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Introduction

- Universal pre-k has expanded rapidly to broaden access to high-quality early learning, with seven states and Washington, D.C., now enrolling more than half of four-year-olds^{1,2}
- Prior research documents system-level effects of UPK on child outcomes^{3,4}, family labor supply^{5,6}, and early education markets.⁷
- Despite growing interest in using UPK to bolster public school enrollment^{8,9}, the impact of UPK on system-level enrollment is less understood
- In fragmented ECEC markets, UPK may change how families engage with public schools, such as:
 - promote “stickiness” and structural continuity^{10,11}
 - shape schooling choices via a “foot-in-the-door” mechanism^{12,13,14}
- Examine impact of D.C.’s UPK expansion on public K-5 enrollment, using population-level data representing 1M+ students across 25 years.

Research questions

1. What is the impact of D.C.’s universal pre-k expansion on public school system K-5 enrollment?
2. Through which pathways did universal pre-K generate enrollment gains—increasing participation among school-eligible children, between-sector shifts, or both?
3. What mechanisms explain UPK’s contribution to increased public school participation?

Data and Methods

Data

- Public school PreK-5 enrollment counts from the Common Core of Data (CCD) (1999-2023)
- School-aged population estimates retrieved from the Stanford Education Opportunity Project’s Neighborhood Segregation Data (2000-2022)¹⁵
- DC birth count estimates retrieved from DC Office of the Deputy Mayor for Education (1999-2022)¹⁶
- Next: *private school enrollment counts from Private School Universe Survey (PSS)*

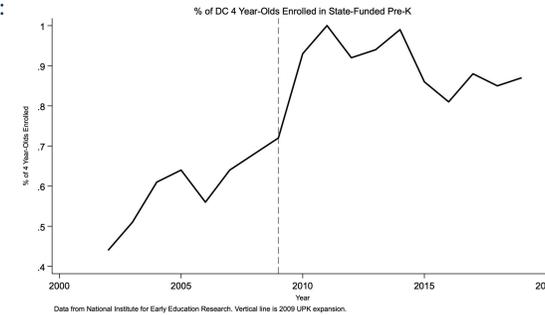
Methods

Compare enrollment changes in treated versus control units before and after UPK implementation using 3 approaches that address distinct concerns:

