel E Bergan, Pamela Greene, Celia Paris, and Beth I Weinberger. 2011. "Does knowledge of constitutional principles increase support for civil liberties? Results from a randomized field experiment." *The Journal of Politics*, 73(2): 463–476.

Heckman, James J., and Brook S. Payner. 1989. "Determining the Impact of Federal Antidiscrimination Policy on the Economic Status of Blacks: A Study of South Carolina." *The American Economic Review*, 79(1): 138–177.

Henderson, John, and Sara Chatfield. 2011. "Who matches? Propensity scores and bias in the causal effects of education on participation." *The Journal of Politics*, 73(3): 646–658.

Kam, Cindy D., and Carl L. Palmer. 2008. "Reconsidering the Effects of Education on Political Participation." *The Journal of Politics*, 70(3): 612–631.

Lucas, Robert. 1988. "On the mechanics of economic development." *Journal of Monetary Economics*, 22(1): 3–42.

Margo, Robert. 1990*a*. *Race and Schooling in the South, 1880-1950: An Economic History.* Chicago, IL.:University of Chicago Press.

Margo, Robert A. 1990*b*. "Race and Schooling in the South: A Review of the Evidence." *Race and Schooling in the South, 1880-1950: An Economic History*, 6–32.

Marshall, Alfred. 1890. *Principles of Economics.* 175 Fifth Avenue, New York, NY 10010.:Palgrave Macmillan.

McAdam, Doug. 1999. *Political process and the development of black insurgency, 1930-1970.* University of Chicago Press.

Milligan, Kevin, Enrico Moretti, and Philip Oreopoulos. 2004. "Does education improve citizenship? Evidence from the United States and the United Kingdom." *Journal of Public Economics*, 88(9): 1667–1695.

Mohammed, Shariq, and Paul Mohnen. 2021. "Black Economic Progress in the Jim Crow South: Evidence from Rosenwald Schools." Working paper.

Moretti, Enrico. 2004. "Estimating the social return to higher education: evidence from longitudinal and repeated cross-sectional data." *Journal of Econometrics*, 121(1): 175–212. Higher education (Annals issue).

Pelkonen, P. 2012. "Length of compulsory education and voter turnout—evidence from a staged reform." *Public Choice*, 150: 51–75.

Persson, Mikael, Karl-Oskar Lindgren, and Sven Oskarsson. 2016. "How does education affect adolescents' political development?" *Economics of Education Review*, 53: 182–193.

Smith, James P. 1984. "Race and human capital." *American Economic Review*, 74(4): 685–98.

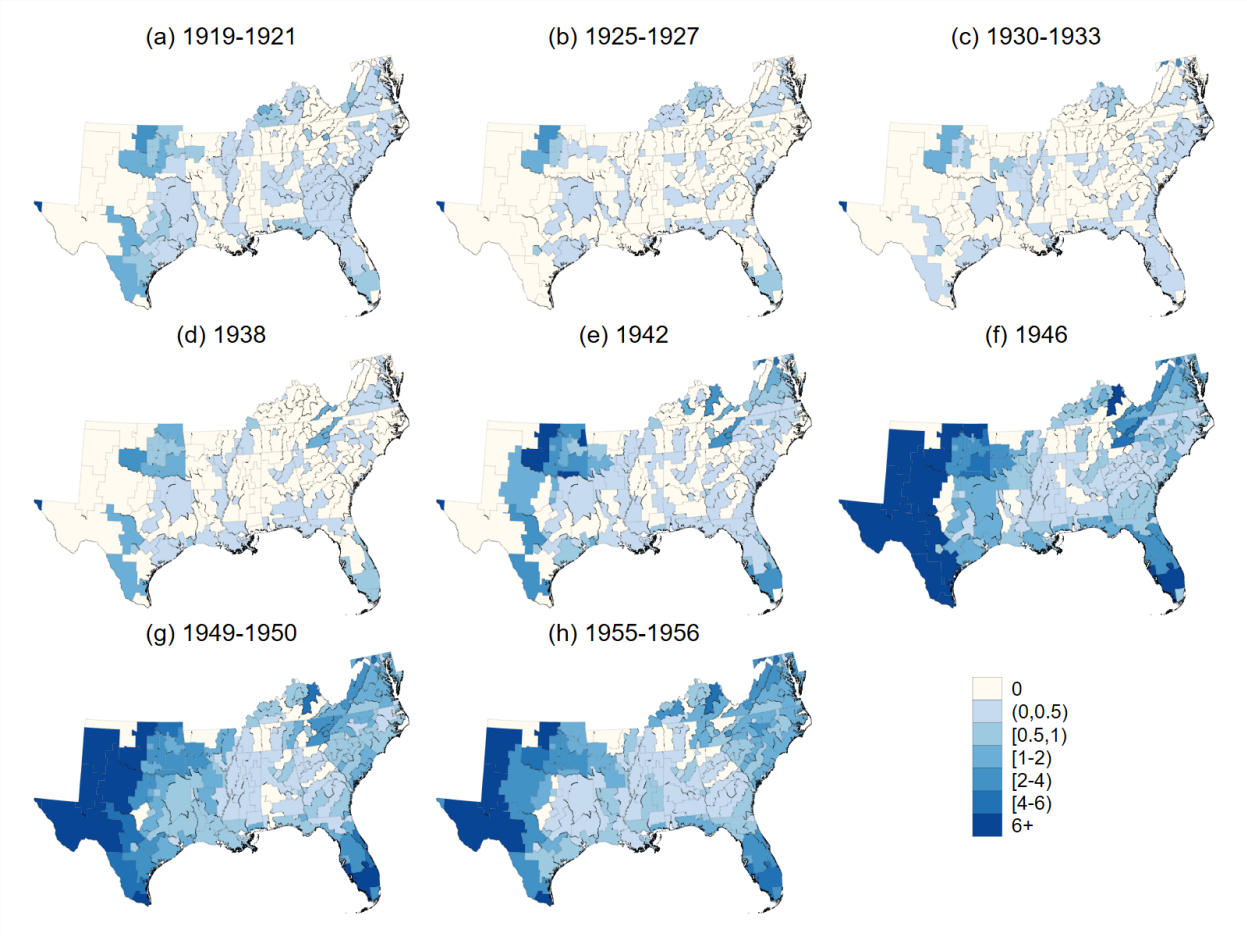
Sondheimer, Rachel Milstein, and Donald P. Green. 2010. "Using Experiments to Estimate the Effects of Education on Voter Turnout." *American Journal of Political Science*, 54(1): 174–189.

Weinschenk, Aaron C., and Christopher T. Dawes. 2019. "The Effect of Education on Political Knowledge: Evidence From Monozygotic Twins." *American Politics Research*, 47(3): 530–548.

Welch, Finis. 1974. "Discrimination in labor markets." , ed. Orley Ashenfelter and Albert Rees, Chapter Education and racial discrimination. Princeton University Press.

