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EVIDENCE FROM MISSISSIPPI**

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ABSTRACT

De Jure and de Facto Determinants of Power: Evidence from Mississippi*

We evaluate the empirical relevance of de facto vs. de jure determinants of political power in the U.S. South between the end of the nineteenth and the beginning of the twentieth century. We apply a variety of estimation techniques to a previously unexploited dataset on voter registration by race covering the counties of Mississippi in 1896, shortly after the introduction of the 1890 voting restrictions encoded in the state constitution. Our results indicate that de jure voting restrictions reduce black registration but that black disfranchisement starts well before 1890 and is more intense where a black majority represents a threat to the de facto power of white elites. Moreover, the effect of race becomes stronger after 1890 suggesting that the de jure barriers may have served the purpose of institutionalizing a de facto condition of disfranchisement.

JEL Classification: J15, N41, O43 and P16

Keywords: education, inequality, institutions, race and voting

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1. Introduction

Recent advances in comparative development have investigated the determinants and the influence of institutions. In order to understand the coexistence of change and persistence in institutional dynamics, a crucial distinction has been drawn between *de jure* and *de facto* sources of political power (Acemoglu and Robinson, 2008a,b). *De facto* power is power that is not allocated by *de jure* institutions such as voting legislation or elections, but rather is possessed by a social group as a result of wealth, violence, or other means. In the context of the U.S. South during the Restoration *de jure* power took the form of suffrage restrictions, while *de facto* control reflected the inter-racial conflict between the white elites and the black descendants of slaves. The goal of this paper is to investigate empirically the relative strength of these alternative although interrelated sources of power. More specifically, we analyse the determinants of electoral outcomes such as voter registration and turnout, with special focus on their racial distribution, on the basis of previously unexploited data covering the counties of Mississippi at the end of the nineteenth century. These data represent a unique source of information on voter registration by race at the county level.

Between the end of the nineteenth and the beginning of the twentieth century southern U.S. states introduced a series of procedures and laws aimed at disfranchising a large share of the population. The majority of these laws took the form of poll taxes and literacy tests which prevented poor and illiterates from casting their vote. African Americans and poor whites were the main target of these rules. In fact, by ensuring their support to the Republican and to the Populist parties these groups represented a serious threat to the aspirations of the wealthy white landowners who were mainly represented by the Democratic party. In order to insulate the political system from these challenges to their hegemony, white Democrats introduced barriers to voting meant to exclude the majority of blacks and poor whites from the southern electorate.

The effectiveness of these procedures is still largely debated. While some scholars believe in an effective power of the disfranchisement schemes in restricting electorate suffrage (e.g., Kousser, 1974), others forcefully question it (e.g., Bond, 1934, 1939; Key, 1949; Ogden, 1958). In particular Key argues that *de jure* disfranchisement is the result of a condition of *de facto* disfranchisement - mainly grounded on race - which restricted the electorate even before these laws were passed. According to Key's *fait accompli* hypothesis, the white elite was able to push these laws through the assemblies only because political participation had already been suppressed through the use of extralegal forces, violence, intimidation, and a growing hegemony of the white plantation elite represented by Democrats. The feeling that such a state of violence and fraud could not be

perpetuated for long and the increasing abuse of power in public office led to the passage in State Constitutions of de jure procedures (Wharton, 1947).

This paper contributes to the above literature by providing evidence on the importance of de facto vs. de jure political power, that is, of race vs. suffrage, in the U.S. South. Mississippi represents an ideal starting point for such an investigation. In the past, it had one the highest proportion of slaves (52 percent in 1860, third after South Carolina and Louisiana) and in 2000 still had the highest proportion of blacks (37 percent if we exclude the District of Columbia with 60 percent). The state was one of the first to enact de jure disfranchisement provisions in 1890. Moreover, in economic terms, it has always been one of the most backward states of the U.S., with the lowest income per capita (\$15,853) in 2000.

In November 1890 a new constitution replaced the Mississippi constitution of 1869. New qualifications for voters required that *“each elector (1) Be a male citizen; (2) Be twenty-one years of age or over; (3) Be a resident of the State two years and of the election district or municipality one year; (4) Be registered to vote; (5) Be not disqualified by reason of insanity, idiocy, or conviction of certain crimes; (6) Be able to read any section of the State Constitution, or be able to understand it when read to him, or to a give reasonable interpretation of it; (7) Have paid all taxes by February of the year in which he desires to vote and produce evidence of payment. This includes payment of an annual poll tax of two dollars.”* Therefore, in addition to longer residence requirements, the novelties introduced by the new constitution were a literacy test and a poll tax, both as prerequisites for registration. A complete re-registration was required before the first election following the 1st of January 1892.

In order to conduct our analysis of the effect of the new constitution we use a previously unexploited source of official statistics for the state of Mississippi that we collected from the United States v. Mississippi Interrogatory Answers. *“The Interrogatory Answers collection is the result of a 1962 action brought by the “USA government against the State of Mississippi (...), alleging that the defendants had violated the voting rights of African American citizens. The U.S. District Court for the Southern District of Mississippi dismissed the complaint, but the Supreme Court reversed the suit on appeal in March 1965. However, Congress passed the Voting Rights Act of 1965 before the District Court reconsidered the case (...). The information outlined in the interrogatory answers provide detailed data and sources that illuminate the difficulties African Americans faced in Mississippi when they attempted to exercise their right to vote between 1890 and 1963.”* (University of Mississippi Libraries, Digital Collections). In particular, the Interrogatory Answers contain cross-

sectional county-level data on voter registration by race for the 1896 presidential election.

We merge this source with data on total voter turnout for presidential elections and we exploit the correlation between black registration and turnout in 1896 in order to reconstruct data on black registration in Mississippi at the end of the 19th century. We compare the resulting estimates with those in Kousser (1974) and Redding and James (2001) and we use them in order to investigate the determinants of electoral outcomes. Next, in order to identify the causal effect of voting restrictions vs. racial factors, we compare results from a difference and difference approach with results from a cross-county regressions. We find that black registration in Mississippi declines after the de jure innovations of 1890 but is also strongly reduced in the presence of a larger black share. Finally, we also investigate whether voting restrictions ultimately matter in economic terms as predicted by distributive politics models. We find that political participation does influence both educational policies and economic inequality.

The main message emerging from our investigation can be summarized as follows: on the one hand, as argued by Kousser (1974), we find a clear effect of the legislation on political outcomes; on the other, as maintained by Key (1949), the process of black disfranchisement starts well before the introduction of the new constitution and disfranchisement is stronger in counties where a black majority represents a threat. Moreover, the effect of the black share becomes stronger after 1890, suggesting that the de jure barriers may have served the purpose of institutionalizing a de facto condition of disfranchisement.

The rest of the paper is organized as follows. Section 2 summarizes the related literature. Section 3 presents results for the imputed estimates of black registration. Section 4 reports the difference in difference estimates. Section 5 contains the cross county evidence. Section 6 looks at education policies and inequality. Section 7 concludes and illustrates the relevance of our results for understanding the ongoing debate about electoral legislation and racial discrimination in the U.S.

2. Related literature

Earlier empirical contributions on the effects of suffrage restrictions in the U.S. South, including Kousser (1973, 1974) and Redding and James (2001), rely on ecological regressions in order to reconstruct the racial pattern of voter behavior during the late nineteenth and the early twentieth century. As a response to the paucity of data organized by race, these techniques exploit the variation in the racial components of the eligible population, together with the available data on

overall turnout, to estimate registration, turnout and party shares for blacks and whites, either at a county or at a state level. While Kousser (1974) strongly rejects Key's (1949) fait accompli hypothesis, Redding and James (2001) acknowledge the cumulative influence of violence and intimidation against blacks, especially in the presence of a large black population.

More recent empirical contributions include Naidu (2012), who examines the effect of voting restrictions over the 1870-1920 period. Using adjacent county-pairs of counties that straddle state boundaries, he finds that the introduction of poll taxes and/or literacy tests, captured jointly by a time-varying dummy variable, lowered overall voter turnout, increased the Democratic vote share, and reduced the teacher-child ratio in black schools. However, the potential role of competing factors such as race is not explicitly investigated. Chay and Munshi (2011) examine political participation in the U.S. South in the 1870-1890 period, that is during and just after Reconstruction, and find that the Republican vote share, which they interpret as a measure of black political mobilization, was larger in the presence of historical preconditions captured by the plantation share (i.e., the share of land allocated to the major plantation crops). In other words, during this historical period, which largely predates our main focus, a greater density of blacks allowed more social cohesion and promoted through this channel their political participation. A common feature with our findings is the prominent role of racial factors in determining electoral outcomes.¹

A discussion on the relative relevance of de jure vs. de facto political power is contained in Acemoglu and Robinson (2008a,b). However, their analysis is mainly theoretical and descriptive and focuses on an earlier historical period, immediately before and after the Civil War. Their general argument is that a change in political institutions that modifies the distribution of de jure power may be offset by a change in the distribution of de facto political power. In the context of the U.S. South, the abolition of slavery and the enfranchisement of blacks following the Civil War represented a huge change in the distribution of de jure power. Yet, the economic and political system changed very little if compared with the antebellum South, since the persistence of the de facto political power of the landed elites was able to compensate effectively for the loss of their de jure political power. The elites managed to keep control through the continuation of the plantation economy and through intimidation and violence. In the present paper, we empirically test the implications for this analysis over the Restoration.

