

THE IMPACT OF GUARANTEED TUITION POLICIES ON POSTSECONDARY TUITION LEVELS AND OTHER OUTCOMES: A DIFFERENCE-IN-DIFFERENCE APPROACH

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Outline

- What are state-level guaranteed tuition laws?
 - Which states have guaranteed tuition laws?
- What do politicians think guaranteed tuition laws will do?
- The effect of guaranteed tuition laws on institutional tuition levels.
- The effect of guaranteed tuition laws on other outcomes
- Future directions for research.

Guaranteed Tuition

- Institutions do not change (“guarantee”) tuition rate for 4 years
- Institutional programs vs. state law
- State guaranteed tuition laws
 - Illinois*
 - Oklahoma
 - Texas

Illinois' Law

- “Truth-in-Tuition” law was effective fall 2004
- Mandates that Illinois public four-year institutions guarantee tuition for incoming freshmen for four years
- Applies to all in-state students

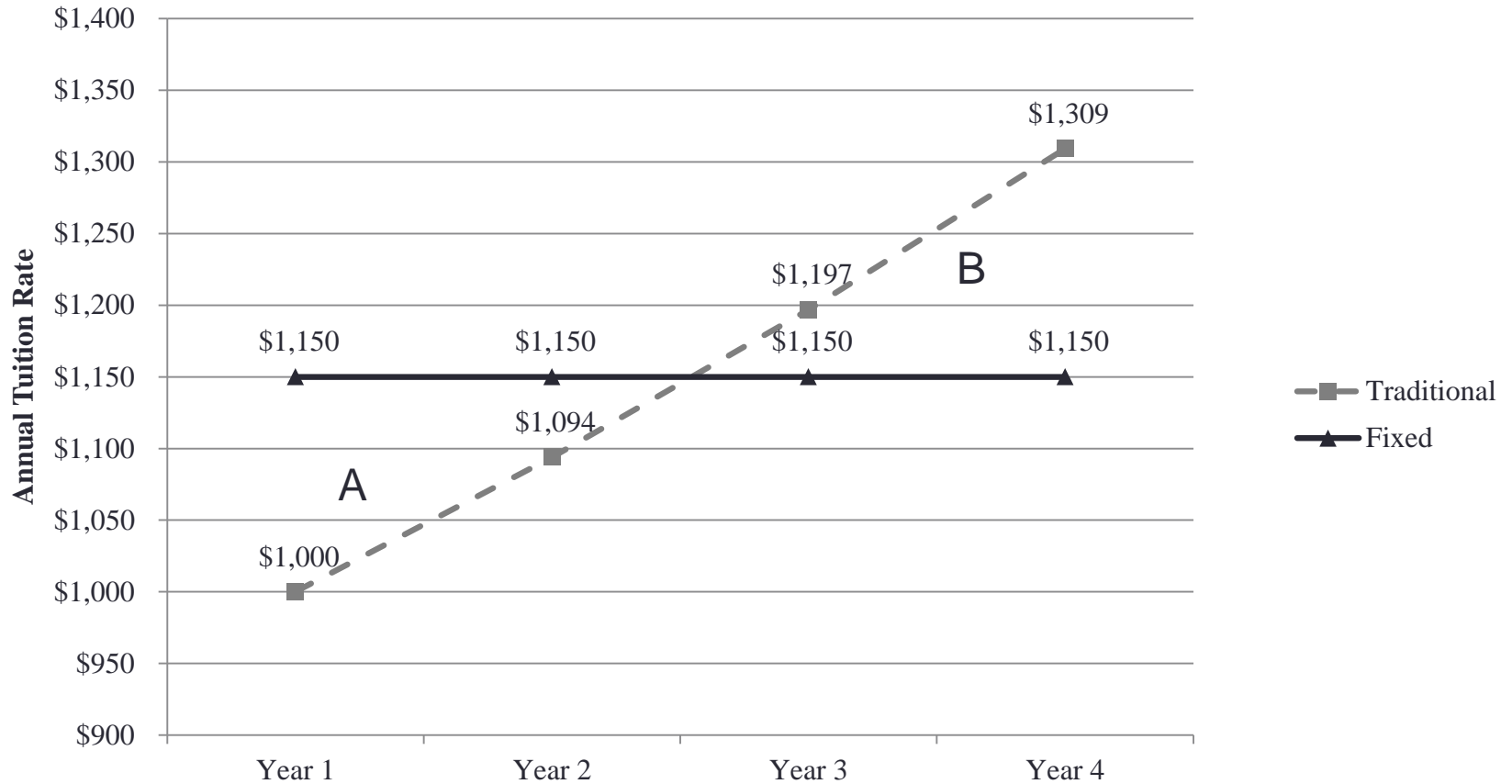
Politicians believe that guaranteed tuition laws will benefit students and families...

