GOV1368 Section 10

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Harvard

Fall 2024

Recap

Last time we talked about:

- DiD estimation as a linear regression
- GDD as a continuous-treatment extension of DiD
- The impact of charter school expansion on district-level outcomes

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Today we will discuss some tips on how to present empirical (quantitative) research.

Agenda

Introduction and Context

Data, Methods and Results

Conclusion

Demonstration

Application

Contents

Introduction

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Make sure you clearly articulate what's the big picture idea you are studying, and have your audience understand:

- What are we talking about?
- What is your **research question**?
- Why is it important?
- How do you study this (what do you do, briefly)?
- (Longer presentations: include a "literature review" slide and a preview of findings.)

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Spend 1-2 minutes on your introduction (you have 6 minutes in total).

Context

Now that your audience is thinking about the general topic and question that you want them to think about, let's go into some details:

- Where in space and time is your data from?
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Sometimes it might be useful to include some images (e.g. if you are talking about a network of charter schools, include a picture of a school site, if you are evaluating the rollout of a policy, show us the evolution of the adoption of the policy over time).

Be brief here, don't spend more than 1 minute of your short presentation slot (you can reinforce some aspects of the context in the Data section).

Contents

Data

This is a short list-type slide where you mention your data sources. It naturally flows from the Context slide: you just told us the policy you are evaluating and the outcomes you are measuring, now tell us where did you get the data to measure the impact of the policy on the outcomes.

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You spend the least amount of time in this slide: just name drop your sources and indicate simple details like the time span of your data (e.g. "I collected the policy rollout data from EdChoice, and I used state-level math and reading NAEP scores for 4th graders from 1992 onward").

(Disclaimer: some research papers have a heavy "data creation" component, and they spend substantial time on their Data section; this is probably not your case.)

Methods

In the intro you already told us briefly what you're doing to study your research question; now go into more details. For example, if you are conducting a DiD analysis, is it a simple 2x2 analysis or do you have a generalized DiD with a continuous treatment and different adoption periods? If you are using an IV estimator, what is the instrument for your endogenous variable and why should we believe the exclusion condition holds?

This is the slide where you might want to write an equation or two.

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Given that we have only covered very popular methods, and you are not inventing new methods, you should allocate no more than 30 seconds to this slide.

(Disclaimer: methods papers, where the authors invent new methodologies, spend a big chunk of time on this section.)

Results

We know what you are studying, we know where/when this is taking place, we know the data you are using and the methods to analyze this data. Now show us what you found!

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This slide is usually just a table (and maybe some plots). You can include some robustness checks either in the same table or in a separate slide (e.g. do your results change significantly if you include some control variables? definitely show a graph demonstrating that parallel trends seems to hold in your setting if you are writing a DiD paper!)

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Spend about 1 minute on this slide.

Contents

Conclusion

Now that we know your results, tell us what you think, the policy implications, the *so what*.In this short presentation format, you might want to squeeze your policy recommendation with your concluding thoughts.

Remember you'll also have a few minutes of Q & A right after your presentation. You can use this final slide wisely to prompt the kind of questions you might receive (e.g. you can suggest another related policy and pose that it might have similar results, then someone in the audience can ask you about this related policy or the external validity of your results).

Contents

The Short-Run Effects of Education Savings Accounts on Private Enrollment

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Introduction

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Introduction

- Education Savings Accounts (ESAs) laws have been enacted across various states over the past decade.
- These ESAs allow families to use public resources to fund private education endeavors, in lieu of attending public schools.
- ESAs are becoming popular: there are over 30 states currently discussing ESA-related policies and 15 states have already implemented at least one of such policies.
- Yet, the *causal* impact of these ESA laws have not been studied.

