

Does the identity of leaders matter for education? Evidence from the first black governor in the US*

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July, 2015

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Abstract

The goal of this paper is to analyze whether political leaders from disadvantaged minorities improve educational outcomes of teenagers and young adults from the same minority. Specifically, we analyze the impact of the first ever elected African American governor in the United States, Douglas Wilder, who became governor of the State of Virginia in 1990. Using individual level data from the Current Population Survey, we study how the educational achievements of black teenagers from Virginia evolved after the election and we study the channels for the potential effect. The empirical specification follows a double and triple-difference strategy, using whites and other States as controls. The results show that, following the election, there was a significant and sizeable decrease in dropout rates among black teenagers with respect to whites in Virginia as well as a significant and sizeable increase in their probability of getting a high school diploma. We do not find any evidence that these improvements are due to policy changes. But we find evidence that the aspirations of black students improved. This indicates that Douglas Wilder might have been a role model for black teenagers in Virginia.

Keywords: aspirations; education; disadvantaged minority; political leaders

JEL Classification Numbers: I2

*We are grateful to David Deming, Kirabo Jackson, Sylvie Lambert, François Maniquet, Amanda Pallais and Dirk Van de gaer as well as participants to the PoRESP Summer School and seminars in the University of Louvain and the Paris School of Economics for useful comments. Ferrando gratefully acknowledges a research fellowship from the Fonds National de la Recherche Scientifique (FNRS, Belgium, mandat d'aspirant FC 99238). Gille gratefully acknowledges funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2013) / ERC grant agreement 269831.

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1 Introduction

There is growing evidence that the identity of political leaders matters for the outcomes of the group they belong to. Politicians from a minority can affect the outcomes of individuals from the same minority by multiple means: by implementing policies oriented to their group, by fostering aspirations of their group about how much they can achieve and by reducing discrimination and improving perception about the minority in the rest of the population.

In this paper we analyze whether political leaders from disadvantaged minorities improve educational outcomes of teenagers and young adults from the same minority. Specifically, we analyze the impact of the first ever elected black governor in the United States, Douglas Wilder, who became governor of the State of Virginia in 1990, on the educational achievements of African Americans from Virginia. The case of Douglas Wilder is of particular interest because his election had symbolic importance and raised a lot of emotion and hope among the black community (Jeffries, 2000). This is in part due to the fact that Virginia was a slave State, and Richmond, its capital, the capital of the Confederacy. It is also related to Douglas Wilder's personal story, with whom common citizens could easily identify: Douglas Wilder was the grandson of slaves and suffered from discrimination, in particular during his studies (Jeffries, 2000).

In the first part of the paper we study how schooling outcomes of African American teenagers evolved when Douglas Wilder was in power using individual level data from the Current Population Survey (CPS), which is a monthly nationally representative pooled cross-section. Specifically, we study if dropout and high school graduation rates of black teenagers are significantly different before and after Douglas Wilder arrived in power. To take into account that any change in the schooling outcomes of black teenagers might be driven by changes at the state level at that time, we first apply a Differences-in-Differences strategy, comparing the evolution in schooling outcomes between black and white teenagers in Virginia. However, because the evolution of black and white teenagers might follow different trends, we also apply a triple-difference strategy, using other states as controls. Our results show that following the election of the first black governor of the United States there is a significant and sizeable decrease in dropout for black teenagers with respect to whites in the State where he was elected as well as a significant increase in their probability of getting a high school diploma. The estimations suggest that the arrival in power of the governor is related to a decrease in the dropout rate among blacks teenagers of 3 percentage points and to an increase in the probability of having a high school diploma of 14 percentage points. These results are robust to the addition of different controls and state-race specific time trends, and falsification tests show that the effects are not driven by pre-existing changes.

In the second part of the paper we explore the potential channels underlying the results. First, using data on per-pupil spending and timing of dropout we analyze the role of the main changes in educational policies during the period. Our results suggest that educational policies alone cannot explain the differential change that we observe for blacks. Using additional data on aspirations, we analyze whether the aspirations of black students increased with the election of the governor. We find that during the period where Douglas Wilder was in power, aspirations of black students, as measured by self-rated drive to achieve and academic ability, improved.

This paper relates to the literature that studies how the identity of elected leaders affect individual outcomes and in particular educational outcomes. Bhalotra et al. (2014) for example show that the religion of State legislators in India matters for health and education outcomes. Clots-Figueras (2012) show that female State legislators in India have a positive impact on the educational attainment of individuals who grow up in the districts where they are elected. These papers provide quantitative evidence that the identity of politicians matter for educational outcomes, but do not explore the channels.

This paper also relates to the literature that focuses on the channels that we study in this paper, namely the impact of the identity of politicians on policies and aspirations. There is a large evidence showing that the identity of politicians impact the kind of policy that is implemented (see for instance Chattopadhyay and Duflo (2004) on infrastructure targeted to women). The evidence is however mixed with respect to ethnicity (quote). Another literature studies the role of politicians as models. Beaman et al. (2012) find that the increase in female representation in India, following the implementation of a system of quotas for women, improved educational aspirations and achievements of girls. Wolbrecht and Campbell (2007) find evidence of a role model effect in political participation: female politicians tend to increase girls' participation in politics. DellaVigna (2010) studies the effect of the election of Obama on the perception of potential achievements among African Americans. He finds a positive, though weak, effect on the number of applications of African Americans to Law School.