There is also a related literature, including Welch (1973), Margo (1982, 1990), Smith (1984, 1989),

¹ In contexts other than the U.S., Baland and Robinson (2008) look at the effect of the introduction of the secret ballot in Chile in 1958 and find that the change in political institutions had implications for voting behavior.

Orazem (1987), Pritchett (1989), Fishback and Baskin (1991), and Card and Krueger (1992), on the effects of voting restrictions on the racial distribution of education outcomes, schooling segregation and employment discrimination. These contributions are a relevant term of comparison for our analysis of the effect of black registration on education policy and inequality.

Another stream of research has examined the removal of voting restrictions following the 1965 Voting Rights Act. The conclusions are that removal of restrictions increased black registration (Alt, 1994), increased overall turnout and more strongly so in the presence of a larger black share (Filer, Kenny, and Morton, 1991), increased welfare spending (Husted and Kenny, 1997), shifted state aid toward localities with a larger black share (Cascio and Washington, 2012), and increased political competition and growth-promoting policies (Besley, Persson, and Sturm, 2010).

Finally, models of franchise extensions are proposed by Ades and Verdier (1996), Acemoglu and Robinson (2000), Bourguignon and Verdier (2000), and Lizzeri and Persico (2004), while Llavador and Oxoby (2005) and Galor, Moav and Vollrath (2009) offer theoretical motivations for landowners' opposition to democracy.

3. Preliminary Analysis: Revised Voter Registration Data

After the adoption of the new constitution in 1890, black political participation in Mississippi decreased sharply. Kousser (1974) estimates that in 1888 black turnout was about 30 percent, while black registration was reduced to 5.4 and 8.5 percent in 1892 and 1896, respectively, against 53.8 and 76.2 percent for whites. Similarly, as reported by the U.S. Commission on Civil Rights (1965), black registration decreased from almost 70 percent in 1867 to less than 6 percent in 1892. Is this decline in black political participation explained by the new requirements introduced by the new constitution? In this section we exploit a new source on voter registration by race in 1896, together with data on overall voter turnout, to reconstruct the voting pattern in the state of Mississippi in the proximity of the adoption of the 1890 constitution. In addition we try to understand the effect of the new voting requirements on political participation.

The state of Mississippi has been one of the first U.S. states to enact disfranchisement schemes. These schemes have often been considered responsible for the decline in turnout and the persistence of the Democrats' hegemony in the South. However, turnout in several southern U.S. states started its decrease well before the 1890s. This fall was associated with a sharp decline in black participation which started in the 1870s and was mainly attributable to the use of fraud,

intimidation, and violence. *“In the election of 1875 local Democratic clubs announced that no Negro who voted for a Republican could hope for any form of employment. Checkers were stationed at the polls, and groups of armed men intercepted Negroes on their way to register. Negro Political leaders were threatened that continued activity would result in deaths. As a result of these tactics, Negro voting diminished throughout the state and Democrats returned to power”* (U.S. Commission of Civil Rights, 1965: 2). This downward trend has induced some academics (i.e., Key, 1949) to consider the enactment of disfranchisement schemes in the South ineffective because they simply consolidated a state of affairs which was already in place before their introduction. This position contrasts with a more institutional view which ascribes the decline in black registration directly to the effectiveness of voting restrictions. Using a series of ecological regressions, Kousser (1974) concludes that the largest share of the decrease in black registration in the South is to be attributed to the introduction of poll taxes and literacy tests which, for the state of Mississippi, reduced black registration to 5.4 percent in 1892. Redding and James (2001) also use similar ecological regressions and document a decline in the black turnout which by 1892 falls to 7.4 percent.

Ecological regressions have been quite popular in reconstructing racial voting patterns in the South of the U.S. Because data on shares of whites and blacks registered voters are not available, they exploit the variation in the number of white and black eligible voters together with data on the turnout in order to estimate the racial voting patterns. Despite the simplicity of the procedure, ecological regressions do not appear very robust since they are highly sensitive to spatial dependence, model specification, and therefore aggregation bias. As a result, they can lead to inconsistent conclusions: for example, for Mississippi Kousser (1974) estimates black registration in 1892 at 5.4 percent, while for the same year Redding and James (2001) estimate black turnout at 7.4 percent.

Given that the *United States v. Mississippi Interrogatory Answers* provide real data on black and white registration at the county level for the 1896 presidential election, we can use this valuable information in order to construct estimates in the proximity of the 1890s in order to have a consistent series which can then be compared with previous estimates. The only assumption which we make in order to reconstruct such a series is that total voter turnout is a linear function of black registration, so that we can consider the latter as an inverse function of total turnout. As result, we can use a simple imputation in order to estimate black registration for years for which we do not have data. The problem with the imputation is the potential for measurement bias and an improper distribution with biased variation across counties. However, the average registration should be unbiased given that the imputation exploits the variation in black registration and total turnout to

estimate the former for missing years. In addition, in the absence of other sources of electoral data by race for the period under investigation, this procedure represents the only feasible alternative to ecological regressions and can provides a term of comparison for the results in Kousser (1974) and Redding and James (2001).

According to the Interrogatory Answers data, average black registration for the 1896 presidential elections across the counties of Mississippi is equal to 14.3 percent with a standard deviation of almost 13 percent. Table 1 reports the pairwise correlations between electoral outcomes for the 1896 presidential election. Data on black and white registration are from the Interrogatory Answers, while overall turnout and Democratic and republican party shares are provided by Clubb et al. (2006). The correlation between black registration and total turnout is above 0.75. Moreover, the correlation between black registration and the other available figures is much lower, suggesting that it is the variation of turnout that matters most for the variation of black registration.

Table 1: Correlations between Registration and Turnout, Mississippi, 1896

	Blk Registr.	Wht Registr.	Turnout	Democratic	Republican
Black Registration 1896	1.0000				
White Registration 1896	0.0621	1.0000			
Turnout 1896	0.7528	0.1685	1.0000		
Democratic Vote Share 1896	-0.3384	0.1690	-0.2613	1.0000	
Republican Vote Share 1896	0.0139	-0.2471	-0.2579	-0.4431	1.0000

The outcome of the imputation for the presidential elections in 1884, 1888 and 1892 is reported in Table 2, which shows descriptive statistics for black registration in these years as well as the real data for the 1896. In 1884 black registration is almost 36 percent and declines to 32.5 percent in 1888. According to Kousser (1974, p. 144) black turnout in 1888 is close to 30 percent which seems consistent with our estimated 32.5 percent registration given that it is natural to expect partial defection. Registration decreases to less than 11 per cent in 1892. However, 1892 may be a sensitive year because it is the first election after the reform of the constitution and this can explain why the percentage in 1892 is even smaller than the actual figure of 14.3 percent reported by the Interrogatory Answers for 1896. Even though before 1890 there was already a downward trend in black registration, and even setting aside 1892 for the above-mentioned reasons, we find that between 1888 and 1896 there is a fall of over 18 percent.

Table 2: Black Registration, Mississippi, 1884-1896

<i>Variable</i>	<i>Obs.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Black Registration 1884	73	0.358	0.127	0	0.633
Black Registration 1888	73	0.325	0.118	0.061	0.532
Black Registration 1892	75	0.107	0.079	0	0.321
Black Registration 1896	75	0.143	0.126	0.007	0.538

Table 3 compares summary statistics for black turnout and registration for different years from the available sources. No alternative estimates, beside our own, are available for 1884. For 1888, as previously mentioned, Kousser's 30 percent figure for black turnout is consistent with our 32.5 percent estimate of black registration. For the 1892 presidential election Kousser (1974, Table 2.3) provides a percentage of black registration of 5.4 percent, which appears too low if compared with estimated black turnout in Redding and James (2001, Table 2) for the same year which is equal to 7.4 percent when estimated on the basis of the black proportion.² On the other hand, the latter figure is consistent with our 10.7 percent estimate for black registration. For 1896 Kousser (Table 2.3) seems to underestimate the percentage of registered blacks. His 8.5 percent figure is much lower than the 14.25 percent provided by the Interrogatory Answers. A possible explanation for this discrepancy is that Kousser might have divided the number of black registered voters in 1896 by the total black adult (21 years of age and above) male population in 1890, with the result of underestimating percentage registration given that the latter was available for 75 counties only. The total number of registered blacks and whites for these 75 counties is 16,234 and 108,998 respectively, which is exactly the same as the total reported in the Biennial Report of Secretary of State to Legislature of Mississippi for 1896-1897. If we divide the total number of blacks registered in 1896 by the total black adult male population in the state in 1890 we also get the same percent as in Kousser. A similar underestimate is reported by the U.S. Commission on Civil Rights (1965).