<http://illinoisreview.typepad.com/illinoisreview/2013/05/ask-peter-roskam-the-truth-in-tuition-act-video.html>

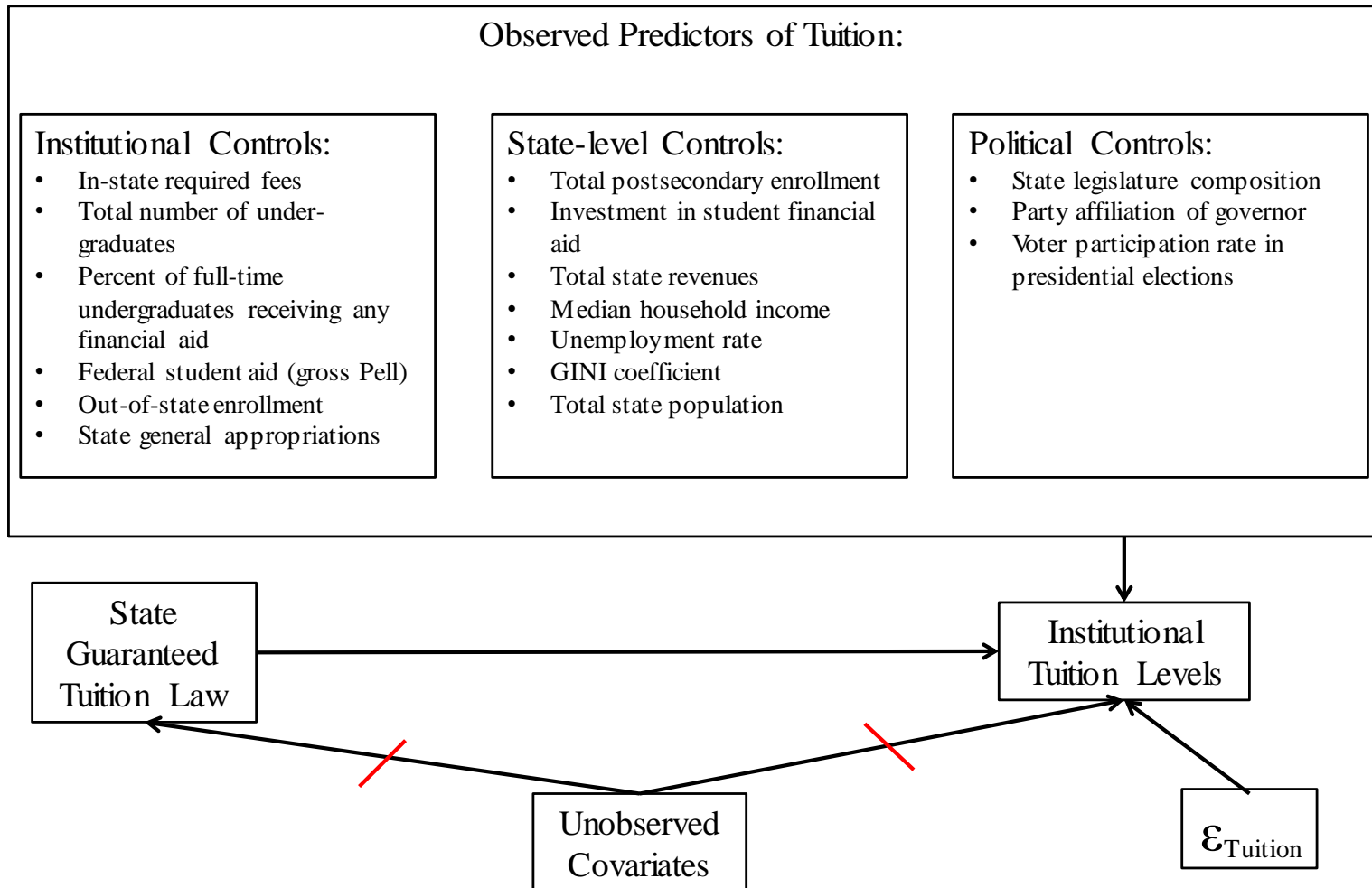
Research Question – Tuition

Does the implementation of a state-level guaranteed tuition program lead to changes in annual tuition charges or the aggregate amount of tuition paid by students over four years at public four-year institutions?