The rest of the paper is organized as follows: section 2 explains the source of the data and shows some descriptive statistics; section 3 describes the empirical strategy; section 4 shows the main results; section 5 explores the channels; section 6 concludes.

2 Data

2.1 Sources

Our main source of data is the Current Population Survey from 1984 to 1993. It is a nationally representative pooled cross-section, which provides monthly individual data on school enrolment and attainment since 1984. Our two educational outcomes of interest are dropout and high school diploma. Dropout is defined for individuals between the age of 16 to 19. It is a dummy variable equal to one if the individual is currently not attending school and does not have a high school diploma and zero otherwise. We exclude the summer months (June, July and August) from the sample because due to holidays the percentage of individuals declaring that they do not attend school is much higher than during the rest of the year. For high school diploma, we focus on individuals aged 18 to 19. The outcome variable is a dummy equal to one if the individual has graduated from high school, zero otherwise. Additionally, we use the Census of population of 2000 to check the robustness of the results on educational attainment.

To shed light on the potential mechanisms underlying the effects on school outcomes we use additional datasets. To test the effect of educational policies, we exploit data on per-pupil spending from the Census of Governments between 1987 and 1992. To test the channel of aspirations, we use a nationally representative survey of first year college students, the CIRP freshman survey from the Higher Education Research Institute (HERI).

Table ?? provides descriptive statistics for our main outcome variables. As a first approximation to our main results, we can observe that the evolution in educational outcomes for whites in Virginia and the control states is quite similar, while blacks observe a substantial decrease in dropout and a even larger increase in high school diploma.

3 Empirical strategy

3.1 Strategy

To take into account the fact that any observed change in the educational outcomes of black teenagers might be driven by some trend or other events happening in Virginia, we first use a difference-in-difference (DD) approach to estimate the effect of the governor on the outcomes of black teenagers. The difference-in-difference uses whites as controls. We estimate the following equation:

$$Y_{itrm} = \alpha_0 + \alpha_1 Bl_r \times Post_t + \alpha_2 Bl_r + \alpha_3 Post_t + X_i' \omega + \theta_m + \epsilon_{itrm} \quad (1)$$

where Y_{itrm} is the school outcome of interest of individual i of race r at year t in month m , Bl_r is a dummy equal to 1 for blacks, $Post_t$ is a dummy equal to 1 during the period when Douglas Wilder is the governor of Virginia, *i.e.* 1990-1993¹, X_i is a set of individual control variables including sex, age, household size and household composition.² In some specifications, we add parental education as control. We also control for a variable that indicates if the individual has the legal age to leave school. To control for the fact that there are seasonal variations in schooling attendance we add a set of month dummies, θ_m . The coefficient of interest is α_1 , which measures the change in the outcomes of blacks in Virginia with respect to whites. The standard errors are clustered at the race-year level.

The previous specification might lead to biased estimates if whites and blacks have different trajectories even in absence of the governor. To account for this, we also use a triple difference strategy (DDD), where the other states are used as controls. We only use states that have at least 10% of blacks in their population in 1990.³ We estimate the following equation:

$$Y_{itrm} = \beta_0 + \beta_1 Bl_r \times VA_s \times Post_t + \beta_2 Bl_r \times VA_s + \beta_3 Bl_r \times Post_t + \beta_4 \times VA_s \times Post_t + \beta_5 Bl_r + \beta_6 Post_t + \beta_7 VA_s + \delta_m + X_i' \eta + \zeta_{itrm} \quad (2)$$

where VA_s is a dummy that indicates residence in Virginia. The rest of the variables are defined as earlier. The coefficient of interest here is β_1 , which indicates the change in the outcomes of black teenagers in Virginia with respect to whites and with respect to the evolution of black vs. whites in other States. The standard errors are clustered at the state-race-year level.

3.2 Parallel trends assumption

The main assumption of our empirical strategy is the parallel trend assumption. Table 1 reports the pre-treatment trends. Columns 1 and 2 show the pre-treatment trends for dropout and Columns 3 and 4 show the pre-treatment trends for high school diploma. In Columns 1 and 3 the coefficient on Black x Year is close to zero and not statistically significant, showing

¹The exact term of the governor's office was January 13th, 1990 to January 15th, 1994. For the sake of simplicity we include the whole month of the inauguration but exclude January of 1994 from the term.

²We include dummy variables indicating if the individual lives alone and if she/he lives with only one parent.

³The states that are included as controls are shown in Figure 4 in the Appendix. They are: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Illinois, Louisiana, Maryland, Michigan, Mississippi, Missouri, New-Jersey, New-York, North-Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas. The cut-off at 10% is due to data constraints: given the sample size of the CPS, the states with less than 10% of blacks do not have enough black teenagers in the data.

that the trend in dropout and in high school diploma is not statistically different between blacks and whites before Douglas Wilder arrives in power. Columns 2 and 4 check whether black relative to whites in Virginia had a differential trend to black relative to whites in the control states. The coefficient on Black x VA x Year is also very small and not statistically significant so we cannot reject that the trends are parallel before the election. Using DD and DDD to understand the changes in schooling outcomes of black teenagers once Douglas Wilder arrives in power can therefore be considered as a valid strategy.