Table 3: Comparison of Turnout and Registration Estimates, Mississippi, 1884-1896

<i>Source:</i>	<i>Kousser</i>		<i>Redding & James</i>	<i>Bertocchi & Dimico</i>
	Black Turnout	Black Registration	Black Turnout	Black Registration
Presidential 1884	-	-	-	35.8%
Presidential 1888	30%	-	-	32.5%
Presidential 1892	-	5.4%	7.4%	10.7%
Presidential 1896	-	8.5%	-	14.25%

² When estimated on the basis of the white proportion the figure is much lower at 0.88 percent

Given that we now have data on black registration before and after the introduction of the 1890 constitution we can use this data in order to estimate a difference in mean between the two time periods. Of course this procedure does not identify any casual effect since it does not take in consideration the long-run time trend. However, when compared with the difference in mean in total turnout it can provide useful insight on the overestimation of the effect of voting restrictions which we can obtain using turnout rather than black registration.³

The estimates are reported in Table 4. In Model 1 we only control for a post-constitution dummy which is equal to one after 1890. Its coefficient indicates that the difference in mean in the registration of blacks before and after the new constitution is about 18 percent. In the next two models we also enter the share of black adult males⁴ for the relevant years (Model 2) and its interaction with the post-constitution dummy (Model 3). While the interaction is not significant in Model 3, the share of eligible black males is highly significant and decreases registration by almost one third per a one percent increase in the share of blacks. In other words, black registration declines after the de jure innovations of 1890 but is also strongly reduced in the presence of a larger black share.

In the next three models we repeat the same exercise using data on turnout to spot possible difference in the estimated effect of the post-constitution dummy. Estimates for turnout are very similar to the ones for registration even though using the former tends to over-estimate the effect of the post-constitution dummy by an average 3 percent. Of course, if disfranchisement schemes were effective, this is likely to be due to a fall in the white electorate.

³ Of course the over-estimated effect of the post-constitution dummy in the turnout regressions will also depend on the correlation between the dummy and unobservable variables in both the registration and the turnout regressions. The over-estimated effect is exactly predicted only when the dummy and the residuals in the two regressions are not correlated or correlated in the same way.

⁴ The share of black adult males for each year is computed in the following way. We have data on black adult males in 1890. For the years 1870, 1880, and 1900 we have data on adult males and the share of blacks and whites. If the age distribution of blacks and whites is the same we can multiply the share of blacks and whites by the share of the adult male population to get a measure of the eligible blacks in the same years. Finally in order to compute shares for each year we compute the rate of growth over a decade (as a difference in the share of blacks) and we assume that the rate of growth over each decade is constant. Therefore we augment/decrease the share of blacks by such a rate of growth multiplied by the distance in terms of years.

Table 4: Determinants of Black Registration and Total Turnout, Mississippi, 1884-1896

Dependent Variable:	Black Registration 1884-1896			Turnout 1884-1896		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Estimation Method: OLS						
Post-Constitution Dummy	-0.182*** (0.0201)	-0.182*** (0.0158)	-0.152*** (0.0311)	-0.211*** -0.0205	-0.211*** -0.0151	-0.177*** -0.0348
Black Adult Male Share		-0.311*** (0.0243)	-0.281*** (0.0383)		-0.390*** -0.0325	-0.354*** -0.0584
Post-Const.D.* Ad.Blk.M.Sh.			-0.0599 (0.0480)			-0.0695 -0.065
Constant	0.325*** (0.0138)	0.481*** (0.0156)	0.466*** (0.0204)	0.459*** -0.0161	0.655*** -0.0187	0.637*** -0.0286
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	296	295	295	296	295	295
R-squared	0.48	0.67	0.67	0.51	0.71	0.71

Robust Standard Errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

4. The Impact of Voting Restrictions in Mississippi

The problem with the estimates in the previous section is that they do not provide a clear causal effect because of the absence of a control group. However, given the correlation between turnout and black registration we can use the former over the 1876-1900 period in order to establish a causal effect of the voting requirements introduced in the 1890 constitution. In doing so we need to keep in mind that, under the assumption that the post-constitution dummy in the turnout and black registration regressions is correlated with the same unobservable variables there may be an average 3 percent of whites which is also disenfranchised.

Our identification strategy is based on a simple difference in difference in which we compare Mississippi turnout before and after 1890 using an appropriate control group which over the same time period did not pass any bill to restrict the electorate. The timeline of the introduction of poll taxes and literacy tests in all southern states is reported in Table 5. Three states (Arkansas, Florida, and Tennessee) only had a poll tax, while the remaining eight states including Mississippi had both a poll tax and a literacy test. North Carolina, Alabama, Texas, and Virginia are among the last states to introduce legal voting requirements (between 1900 and 1902). However, Virginia also had a poll tax, which was later repealed, before 1881.

Table 5: Poll Tax and Literacy Test, Years of Introduction

<i>State</i>	<i>Poll Tax</i>	<i>Literacy Test</i>
Alabama	1901	1901
Arkansas	1892	-
Florida	1889	-
Georgia	1877	1908
Louisiana	1898	1898
Mississippi	1890	1890
N. Carolina	1900	1900
S. Carolina	1895	1895
Tennessee	1890	-
Texas	1902	1902
Virginia*	1902	1902

Source: Kousser (1974, Table 9.1).

* Virginia had a poll tax also before 1881.

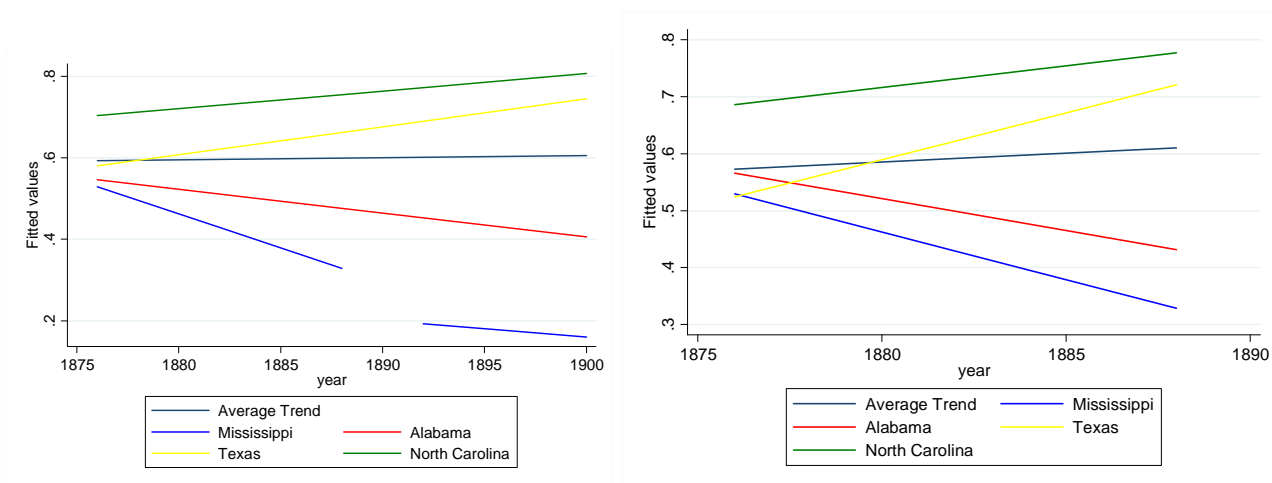
Table 6 reports average turnout for Mississippi, North Carolina, Alabama, Texas over the 1876-1900 period (the source is Clubb, 2006). Turnout in Mississippi over this time period is on average by far the lowest. There is a clear decline of almost 30 percent between the 1876 and the 1888 presidential elections. After 1890 turnout for presidential elections fluctuates around 20 percent. Instead, turnout for congressional elections has always been quite low (no larger than 35.5 percent). Alabama follows a rather similar trend. Turnout for presidential elections drops by almost 25 percent before 1890 and then keeps decreasing with the exception of the 1892 election, while turnout for congressional elections is relatively low. On the other hand, for North Carolina and Texas turnout is increasing over the period both for congressional and presidential elections.

Table 6: Voter Turnout in Four Southern States, 1876-1900

<i>Year</i>	<i>Mississippi</i>	<i>North Carolina</i>	<i>Alabama</i>	<i>Texas</i>
Presidential 1876	0.756	0.863	0.720	0.434
Congress 1878	0.220	0.431	0.343	0.634
Presidential 1880	0.502	0.806	0.581	0.611
Congress 1882	0.355	0.705	0.455	0.601
Presidential 1884	0.498	0.834	0.534	0.724
Congress 1886	0.197	0.640	0.284	0.634
Presidential 1888	0.459	0.849	0.568	0.706
Congress 1890	-	0.731	0.375	0.663
Presidential 1892	0.203	0.794	0.696	0.738
Congress 1894	0.148	0.761	0.4	0.724
Presidential 1896	0.248	0.858	0.539	0.782
Congress 1898	0.09	0.836	0.261	0.660
Presidential 1900	0.191	0.717	0.424	0.683
Total	0.287	0.756	0.465	0.669

In Figure 1 we show the time trend for turnout. The chart on the left compares the time trend for Mississippi, before and after the introduction of legal voting requirements enacted with the 1890 constitution, with the trend in the other three states and the trend averaged over all four states. The average trend over this time period appears to be more or less constant. However, while Mississippi and Alabama reveal a clear decline, Texas and North Carolina exhibit an increase. The resemblance between Alabama and Mississippi is even more convincing if we look at the chart on the right, where we compare trends before the enforcement of the 1890 constitution. While the trends for Alabama and Mississippi tend to move closely, Texas and North Carolina follow a completely different path experiencing a large increase in turnout over the 1876-1888 period now under consideration.

