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A PROMISE-ing Change? West Virginia's Merit Aid Program and College Enrollment

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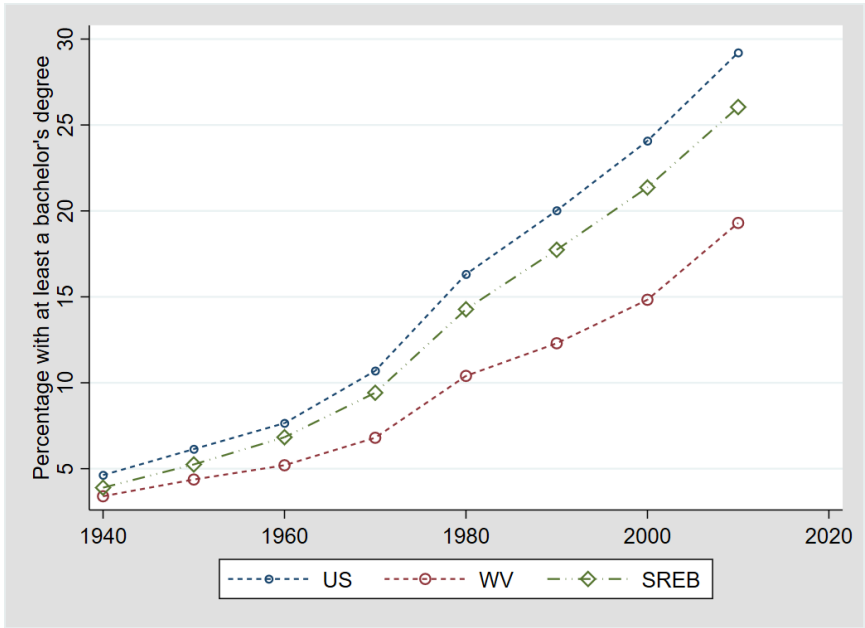
Research Day, April 12, 2019