Table 1: Test for parallel trend before treatment

Dependant variable:	Dropout		High school diploma	
	(1) DD Virginia	(2) DDD all States	(3) DD Virginia	(4) DDD all States
Black x VA x Year		0.000 (0.008)		-0.006 (0.012)
Black x Year	0.001 (0.008)	0.001 (0.003)	-0.002 (0.011)	0.004 (0.005)
Black	0.026 (0.023)	0.023** (0.011)	-0.242*** (0.037)	-0.170*** (0.021)
Year	-0.010*** (0.002)	-0.002 (0.002)	0.005 (0.005)	-0.003 (0.003)
Black x VA		0.003 (0.025)		-0.072* (0.041)
VA x Year		-0.007** (0.003)		0.008 (0.006)
VA		0.029** (0.013)		-0.017 (0.022)
Constant	0.130*** (0.010)	0.101*** (0.009)	0.717*** (0.019)	0.734*** (0.011)
Observations	7162	248983	4643	161211
r2	0.004	0.001	0.055	0.021

Source: CPS basic, 1984-1989. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level.

4 Results

In this section we present the results on the evolution of educational outcomes of black teenagers when Douglas Wilder is in power. Section 4.1 shows the results with the DD and DDD specification. Section 4.2 studies if the changes in educational outcomes concern all the individuals or are restricted to a sub-sample. Section 4.4 provides some evidence that the results are not driven by pre-trends or statistical artefacts.

4.1 Main results

4.1.1 Differences-in-Differences

We first estimate the evolution of educational outcomes with a DD specification, which compares the evolution in the educational outcomes of black teenagers in Virginia before and after 1990 with respect to the evolution in the educational outcomes of white teenagers in Virginia (Table 2).

Table 2: Governor from minority and educational outcomes. Differences-in-Differences.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Black x Post	-0.041** (0.019)	-0.042*** (0.012)	-0.033 (0.032)	-0.029** (0.010)	0.158*** (0.035)	0.157*** (0.028)	0.138** (0.055)	0.138*** (0.026)
Black	0.006 (0.015)	0.007 (0.008)	0.013 (0.016)	-0.025** (0.009)	-0.195*** (0.024)	-0.194*** (0.014)	-0.207*** (0.042)	-0.137*** (0.019)
Post	-0.014 (0.009)				-0.056*** (0.019)			
Female	-0.038*** (0.006)	-0.039*** (0.006)	-0.039*** (0.006)	-0.041*** (0.006)	0.126*** (0.019)	0.126*** (0.019)	0.126*** (0.019)	0.118*** (0.018)
Household size	0.020*** (0.004)	0.019*** (0.004)	0.019*** (0.004)	0.015*** (0.004)	-0.029*** (0.008)	-0.029*** (0.008)	-0.029*** (0.008)	-0.023*** (0.008)
Lives alone	0.266*** (0.023)	0.263*** (0.024)	0.264*** (0.024)		-0.207*** (0.039)	-0.204*** (0.039)	-0.204*** (0.039)	
Single parent (proxy)	0.075*** (0.010)	0.076*** (0.010)	0.076*** (0.010)	0.046*** (0.010)	-0.122*** (0.026)	-0.123*** (0.025)	-0.123*** (0.025)	-0.060** (0.024)
Compulsory attendance age	0.019 (0.016)	0.015 (0.017)	0.015 (0.017)	0.016 (0.018)				
Constant	-0.043* (0.022)	-0.015 (0.025)	-0.016 (0.025)	0.131*** (0.027)	0.956*** (0.039)	0.955*** (0.042)	0.957*** (0.040)	0.823*** (0.042)
Year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	No	Yes	No	No	No	Yes	No
Extra controls	No	No	No	Yes	No	No	No	Yes
Observations	10997	10997	10997	10458	7021	7021	7021	6384
R^2	0.065	0.067	0.067	0.090	0.153	0.156	0.156	0.240

Source: CPS basic, 1984-1989. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the race-year level

Columns (1) to (4) show the changes in dropout rates among teenagers aged 16 to 19 years old and columns (5) to (8) show the changes in high school graduation rates among individuals aged 18 to 19. The coefficient on Black x Post indicates the evolution for blacks with respect to whites and is therefore the one that interest us. In the basic DD specification in columns (1) and (5), this coefficient is highly significant and shows that blacks in Virginia

have a significant decrease in their probability of dropping out and a significant increase in their probability of getting a high school diploma after 1990 with respect to whites. Controlling for time effects that are common across groups with year dummies in columns (2) and (6) does not change the results. Columns (3) and (7) additionally allow the time trend to be different for blacks and whites. For high school diploma the results are very close to the previous specifications. For dropout the coefficient is not significant anymore but the magnitude is similar to the previous columns. Finally columns (4) and (8) additionally control for the highest level of education in the household. Because we only have the information for the individuals that live with their parents the sample is slightly smaller. But the results confirm the previous findings: there is a significant decrease in dropout of 3 percentage points for blacks with respect to whites that translates into a higher probability of getting a high school diploma. The magnitude of the coefficient implies an increase in the probability of getting a high school diploma of around 14 percentage points.