Figure 1: Voter Turnout in Four Southern States, 1876-1900 and 1876-1890



Alabama and Mississippi are also more closely related from a social and historical point of view with an average share of adult male blacks of 12.4 percent of the total population over the years being considered, Alabama ranks fifth after Louisiana, South Carolina, Georgia, and Mississippi. However, Louisiana, South Carolina and Georgia cannot be used as a control group since they passed voting restrictions earlier. On the other hand, Alabama did not pass a bill until 1901. Therefore we can use the period before 1901 as a reference in order to get consistent estimates of the new requirements in the 1890 Mississippi constitution.

An essential assumption behind the difference in difference estimator is the exogeneity of the treatment (i.e., there should be no reasons why states which had lower turnout enacted disfranchisement schemes sooner). The endogeneity of the treatment is always a potential problem and if we take Key's argument seriously then we should expect some possible endogeneity. This

endogeneity bias is likely to over-estimate the effect of disfranchisement schemes. However, the fact that turnout in Alabama is not really different from the one in Mississippi and the fact that also states in which the trend in turnout was increasing enacted those schemes (Texas and North Carolina) seem to suggest that turnout should not have any effect on the enactment of voting restrictions. The fact that the timing of the introduction of the schemes across states is independent of turnout is also confirmed by additional inspection. Virginia which first introduced a poll tax in 1876 (and then abolished in 1881) had in the same year a turnout close to 71 percent. Turnout in Georgia and Tennessee in the election before the introduction of the schemes (1876 and 1888 respectively) was 63.3 and 79.3 percent. Overall the timing of the introduction of the schemes appears to depend more on de facto power, political will, social conditions, and influences of the central government so that it is exogenous with respect to turnout.

In more detail, the model we estimate to test the possible causal effect of the 1890 constitutional reform can be written as:

$$Turnout_{i,t} = \alpha_i + \lambda_t + \alpha_i t + \beta_1 dis_{i,t} + \beta_2 Blacks_{i,t} + \beta_3 dis_{i,t} * Blacks_{i,t} + \beta_4 Congress_{i,t} + \beta_5 Turnout_{i,t-1} + \mu_{i,t}$$

where the dependent variable is voter turnout over the 1876-1900 period; $dis_{i,t}$ is a dummy variable which should capture the effect of legal requirements introduced in the 1890 Mississippi constitution; $Blacks_{i,t}$ is the share of black adult male; $dis_{i,t} * Blacks_{i,t}$ is an interaction term that should capture a change in the slope coefficient of blacks after 1890; and $Congress_{i,t}$ is a dummy for congressional elections. Parameters α_i and λ_t capture time and state fixed effects; $\alpha_i t$ are separate linear time trends for each state; $Turnout_{i,t-1}$ is the turnout in the previous election, which we enter to control for persistence in turnout. Therefore the model controls for different time trend across the two groups ($\alpha_i t$) and for transitory shocks in turnout (λ_t).

There are four possible cases which need to be discussed. The first one is when $dis_{i,t}$ is significant and the interaction $dis * Blacks$ is not, so that there is no change in the slope coefficient of blacks after the new constitution is enacted. The second case is when $dis_{i,t}$ and $dis_{i,t} * Blacks_{i,t}$ are both significant. In this case there is a break in the fitted line and a change in the slope parameter for blacks ($\beta_2 + \beta_3$ when $dis_{i,t}$ is equal 1) after 1890. The third case scenario is when $dis_{i,t}$ is not significant but $dis_{i,t} * Blacks_{i,t}$ is significant. In this case there is only a change in the slope parameter for blacks. Before 1890 it is equal to β_2 and after 1890 it becomes $\beta_2 + \beta_3$. The final case is when only $Blacks_{i,t}$ is significant. From a theoretical point of view we interpret these four cases in the

following way. In the first case (when only $dis_{i,t}$ is significant) there is evidence of de jure disfranchisement which is binding for all citizens independently on race. Hence turnout drops because illiterate and poor citizens belonging to both groups are not allowed to vote. The second case (when $dis_{i,t}$ and $dis_{i,t} * Blacks_{i,t}$ are both significant) still points to de jure disfranchisement, but now restrictions are more binding for blacks, possibly because of characteristics related to blacks (e.g., illiteracy and wealth). In the third case (when $dis_{i,t}$ is not significant but $dis_{i,t} * Blacks_{i,t}$ is significant) we have what we call the “institutionalization” of de facto disfranchisement. The last case, when only the share of blacks is significant, can be interpreted as evidence of de facto disfranchisement consistent with the *fait accompli* hypothesis in Key (1949).

Table 7 shows county-level estimates for the 1876-1900 period using counties of Alabama as a control group. In Model 1 we pool congressional and presidential elections together and the post-constitution dummy which should capture the effect of the reform in Mississippi is not significant. The effect of the share of black adult males is to decrease turnout by almost 0.34 percent per a one percent change in the share. In addition the significant effect of turnout ($t - 1$) suggests persistence in turnout: on average there is an increase in turnout of 0.40 percent per a one percent higher turnout in the previous election. In Model 2 we confine the estimates to presidential elections only. The 1890 constitutional reform now decreases turnout by an average 9 percent even though the effect is marginally significant. The interaction between blacks and the post-1890 dummy is also significantly reinforcing the negative effect of the share of blacks after 1890. Before 1890 a one percent change in the share of blacks decreases turnout by an average 0.43 percent, compared to an average 0.58 percent after 1890. In Model 3 we only look at congressional elections and we find that the effect of the reform has no statistically significant effect, while the share of blacks and the interaction between blacks and the post-1890 dummy remain significant. However, differently from presidential election the racial effect diminishes after 1890.

Results in Table 7 therefore suggest that the effect of the restrictions to vote in Mississippi may have had only a marginal effect on presidential elections and that the decrease in turnout is more likely to depend on a long term trend which initiated after the 1876 election. In addition it seems that de facto factors of disfranchisement, such as race, may have been the main reasons of turnout reduction. The effect of race became even more binding after 1890 which suggests that the main effect of constitutional reforms may have been through the institutionalization of de facto disfranchisement.

Table 7: Determinants of Voter Turnout, Mississippi and Alabama, 1876-1900

<i>Dependent Variable:</i>	<i>Turnout 1876-1900</i>		
	Model 1	Model 2	Model 3
Estimation Method: LSDV	Presid. + Congr.	Presidential	Congressional
Turnout (t - 1)	0.404*** (0.0226)	0.395*** (0.0276)	0.505*** (0.0401)
Post-Constitution Dummy	-0.0507 (0.0372)	-0.0866* (0.0494)	-0.0399 (0.0613)
Black Adult Male Share	-0.342*** (0.0530)	-0.428*** (0.0622)	-0.242*** (0.0916)
Congressional Election	-0.434*** (0.0205)		
Post-Constitution Dummy * Ad.Blk.M.Sh.	-0.0682 (0.0654)	-0.147** (0.0727)	0.208** (0.0936)
Constant	0.391*** (0.0218)	0.481*** (0.0281)	-0.153*** (0.0406)
State Time Trend	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes
Observations	1,486	744	742
R-Squared	0.66	0.70	0.49

Robust Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5. Cross County Analysis

So far we have shown that between the pre-1890 and the post-1890 period there has been a decline in black registration of almost 18 percent and that this decline is marginally imputable to a direct effect of the disfranchisement schemes, since the main effect of these schemes runs through a sort of institutionalization of de facto disfranchisement. In this section we use the data on registration by race for the 1896 presidential election in Mississippi collected from the Interrogatory Answers to test whether such a conclusion is confirmed by a simple cross county analysis.

We exploit the cross county variation in the proportion of registered votes by race in 1896 to test whether registration varies with proxies for the level of literacy and wealth of blacks which should capture the effectiveness of the literacy test and the poll tax. If the de jure innovations introduced by the 1890 constitution were such to influence electoral outcomes, we should expect the difference in black registration to depend strongly on the cross county variation in these variables. At the same time, we can gauge how registration responds to de facto elements, as captured by the share of

blacks and measures of the power of the landed elites. If the variation in black registration is determined by de jure constraints, once we control for them de facto elements should not display any explanatory power.