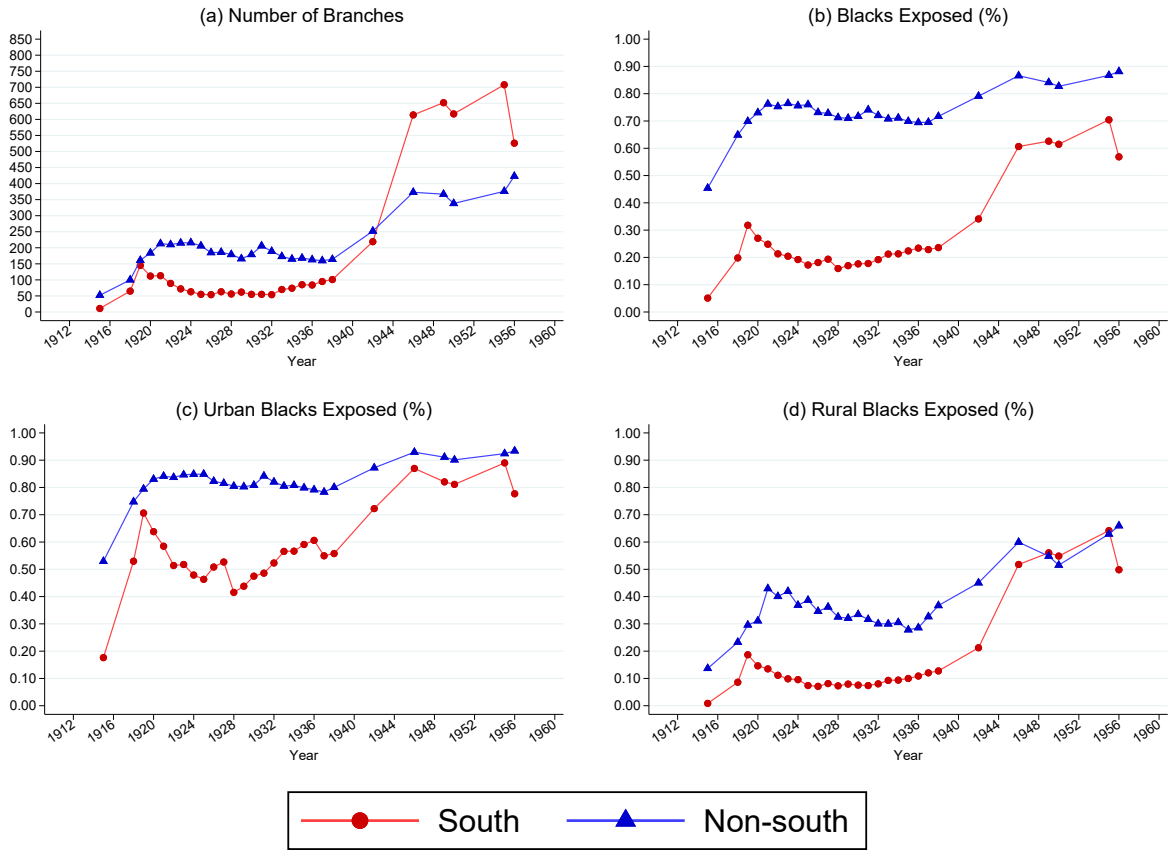
Wright, Gavin. 1999. "The Civil Rights Revolution as Economic History." *The Journal of Economic History*, 59(2): 267–289.

Figure 1: Number of NAACP branches per 10,000 blacks (state economic areas)



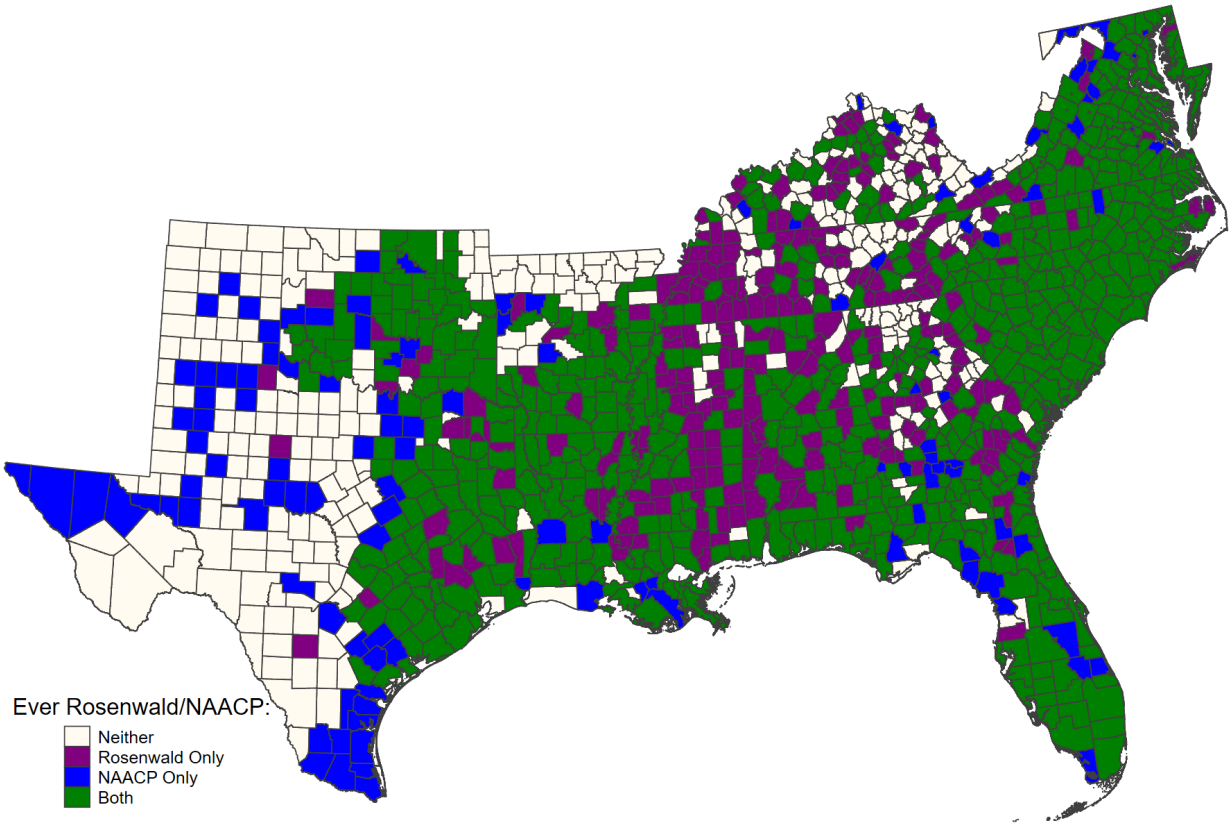
This graph shows the evolution of the number of NAACP branches per 10,000 blacks at the state economic area level. Counts of black population are from the 1920 Census.

Figure 2: Growth of the NAACP



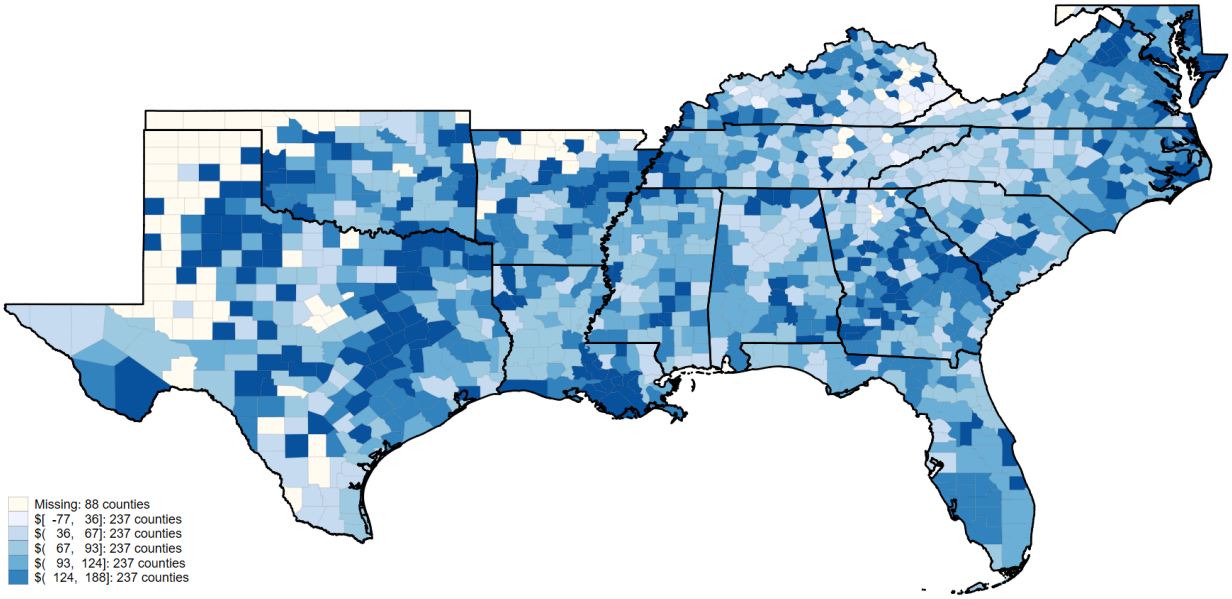
Panel (a) shows the total number of active NAACP branches in each year. A branch is defined as active if it reports dues or membership data. Panel (b) shows the share of blacks living in areas with an active NAACP branch in their county. Panel (c) shows the share of blacks living in urban areas with an active NAACP branch in their county. Panel (d) shows the share of blacks living in rural areas with an active NAACP branch in their county. Census data for the black rural and urban population are taken from the 1920 census. Annual aggregates are smoothed using a 2-year moving average.

