

Does the identity of leaders matter for education?

Evidence from the first black governor in the US

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CONTRIBUTION

- ▶ Effect of leaders belonging to minority groups on educational outcomes of teenagers from the same minority group.
- ▶ Case study: first African American governor ever elected in the US.
- ▶ Channels: Policies or Aspirations?
- ▶ Focus on high school outcomes in the US.

MOTIVATION

- ▶ Benchmark voting model of political economy => No room for identity
- ▶ Increasing evidence that identity of politicians matters for outcomes
 - ▶ Bhalotra *et al.* (2014); Clots-Figueras (2012); Franck and Rainer (2012).
- ▶ Policy implications: take into account identity of elected leaders
 - ▶ ex: quotas for minorities

OUR CASE STUDY: ELECTION OF DOUGLAS WILDER - VIRGINIA IN 1990.



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"It's a victory for America," said the Rev. Jesse Jackson.

"I never thought I'd see this. It's the highlight of a lifetime," said Wells, who grew up here.

CHANNELS FOR EFFECT OF POLITICIANS FROM MINORITIES ON EDUCATIONAL OUTCOMES:

- ▶ **policies** oriented to minorities
 - ▶ Chattopadhyay and Duflo (2004).
- ▶ changes in **aspirations** of parents and young people about how much they can achieve
 - ▶ Beaman *et al.* (2012); Wolbrecht & Campbell (2007); DellaVigna (nd).
- ▶ changes in **discrimination** and racial perceptions

PREVIEW OF THE RESULTS:

- ▶ **Main finding:** Among African Americans when Douglas Wilder is in power:
 - ▶ increase in high school diploma (~ 17 pp.)
- ▶ **Channels:**
 - ▶ **Policies:** cannot fully explain the impact
 - ▶ **Aspirations:** Increase in self-rated ability and drive to achieve

DATA

Sources

- ▶ CPS - *Current Population Survey*. Basic sample.
 - ▶ Individual microdata on school enrolment and attainment
 - ▶ Monthly data
 - ▶ 1984-1993
- ▶ Census - 2000; Freshmen survey; Census of Governments.

DATA

Sources

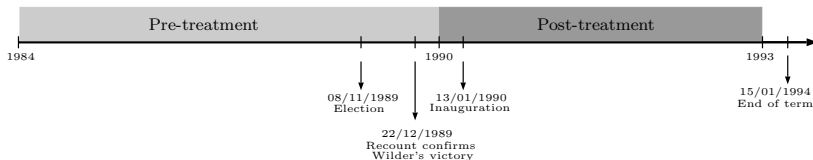
- ▶ CPS - *Current Population Survey*. Basic sample.
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Main outcome: High school diploma

- ▶ 1 if high school diploma; 0 otherwise
- ▶ 18-19 years old

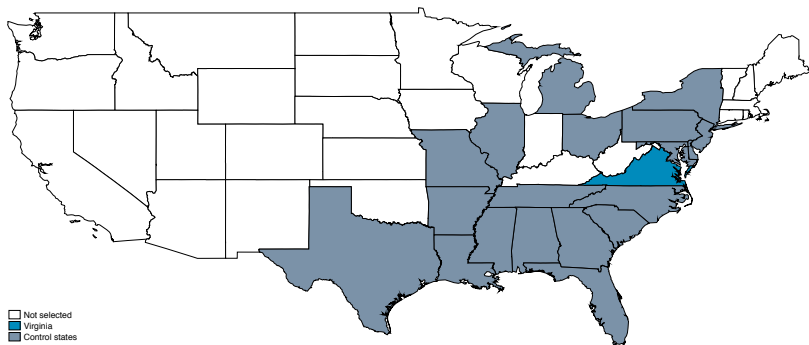
IDENTIFICATION STRATEGY

Figure 1: Time line of events and strategy



IDENTIFICATION STRATEGY (CONT')

Figure 2: Control states



IDENTIFICATION STRATEGY: TRIPLE DIFFERENCES

- ▶ Whites as controls
- ▶ States with more than 10% of African American in 1990 as controls