Our first set of regressors includes proxies for the de jure constraints which reflect the two innovations introduced by the 1890 constitution, i.e., the literacy test and the poll tax. Of course, these requirements were imposed on all residents of the state of Mississippi. However, their practical relevance should vary with illiteracy and with the ability to pay, which in turn differ between races and across counties. Thus, we employ the illiteracy rate per race as an indicator of the impact of the literacy test. In particular, counties associated with higher shares of illiterate blacks should exhibit lower registration. To proxy for blacks' wealth, and therefore for the impact of the poll tax,⁵ we use three variables: sharecropping intensity, black migration, and black infant mortality. Sharecropping intensity should reflect cash flow availability. Consequently, the poll tax should be more effective in counties where the population has tighter cash flow (see Kousser, 1974), so that we should expect a negative association between sharecropper intensity and registration. Consistently with migration theory,⁶ we expect blacks to leave those counties where their wage is lower.⁷ Thus, we should observe a negative correlation between migration and registration. Infant mortality is in turn influenced by diseases and malnutrition and is therefore closely associated with low income levels,⁸ so that we should expect a negative correlation with registration. To sum up, we interpret illiteracy, sharecropping intensity, migration, and infant mortality as variables capturing the effectiveness of the de jure determinants of voter registration.

Our main de facto determinant of voter registration is race, as measured by the share of black adult males over total population. The use of the black adult male share as a proxy for de facto disfranchisement is consistent with the literature in the field (Kousser, 1974; Key, 1949; and Ogden, 1958). The opposition to black registration was tougher in counties where blacks represented the majority. For example Wharton (1947) reports that, except in counties where the Democrats had a safe majority, blacks were strenuously pressured to refrain from voting, or even to vote the Democratic ticket, both through economic means (such as threats of unemployment) and other cooptative or intimidative practices. In their regression analysis of voter behavior, Redding and James (2001) also employ black population as a proxy for a host of factors aimed at discouraging

⁵ In Mississippi the tax was cumulative, with a maximum total charge of four dollars: For the bottom three quarters of the southern population 1890 per capita income (including non-cash components) was estimated by Kousser (1974) at about 64 dollars.

⁶ See Harris and Todaro (1970).

⁷ See Irwin and O'Brien (2001) for migration patterns in the Mississippi-Yazoo Delta in 1880-1910.

⁸ See the Report on Vital Statistics in the 1880 and 1890 census.

black political participation. We also control for land inequality and for the share of urban population. Both controls should capture the relative influence of the land-owning white elite, whose presence may represent another de facto impediment to black political participation (as suggested by Acemoglu and Robinson, 2008a).

In Table 8 we report descriptive statistics for the state of Mississippi at the turn of the century. In 1896 black registration⁹ is less than one fifth of white registration:¹⁰ the cross county average share of black adult males who register in 1896 is about 14 percent against almost 73 percent for whites.¹¹ In socio-economic terms, Mississippi is a striking image of the South in this time period. With a 51.8 percent of blacks over total population in 1890, it ranks third after South Carolina and Louisiana. The black share increases by almost 0.2 percent in the 1860-1890 period, since the slave share in 1860 is equal to 51.6 percent.¹² We also calculate a proxy for black migration which is equal to the difference between black population in 1890 and black population in 1880, the latter augmented by the difference between birth and death rates in 1880 and 1890. From census data¹³ we know that the annual rate of birth among blacks is 3.1 percent and the annual rate of death is 1.5 percent.¹⁴ Using this measure we estimate an average migration rate in 1880-90 of 1 percent, with a peak of 44 percent in Quitman.¹⁵ Next we report statistics for other controls, starting with the black adult male share, which varies widely across counties following the pattern of the black share. Black illiteracy, i.e., the share of illiterate black adult males, is much larger than that for whites (52 percent against 8 percent).¹⁶ The index of sharecropping intensity¹⁷ is on average almost 30 percent of total farm population, with the highest share in Issaquena (over 80 percent). The infant mortality rate for blacks in 1890, measured as the rate of death in black population under one year of age, is on average 8.5 percent, with a maximum at 21.3 percent in Clay and a minimum at 1.97 percent in

⁹ Black registration is equal to the ratio of the number of registered blacks in 1896 to black male population of age 21 and above in 1900 (the closest available year as in Kousser, 1974). We proceed in a similar fashion for white registration. See also footnote 4.

¹⁰ The total number of registered blacks and whites is 16,234 and 108,998 respectively. These figures are consistent with totals provided by the Biennial Report of Secretary of State to Legislature of Mississippi for 1896-1897.

¹¹ The maximal white registration is above 100 percent because of frauds, which at the time were common in the South. For example Kousser (1974, p. 49) reports that white registration in Louisiana in 1897 is 103.2 percent.

¹² In 1860, there were fewer than 1,000 free people of colour.

¹³ The birth and death rates for 1880-90 are provided by the Report on Vital Statistics of the 1890 census.

¹⁴ The number of blacks in Mississippi in the 1890 census is 742,559. However, if we augment the 1880 number of blacks by taking into account birth and death rates, we obtain an estimated number of blacks in 1890 of 747,835. We impute this difference to migration outside the state.

¹⁵ If we take the difference between the share of blacks (including slaves and free coloured) in 1860 and the share of blacks in 1890 for the 60 counties that exist in 1860 we find that the increase in the share of blacks is 0.7 percent, which is larger than what previously reported in the text because of the creation of new counties from lands of pre-existing counties in the 1860s and the 1870s. We introduce our estimate of migration because of the lack of comparability between the counties in place in 1860 and 1890.

¹⁶ We use data on the share of illiterates in 1900 because figures for the adult population are available only for this year.

¹⁷ The index of sharecropping intensity is calculated as the ratio of farm population under a sharecropping scheme to total farm population. The index is equal to one if all farm population is under a sharecropping scheme.

Jasper. Land inequality¹⁸ and the share of urban population (both as of 1890) also vary significantly.

Table 8: Descriptive Statistics, Mississippi, 1860-1900

Variable	Obs.	Mean	Std. Dev.	Min	Max
White Registration 1896	75	0.725	0.168	0.344	1.073
Black Registration 1896	75	0.143	0.126	0.007	0.538
Blacks over Population 1890	76	0.518	0.227	0.084	0.940
Slaves over Population 1860	60	0.516	0.209	0.122	0.925
Black Migration 1880-90	74	0.010	0.124	-0.267	0.442
Black Adult Males over Population 1896	75	0.203	0.091	0.035	0.386
Sharecropping Intensity 1890	74	0.294	0.153	0.014	0.812
Black Illiteracy 1900	75	0.523	0.0715	0.208	0.660
White Illiteracy 1900	75	0.077	0.041	0.008	0.201
Black Infant Mortality 1880	74	0.849	0.331	0.197	2.128
Land Inequality 1890	76	1.328	0.572	0.611	4.737
Urban Density 1890	76	0.033	0.088	0	0.403
Jackson Dummy	83	0.012	0.109	0	1
Mississippi River Delta Dummy	83	0.180	0.387	0	1
Distance in Longitude from Jackson	82	0.988	0.0088	0.970	1.004
Distance in Latitude from Jackson	82	0.930	0.037	0.872	1.003

The descriptive statistics in Table 8 already provide some preliminary evidence about the importance of race as a disfranchisement factor. If we compare the maximal and minimal registration for blacks across counties, we find that registration is highest in Smith (53.8 percent of black adult males), where the share of blacks in only 16 percent and the share of black adult males is similarly low at 6.6 percent, and therefore not large enough to represent a credible threat to white Democrats. At the other extreme we find Noxubee where black registration is equal to 0.7 percent against a share of blacks and of black adult males of 82.7 and 31.2 percent, respectively. The fact that blacks in this county represented a large majority suggests that tougher opposition was necessary in order to keep a white hegemony, as explained by Wharton (1947). At the same time, the difference in registration between these two counties is hardly explained in terms of literacy tests and poll taxes, since large variations in illiteracy and wealth are absent (black illiteracy in Smith is 54 percent and in Noxubee 66 percent, i.e., both above the mean).

In Table 9 we regress variables for white and black registration on our de jure and de facto controls. In Model 1 we start with a basic model of black registration in which we only include de jure controls, i.e., black illiteracy for the effect of the literacy test and sharecropping intensity, black

¹⁸ To compute land inequality we use the Generalized Entropy Index ($a=-1$).

migration, and black infant mortality for the effect of the poll tax. The only significant proxy is sharecropping intensity: its negative coefficient confirms the hypothesis that counties where cash availability is lower should exhibit lower black registration. While the signs of the coefficients of the other proxies always point to the expected direction, none of them is significant.

In Model 2 we add our main control for de facto power, i.e., the share of black adult males. The effect of race turns to be significant at a 1 percent level, with a decrease in registration of 1.11 per a one percent increase in the black adult male share.¹⁹ At the same time, the coefficient of sharecropping intensity turns positive and barely significant at a 10 percent level, while black migration is associated with higher registration. Similar results (which we do not report for brevity) are obtained by replacing the black adult male share with the slave share in 1860. The correlation between the two variables is 0.95 but using the latter would reduce the sample to only 60 observations.

In Model 3 we enter two proxies for the de facto power of white elites, land inequality and the urban density. The former does display a significantly negative effect on black registration with a reduction of black registration by almost 0.05 per a standard deviation, while the latter is not significant. Nevertheless, the effect of race as captured by the black adult male share is hardly diminished, while sharecropping intensity is no longer significant and migration remains so only at a 5 percent level.