Figure 3: Southern counties by ever-Rosenwald and ever-NAACP status



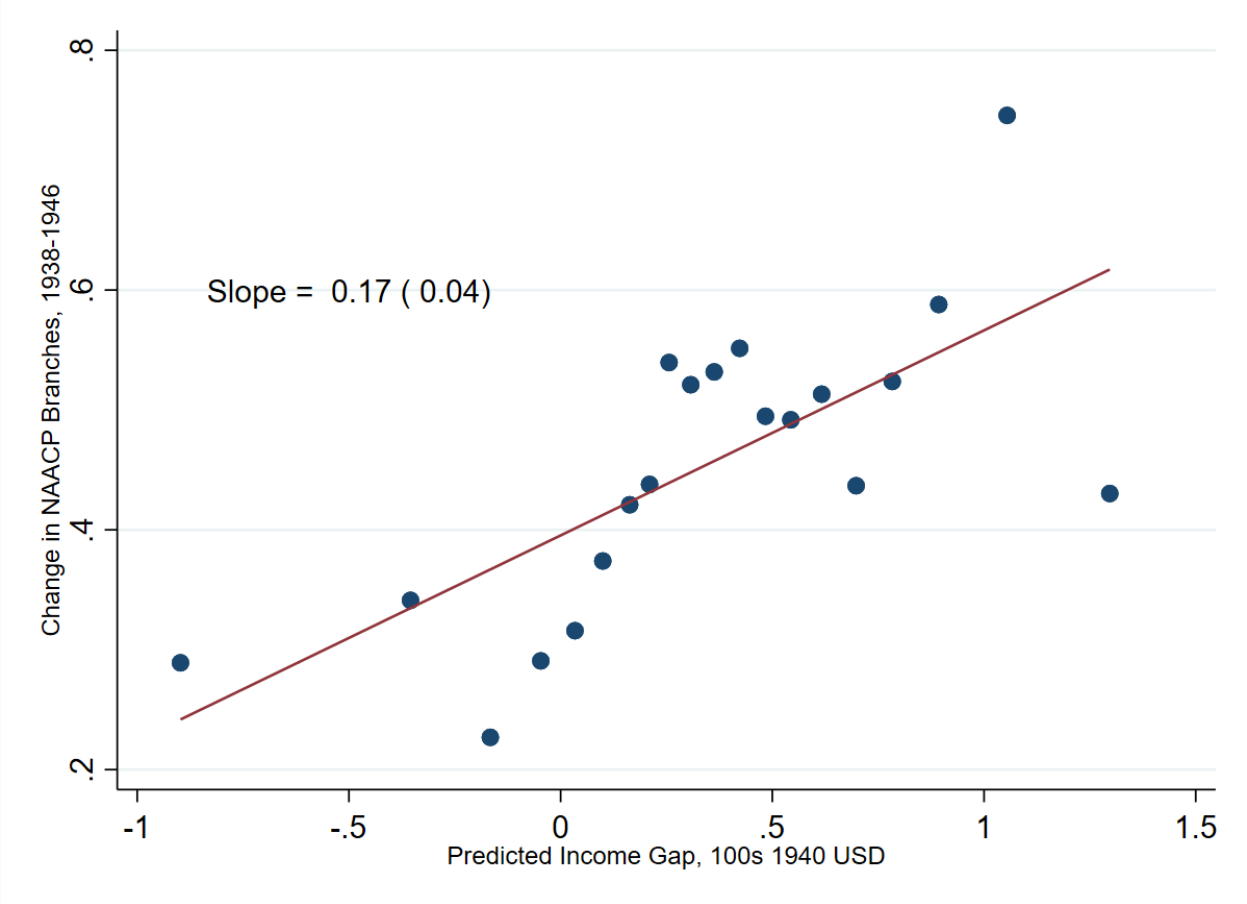
This graph shows the distribution of Sourthern counties by whether they ever had a Rosenwald school and/or NAACP branch. To account for border changes in analysis, We aggregate some counties into one large county and assign these counties the same value.

Figure 4: Map of Income Gap Distribution



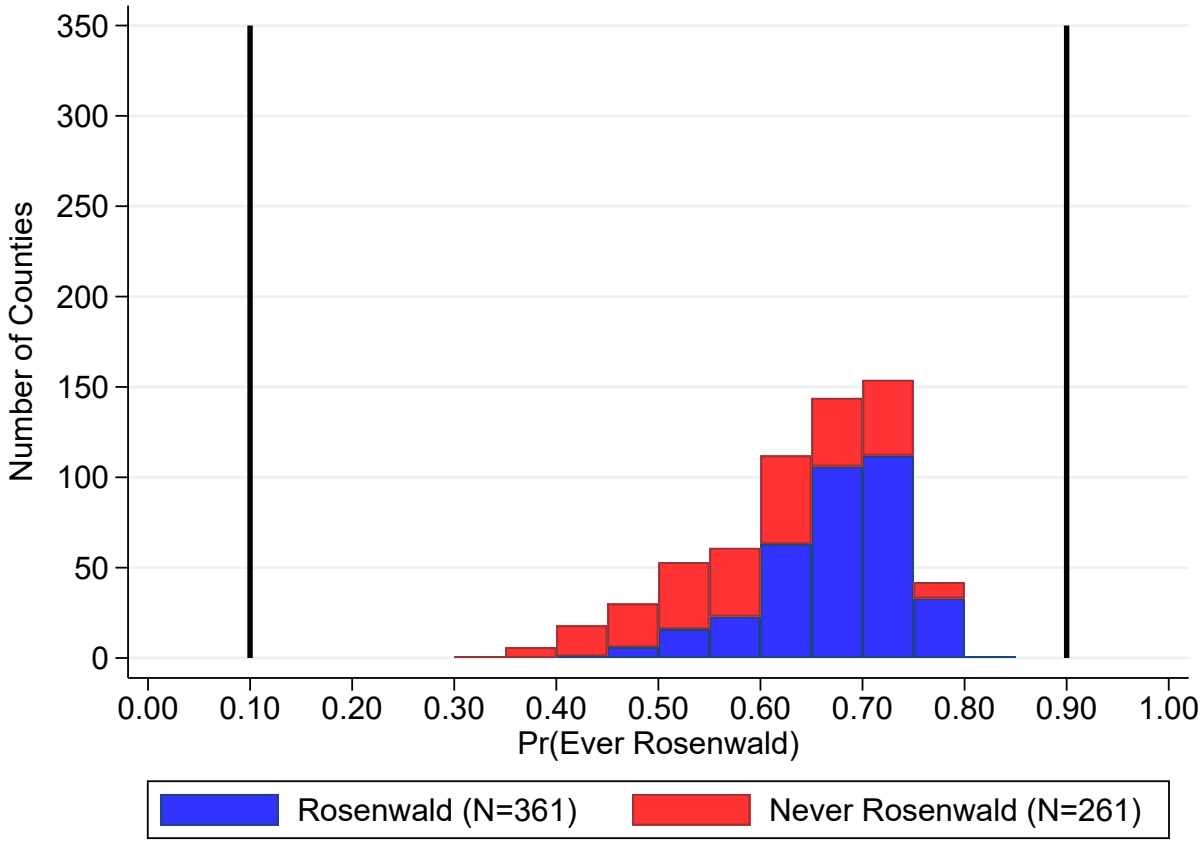
This figure shows the distribution of the income gap measure in the south (as described in Section 2), windsorized at the 5^{th} and 95^{th} percentiles. Each positive value in income gap represents what black males aged 25 to 50 would have earned in the county in 1940 US dollars, if human capital led to occupational assignment in the same way as outside the South. We group the income gap values by quintiles for counties with a positive black population in 1920