IDENTIFICATION STRATEGY: TRIPLE DIFFERENCES

- ▶ Whites as controls
- ▶ States with more than 10% of African American in 1990 as controls

$$\begin{aligned} \text{School outcome}_{i,s,t,m} = & \beta_1 (\mathbf{Black}_m \times \mathbf{Virginia}_s \times \mathbf{Post}_t) \\ & + \beta_2 (\mathbf{Black}_m \times \mathbf{Virginia}_s) + \beta_3 (\mathbf{Black}_m \times \mathbf{Post}_t) + \beta_4 (\mathbf{Virginia}_s \times \mathbf{Post}_t) \\ & + \beta_5 \mathbf{Black}_m + \beta_6 \mathbf{Virginia}_s + \beta_7 \mathbf{Post}_t \\ & + \beta_8 X_{i,s,t,m} \end{aligned}$$

$X_{i,s,t,m}$ = Education of parents; family composition; age; gender; month

IDENTIFICATION STRATEGY: TRIPLE DIFFERENCES

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- ▶ States with more than 10% of African American in 1990 as controls

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 & + \beta_2 (\mathbf{Black}_m \times \mathbf{Virginia}_s) + \beta_3 (\mathbf{Black}_m \times \mathbf{Post}_t) + \beta_4 (\mathbf{Virginia}_s \times \mathbf{Post}_t) \\
 & + \beta_5 \mathbf{Black}_m + \beta_6 \mathbf{Virginia}_s + \beta_7 \mathbf{Post}_t \\
 & + \beta_8 X_{i,s,t,m}
 \end{aligned}$$

$X_{i,s,t,m}$ = Education of parents; family composition; age; gender; month

- ▶ We add State and Year dummies (specific to AA) and time trends.

ENDOGENEITY ISSUE?

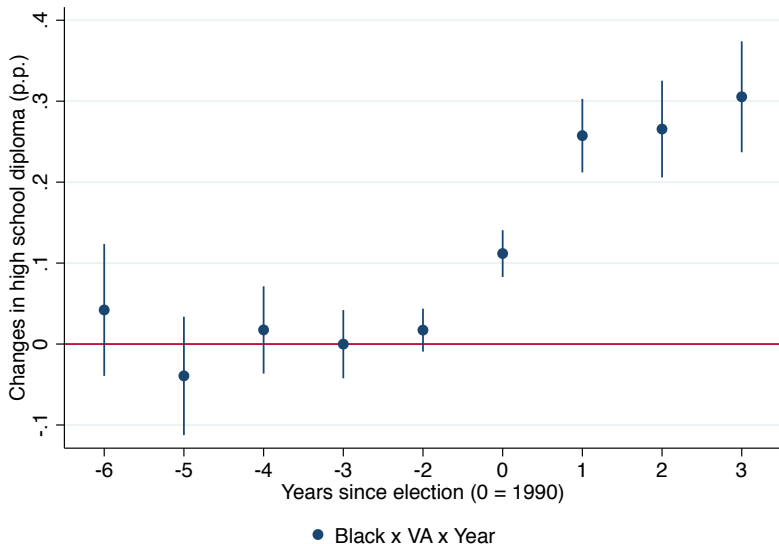
It might be that Douglas Wilder was elected in Virginia because Virginia has different characteristics

- ▶ Parallel pre-trends
- ▶ Control for race-state specific trend
- ▶ Placebo test before treatment

Table 1: Governor from minority and high school diploma. DDD.

	(1)	(2)	(3)	(4)	(5)
Black x VA x Post	0.173*** (0.037)	0.178*** (0.037)	0.175*** (0.037)	0.156** (0.074)	0.165*** (0.032)
Black x VA	-0.087*** (0.016)				
Black x Post	-0.013 (0.013)				
VA x Post	-0.030 (0.020)	-0.032 (0.021)			
Black	-0.102*** (0.009)	-0.006 (0.028)	-0.003 (0.028)	0.044 (0.046)	0.029 (0.027)
VA	0.003 (0.015)				
Post	-0.027*** (0.008)				
State dummies	No	Yes	No	No	No
Year dummies	No	Yes	No	No	No
Black-state & black-year dummies	No	Yes	Yes	Yes	Yes
State-year dummies	No	No	Yes	Yes	Yes
Time trends	No	No	No	Yes	No
Extra controls	No	No	No	No	Yes
Observations	251213	251213	251213	251213	222593
R ²	0.142	0.149	0.151	0.152	0.209

Figure 3: Effect on high school diploma year by year. DDD.