Frontloading Guaranteed Tuition

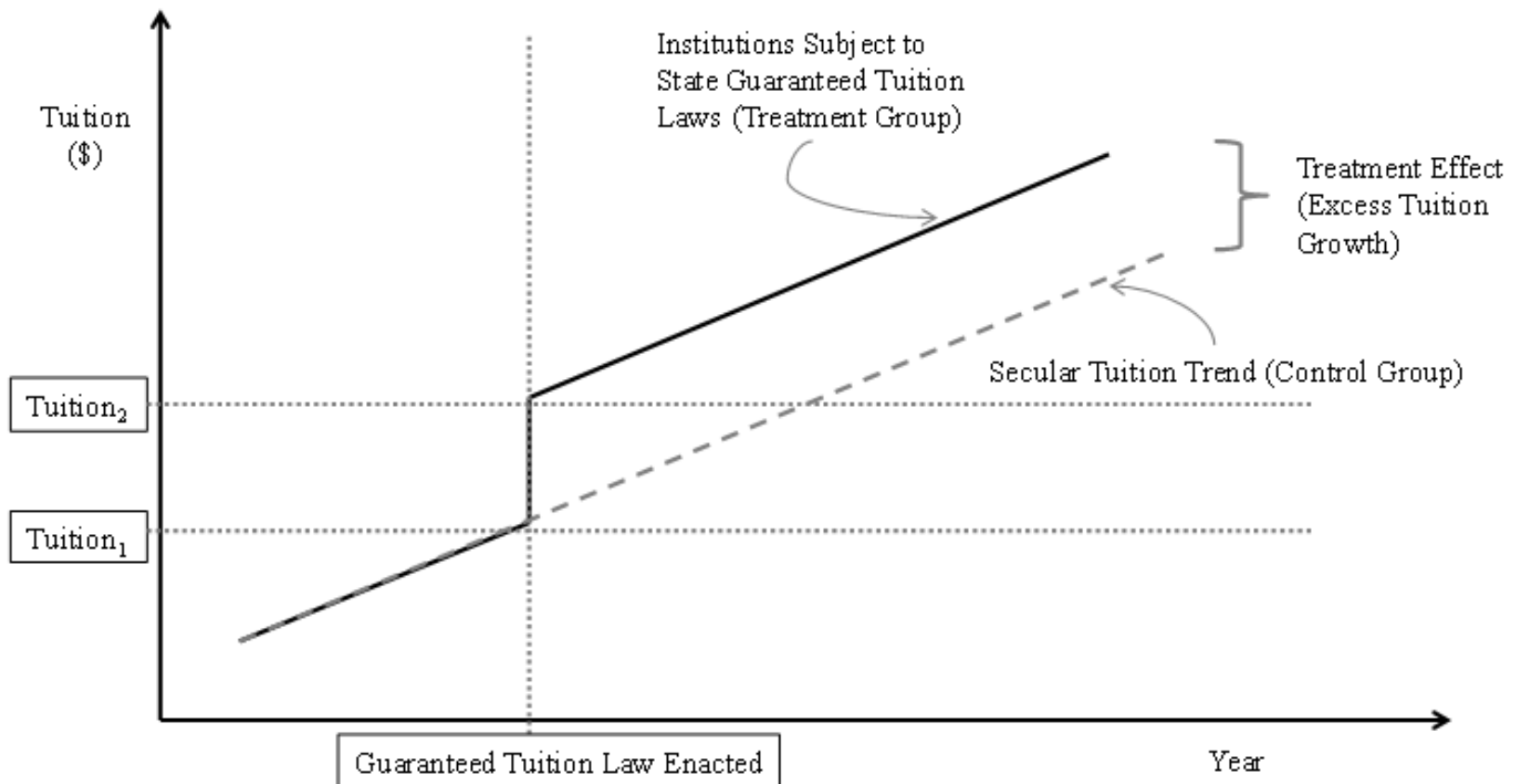


Conceptual Drawing - Tuition



Difference-in-difference designs assume that unobserved covariates have the same effect on the treatment and control groups.

Difference-in-Difference Approach – Tuition



Data

- A unique dataset was constructed for this study.
- Data sources:
 - Integrated Postsecondary Education Data System (IPEDS).
 - U.S. Census Bureau
 - U.S. Bureau of Labor Statistics.

Data

- Estimating sample:
 - Identified at the institution-year level.
 - The estimating sample is focused on all public four-year institutions located in one of the US states.
 - Only active, degree-granting institutions that offer undergraduate degrees, are not U.S. service institutions, and are eligible to participate in Title IV federal financial aid programs.
 - The full estimating sample contains 5,927 observations and is comprised of approximately 582 institutions over the years 2000-2011.

Model Specifications

Model

$$Tuition_{it} = \beta(Indiana_i * Post2004_t) + \mathbf{X}_{it}\boldsymbol{\gamma} + \mu_i + v_t + \varepsilon_{it}$$

Tuition Results

The magnitude of the effect indicates a **\$1,479** average increase in tuition following the enactment of Illinois' Truth-in-Tuition law, as compared with institutions not subject to the law.