Figure 5: NAACP Branches vs. Income Gap



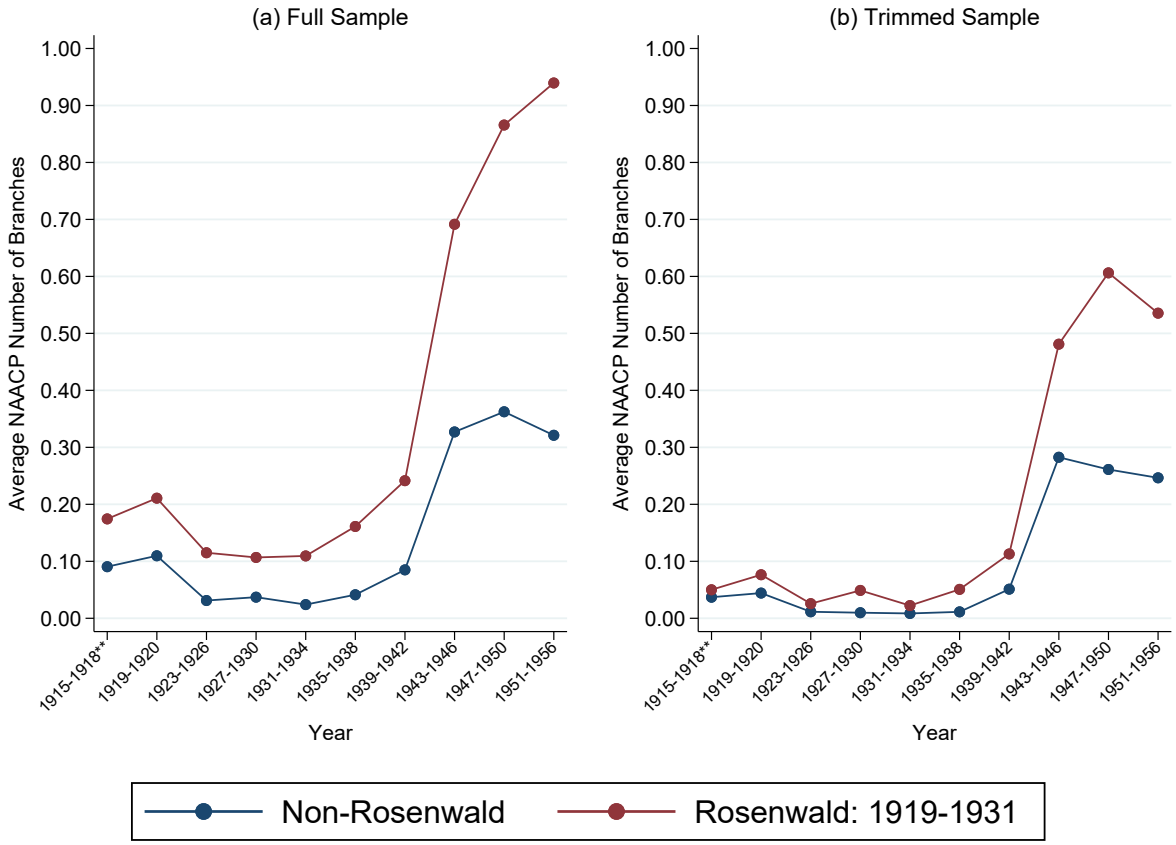
This figure shows the binscatter plot of the change in number of NAACP branches 1938-1946 against the income gap measure defined in Section 2 with the same set of controls as the base specification in Table 2 in rural counties. The scatter plot shows the means of residualized x and y variables grouped into 20 bins. The best linear fit line is constructed from an OLS regression of the y-residuals on the x-residuals, and the slope of fit line matches the coefficient of the multivariate regression.

Figure 6: Distribution of Rosenwald Propensity Score



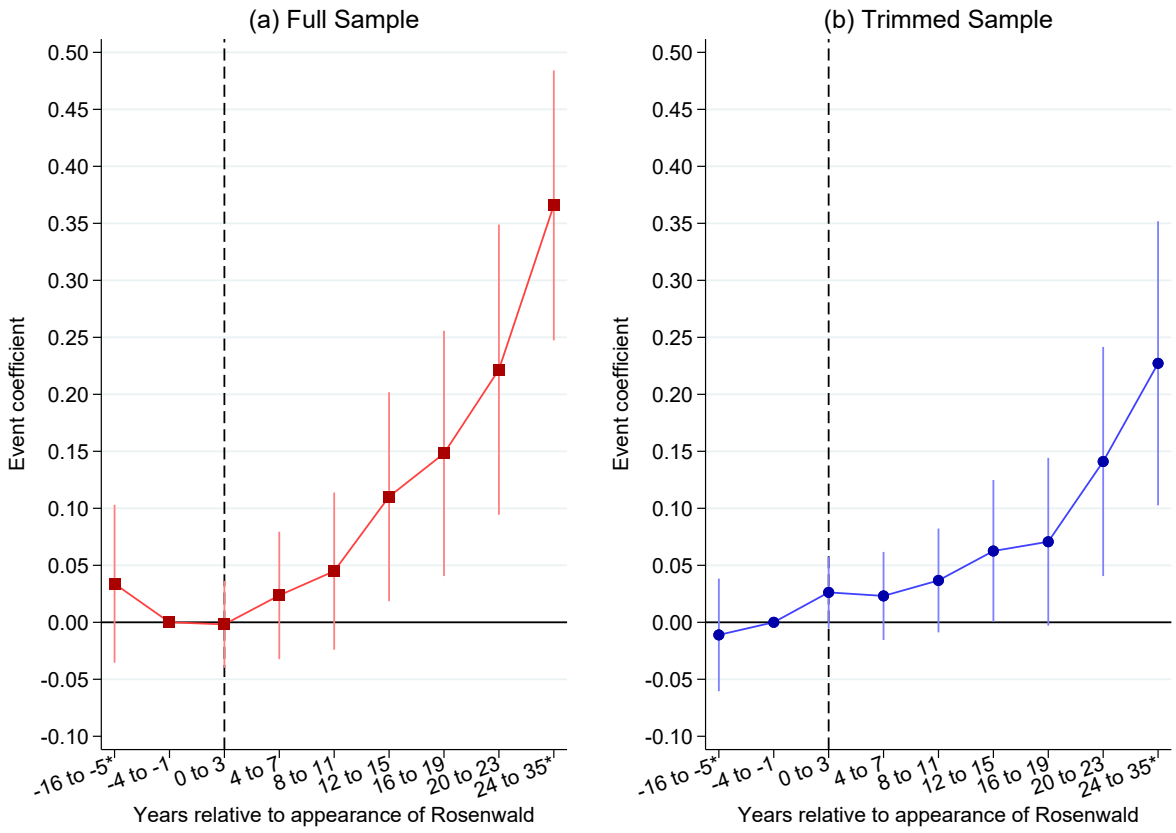
This figure shows the distribution of propensity scores re estimated after trimming counties with original propensity scores outside of the 0.1 to .9 range, for all Southern states with positive population of black children.