Finally in Model 4 to control for omitted variables bias we also include a set of geographical variables (see Table 8 for summary statistics). Namely, we include a dummy for Jackson, the state capital, because in this county Republicans had a strong organization. We also control for distance from Jackson (both in latitude and longitude). A dummy for counties on the Mississippi River Delta is meant to capture its particular characteristics (agricultural plains with the largest black shares and land inequality).²⁰ The Jackson dummy exerts a positive but marginally significant influence, while the longitudinal distance from the capital decrease black registration. Apart from that, the de facto proxies for race and land inequality are now the only significant regressors, while proxies for de jure constraints never seems to matter.

¹⁹ We check for non-linearities by entering the squared term of the variable, which however is never significant.

²⁰ Irwin and O'Brien (2001) analyze the evolution of the agricultural system in the Mississippi-Yazoo Delta in 1880-1910.

Table 9: Determinants of Voter Registration per Race, Mississippi, 1896

<i>Dependent Variable: Registration per Race 1896</i>					
	Model 1	Model 2	Model 3	Model 4	Model 5
Estimation Method: OLS	Blk Registr.	Blk Registr.	Blk Registr.	Blk Registr.	Wht Registr.
Black Adult Male Share 1896		-1.110*** (0.139)	-1.038*** (0.133)	-1.184*** (0.189)	-0.163 (0.401)
Black Illiteracy 1900	-0.152 (0.175)	0.158 (0.124)	0.00983 (0.137)	-0.0489 (0.154)	
Sharecropping Intensity 1890	-0.289*** (0.0890)	0.0989* (0.0588)	0.0294 (0.0661)	-0.0561 (0.0957)	0.199 (0.216)
Black Migration 1880-90	-0.137 (0.0884)	0.194*** (0.0644)	0.155** (0.0657)	0.111 (0.0728)	
Black Infant Mortality 1890	-0.730 (0.619)	-0.0177 (0.412)	-0.0422 (0.407)	0.261 (0.423)	
Land Inequality 1890			-0.0486*** (0.0177)	-0.0560** (0.0234)	-0.0656* (0.0372)
Urban Density (log) 1890			-0.106 (0.0740)	-0.104 (0.0838)	-0.649*** (0.196)
Jackson Dummy				0.0800* (0.0467)	0.232** (0.0893)
Mississippi River Delta Dummy				-0.0172 (0.0254)	-0.0675 (0.0756)
Distance in Longitude from Jackson				-4.511** (1.890)	0.122 (3.354)
Distance in Latitude from Jackson				-0.195 (0.546)	-0.187 (0.942)
White Illiteracy 1900					-0.937 (0.726)
Constant	0.343*** (0.104)	0.257*** (0.0687)	0.409*** (0.100)	5.134** (2.175)	0.943 (4.058)
Observations	74	74	74	74	75
R-Squared	0.16	0.47	0.51	0.55	0.22

Robust Standard Errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Overall, the R-squareds (between 0.47 and 0.55 in the three models including the black adult male share) imply that these models can explain a large portion of the variation in black registration, consistently with the idea that blacks were more severely deprived of political power in counties where the share of blacks was larger. On the other hand the effect of factors proxying for the poll tax and the literacy test add no robust explanatory power to our models when race is accounted for. In other words, de facto disfranchisement as captured by race prevails over de jure disfranchisement

as an explanation of black registration. The effect of land inequality is also significant and negative, which suggests that the opposition to blacks' enfranchisement was tougher in counties in which whites represented a strong elite.²¹

In Model 5 we replace black registration with white registration as the dependent variable and we find that land inequality exerts a significant negative effect (significant at a 10 percent level) also on white registration. A standard deviation in land inequality decreases white registration by almost 0.07 percent, suggesting that poor whites may also have been affected by the presence of white elites. The Jackson dummy and urban density are the only other significant variables. This lack of significance is likely to be explained by the large proportion of registered whites, close on average to 73 percent and therefore in line with turnout in a full democracy. It is plausible therefore that restrictions introduced with the 1890 constitutions had no effect on the white electorate, as confirmed by the insignificance of the coefficient of white illiteracy.

Since voting and registration may follow spatial patterns (Darmofal, 2006), in Table 10 we repeat the same exercise of Table 9 controlling for spatial correlation across counties, to obtain very similar results. Sharecropping intensity is still significant at a 1 percent level in Model 1, but consistently with simple OLS the variable loses significance in the following models. Land inequality confirms its negative and significant coefficient and the effect of the other controls, starting with that of race, is similar to what emerged from Table 9.²²

Results in Table 10 are directly comparable with the difference in difference estimates presented in the previous section, where we used turnout as the dependent variable. Both the cross county analysis and the difference in difference approach suggest a marginal and non-robust effect of poll taxes and literacy tests on black registration and voting behavior. On the other hand there is evidence of a strong effect of race, which may have been used as a signalling device. Given that the easiest way to ensure a Democratic victory in the election was to exclude potential voter for Republicans, and given that blacks were likely to vote Republican, race was the simplest characteristic which revealed voting preferences.

²¹ Alternative GE indices with a different coefficient ($a=0$, $a=1$, and $a=2$, where a lower a puts more weights on the lower tail of the distribution) and a Gini Index are not significant.

²² The Interrogatory Answers also provide cross county information about the 1899 primaries. Analogous regressions using these data, which we do not report for brevity, deliver similar results.

Table 10: Determinants of Voter Registration per Race, Mississippi, 1896 (Spatial OLS)

<i>Dependent Variable: Registration per Race 1896</i>					
	Model 1	Model 2	Model 3	Model 4	Model 5
Estimation Method: Spatial OLS	Blk Registr.	Blk Registr.	Blk Registr.	Blk Registr.	Wht Registr.
Black Adult Male Share 1896		-1.094*** (0.128)	-0.981*** (0.134)	-1.117*** (0.136)	-0.115 (0.382)
Black Illiteracy 1900	-0.136 (0.172)	0.171 (0.123)	0.0387 (0.127)	-0.0349 (0.139)	
Sharecropping Intensity 1890	-0.287*** (0.0919)	0.0997* (0.0532)	0.0142 (0.0633)	-0.148 (0.0952)	0.143 (0.245)
Black Migration 1880-90	-0.118 (0.101)	0.204*** (0.0639)	0.157** (0.0642)	0.105 (0.0662)	
Black Infant Mortality 1890	-0.726 (0.590)	-0.0594 (0.412)	-0.271 (0.552)	0.0607 (0.484)	
Land Inequality 1890			-0.0472*** (0.0157)	-0.0718*** (0.0235)	-0.0804* (0.0471)
Urban Density (log) 1890			-0.111 (0.0742)	-0.117 (0.0861)	-0.669*** (0.200)
Jackson Dummy				0.0674 (0.0411)	0.220*** (0.0809)
Mississippi River Delta Dummy				-0.00674 (0.0227)	-0.0840 (0.0787)
Distance in Longitude from Jackson				-4.420*** (1.338)	-0.146 (2.845)
Distance in Latitude from Jackson				-0.221 (0.377)	-0.138 (0.761)
White Illiteracy 1900					-1.171 (0.978)
Constant	0.331*** (0.108)	0.249*** (0.0653)	0.395*** (0.0864)	5.103*** (1.573)	1.213 (3.445)
Spatial Correlation	0.328 (0.593)	-0.601 (0.992)	-1.095 (1.426)	-3.559** (1.697)	-0.962 (2.249)
Observations	74	74	74	74	75
Variance Ratio	0.16	0.45	0.47	0.54	0.25

Robust Standard Errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

To sum up, our results imply that the formal legal institutions introduced with the Restoration were associated with a decrease in black political participation but they did not alter the balance of political power and rather formalized a status quo produced by other factors reflecting the de facto power of the white elite. Their introduction can be justified as an effort to substitute legal for extorted political control and to ensure the maintenance of white supremacy even in the face of

economic and social transformation that may alter de facto power in the future. Although Wharton (1947) concludes his work on the conditions of blacks in Mississippi in the 1865-1890 period by asserting that by 1890 a transition from slavery to a caste system had been completed, and despite the fact that Mississippi did represent an extreme situation of extraordinary violence and discrimination, still even in this state the white elites had some reason to worry about the future. Indeed in 1888 the Republicans had almost managed to pass through Congress the Lodge Election Bill, which would have extended federal supervision of registration and voting and made fraud and intimidation more difficult even in Mississippi. Moreover, there was also evidence of progressive erosion of local Democratic power (see Kousser, 1974).