4.1.2 Triple difference

Next, we estimate the effect of the election of Douglas Wilder on dropout and high school diploma controlling for the evolution of blacks versus whites in other states. This specification allows us to verify that the impact in Table 2 is not driven by events affecting blacks all over the United States after 1990. Table 3 shows the results. Changes in dropout are shown in columns (1) to (4) and changes in high school diploma in columns (5) to (8).

The results are similar in size and significance to the results in Table 2. Blacks in Virginia experience a significant decrease in dropout with respect to whites and to the evolution of blacks versus whites in other states after Douglas Wilder arrives in power, and a significant increase in their probability of getting a high school diploma. Columns (1) and (5) show the basic specification whereas columns (2) to (4) and (6) to (8) control for state-year dummies that take into account time effects by state that are common across groups as well as black-state and black-year dummies that allow for a different intercept for blacks in each state and for blacks in each year. Columns (3) and (7) allow for a different trend for blacks and whites in each state, and columns (4) and (8) control for the education of the parents. Again, when we control for race-state specific time trend the coefficient on Black x VA x Post for dropout is not precisely estimated but the coefficient is still stable and large, around 3 percentage points. Interestingly, the coefficient on VA x Post, which represents the coefficient for whites in Virginia after 1990 is not significantly different from zero and is very small for both schooling outcomes. This seems to indicate that whites in Virginia did not see a significant change in dropout and in the probability of getting a high school diploma after 1990. Thus,

Table 3: Governor from minority and educational outcomes. Triple difference.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Black x VA x Post	-0.053*** (0.020)	-0.058*** (0.014)	-0.032 (0.035)	-0.048*** (0.011)	0.172*** (0.036)	0.175*** (0.028)	0.157*** (0.058)	0.163*** (0.025)
Black x VA	0.009 (0.015)				-0.087*** (0.021)			
Black x Post	0.013** (0.006)				-0.013 (0.012)			
VA x Post	-0.005 (0.009)				-0.029 (0.021)			
Black	-0.006 (0.004)	-0.099*** (0.010)	-0.108*** (0.021)	-0.112*** (0.008)	-0.103*** (0.008)	-0.003 (0.021)	0.044 (0.035)	0.028 (0.020)
VA	0.013 (0.008)				0.003 (0.015)			
Post	-0.010** (0.004)				-0.027*** (0.008)			
Constant	-0.062*** (0.005)	0.022 (0.014)	0.025 (0.016)	0.153*** (0.011)	0.973*** (0.008)	0.904*** (0.023)	0.889*** (0.015)	1.002*** (0.033)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	No	Yes	No	No	No	Yes	No
Extra controls	No	No	No	Yes	No	No	No	Yes
Observations	387607	387607	387607	362459	251214	251214	251214	222575
R^2	0.068	0.078	0.078	0.087	0.142	0.151	0.152	0.209

Source: CPS basic, 1984-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level

we can rule out the hypothesis that the effect observed for blacks is driven by a discouraging effect among whites instead of an improvement among blacks.

The results are similar when equation (2) is estimated using logit (see table 8 in the Appendix).

4.2 Heterogeneity

In this section we explore whether there are heterogenous effects among black teenagers in the decrease in dropout and the increase in the probability of getting a high school diploma.

We first look at heterogenous effects by age for dropout by dividing the sample between 16-17 years old and 18-19 years old individuals. Table 4 only reports the specification in DDD and the coefficient on Black x VA x Post but the results are similar for DD and for the other interaction terms. Results show that the decrease in dropout is only driven by the

Table 4: Governor from minority and educational outcomes. Triple difference.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age: 16-17								
Black x VA x Post	-0.008 (0.012)	-0.009 (0.009)	0.026* (0.014)	-0.004 (0.010)				
Observations	199017	199017	199017	195411				
Age: 18-19								
Black x VA x Post	-0.100*** (0.038)	-0.106*** (0.030)	-0.107 (0.074)	-0.095*** (0.024)				
Observations	188590	188590	188590	167048				
Age: 18-19, sex: male								
Black x VA x Post	-0.094* (0.057)	-0.099** (0.045)	-0.130 (0.090)	-0.113*** (0.039)	0.199*** (0.058)	0.202*** (0.053)	0.182* (0.096)	0.211*** (0.047)
Observations	92003	92003	92003	85271	122302	122302	122302	113447
Age: 18-19, sex: female								
Black x VA x Post	-0.103*** (0.037)	-0.109*** (0.028)	-0.071 (0.071)	-0.069*** (0.020)	0.128*** (0.048)	0.129*** (0.028)	0.106*** (0.035)	0.096*** (0.027)
Observations	96587	96587	96587	81777	128912	128912	128912	109128
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	No	Yes	No	No	No	Yes	No
Extra controls	No	No	No	Yes	No	No	No	Yes

Source: CPS basic, 1984-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level.

individuals aged 18-19. For 16-17 years old individuals the coefficient on Black x VA x Post is very small and not significantly different from zero.