Figure 7: NAACP Branches by Rosenwald status



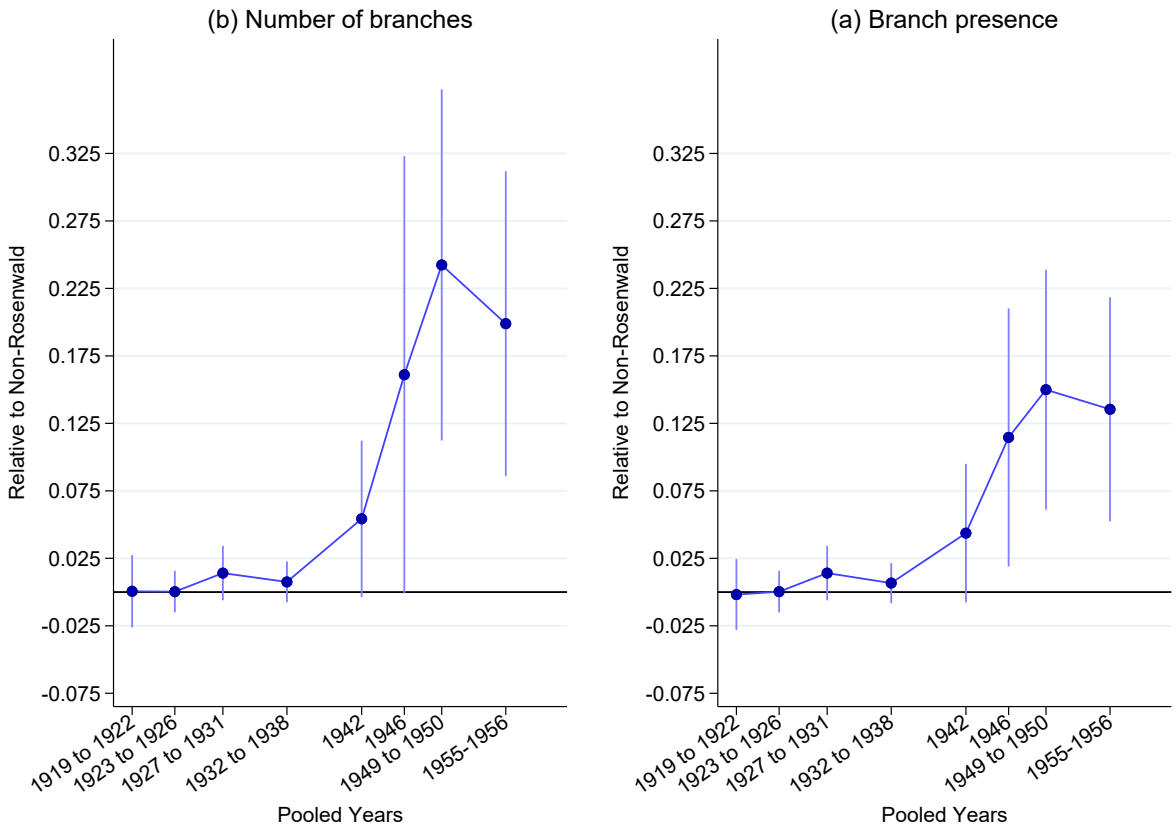
This figure plots mean NAACP number of branches by year, where years are grouped into evenly spaced time-intervals that are used in the event analysis. The left panel shows the raw data with no sample restrictions. The right panel trims the sample of p-scores below 0.1 and above 0.9 and keeps only rural counties. Counties are weighted by the square-root of the average number of rural black children in 1920 and 1930.

Figure 8: NAACP and Rosenwald Schools: Event Study



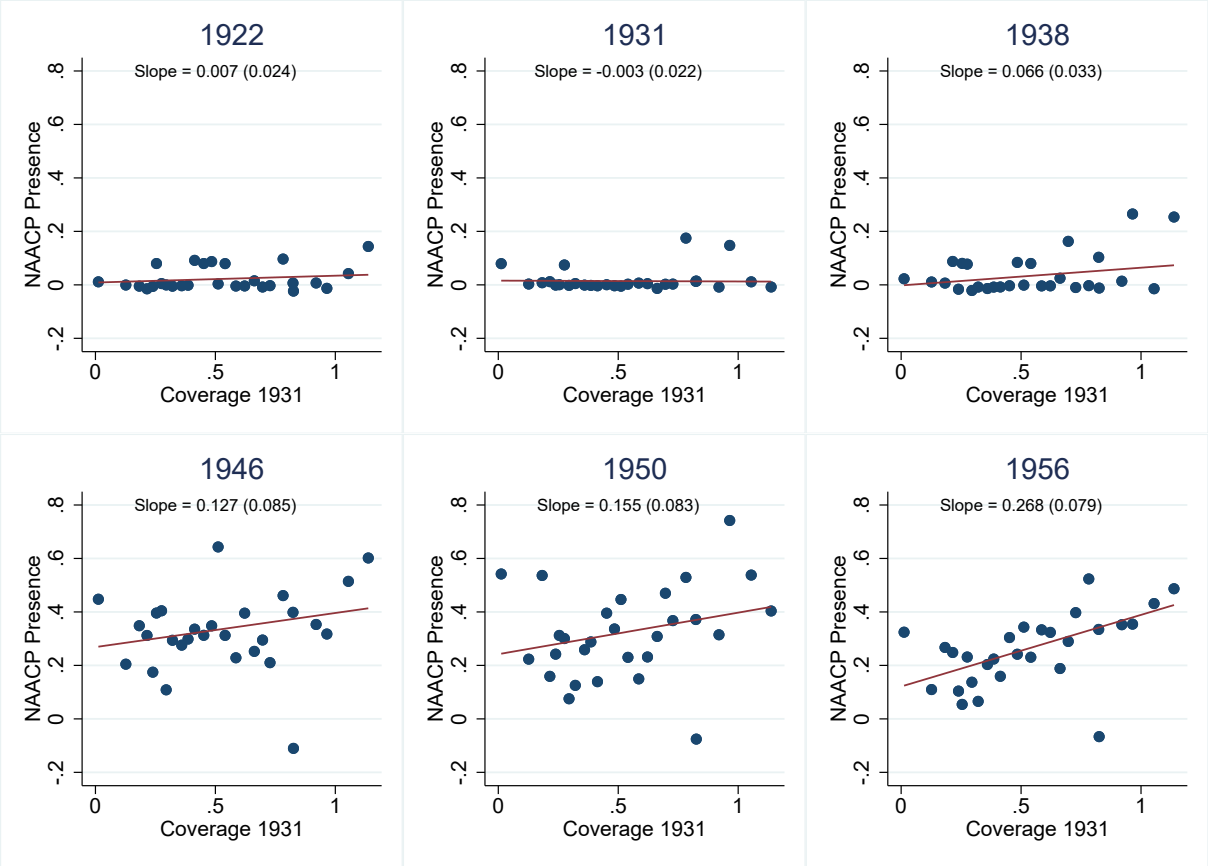
This graph plots the estimated coefficients and 95% confidence intervals from the event study model in equation 6. Panel (a) uses the full set of Southern counties, and panel (b) includes only the rural counties with propensity score in between .1 to .9. The excluded event dummy is "-4 to -1" years prior to Rosenwald, with the first and last event dummies "binned up" over multiple event periods ("-16 to -5" and "24 to 35). Regressions control for county fixed effects and an interaction of period fixed effects with quintiles of p-scores. Robust standard errors are clustered at the county-level. Counties are weighted by the square-root of the average number of rural black children in 1920 and 1930.

Figure 9: NAACP and Rosenwald Schools: Baseline Difference-in-Differences



This graph plots the estimates and 95% confidence intervals based on Equation 7 for NAACP branch presence and number of branches among rural counties with estimated p score between .1 and .9. Regressions control for interaction of period fixed effects with quintiles of propensity scores and all the base variables used in estimating the propensity score. Robust standard errors are clustered at the county-level. Counties are weighted by the square-root of the average number of rural black children in 1920 and 1930.

Figure 10: NAACP and Rosenwald Schools: 1931 Coverage



This graph shows the relationship between NAACP presence and Rosenwald coverage in 1931. Rosenwald counties are grouped into 30 quantiles by coverage. Each dot represents the bin-adjusted average presence and coverage, given by residualized value from regressing each variable on indicators for quintiles of the estimated propensity score. The red straight line shows the OLS-fitted line from regressing presence on coverage and the quintiles of propensity score. (Graph for 1938 looks similar to that for 1942, which we omitted for presentation purpose)

Table 1: Characteristics by occupation

	(1) Professional, Managers	(2) Clerical, Kindred workers	(3) Salesmen	(4) Craftsmen	(5) Operatives, Kindred workers	(6) Farm laborers, foremen	(7) Service Workers	(8) NonFarm Laborers
Actual Share (%) $I[Occupation_{ic} = o]$	3.85	0.45	0.29	4.42	11.84	29.11	13.95	36.11
	(4.086)	(0.790)	(0.859)	(4.614)	(11.53)	(18.95)	(14.90)	(16.66)
Predicted Share (%) $\widehat{Pr(Occupation_{ic} = o)}$	2.95	0.67	0.25	4.04	18.89	15.61	14.89	42.71
	(2.040)	(0.344)	(0.0847)	(0.678)	(0.622)	(2.072)	(2.454)	(2.627)
Share Difference (%) $\Delta Pr(Occupation_{oc})$	-0.91	0.22	-0.04	-0.38	7.05	-13.50	0.93	6.60
	(4.141)	(0.838)	(0.865)	(4.613)	(11.56)	(18.35)	(13.78)	(16.37)
Predicted Wage (1940$) $\widehat{Income_{oc}}$	900.54	1118.78	991.26	779.57	655.69	239.23	508.60	375.29
	(81.82)	(81.96)	(82.00)	(81.82)	(81.85)	(81.82)	(81.88)	(81.82)

This table summarizes, for each occupational group, means and standard deviations of variables that aggregate to the final income gap measure in the rural South. The variables are, from top the bottom, actual share of Black men in each occupation, predicted share, share difference, and predicted wage of Black men. The math expressions for variables are included and calculations are explained in Section 2.