Introduction

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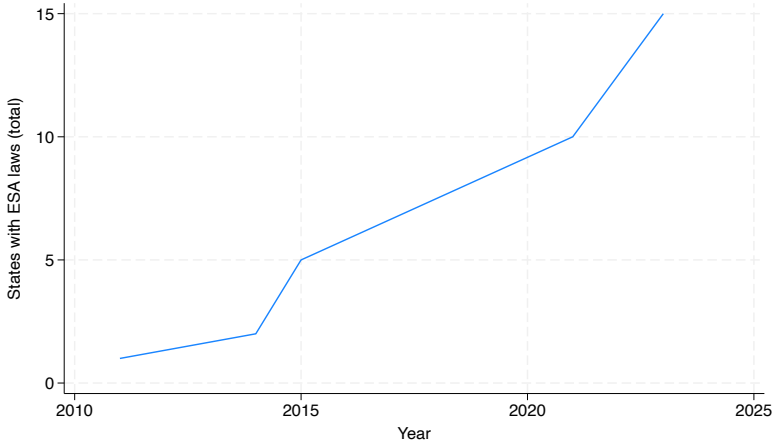
- Measuring these initial effects is important to inform the expansion of such policies, both increasing coverage within states, and replicating similar policies across states.
- I estimate the causal effects of ESAs by leveraging the staggered rollout of ESA-laws across states in a (generalized) Difference-in-Differences (DiD) framework.

Context

AZ passed the first ESA law in 2011, 14 states have followed suit over the past decade.



We will estimate the effects of these laws on state-level private school enrollment.

Data

I combined two data sources for this project:

1. Education Commission of the States (ECS): years ESA laws were implemented in each state.
2. National Center for Education Statistics (NCES) of the Department of Education (DOE):
   - Private enrollment per state coming from the Private School Universe Survey (PSS); biannual from 1991 onward.
   - Public school enrollment per state coming from the Common Core of Data (CCD); same years.

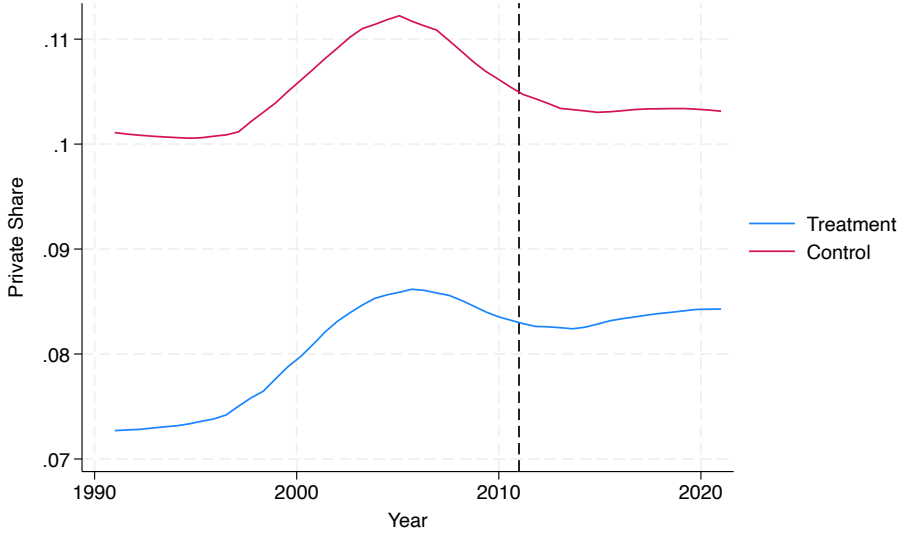
Methods

I estimated the average treatment effect that ESA laws have had on the private enrollment rates of treated states (ATET) by using a difference-in-differences (DiD) regression with a staggered rollout of the treatment:

$$PrivateEnrollment_{st} = \alpha + \beta Treat_s \times Post_t + \gamma_s + \delta_t + \varepsilon_{st}$$

where β is the causal parameter of interest (ATT) and γ_s and δ_t are state and year fixed effects.

Parallel Trends



Results

	(1) Private Share of Enrollment	(2) Private Share of Enrollment
Treatment × Post-Period	0.0113*	0.00804*
	(0.075)	(0.094)
Observations	814	508

Column (1) uses the full sample. Column (2) restricts the sample using data from 2003 onward.

p-values in parentheses

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

Conclusion

- We observe small but significant short-term effects of ESA laws on private enrollment.
- These results indicate that parents respond to ESA incentives by moving students from public to private schools, even in short time periods after ESA policies are implemented.
- This suggests that the expansion of ESA laws might substantially reduce public school enrollment rates en the coming years, which is relevant for designing supply-side policies of public schooling in the US.
- These ESA laws might have other effects, e.g. instead of only shifting enrollment from public to private schools, they might increase homeschooling rates. These are out of the scope of this research project.

Contents

Application: The Impact of ESAs on Private Enrollment

Stata