Next we analyze the results by gender. Given that the results for dropout are driven by the 18-19 years old, we focus on this age group. Although the estimations show that there is a significant decrease in dropout and a significant increase in the probability of getting a high school diploma for both genders, the magnitude of the change is quite different. For dropout, girls have a significant decrease of 7 percentage points for the most demanding specifications (Columns (3) and (4)) whereas boys experience a decrease of 12 percentage points. For high school diploma, the difference is even larger with an increase of 18-20 percentage points in the probability of having a high school diploma for boys, which is twice as large as the increase for girls.

4.3 Robustness checks

In this section we test the robustness of our results by changing the definition of the age-group and by using a different dataset.

4.3.1 Alternative definition of age group

The previous results on dropout are robust to an alternative definition of the age group for dropout, in which we restrict the sample to agents who are at least 16 years old in 1990. Given that dropout is defined for individuals aged 16 to 19, this sample definition tries to ensure that the decision of dropout is made after Douglas Wilder arrives in power and not before. The results are similar to the ones found with the unrestricted sample (table 7 in the Appendix).

4.3.2 Census data

We also test the robustness of our results by using another data source than the CPS, the census data. We use the public 5% micro sample from 2000 and we focus on individuals who were 18-19 between 1984 and 1993 and who were born in Virginia. To have the same population as in the CPS, we restrict our analysis to non-institutionalized individuals.⁴

As individuals provide their educational level, we can see if blacks that were 18-19 years old when Douglas Wilder was in power tend to have a higher probability of having a high school diploma than blacks from previous cohorts, with respect to whites and to other States. Table 9 in the Appendix shows that it is the case, and that, consistent with the CPS data, the probability increases more for boys than for girls.⁵

4.4 Falsification tests

4.4.1 Placebo tests

To check the robustness of our results, we first run a placebo regression, where we assign the treatment - the election of Douglas Wilder - to Virginia in a pre-treatment period. Specif-

⁴i.e. we exclude persons in the military who reside in military barracks, inmates in old age homes, prisons and mental institutions.

⁵The magnitude of the effect is much smaller with the census data than with CPS. This can be due to several factors. First, the way high school diploma is measured is different between the census and the CPS. In the census we do not know when the individuals got their high school diploma. Thus, individuals who got their high school diploma after the age of 19 are classified as having a high school diploma in the census whereas they are marked as not having a high school diploma in the CPS. Second, the census provide information on recalled highest educational attainment, which may be less accurate than current educational attainment as provided by the CPS. Third, the econometric specification is not exactly the same: with the census data we can only control for year of birth dummies, but not for year dummies.

ically, we use only pre-treatment data, and we test whether there is any differential effect on dropout and high school graduation for blacks in Virginia in 1998-1989 with respect to the previous period (1984-1987). This allows us to check if changes in educational outcomes begin before Douglas Wilder arrives in power.

Table 5: Governor from minority and educational outcomes. Placebo test: treatment in 1988-1989. Triple difference.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Black x VA x Post	0.045 (0.061)	0.038 (0.044)	0.026 (0.067)	0.013 (0.041)	-0.021 (0.042)	-0.023 (0.016)	0.027 (0.019)	0.006 (0.020)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	No	Yes	No	No	No	Yes	No
Extra controls	No	No	No	Yes	No	No	No	Yes
Observations	121095	121095	121095	106965	161211	161211	161211	142586
R^2	0.065	0.076	0.077	0.110	0.138	0.147	0.147	0.204

Source: CPS basic, 1984-1989. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level. This sample only includes 18-19 years old.

Table 5 provides the results of the estimation in DDD for 18-19 years old. The results show that there is no significant change in the educational outcomes of blacks before 1990 in Virginia: the coefficient on both dropout and high school diploma is quite small and not significantly different from zero. Therefore, it seems that the change in educational outcomes for blacks is not driven by events that happened before the election of Douglas Wilder.

4.4.2 Permutation tests

Next, we run placebo regressions where we assign treatment to the period 1990-1993 successively in each of the 20 control states. We exclude the state of Virginia. The objective here is to see if we can observe changes in educational outcomes of the same magnitude or higher than in Virginia (- 10 pp. in dropout and + 16 pp. in high school diploma) in other states during the same period. If we do observe changes of comparable magnitude in other states, then we would not be able to exclude that the changes for blacks in Virginia are driven by a different event than the election of Douglas Wilder or are due to an over-acceptance of the null hypothesis. The results of the DDD estimation are shown in Table 10 in the Appendix. Some states such as Arkansas, New-York and Louisiana show a significant

decrease in dropout after 1990. However, the magnitude of the change is much smaller than in Virginia. Moreover, in New-York the coefficient drops substantially when we allow for a differential time trend for blacks and whites (column (3)). We also observe a significant increase in the probability of getting a high school diploma in Arkansas, Illinois, Michigan and New-York. However, when we allow for a differential time trend for blacks and whites (column (7)) the effect disappears or becomes negative in those four States.