ADDITIONAL RESULTS AND ROBUSTNESS CHECKS:

- ▶ Heterogeneity test
 - ▶ Larger increase for boys. **Results**
- ▶ Lasting of effects **Results**
 - ▶ effect seems to last (significant but smaller for period 1994-2000)
- ▶ Alternative dataset: Census data of 2000.
 - ▶ results have same significance but smaller **Results**
- ▶ Permutation test: placebo treatment in each control state
 - ▶ no effect of similar magnitude in other states
- ▶ Labor market outcomes (wages and unemployment) **Results**
 - ▶ no significant differences for reference group

ASPIRATIONS:

“People want to touch him, to say, ‘He’s been to my school,’... or ‘my father works for him.’ They identify with the governor in a way that many people at my level do not,” Tuby G. Martin, Secretary of Administration.

ASPIRATIONS:

Freshmen Survey

- ▶ 1st year of college students
- ▶ 1985-1993
- ▶ Questions: "Rate yourself on each of the following traits as compared with the average person your age"
 - ▶ Academic ability
 - ▶ Drive to achieve
- ▶ DDD strategy
- ▶ Controls = age, gender, parental education, high school GPA

Table 2: Effect on aspirations. DDD. 1st year college.
Ordered logit.

	(1)	(2)	(3)	(4)	(5)
Academic ability					
Black x VA x Post	0.373*** (0.089)	0.314*** (0.056)	0.220* (0.122)	0.303*** (0.066)	0.175* (0.106)
Observations	945290	945290	945290	945290	945290
Drive to achieve					
Black x VA x Post	0.146* (0.084)	0.117* (0.066)	0.218* (0.118)	0.092 (0.069)	0.169 (0.120)
Observations	944247	944247	944247	944247	944247
Controls	Yes	Yes	Yes	Yes	Yes
Year dummies	No	Yes	Yes	No	No
State dummies	No	Yes	Yes	No	No
Black-state dummies	No	Yes	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	Yes
Time trends	No	No	Yes	No	Yes
State-year FE	No	No	No	Yes	Yes

Source: Freshmen survey. 1985-1993.

POLICIES:

Policies?

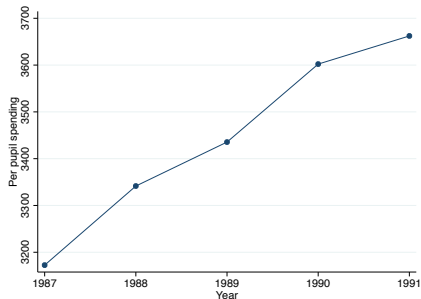
- ▶ School funding reform in 1989
- ▶ Increase in compulsory school attendance age - 07/1990

POLICIES:

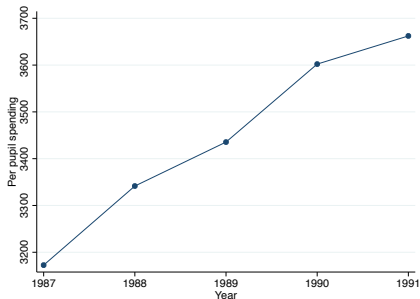
School funding reform in 1989

- ▶ An equation determines the money per pupil in each school district/county
- ▶ in Virginia in 1989: reform of the equation to have a more equal distribution of funds across districts
- ▶ Potential impact on the educational level of AA
 - ▶ If increase in per pupil spendings in Virginia and $\frac{\delta \ell_b}{\delta s} > \frac{\delta \ell_w}{\delta s}$
 - ▶ If increase in per pupil spendings in districts where there are more AA

► increase in per pupil spendings in Virginia after 1989?



► increase in per pupil spendings in Virginia after 1989?