6. Disfranchisement and Economic Policies

Once having established the relative importance of de facto vs. de jure disfranchisement factors in explaining voting outcomes, in this section we turn our attention to a related but distinct question, namely what is the effect of voting restrictions on actual economic policy outcomes. In other words, we now seek to establish whether voting behavior ultimately does matter in economic terms, as predicted by distributive politics models. The available literature on this topic has never exploited the variation in electoral data in order to investigate this issue.²³ Here we focus on two outcomes, education policy and economic inequality.²⁴

We can test the relationship between voting and education by merging the data on the 1896 presidential election with cross county data on educational outcomes. Section 207 of the 1915 constitution of Mississippi cites: “*Separate schools should be maintained for children of the white and colored races.*” The importance of the discriminatory provision of schooling between races in the South and its consequences in terms of education and employment has been exhaustively documented.²⁵ In this section we add to this literature by investigating whether de jure and de facto disfranchisement may have contributed to the unequal provision of public education in the state of Mississippi.

While cross county data on education outcomes are available for 1917, our data on voter registration refer to 1896. However, by assuming sufficient persistence in the de facto institutions (see Acemoglu and Robinson, 2008a,b) which are responsible for electoral outcomes, we can use

²³ See Naidu (2012) and the other references in the literature review.

²⁴ Bertocchi and Dimico (2011) examine the effect of race on current economic performances in Mississippi, while Bertocchi and Dimico (2012, 2010) look at the impact of race on education and inequality, respectively, in the U.S.

²⁵ See Margo (1982, 1990) and the other references in the literature review.

1896 registration as a proxy of black disfranchisement throughout the period. Table 11 reports data that illustrate the time evolution of a number of education variables, at the state level, in selected years between 1890 and 1962. Data are provided by the Interrogatory Answers (Section 8). Since 1890 black children of school age in Mississippi have always been much more numerous than white children. On the other hand, the number of teachers per pupil and the salaries of black teachers have always been smaller than those of whites, while education expenditure per black pupil has always been less than expenditure per white pupil.

Table 11: Education Indicators, Mississippi, 1890-1962

<i>Children of School Age</i>		
Year	White	Black
1890	207,652	292,581
1910	301,548	410,089
1929	379,678	493,967
1949	393,804	492,349
1960	329,215	337,871
<i>Teacher per Child in Attendance</i>		
Year	White	Black
1931-32	23 – 1	34 – 1
1939-40	25.5 – 1	35.1 – 1
1951-52	26 – 1	34 – 1
1961-62	23 – 1	28.5 – 1
<i>Yearly Teacher Salaries</i>		
Year	White	Black
1941 – 42	\$ 735.38	\$ 232.93
1949 – 50	\$ 1,805.69	\$ 710.56
1953 – 54	\$ 2,175.55	\$ 1,244.68
1961 – 62	\$ 3,742.39	\$ 3,236.75
<i>Education Expenditure per Pupil</i>		
Year	White	Black
1900 – 01	\$ 8.20	\$ 2.67
1929 – 30	\$ 40.42	\$ 7.45
1939 – 40	\$ 31.23	\$ 6.09
1949 – 50	\$ 75.70	\$ 23.83
1956 – 57	\$ 128.50	\$ 78.70
1960 – 61	\$ 173.42	\$ 117.10

Using spatial OLS, in Table 12 we look at the relationship between the variation of teachers per pupil ratio for blacks and whites in 1917²⁶ and voter registration in 1896, also by race, as a proxy of disfranchisement. Data on black and white teachers are collected from the State Superintendent Report (Bond, 1918) while data on black and white children of school age (6-14) are provided by the Historical Census (Haines et al., 2004). On average in 1917 there are 50.2 black teachers for

²⁶ For the U.S. South over 1870-1920 Naidu (2012) also finds a marginal negative effect of poll taxes and literacy tests on the ratio of black teachers to black pupils.

5,929.25 black children of school age, while the number of white teachers is 86.5 for 4,325.5 white children.

Table 12: Determinants of Black and White Teachers per Pupil, Mississippi, 1917

<i>Dependent Variable: Black and White Teachers per Pupil 1917</i>		
	Model 1	Model 2
Estimation Method: Spatial OLS	Blk Teachers/Blk Pupils	Wht Teachers/Wht Pupils
Black Adult Male Share 1910	-0.00790 (0.00540)	0.0627*** (0.0230)
Black Registration 1896	0.0175** (0.00741)	0.0204 (0.0145)
White Registration 1896	-0.00417 (0.00313)	-0.0116 (0.00924)
Black Illiteracy 1910	0.00468 (0.00945)	
Land Inequality 1910	-0.00240** (0.00104)	-0.00612* (0.00360)
Urban Density (log) 1890	-0.000178 (0.000145)	-0.00158*** (0.000486)
Jackson Dummy	0.00326 (0.00471)	0.0287 (0.0189)
Mississippi River Delta Dummy	0.00123 (0.00130)	-2.65e-05 (0.00739)
Distance in Longitude from Jackson	0.202*** (0.0535)	0.0884 (0.247)
Distance in Latitude from Jackson	0.0331** (0.0143)	0.0765 (0.0629)
White Illiteracy 1910		0.197* (0.112)
Constant	-0.205*** (0.0598)	-0.141 (0.283)
Spatial Correlation = 0	-3.534* (1.847)	0.0156 (0.917)
Observations	75	75
Variance Ratio	0.47	0.34

Robust Standard Errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In order to understand whether this difference is the effect of de jure disfranchisement, or else of race, in Model 1 we regress black teachers per black pupil on the black adult male share in 1910 and black and white registration in 1896. We also enter controls for the historical values of black illiteracy, land inequality, and the urban share, plus the geographical dummies. The number of black

teachers per black pupil significantly increases with black registration and decreases with land inequality. At the mean a one percent change in the black registration increases the ratio of teachers to pupils by almost 0.018 which means that the number of teachers increases by almost two teachers per a hundred students.

In Model 2 we look at the ratio of white teachers per white pupils and consistently with Margo (1990) we find that the number of white teachers increases with the share of blacks while voting does not significantly affect white educational inputs. The positive effect of the share of blacks on white teachers occurs because counties used to divert state funds, which were allocated on a per child basis, from blacks to whites. For example in 1939-40 Sunflower county received for education from the state of Mississippi a total of \$73,626, computed on a per child basis. Since 79 percent of the children of school age were black, the amount the county received for black pupils was \$58.165. However, only \$35.564 was spent for black pupils. The remaining \$22.601 was presumably spent on additional schooling for whites. As a result, the amount spent per white pupil was much larger in counties with a higher share of blacks.

Another way to assess the economic impact of voting restrictions is to measure their effect on inequality, which we can proxy for this time period using land inequality (as in Nunn, 2008). In Table 13 we show a significant effect of the variation in voter registration on the Gini index of farms distribution in 1910. This measure of land inequality also increases with its initial level and with white registration, while it decreases with black registration. The share of white adult males, which is used to proxy for the number of potential owners, is not significant, while the share of the urban population is marginally significant.

To conclude, our results show that political participation matters both for educational policies and inequality, since lower black registration is significantly correlated with lower resources for blacks and higher inequality.

Table 13: Determinants of Land Inequality, Mississippi, 1890-1910

<i>Dependent Variable: Gini Index of Farms Distribution in 1910</i>	
Estimation Method: Spatial Correlation	Model 1
Black Registration 1896	-0.0670** (0.0339)
White Registration 1896	0.0750** (0.0296)
White Adult Male Share 1910	0.109** (0.0518)
Land Inequality 1890 (Gini Index)	0.222*** (0.0791)
Urban Density (log) 1890	0.00418* (0.00242)
Jackson Dummy	0.0180 (0.0155)
Mississippi River Delta Dummy	-0.0400 (0.0250)
Distance in Longitude from Jackson	-1.864** (0.825)
Distance in Latitude from Jackson	0.380*** (0.137)
Constant	1.819** (0.881)
Spatial Correlation = 0	-0.882 (2.108)
Observations	75
Variance Ratio	0.49

Robust Standard Errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

7. Conclusion

With the aid of previously unexploited information on voter registration in 1896 Mississippi, we have investigated the effects of the voting restrictions introduced in the U.S. South between the end of the nineteenth and the beginning of the twentieth century and shed light on their actual effectiveness.

First, by exploiting the correlation between black registration and total turnout, we employ the 1896 data to impute estimates of black registration before and after the enactment of the 1890 state constitution. We show that black registration in Mississippi declines after the de jure innovations of

1890 but that it is also strongly affected by de facto racial factors captured by the share of blacks. Next, in order to establish a causal effect, we apply a difference in difference approach that indicates a marginal effect of voting restrictions and again a strong influence of race. The fact that the effect of race becomes even stronger after 1890 suggests that the de jure barriers may have served the purpose of institutionalizing a de facto condition of disfranchisement. Further cross county evidence confirms that de facto disfranchisement as captured by race prevails over de jure disfranchisement as an explanation of the observed pattern of black political participation. Finally we provide evidence of an influence of political participation on education policy and inequality.

Our findings contribute not only to the literature on the socio-political history of the Restoration in the U.S. South, but also to a broader current research line on the comparative relevance of de jure and de facto sources of power. The main message of the paper is that the de facto power of the southern white elites prevailed on the voting legislation as a determinant of black political participation. This finding helps to understand why, almost fifty years after the Voting Rights Act, enough “vestiges of discrimination” remain despite the removal of “first generation barriers”. This is the motivation for the decision taken by Congress in 2009 to confirm until 2031 the preclearance provision, that is the section of the Act that requires jurisdictions that used poll taxes and literacy tests to obtain federal approval for any changes to their election practices, such as redistricting (The Economist, 2011). In other words, as voting restrictions were not the main driver of black disfranchisement during the Restoration, their de jure reversal was not enough to end racial discrimination.