Table 2: Income Gap and NAACP in 1946 and 1956

	Black					White
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Number of Branches						
Income gap	.416***	.423***	.395***	.256**	.305***	-.198
	(.102)	(.102)	(.109)	(.123)	(.101)	(.150)
Mean Branches	.449	.449	.449	.380	.500	.446
Observations	1117	1117	1117	1117	1202	1126
Controls	Base	WWII	All	All	All	All
Sample	Rural	Rural	Rural	Rural	All	Rural
Year	1946	1946	1946	1956	1946	1946
Panel B: Presence						
Income gap	.680***	.696***	.693***	.553***	.634***	.025
	(.155)	(.157)	(.171)	(.179)	(.168)	(.234)
Mean Presence	.349	.349	.349	.314	.382	.346
Observations	1117	1117	1117	1117	1201	1126
Controls	Base	WWII	All	All	All	All
Sample	Rural	Rural	Rural	Rural	All	Rural
Year	1946	1946	1946	1956	1946	1946

This table reports estimated relationship between NAACP and the income gap measure, which is constructed as in equation 3, separately for black men in counties with positive Black children population and for white men. The unit of observation is the county. The dependent variable for Panel A is the number of NAACP branches in 1946 or 1956, and the one for Panel B is presence in 1946 or 1956. "Income gap" is the income gap as constructed in equation 3 windsorized at the 5th and 95th percentiles. The sample for all columns, except for column 5, is the set of rural Southern counties, and column 5 includes all Southern counties. Column 1 includes as controls the number of branches in 1938, average number of branches in 1915 to 1938, percent of black farmers, population in 1940, urban population in 1940, and population density in 1940. Column 2 adds a set of WWII controls: number of WWII public facilities, casualty rate among semi-skilled whites, and enlistment rate of semi-skilled whites. Columns 3 through 6 add an extensive set of political controls including variables for Congressional representation, agricultural composition, religious background, etc, and the missingness indicators for these variables. Rural counties are defined as those with less than 50% of population in urban areas. First four columns keep only counties with all the controls available. Results are robust if we include non South counties in that effects are offset by the North. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: NAACP and Rosenwald Schools: Difference-in-differences results

	Number of Branches				Presence			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1919-1922	.00445	.00058	.00058	.00058	.0016	-.00186	-.00186	-.00186
	(0.013)	(0.014)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)
1923-1926	.00018	.00031	.00031	.00031	.00018	.00031	.00031	.00031
	(0.009)	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)
1927-1931	.0122	.014	.014	.014	.0122	.014	.014	.014
	(0.009)	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)
1932-1938	.00956	.00753	.00753	.00753	.00849	.00666	.00666	.00666
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
1942	.056**	.0543*	.0543*	.0543*	.0485*	.0437*	.0437*	.0437*
	(0.027)	(0.029)	(0.029)	(0.029)	(0.025)	(0.026)	(0.026)	(0.026)
1946	.193**	.161*	.161*	.161*	.143***	.115**	.115**	.115**
	(0.076)	(0.082)	(0.082)	(0.082)	(0.047)	(0.049)	(0.049)	(0.049)
1949-1950	.282***	.242***	.242***	.242***	.184***	.15***	.15***	.15***
	(0.063)	(0.066)	(0.066)	(0.066)	(0.043)	(0.045)	(0.045)	(0.045)
1955-1956	.235***	.199***	.199***	.199***	.165***	.135***	.135***	.135***
	(0.058)	(0.057)	(0.058)	(0.057)	(0.040)	(0.042)	(0.042)	(0.042)
p value 46'-56'	.00006	.0016	.0016	.0016	.0001	.0045	.0046	.0045
Year FE	X				X			
Quintiles $\hat{P}_c$ x year		X	X	X		X	X	X
$\hat{P}_c$ covariates			X				X	
County FE				X				X

This table reports estimated treatment effects from difference-in-differences model in Equation 7. Columns 1 and 5 include period fixed effects. Columns 3 and 7 control for covariates used in estimating the propensity score score $\hat{P}_c$, and interactions between time fixed effects and indicators for quintiles of $\hat{P}_c$. Columns 4 and 8 also include county fixed effects. First row of summary statistics panel reports p value of the F test for coefficients for years 1946 - 1956. The number of counties with Rosenwald is 352 across all columns.

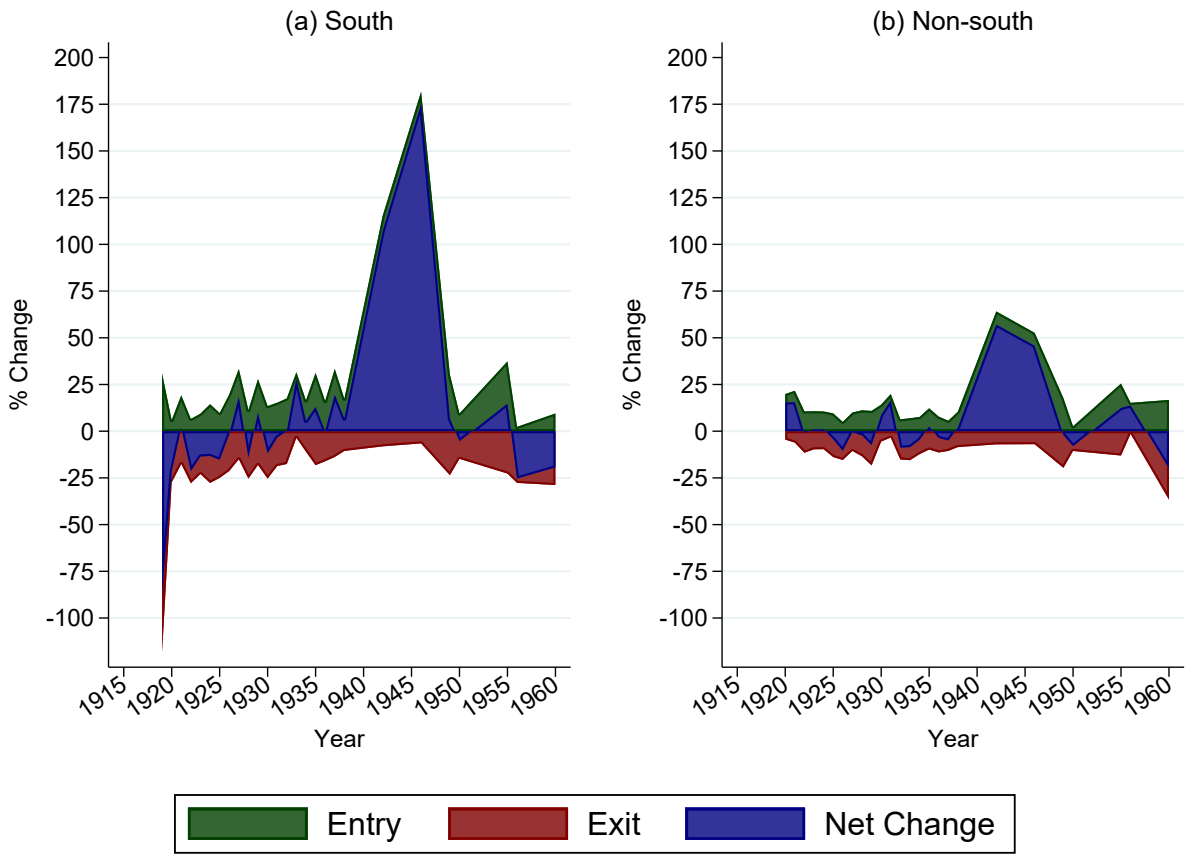
Table 4: Income Gap and Rosenwald Interactions, 1946 and 1956