5 Channels

The previous section shows that there is a significant decrease in the dropout rate of 18-19 years old blacks in Virginia when Douglas Wilder is in power, as well as a significant increase in their probability of graduating from high school. In this section we explore two channels that could lead to these changes. Section 5.1 studies if the changes are driven by changes in educational policies. Section 5.2 analyzes whether the aspirations of black young adults of the same age also changed during that period.

5.1 Educational policies

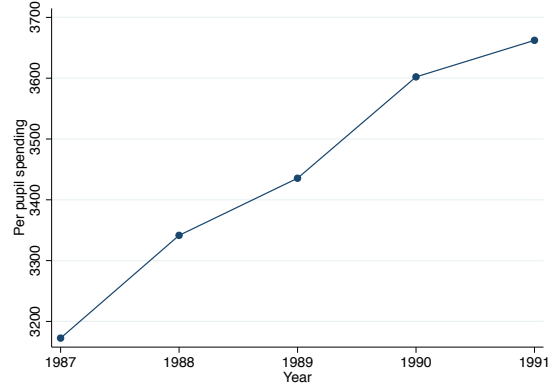
The changes in educational outcomes could be explained by educational policies introduced in Virginia immediately before or during the time the governor was in power. Two major educational policies were introduced in 1989 and 1990 in Virginia: a school funding reform and a change in the compulsory school attendance age. We consider these two policies successively.

A legislative school funding reform was introduced in Virginia in 1989. The objective of the reform was to distribute resources more equally between school counties. This reform could have affected the educational outcomes of blacks with respect to whites if per-pupil spendings increased and blacks tend to benefit more from an increase in spending or if counties with more blacks benefited more from the reform.

We can easily check if per-pupil spending increased at a higher speed after 1989. Figure 1 plots the evolution of current per-pupil spending in Virginia between 1987 and 1991. The spendings are in constant dollars. We see that there is an increase in per-pupil spending over the period, but that the increase tend to slow down after 1990. The changes in educational outcomes of black teenagers can therefore not be driven by a faster increase in per-pupil spendings after 1989.

However, it can still be that districts with a higher share of blacks get more money per

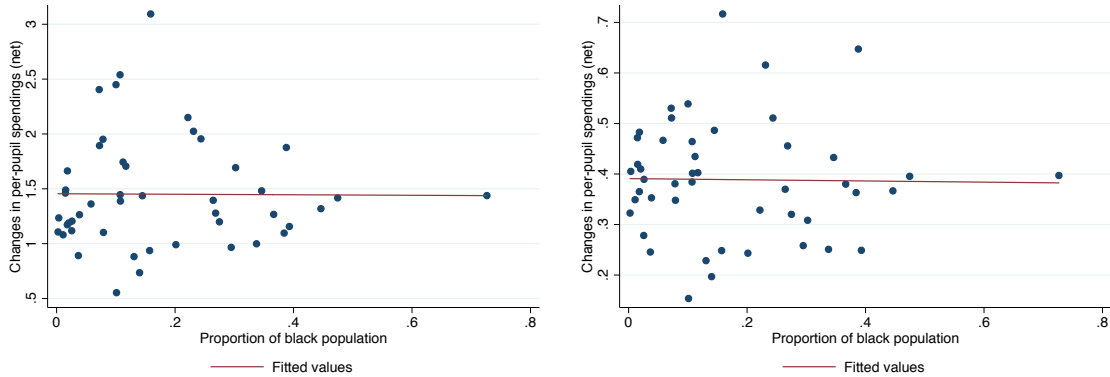
Figure 1: Evolution of per-pupil spending



Source: Census of governments.

student after the reform. To check if counties with a higher share of blacks benefited from a higher per-pupil spending, we use data on per-pupil spending before and after the school funding reform. We estimate the correlation between the change on per-pupil spending by county with the share of blacks in each county in 1990. Figure 2 shows that there is no correlation between the change on per-pupil spending and the share of blacks per county.

Figure 2: Net increase in per-pupil spend- Figure 3: Percentage increase in per-pupil
ing between 1987 and 1992 spending between 1987 and 1992



Source: Census of governments.

The second reform changed the compulsory school attendance age. In July 1990, the state of Virginia increased the compulsory school attendance age from 17 to 18 years old. Even though we control in each specification for a dummy indicating if the individual has the right to drop out, this change may still have a differential impact on blacks with respect to whites if blacks were dropping at age 17 before the reform and now they stay one year longer. However, the results in Table 4.2 show that the improvement in educational attainment only holds for individuals aged 18 and 19. These students are too old to be affected by the policy.

Therefore, we can conclude that the change in compulsory school attendance age does not seem to be driving the changes in educational attainment among blacks.

5.2 Aspirations

We next explore whether the election of the first black governor of the US improved the aspirations of black students. To study this channel, we exploit a survey of first-year college students, the CIRP Freshman Survey, which includes questions that proxy for aspirations. Specifically, we look at self-rated academic ability and drive to achieve. They are both categorical variables that take value 1 to 5. Higher values imply higher self-rated ability or drive to achieve. We estimate equation 2 using an ordered logit model.

Table 6: Governor from minority and aspirations. Triple difference. Ordered logit.