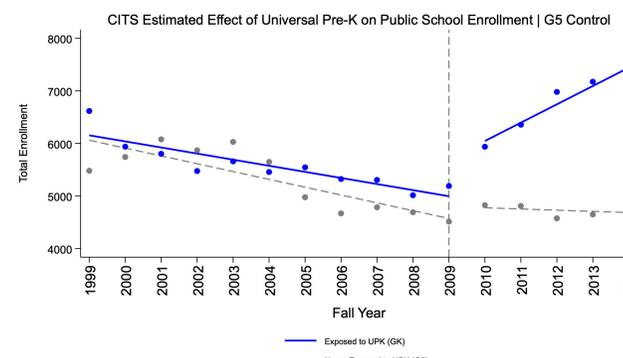
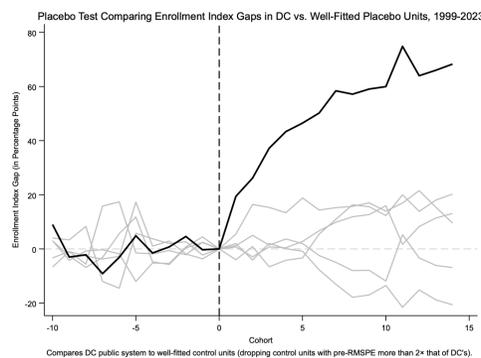
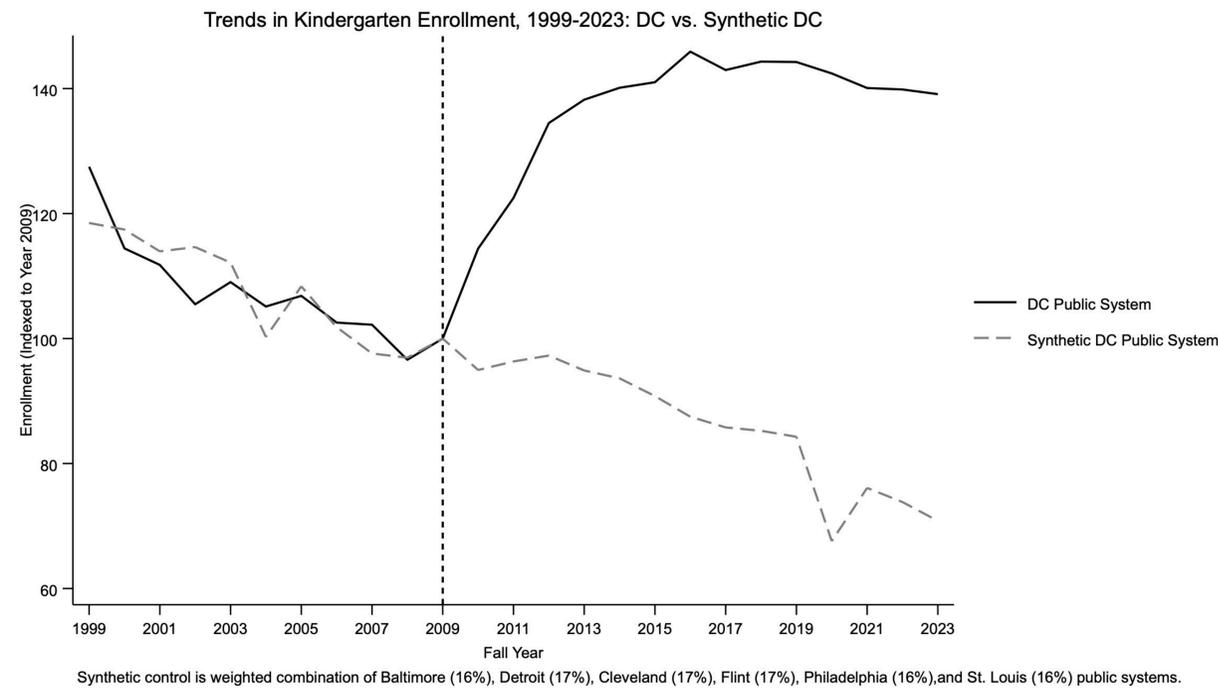
- Interrupted Time Series: DC’s pre-existing enrollment trends
- Synthetic Control: Broad, macro secular events (e.g., 2008 Recession)
- Comparative Interrupted Time Series: localized, DC-specific events (e.g., Rhee-era reforms); sibling spillovers

D.C. Universal Public Pre-K Expansion

- Pre-K Enhancement and Expansion Amendment Act of 2008: high-quality, public, universal pre-K for all DC 3- and 4-year-olds. Full expansion in fall 2009.
 - \$68.4 million across 5 years to expand pre-k seat access, centralize governance through the public system (OSSE), and improve quality of pre-k programs.
 - Explicit goal to counter declining enrollment; strengthen the financial stability of the public school system.⁸
- Today, DC UPK is most highly ranked program in US. Enrolls 95% of 4-year-olds compared to 37% nationally.¹



Key Finding: UPK increased public kindergarten enrollment by 20%, with effects growing over time.



Discussion

- UPK reversed 10+ years of enrollment declines to sustained growth; Generated gains across K-5 and all student subgroups.
- Net gains driven by:
 - Significantly larger kindergarten cohorts rather than changes in between-grade retention
 - Gains in the traditional public school sector (DCPS)
 - Larger share of school-aged kids participating in public k (+10pp)
- Two likely mechanisms:
 - Quality: UPK expansion was accompanied by substantial investments in pre-k instructional quality and vertical alignment. State pre-K investments rose by an estimated \$50 million, 40%+ over predicted spending
 - Compositional Changes: Post-UPK pre-k cohorts became larger and more representative of the wider DC child population. Total pre-k capacity grew (+17% growth), and net gains were largest in previously underrepresented groups (+30% growth among White students).
- Suggest that ECE policy can shape participation of the broader public education system.
 - Relevant as public school districts grapple with post-pandemic enrollment losses and increasing competition from school choice alternatives.
- Limitations: findings are specific to D.C.’s highly invested UPK model.
- Next Steps: better answer the question of where kids came from by analyzing private school enrollment shifts.

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