	Rural					All	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Number of Branches							
Income gap	.416***		.248	.267	.042	.097	.121
	(.102)		(.185)	(.188)	(.260)	(.163)	(.166)
Had Rosenwald		.875***	.787***	.734***	.973***	.593***	.534***
		(.137)	(.153)	(.161)	(.202)	(.170)	(.176)
Income Gap X Rosenwald			.260	.179	.244	.344*	.281
			(.212)	(.214)	(.281)	(.185)	(.187)
Mean Branches	.449	.449	.449	.449	.380	.500	.500
Observations	1117	1117	1117	1117	1117	1202	1202
Controls	Base	Base	Base	All	All	Base	All
Year	1946	1946	1946	1946	1956	1946	1946
Panel B: Presence							
Income gap	.680***		.588**	.638**	.319	.572**	.613**
	(.155)		(.248)	(.259)	(.317)	(.242)	(.256)
Had Rosenwald		1.110***	1.057***	.963***	1.202***	1.031***	.995***
		(.197)	(.228)	(.244)	(.257)	(.306)	(.322)
Income Gap X Rosenwald			.228	.102	.279	.173	.062
			(.302)	(.312)	(.355)	(.293)	(.306)
Mean Presence	.349	.349	.349	.349	.314	.382	.382
Observations	1117	1117	1117	1117	1117	1201	1201
Controls	Base	Base	Base	All	All	Base	All
Year	1946	1946	1946	1946	1956	1946	1946

This table reports estimated relationship between NAACP branches and presence, Rosenwald, and the income gap measure. The unit of observation is the county. The dependent variable for Panel A is the number of NAACP branches and for Panel B is presence. "Income gap" is the income gap as constructed in equation 3 windsorized at the 5th and 95th percentiles. "Had Rosenwald" is an indicator that equals to one if the county had at least one Rosenwald school in 1931. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

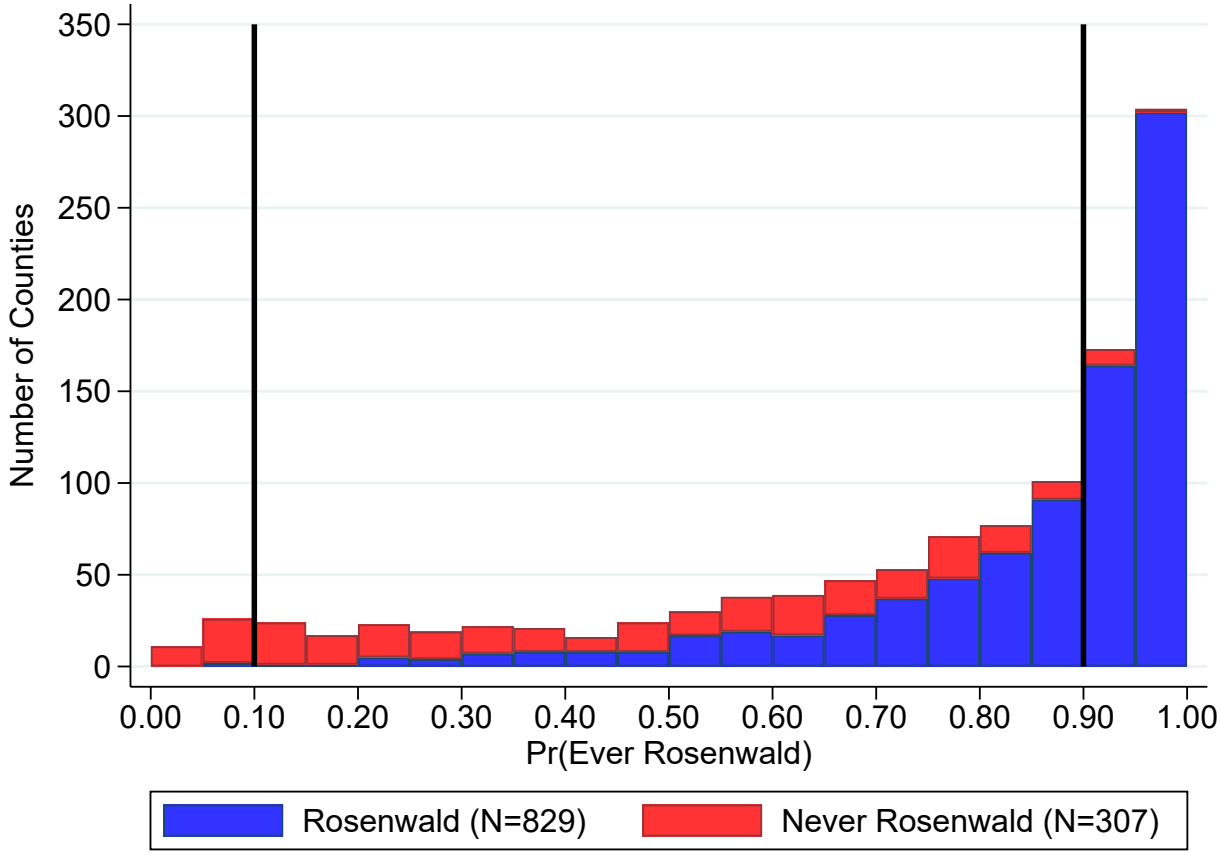
7 Appendix

Figure A.1: Entry and exit of NAACP branches



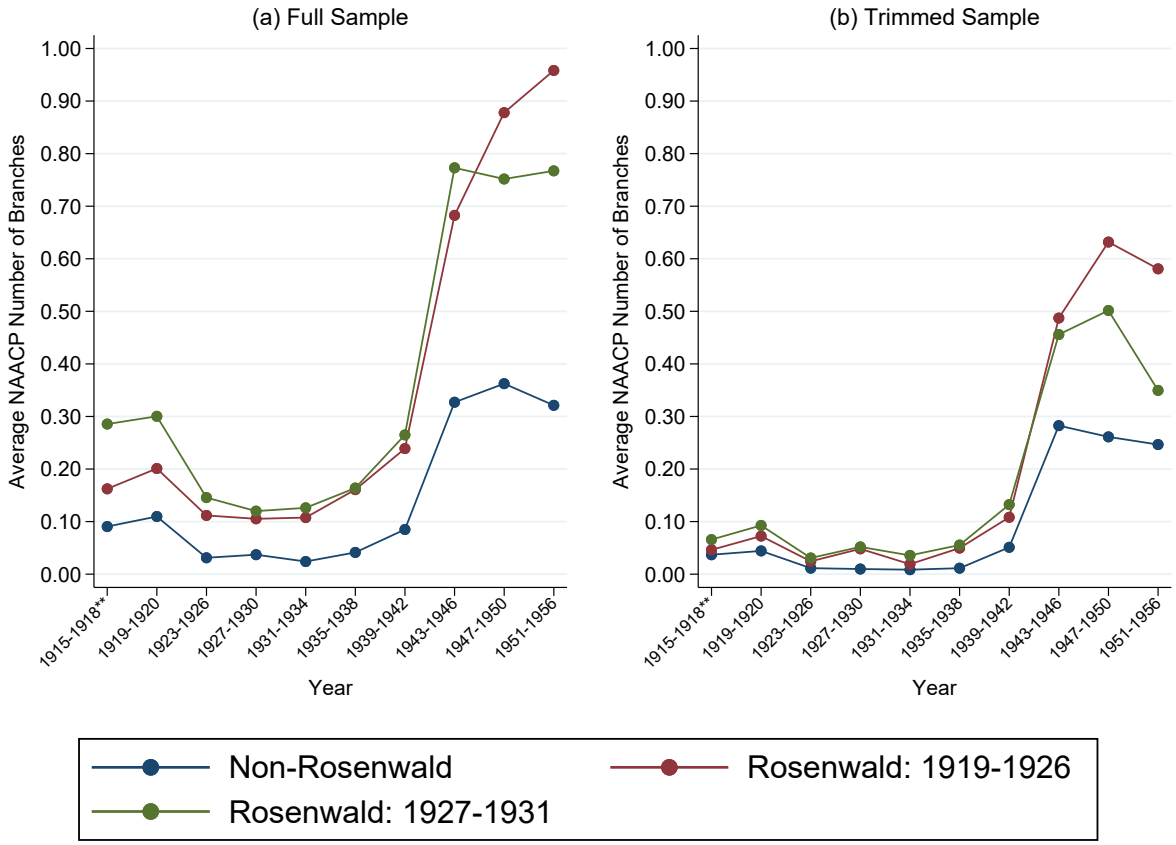
For each branch, we indicate whether a branch entered or exited the panel in a year, and calculate the total number of exits and entries by region. Then, we subtract these quantities to get the net change of branches in a region for each year. Finally, we normalize these changes by the total number of active branches in the previous period.