Introduction

Educational attainment in the United States: Bachelors degree or higher

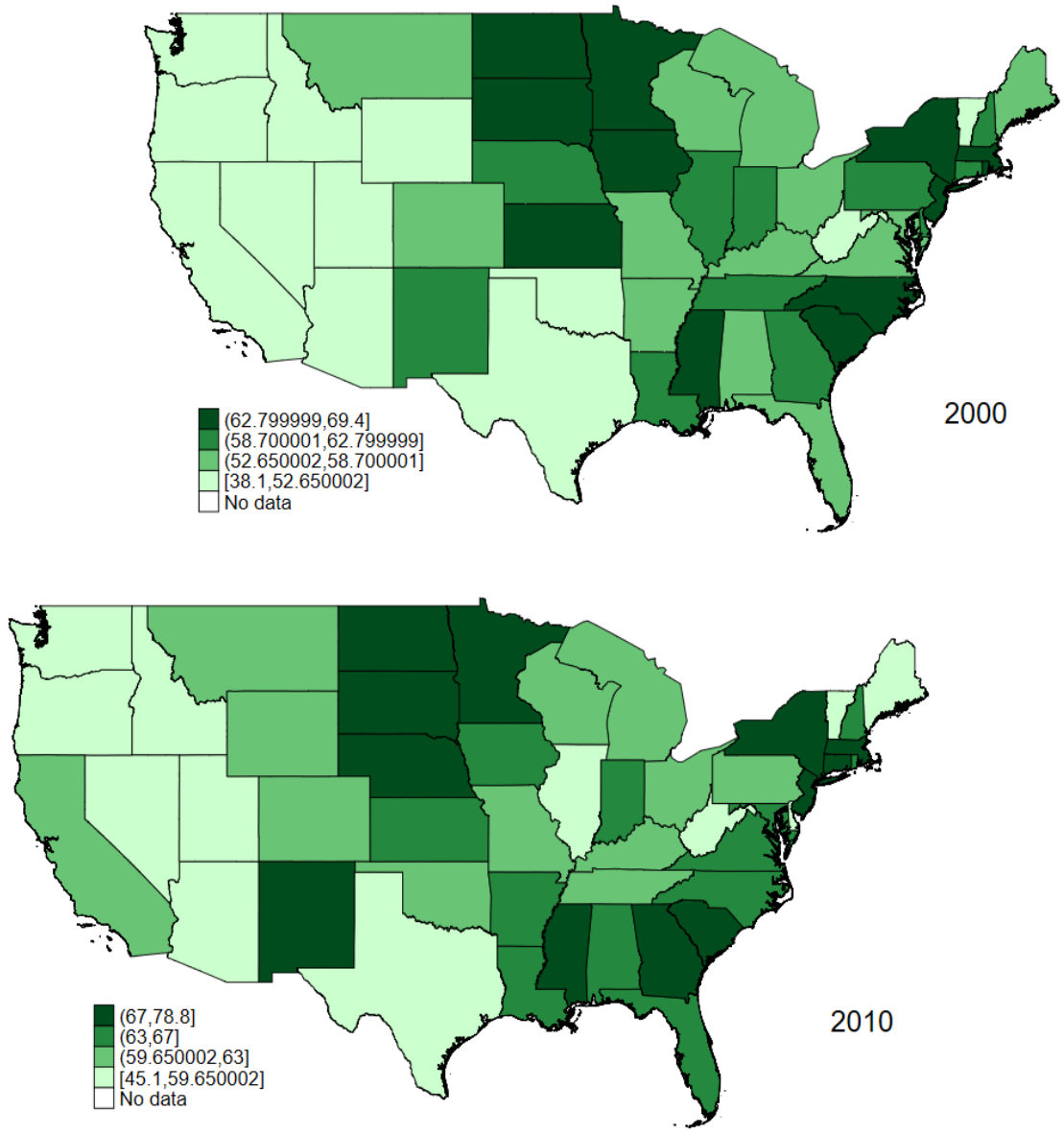


U.S. Census Bureau

- WV reports the lowest percentage in 2000 and 2010
- WV degree completion rates are 42.4% (US=30%) and 21.7% (US=29.9%) in 2000 and 2010
- College attendance rate?

Introduction

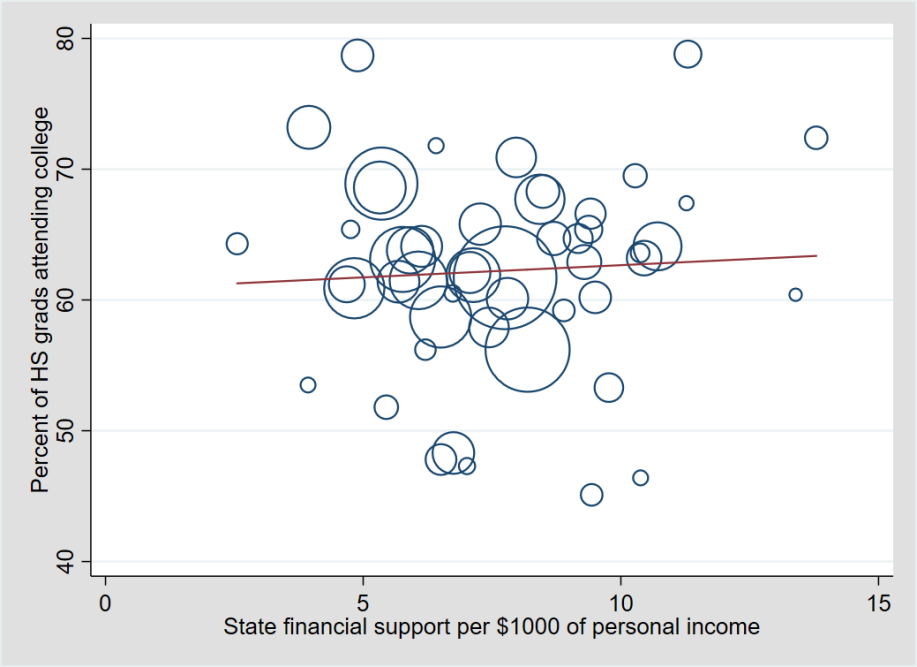
College-going rate in the United States: percentage of high-school graduates



Data Source: IPEDS enrollment survey

Introduction

State support for higher education and college attendance



- Causal link between student financial aid and college attainment (Dynarski 2003)
  - subsidizes college education; lowers the need to work in college
- Merit-based aid links financial support to academic achievement
  - better post-enrollment academic outcomes; on-time degree completion Henry et al. (2004); Bruce and Carruthers (2011)
  - increased college enrollment Dynarski (2000); Cornwell et al. (2006)

PROMISE scholarship

- Introduced in the year 2002
- Designed after successful merit aid programs like Georgia's HOPE scholarship
  - full tuition waiver at 2-year and 4-year public institutions in WV
  - equivalent amount at eligible private institutions within the state
  - eligibility based on SAT/ACT score and high-school GPA on core courses
  - stringent anual renewal criteria
- Improved post-enrollment outcomes Scott-Clayton (2011)
  - higher semester-level GPAs
  - higher credit accumulation
  - on-time degree completion
- Improved post-graduation outcomes Scott-Clayton (2016)
  - better credit ratings
  - residents of higher-income neighborhoods
- Scholarship's impact on college attendance is unknown

PROMISE scholarship

- Impact of PROMISE on higher education in WV?
  - Trends over time
  - Trends by institution type, gender and race
- Effect of PROMISE on high school enrollment/completion?
- Policy complementing PROMISE?