Dep. variable:	Academic ability				Drive to achieve			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
main								
Black x VA x Post	0.373*** (0.101)	0.220* (0.117)	0.303*** (0.056)	0.175* (0.090)	0.146 (0.110)	0.218* (0.119)	0.092 (0.058)	0.169* (0.099)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	No	Yes	No	No	No	Yes	No	No
State dummies	No	Yes	No	No	No	Yes	No	No
Black-state dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	Yes	No	Yes	No	Yes	No	Yes
State-year FE	No	No	Yes	Yes	No	No	Yes	Yes
Observations	945290	945290	945290	945290	944247	944247	944247	944247

Source: Freshmen survey, 1985-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level.

Our results show that black first-year college students tend to rate higher their academic ability and their drive to achieve (although not always significantly) after 1990. We find that blacks in Virginia after the election increase their odds ratio of being in a higher category of self-rated academic ability by 17 to 44% depending on the specification. They also increase their odds ratio of being in a higher category of self-rated drive to achieve by 10 to 17%.

6 Concluding remarks

This paper aims at analyzing the effect of politicians belonging to minorities on the educational outcomes of individuals belonging to the same minorities. We have focused our

analysis on the first black governor ever elected in the US. This election was a major event for the black community in Virginia. Therefore, we can expect that this election impacted the educational outcomes of blacks in Virginia. We found a sizeable effect on dropout and high school diploma among blacks. The effect does not seem to be explained by the main changes in educational policies at that time. Our results provide some evidence that the effect could have been mediated by an increase in aspirations of black students. These results provide support to a role model of the first elected black governor in the United States.

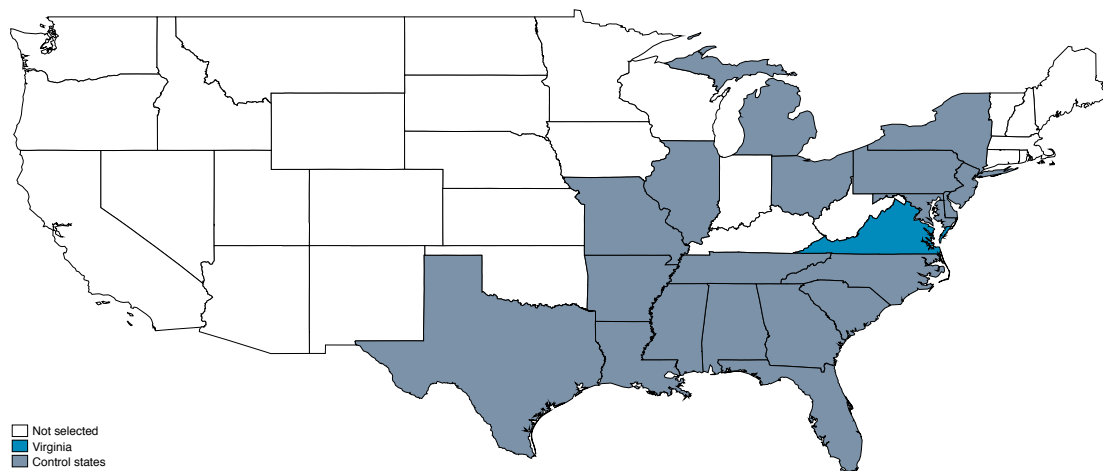
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A Appendix

A.1 Identification strategy

Figure 4: Control states



A.2 Robustness checks

Table 7: Governor from minority and dropout. Triple difference. Alternative age definition.

Dep. variable:	Dropout			
	(1)	(2)	(3)	(4)
Black x VA x Post	-0.046*** (0.017)	-0.048*** (0.012)	-0.056 (0.038)	-0.037*** (0.009)
Controls	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes
Time trends	No	No	Yes	No
Extra controls	No	No	No	Yes
Observations	270955	270955	270955	257886
R^2	0.066	0.076	0.076	0.078

Source: CPS basic, 1984-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
The standard errors are clustered at the state-race-year level

Table 8: Governor from minority and educational outcomes. Triple difference. Logit.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
main								
Black x VA x Post	-0.778*** (0.298)	-0.814*** (0.250)	-0.588 (0.488)	-0.752*** (0.189)	0.818*** (0.184)	0.833*** (0.143)	0.790*** (0.291)	0.853*** (0.135)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Time trends	No	No	Yes	No	No	No	Yes	No
Extra controls	No	No	No	Yes	No	No	No	Yes
Observations	387607	387607	387607	362459	251214	251214	251214	222575

Source: CPS basic, 1984-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level

Table 9: Governor from minority and High School diploma. Census data. Triple difference.

Dep. variable:	High school diploma			
	(1)	(2)	(3)	(4)
Sex: male and female				
Black x VA x Post	0.021** (0.010)	0.024*** (0.007)	0.011 (0.008)	0.024*** (0.007)
Observations	982804	982804	982804	982804
Sex: male				
Black x VA x Post	0.031** (0.015)	0.036*** (0.011)	0.049*** (0.016)	0.036*** (0.011)
Observations	473566	473566	473566	473566
Sex: female				
Black x VA x Post	0.015 (0.011)	0.018** (0.007)	-0.021** (0.010)	0.017** (0.008)
Observations	509238	509238	509238	509238
Controls	Yes	Yes	Yes	Yes
Black-state dummies	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes
State-year dummies	No	Yes	Yes	Yes
Time trends	No	No	Yes	No
Extra controls	No	No	No	Yes

Source: Public micro census 2000 (5 % sample). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level. This sample only includes individuals born between 1965 and 1975.