Figure A.2: Distribution of Rosenwald p score (before trimming)



This figure shows the distribution of estimated propensity scores using Southern states with positive population of black children before trimming by the 0.1 to 0.9 range

Figure A.3: NAACP branches by Rosenwald status



This figure plots mean NAACP number of branches by year, where years are grouped into evenly spaced time-intervals that are used in the event analysis. The left panel shows the raw data with no sample restrictions. The right panel trims the sample of p-scores below 0.1 and above 0.9 and keeps only rural counties. Counties are weighted by the square-root of the average number of rural black children in 1920 and 1930.

Table A.1: Characteristics by occupation for White Men

	(1) Professional, Managers	(2) Clerical, Kindred workers	(3) Salesmen	(4) Craftsmen	(5) Operatives, Kindred workers	(6) Farm laborers, foremen	(7) Service Workers	(8) NonFarm Laborers
Actual Share (%) $I[Occupation_{ic} = o]$	18.79	5.59	4.40	15.97	18.99	13.79	3.87	18.69
	(5.554)	(2.073)	(2.464)	(4.436)	(9.975)	(9.420)	(3.992)	(9.045)
Predicted Share $\widehat{Pr(Occupation_{ic} = o)}$	15.25	5.18	3.71	15.28	22.79	13.37	4.40	20.03
	(4.170)	(1.194)	(0.856)	(1.239)	(1.341)	(2.558)	(0.238)	(2.987)
Share Difference $\Delta Pr(Occupation_{oc})$	-3.54	-0.41	-0.69	-0.69	3.80	-0.41	0.53	1.34
	(3.248)	(1.668)	(2.077)	(4.250)	(9.740)	(8.946)	(3.988)	(8.068)
Predicted Wage $\widehat{Income_{oc}}$	900.54	1118.78	991.26	779.57	655.69	239.23	508.60	375.29
	(81.82)	(81.96)	(82.00)	(81.82)	(81.85)	(81.82)	(81.88)	(81.82)

This table summarizes, for each occupational group, means and standard deviations of variables that aggregate to the final income gap measure in the rural South for white men. The variables are, from top the bottom, actual share of white men in each occupation, predicted share, share difference, and predicted wage of White men. The math expressions for variables are included and calculations are explained in Section 2.

Table A.2: Difference-in-differences Membership

	(1)	(2)	(3)	(4)
1919-1922	.73	.38	.38	.38
	(0.992)	(1.032)	(1.033)	(1.032)
1923-1926	.27	.24	.24	.24
	(0.542)	(0.494)	(0.495)	(0.494)
1927-1931	.16	.14	.14	.14
	(0.548)	(0.568)	(0.568)	(0.568)
1932-1938	.35	.25	.25	.25
	(0.406)	(0.385)	(0.385)	(0.385)
1942	5.5**	5.3**	5.3**	5.3**
	(2.275)	(2.163)	(2.165)	(2.163)
1946	43***	36***	36***	36***
	(11.000)	(10.869)	(10.876)	(10.867)
1949-1950	16***	14***	14***	14***
	(3.622)	(3.417)	(3.419)	(3.416)
1955-1956	15***	14**	14**	14**
	(5.742)	(6.567)	(6.571)	(6.566)
p value 46'-56'	.00004	.0004	.0004	.00039
Year FE	X			
Quintiles $\hat{P}_c$ x year		X	X	X
$\hat{P}_c$ covariates			X	
County FE				X

This table reports difference-in-differences results on membership using the same specifications as in Table 3

Table A.3: Difference-in-differences Heterogeneity

	Plantation	% Black in school	% Black	Republican vote share	% Slave
	(1)	(2)	(3)	(4)	(5)
1919-1922 X Above Med	.019	.019	-.011	.028	-.014
	(.019)	(.019)	(.02)	(.017)	(.017)
1923-1926 X Above Med	.034**	-.0011	.014	-.0049	-.0002
	(.013)	(.019)	(.015)	(.016)	(.013)
1927-1931 X Above Med	.0085	-.0041	.0077	.0072	-.014
	(.019)	(.02)	(.02)	(.017)	(.019)
1932-1938 X Above Med	.012	.0034	-.0011	.0057	-.014
	(.017)	(.017)	(.015)	(.014)	(.015)
1942 X Above Med	.0059	.00067	-.1**	.098***	-.0097
	(.038)	(.035)	(.042)	(.035)	(.041)
1946-1956 X Above Med	-.11**	.073	.053	-.025	-.0022
	(.048)	(.046)	(.049)	(.045)	(.048)
Adjusted R^2	.28	.28	.28	.28	.28
N above median	223	179	217	185	239
N below median	129	173	135	167	113

This table reports results on heterogeneity for Table 3 by interacting treatment with an indicator for whether above or below median cuts of several key variables: percentage black in school and percentage black in 1910, republican vote share in 1868, plantation share in 1890, and percentage slave in 1860.

Table A.4: Income Gap on Branch Growth

	Rural Southern counties						All Southern counties		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Income gap	.356***	.219	.225	.225	.255	.003	.191*	.059	.082
	(.113)	(.203)	(.202)	(.202)	(.206)	(.269)	(.105)	(.183)	(.186)
Had Rosenwald		.775***	.932***	.926***	.835***	1.011***		.654***	.716***
		(.170)	(.187)	(.188)	(.196)	(.231)		(.195)	(.232)
Rosenwald X Income gap		.218	.003	.007	-.048	.111		.274	.105
		(.234)	(.263)	(.263)	(.268)	(.327)		(.210)	(.239)
Coverage above median			-.264*	-.264*	-.247*	-.111			-.248
			(.138)	(.139)	(.143)	(.148)			(.200)
Coverage above median X Income gap			.387	.389	.394	.349			.220
			(.245)	(.247)	(.250)	(.258)			(.220)
Mean Branches	.349	.349	.349	.349	.349	.314	.383	.383	.383
Observations	1117	1117	1117	1117	1117	1117	1202	1202	1202
Controls	Base	Base	Base	WWII	All	All	Base	Base	All
Outcome Year	1946	1946	1946	1946	1946	1956	1946	1946	1946

This table reports estimated relationship between NAACP branches Rosenwald, Rosenwald, and the income gap measure. The unit of observation is the county. The dependent variable is the number of NAACP branches and "Income gap" is the income gap as constructed in equation 3 windsorized at the 5th and 95th percentiles. "Had Rosenwald" is an indicator that equals to one if the county had at least one Rosenwald school in 1931. "Coverage above median" equals to one if the Rosenwald coverage is above median. Standard Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.5: Income Gap on Branch Growth (including Northern counties)

	(1)	(2)	(3)	(4)	(5)
Income gap	.377***	.406***	.437***	.254	.301*
	(.089)	(.090)	(.096)	(.158)	(.162)
Had Rosenwald				.693***	.823***
				(.157)	(.193)
Rosenwald X Income gap				.286	.112
				(.179)	(.206)
Coverage above median					-.275
					(.172)
Coverage above median X Income gap					.218
					(.191)
North	-.690***	-.676***	-.514***	-.221	-.226
	(.094)	(.095)	(.151)	(.147)	(.185)
North X Income gap	-.377***	-.397***	-.423***	-.235	-.278
	(.122)	(.123)	(.127)	(.179)	(.182)
Mean Branches	.422	.422	.422	.422	.422
Observations	2306	2306	2306	2306	2306
Controls	Base	WWII	WWII + Political	Base	WWII + Political

This table has the same specification as Table A.4 but includes Northern counties