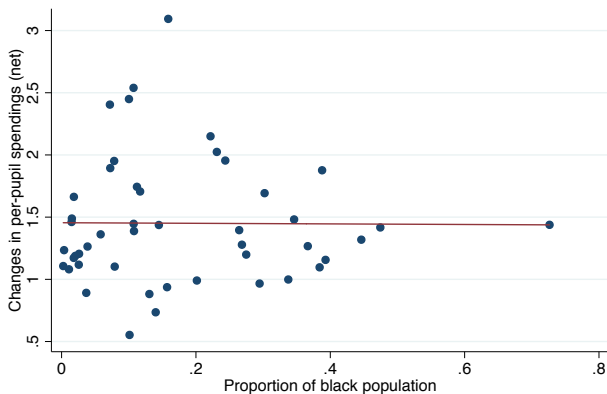


Source: Census of governments.

Dep. variable:	Current per-pupil spendings		
	(1)	(2)	(3)
VA x Post 1989	72.31 (901.77)	72.31 (913.42)	-30.60 (204.57)
VA x Post 1990	99.17 (902.84)	99.17 (913.40)	76.85 (204.42)
VA x Post 1991	68.24 (1108.71)	68.24 (1118.73)	-23.43 (177.17)
Year dummies	No	Yes	Yes
State time-trend	No	No	Yes
Observations	105	105	105

- Increase in per pupil spendings in districts where there are more blacks?

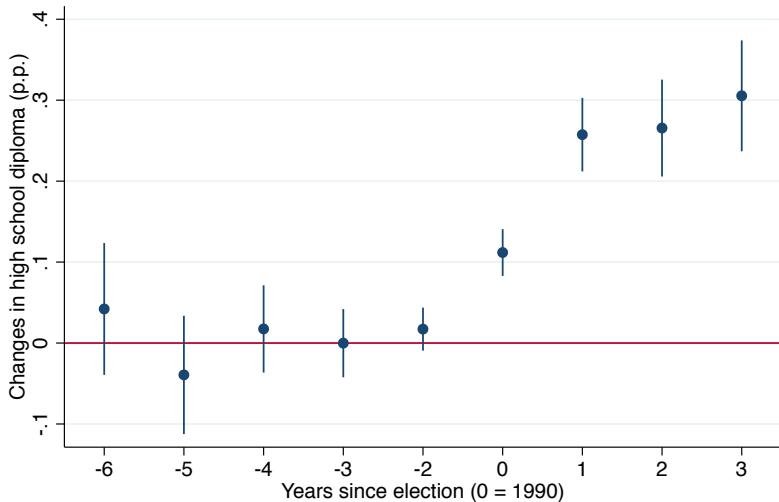
Figure 4: Net increase in per-pupil spending between 1987 and 1992



POLICIES (CONT')

- ▶ **Increase in compulsory school attendance age from 17 to 18 in 1990.**
 - ▶ Reform concerns 17 years old (and younger) individuals from July 1990 onwards.
 - ▶ If there is an effect of this reform on high school graduation rates, we should observe it for the 18-19 years individuals after 1991.
 - ▶ The effect on 18-19 years old students begins in 1990.

Figure 5: Effect on high school diploma year by year. DDD.



● Black x VA x Year



Table 3: Dropout for 16-17. DDD

Dep. variable:	Dropout			
	(1)	(2)	(3)	(4)
Age: 16-17				
Black x VA x Post	-0.005 (0.012)	-0.006 (0.009)	0.025* (0.014)	-0.003 (0.010)
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	199017	199017	199017	195519

CONCLUSIONS:

- ▶ We find a sizeable change in high school diploma among blacks when Douglas Wilder is in power.
- ▶ Effect cannot be fully explained by the main changes in educational policies.
- ▶ We find evidence that the effect could have been mediated by an increase on aspirations among African American students (evidence of role model).

Thanks for your attention!

Table 4: Heterogeneity of the effect. DDD.

Dep. variable:	High school diploma				
	(1)	(2)	(3)	(4)	(5)
Sex: male					
Black x VA x Post	0.199*** (0.067)	0.206*** (0.067)	0.202*** (0.068)	0.184 (0.123)	0.209*** (0.059)
Observations	122301	122301	122301	122301	113487
Sex: female					
Black x VA x Post	0.130*** (0.031)	0.136*** (0.035)	0.132*** (0.036)	0.104** (0.044)	0.097*** (0.035)
Observations	128912	128912	128912	128912	109106
Controls	Yes	Yes	Yes	Yes	Yes
State dummies	No	Yes	No	No	No
Year dummies	No	Yes	No	No	No
Black-state dummies	No	Yes	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	Yes
State-year dummies	No	No	Yes	Yes	Yes
Time trends	No	No	No	Yes	No
Extra controls	No	No	No	No	Yes

Table 5: Governor from minority and educational outcomes.
Triple difference. From 1984 to 2000.