Data and variables

- 12-month enrollment, full or part-time by institution
  - Integrated Postsecondary Education Data Systems (1996-2006)
- High school completions by state and year
  - Common Core of Data
  - Private School Universe Survey
- State-level covariates like the fraction of young population, median household income, wage rate and state unemployment rate
  - U.S. Census Bureau
  - Bureau of Labor Statistics

Empirical Strategy

Basic empirical model:

$$enroll_{ist} = \beta treatpost_{ist} + \gamma post_{is} + X_{ist}\omega + \alpha_s + \pi_t + \varepsilon_{ist}$$

- *enroll* : fraction of instate high-school graduates attending college
- *treatpost* : treatment effect
- X: covariates
- α_s: State FE, π_t: Year FE

Table: Mean enrollment in WV and control states before and after PROMISE

	WV	Control states	Difference
Pre PROMISE	0.59	1.121	-0.531
			(0.735)
Post PROMISE	0.778	1.207	-0.429
			(0.806)
Difference	0.188	0.087	0.102
	(1.080)	(0.154)	(1.091)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

SE clustered at the state level for the DD

Support for control=541, support for treated=11

Preliminary results

Table: Estimated effect of PROMISE on college enrollment

	(1)	(2)
treatpost	-0.0013*	-0.0004
	(0.0007)	(0.0017)
State FE	x	x
Year FE	x	x
Covariates		x
Observations	*47,260*	*47,260*

SE clustered at the state-level in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Synthetic Control Methos

Validity of DID

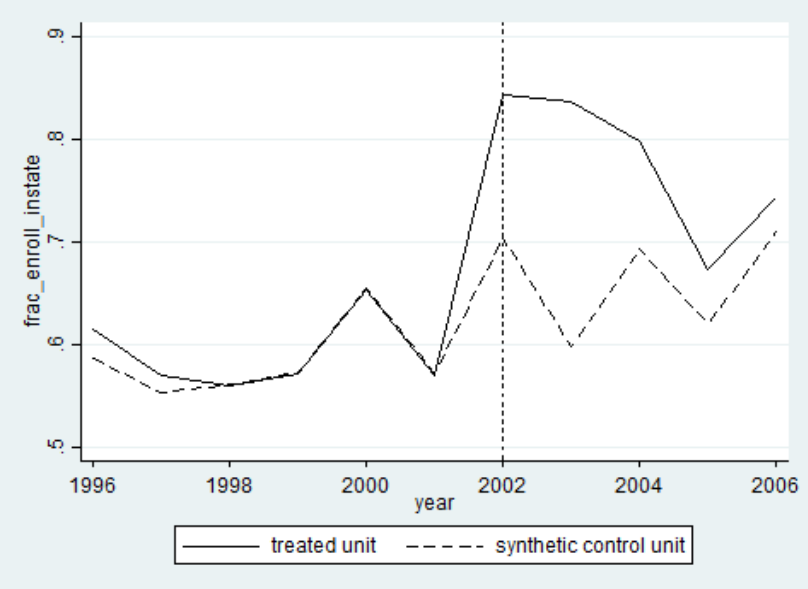
- assumption of parallel trends
- control groups represent counterfactual WV

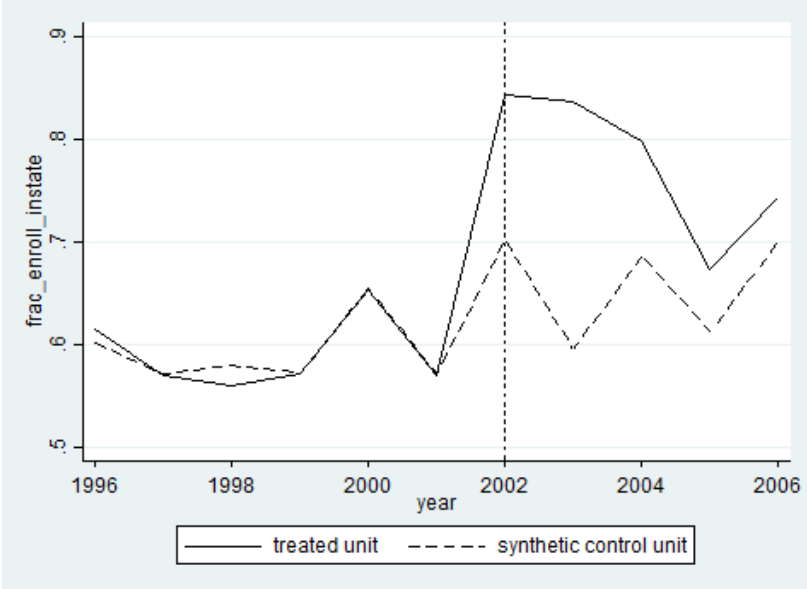
Synthetic Control Method (SCM)

- data driven technique
- hypothetical counterfactual based on pretreatment trends

Synthetic Control Methods

SCM using the total fraction of instate HS grads enrolling in college





Synthetic Control Methods

SCM using the fraction of instate HS grads enrolling in the average post-secondary institution