Table 10: Governor from minority and educational outcomes. Permutation test. Triple difference.

Dep. variable:	Dropout				High school diploma			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Alabama	0.037 (0.030)	0.028 (0.023)	0.021 (0.038)	0.021 (0.019)	-0.037 (0.045)	-0.030 (0.037)	0.089* (0.046)	-0.010 (0.033)
Arkansas	-0.057* (0.032)	-0.061*** (0.021)	-0.063* (0.037)	-0.028* (0.015)	0.126*** (0.046)	0.131*** (0.027)	0.040 (0.049)	0.118*** (0.028)
Delaware	0.078 (0.055)	0.075 (0.046)	0.179** (0.076)	0.084** (0.034)	-0.043 (0.079)	-0.048 (0.070)	-0.191 (0.123)	-0.061 (0.053)
District of Columbia	-0.017 (0.040)	-0.036 (0.040)	-0.055 (0.063)	-0.038 (0.034)	0.016 (0.058)	0.018 (0.043)	0.073 (0.079)	0.028 (0.039)
Florida	0.050* (0.027)	0.049** (0.021)	0.103*** (0.031)	0.053*** (0.020)	-0.003 (0.025)	-0.001 (0.019)	-0.029 (0.030)	0.003 (0.018)
Georgia	0.003 (0.033)	-0.004 (0.023)	0.002 (0.030)	0.019 (0.020)	-0.002 (0.051)	0.007 (0.039)	0.075 (0.051)	-0.017 (0.034)
Illinois	0.037* (0.022)	0.031* (0.017)	-0.009 (0.018)	0.035** (0.016)	0.060* (0.034)	0.063*** (0.022)	0.026 (0.030)	0.049** (0.022)
Louisiana	-0.038 (0.048)	-0.039 (0.028)	-0.127*** (0.045)	-0.053** (0.026)	-0.133** (0.055)	-0.129*** (0.038)	-0.126** (0.059)	-0.115*** (0.038)
Maryland	0.068** (0.031)	0.070*** (0.019)	0.000 (0.046)	0.048*** (0.018)	-0.098** (0.039)	-0.105*** (0.018)	-0.068* (0.035)	-0.080*** (0.019)
Michigan	0.000 (0.028)	-0.004 (0.025)	0.139*** (0.018)	0.005 (0.021)	0.055* (0.031)	0.058** (0.023)	-0.041* (0.024)	0.061*** (0.019)
Mississippi	-0.037 (0.028)	-0.046** (0.019)	-0.038 (0.035)	-0.010 (0.020)	0.018 (0.029)	0.024 (0.018)	0.079** (0.031)	-0.017 (0.022)
Missouri	-0.018 (0.056)	-0.025 (0.042)	-0.029 (0.056)	-0.055 (0.046)	0.050 (0.049)	0.060 (0.049)	-0.017 (0.094)	0.036 (0.043)
New Jersey	0.016 (0.023)	0.009 (0.016)	0.046 (0.029)	0.004 (0.014)	-0.012 (0.028)	-0.005 (0.024)	0.079*** (0.027)	-0.002 (0.028)
New York	-0.040** (0.018)	-0.047*** (0.012)	-0.002 (0.017)	-0.050*** (0.008)	0.040 (0.032)	0.045* (0.024)	-0.066*** (0.019)	0.047** (0.019)
North Carolina	0.045** (0.022)	0.040*** (0.014)	0.021 (0.018)	0.034** (0.013)	-0.037 (0.028)	-0.036* (0.020)	-0.051* (0.028)	-0.032 (0.020)
Ohio	0.022 (0.020)	0.015 (0.016)	0.012 (0.021)	0.020 (0.020)	-0.022 (0.030)	-0.017 (0.026)	0.003 (0.039)	-0.015 (0.029)
Pennsylvania	-0.031 (0.030)	-0.039 (0.024)	-0.034 (0.054)	-0.025 (0.029)	0.017 (0.033)	0.019 (0.022)	0.029 (0.040)	0.003 (0.023)
South Carolina	0.023 (0.042)	0.018 (0.038)	-0.104** (0.052)	0.031 (0.039)	-0.032 (0.042)	-0.025 (0.034)	0.118*** (0.035)	-0.023 (0.031)
Tennessee	-0.026 (0.055)	-0.032 (0.044)	-0.061 (0.071)	-0.051 (0.039)	0.009 (0.032)	0.013 (0.019)	0.003 (0.027)	0.017 (0.020)
Texas	-0.014 (0.020)	-0.019 (0.014)	-0.064** (0.026)	-0.040*** (0.013)	-0.052 (0.032)	-0.047** (0.023)	0.014 (0.028)	-0.024 (0.022)

Source: CPS basic, 1984-1993. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The standard errors are clustered at the state-race-year level. This sample only includes 18-19 years old.