Dep. variable:	High school diploma				
	(1)	(2)	(3)	(4)	(5)
Black x VA x Post ₁₉₉₀₋₁₉₉₃	0.173*** (0.038)	0.178*** (0.038)	0.176*** (0.038)	0.210*** (0.058)	0.163*** (0.033)
Black x VA x Post ₁₉₉₄₋₂₀₀₀	0.119*** (0.028)	0.124*** (0.027)	0.119*** (0.026)	0.192** (0.075)	0.100*** (0.026)
Controls	Yes	Yes	Yes	Yes	Yes
State dummies	No	Yes	No	No	No
Year dummies	No	Yes	No	No	No
Black-state dummies	No	Yes	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	Yes
State-year dummies	No	No	Yes	Yes	Yes
Time trends	No	No	No	Yes	No
Extra controls	No	No	No	No	Yes
Observations	375657	375657	375657	375657	335062
R ²	0.146	0.152	0.155	0.156	0.209

Table 6: Robustness check. High school diploma. Census data. DDD.

Dep. variable:	High school diploma				
	(1)	(2)	(3)	(4)	(5)
Black x VA x Post	0.021** (0.009)	0.023*** (0.009)	0.025*** (0.009)	0.011 (0.009)	0.025*** (0.009)
Observations	1024709	1024709	1024709	1024709	1024709
Controls	Yes	Yes	Yes	Yes	Yes
State dummies	No	Yes	No	No	No
Year dummies	No	Yes	No	No	No
Black-state dummies	No	Yes	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes	Yes
State-year dummies	No	No	Yes	Yes	Yes
Time trends	No	No	No	Yes	No
Extra controls	No	No	No	No	Yes

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Table 7: Labor market outcomes: DDD. 25-34 years old

	(1)	(2)	(3)	(4)
Wages				
Black x VA x Post	-0.040 (0.073)	-0.036 (0.062)	-0.026 (0.061)	0.070 (0.098)
Observations	110188	110188	110188	110188
Unemployment				
Black x VA x Post	0.001 (0.007)	-0.001 (0.006)	-0.001 (0.006)	-0.019** (0.009)
Observations	1340836	1340836	1340836	1340836
Controls	Yes	Yes	Yes	Yes
State dummies	No	Yes	No	No
Year dummies	No	Yes	No	No
Black-state dummies	No	Yes	Yes	Yes
Black-year dummies	No	Yes	Yes	Yes
State-year dummies	No	No	Yes	Yes
Time trends	No	No	No	Yes

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Table 8: Placebo test on self-rated academic ability

	(1)	(2)	(3)	(4)	(5)
Black x VA x Post	-0.00760 (0.0382)	-0.00981 (0.0263)	-0.0525* (0.0286)	-0.00977 (0.0270)	-0.117*** (0.0293)
Year FE		Yes	Yes		
State FE		Yes	Yes		
Black*State FE		Yes	Yes	Yes	Yes
Black*Year FE		Yes	Yes	Yes	Yes
Black time-trend			Yes		Yes
State*Year FE				Yes	Yes
Observations	512567	512567	512567	512567	512567
R ²	0.357	0.362	0.362	0.363	0.363

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Control variables: sex, parental education, high school GPA

Source: Freshmen survey. 1986-1993

Table 9: Placebo test on self-rated drive to achieve

	(1)	(2)	(3)	(4)	(5)
Black x VA x Post	-0.00717 (0.0356)	-0.00512 (0.0226)	0.0343 (0.0402)	-0.00614 (0.0195)	0.00728 (0.0387)
Year FE		Yes	Yes		
State FE		Yes	Yes		
Black*State FE		Yes	Yes	Yes	Yes
Black*Year FE		Yes	Yes	Yes	Yes
Black time-trend			Yes		Yes
State*Year FE				Yes	Yes
Observations	511920	511920	511920	511920	511920
R ²	0.105	0.109	0.109	0.110	0.110

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Control variables: sex, parental education, high school GPA

Source: Freshmen survey. 1986-1993