Table 3: Difference-in-Difference Model for Illinois' Truth-in-Tuition Policy on Institutional Tuition Levels 2000-2011

	(1)
	Full Controls Institution and Year Fixed Effects Model
VARIABLES	
Illinois*Post2004	1,479*** (128.4)
In-State Fees (CPI adjusted)	-0.860*** (0.0566)
Total Number of Undergraduates	-0.0257 (0.0189)
Percent of Full-Time First-Time Undergraduates Receiving Any Financial Aid	3.470** (1.377)
Gross Pell (CPI adjusted)	1.34e-05* (7.16e-06)
Number of Out-of-State Students	0.390*** (0.0951)
State General Appropriations for Higher Education (CPI adjusted)	-7.19e-06*** (1.32e-06)
Total State Postsecondary Enrollment	0.00140** (0.000568)
Total State Investment in Student Financial Aid (CPI adjusted)	1.32e-06*** (3.44e-07)
Total State Revenue (CPI adjusted)	2.06e-09*** (5.40e-10)
Median Household Income (CPI adjusted)	-0.00277 (0.00583)
State Unemployment Rate	168.7*** (19.97)
State Gini Coefficient	915.3 (1,867)
Total State Population	-0.000175** (8.72e-05)
Proportion of Republican Representatives in State Legislature	-1,373*** (298.0)
Republican Governor	-8.786 (36.92)
Voter Participation Rate in Presidential Elections	-14.27** (6.970)
Constant	7,163*** (1,059)
Institution Fixed Effects?	Yes
Year Fixed Effects?	Yes
Observations	5,927
Number of Institutions	582
R-squared	0.729

Robust standard errors in parentheses. CPI adjustments such that 100=2011. Linear smoothing is used in off-years to make the presidential voter participation rate a continuous measure. *** p<0.01, ** p<0.05, * p<0.1

Additional Tuition Results

Four-Year Aggregate

- Treatment effect \$4,333***

Restricted to Great Lakes Region

- Treatment effect \$915.9***

Coordinating/Planning Board

- Treatment effect \$1,353***

Restricted by Carnegie Classification

- Masters \$1,303***
- Doctoral-Intensive \$1,981***
- Doctoral-Extensive \$1,543***

Note: *** $p < 0.01$

Additional Tuition Results

Three-way Fixed Effects Model (controlling for state-by-year effects)

- Annual Tuition \$1,572***
- Four-Year Aggregate \$9,610***

Note: *** $p < 0.01$

Results Summary – Tuition

- We found evidence of a significant increase in tuition levels when institutions were subject to guaranteed tuition laws.
- Although these laws offer predictability in tuition levels for students, the incentives built into these programs appear to encourage tuition increases, which is not clearly beneficial to students and families.
- Guaranteed tuition laws appear to be a driver of tuition increases, since institutions increase tuition
 - \$1,479, on average, following the enactment of the law in Illinois

Results Summary – Tuition

- The size of this increase in tuition is troubling because, while there is likely a value in institutions offering predictability in tuition rates, it is unlikely that the value of that predictability is greater than \$1,500. In the sample, mean tuition across all states in all years was \$4,387.06 (Table 2), so a \$1,500 increase represents a 34% increase in tuition levels.

Other Outcomes – Appropriations

Baseline

- Treatment effect - \$29.4 million ***

Great Lakes Region

- Treatment effect negative

Coordinating/Planning Board

- Treatment effect - \$34.1 million ***

Restricted by Carnegie Classification

- Masters - \$9.04 million ***
- Doctoral-Intensive - \$32.7 million **
- Doctoral-Extensive - \$48.4 million ***

Note: *** $p < 0.01$ ** $p < 0.05$

Other Outcomes – Enrollments

Baseline

- Treatment effect -458.6***

Great Lakes Region

- Treatment effect negative

Coordinating/Planning Board

- Treatment effect -389.6**

Restricted by Carnegie Classification

- Masters -442.1**
- Doctoral-Intensive negative
- Doctoral-Extensive negative

Note: *** $p < 0.01$ ** $p < 0.05$

Other Outcomes – Completions

Baseline

- Treatment effect -80.35*

Great Lakes Region

- Treatment effect negative

Coordinating/Planning Board

- Treatment effect negative

Restricted by Carnegie Classification

- Masters -72.98**
- Doctoral-Intensive negative
- Doctoral-Extensive 306.3***

Note: *** $p < 0.01$ ** $p < 0.05$

Other Outcomes – Alt. Revenues

Preliminary results suggest that Illinois' guaranteed tuition law had the following effects:

- In-state fees – positive, significant
- Out-of-state tuition – positive, significant
- Out-of-state enrollments – negative, significant

Results Summary

Lower Completions
Lower Appropriations
Higher Fees
Lower Enrollments
Higher Tuition

Tuition Predictability



Future Directions for Research

- Impact of state-level guaranteed tuition laws on:
 - Alternative revenue streams
 - Enrollment by demographics
 - Student debt

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