References

Acemoglu, D. and Robinson, J.A., The Persistence and Change of Institutions in the Americas, *Southern Economic Journal* 75, 282-299, 2008a.

Acemoglu, D. and Robinson, J.A., Persistence of Power, Elites, and Institutions, *American Economic Review* 98, 267-293, 2008b.

Acemoglu, D. and Robinson, J.A., Why Did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective, *Quarterly Journal of Economics* 115, 1167-1199, 2000.

Ades, A and Verdier, T., The Rise and Fall of Elites: A Theory of Economic Development and Social Polarization in Rent-Seeking Societies, CEPR Discussion Paper No. 1495, 1996.

Alt, J.E., The Impact of the Voting Rights Act on Black and White Voter Registration in the South, in Davidson, C. and Grofman, B. (eds.), *Quiet Revolution in the South: The Impact of the Voting Rights Act, 1965-1990*, Princeton University Press, 1994.

Baland, J.M. and Robinson, J.A., Land and Power: Theory and Evidence from Chile. *American*

Economic Review 98, 1737-1765, 2008.

Bertocchi, G. and Dimico, A., 2012, The Racial Gap in Education and the Legacy of Slavery, *Journal of Comparative Economics*, forthcoming.

Bertocchi, G. and Dimico, A., 2011, Race v. Suffrage: The Determinants of Development in Mississippi, CEPR Discussion Paper No. 8589.

Bertocchi, G. and Dimico, A., Slavery, Education, and Inequality, CEPR Discussion Paper No. 8073, 2010.

Besley, T., Persson, T. and Sturm, D.M., Political Competition, Policy and Growth: Theory and Evidence from the United States, *Review of Economic Studies* 77, 1329-1352, 2010.

Bond, H.M., *Negro Education in Alabama: A Study of Cotton and Steel*, Associated Publishers, 1939.

Bond, H.M., *The Education of the Negro in the American Social Order*, Prentice-Hall, inc., 1934.

Bond, W.F., *School Laws of the State of Mississippi*, Report of the State Superintendent of Education, 1918.

Bourguignon, F. and Verdier, T., Oligarchy, Democracy, Inequality and Growth, *Journal of Development Economics* 62, 285-314, 2000.

Card, D. and Krueger, B.D., School Quality and Black-White Relative Earnings: A Direct Assessment, *Quarterly Journal of Economics* 107, 151-200, 1992.

Cascio, E.U. and Washington, E., Valuing the Vote: The Redistribution of Voting Rights and State Funds Following the Voting Rights Act of 1965, NBER Working Paper No. 17776, 2012.

Chay, K. and Munshi, K., Black Mobilization After Emancipation: Evidence from Reconstruction and the Great Migration, mimeo, Brown University, 2011.

Clubb, J.M., Flanigan, W.H. and Zingale, N.H., *Electoral Data for Counties in the United States: Presidential and Congressional Races, 1840-1972*, Inter-university Consortium for Political and Social Research, 2006.

Darmofal, D., The Political Geography of Macro-Level Turnout in American Political Development, *Political Geography* 25, 123-15, 2006.

Filer, J.E., Kenny, L.W. and Morton, R.B., Voting Laws, Educational Policies, and Minority Turnout, *Journal of Law and Economics* 34, 371-393, 1991.

Fishback, P.V. and Baskin, J.H., Narrowing the Black-White Gap in Child Literacy in 1910: The Roles of School Inputs and Family Inputs, *Review of Economics and Statistics* 73, 725-728, 1991.

Galor, O., Moav, O. and Vollrath, D., Inequality in Landownership, the Emergence of Human-Capital Promoting Institutions, and the Great Divergence, *Review of Economic Studies* 76, 143-179, 2009.

- Haines, M.R. and the Inter-University Consortium for Political and Social Research, *Historical, Demographic, Economics, and Social Data: The USA, 1790-2000*, ICPSR02896-v2, Colgate University/Inter-university Consortium for Political and Social Research, 2004.
- Harris, J.R. and Todaro, M.P., Migration, Unemployment and Development: A Two-Sector Analysis, *American Economic Review* 60, 126–142, 1970.
- Husted, T.A. and Kenny, L.W., The Effect of the Expansion of the Voting Franchise On the Size of Government, *Journal of Political Economy* 105, 54-82, 1997.
- Irwin, J.R. and O'Brien, A.P., Economic Progress in the Postbellum South? African-American Incomes in the Mississippi Delta, 1880–1910, *Explorations in Economic History* 38, 166-180, 2001.
- Key, V.O., *Southern Politics in State and Nation*, AA Knopf, 1949.
- Kousser, J.M., *The Shaping of Southern Politics: Suffrage Restriction and the Establishment of the One-Party South, 1880-1910*, Yale University Press, 1974.
- Kousser, J.M., Ecological Regression and the Analysis of Past Politics, *The Journal of Interdisciplinary History* 4, 237-262, 1973.
- Lizzeri, A and Persico, N., Why Did the Elites Extend the Suffrage? Democracy and the Scope Of Government, with an Application to Britain's Age of Reform, *Quarterly Journal of Economics* 119, 707-765, 2004.
- Llavorador H. and Oxoby, R.J., Partisan Competition, Growth, and the Franchise, *Quarterly Journal of Economics* 120, 1155-1189, 2005.
- Margo, R.A., *Race and Schooling in the South, 1880-1950: An Economic History*, University of Chicago Press, 1990.
- Margo, R.A., Race Differences in Public School Expenditures: Disfranchisement and School Finance in Louisiana, 1890-1910, *Social Science History* 6, 9-23, 1982.
- Naidu, S., Suffrage, Schooling, and Sorting in the Post-Bellum U.S. South, NBER Working Paper No. 18129, 2012.
- Nunn, N., Slavery, Inequality, and Economic Development in the Americas: An Examination of the Engerman-Sokoloff Hypothesis, in Helpman, E. (ed.), *Institutions and Economic Performance*, Harvard University Press, 2008.
- Ogden, F.D., *The Poll Tax in the South*, University of Alabama Press, 1958.
- Orazem, P. F., Black-White Differences in Schooling Investment and Human Capital Production in Segregated Schools, *American Economic Review* 77, 714-723, 1987.
- Pritchett, J.B., The Burden of Negro Schooling: Tax Incidence and Racial Redistribution in Postbellum North Carolina, *Journal of Economic History* 49, 966-973, 1989.
- Redding, K. and James, D.R., Estimating Levels and Modeling Determinants of Black and White Voter Turnout in the South, 1880 to 1912, *Historical Methods* 34, 141-158, 2001.

Smith, J.P., Race and Human Capital, *American Economic Review* 74, 685-98, 1984.

Smith, J.P. and Welch, F.R., Black Economic Progress after Myrdal, *Journal of Economic Literature* 27, 519-564, 1989.

The Economist, The Preclearance Problem: Is It Time to Retire the Voting Rights Act? February 3, 2011.

United States v. Mississippi, *Interrogatory Answers*, Archives and Special Collections, J.D. Williams Library, The University of Mississippi, 1965.

U.S. Commission on Civil Rights, *Voting in Mississippi*, 1965.

Welch, F., Black-White Differences in Returns to Schooling, *American Economic Review* 63, 893-907, 1973.

Wharton, V.L., *The Negroes in Mississippi 1865-1890*, University of North Carolina Press, 1947.

Appendix

Table A1. Sources of Variables

Variable	Source
Black Registration 1896 White Registration 1896 Education Indicators 1890-1962 (see Table 11)	United States v. Mississippi, <i>Interrogatory Answers</i> , Archives and Special Collections, J.D. Williams Library, The University of Mississippi
Blacks over Population 1890 Slaves over Population 1860 Black Adult Males over Population 1876-1910 Black Illiteracy 1900 White Illiteracy 1900 Land Inequality 1890 Land Inequality 1910 Urban Density 1890 Black Infant Mortality 1880 Black Migration 1880-90 Sharecropping Intensity 1890 Black and White Children of School Age 1917	Haines, M.R. and the Inter-University Consortium for Political and Social Research, <i>Historical, Demographic, Economics, and Social Data: The USA, 1790-2000</i> , ICPSR02896-v2, Colgate University/Inter-university Consortium for Political and Social Research, 2004
Turnout for Congressional and Presidential Elections Share of Votes for the Republican Party Share of Votes for the Democratic Party	Clubb, J.M., Flanigan, W.H. and Zingale, N.H., <i>Electoral Data for Counties in the United States: Presidential and Congressional Races, 1840-1972</i> , Inter-university Consortium for Political and Social Research, 2006
Black and White Teachers 1917	Bond, W.F., <i>School Laws of the State of Mississippi</i> , Report of the State Superintendent of Education, 1918