Pandemic-Era Public School Disenrollment Across the Income Distribution

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Public school enrollment in Oregon declined during the COVID-19 pandemic (Jacoby & Stalcup 2022)

- Public schools switched to predominantly virtual options from March 2020 through much of the 2020-21 academic year (AY2021)
  - In-person instruction resumed April 2021; AY2022 was fully in-person
- Public K-12 enrollment dropped by approx. 5% (30,000 students)
  - Initial drop in AY2021 followed by a second drop in AY2022
    - Some neighboring states did not experience a second drop
  - Homeschooling estimated to explain 60%+ of enrollment drop
- Enrollment declines concentrated among white students

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How has public school enrollment changed across the income distribution?

- We document public school enrollment patterns by family income from AY2017-AY2022
  - Parallel analyses of administrative record and ACS samples
- Investigate variation across grades/cohorts
- Evaluate agreement on school enrollment between ACS responses and K-12 administrative data

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Data & Methods

	ADREC	ACS
Years	AY2017-AY2022	AY2017-AY2023
Population	School-aged children claimed on tax returns filed in OR	School-aged child respondents to the ACS in OR
Outcome	• Enrolled in public school (ODE admin data)	• Enrolled in public school • Enrolled in private or homeschooling
Income measure	Adjusted gross income in 2019 dollars	Household income in 2019 dollars
N	Approx. 580,000/year	Approx. 7,500/year
Method	• Uses PIKs to link data sources • No weights • Regression-based estimates at key income values	• No linkage • Sample weights; rescaled when excluding imputed income • Survey means by high/mid/low income groupings

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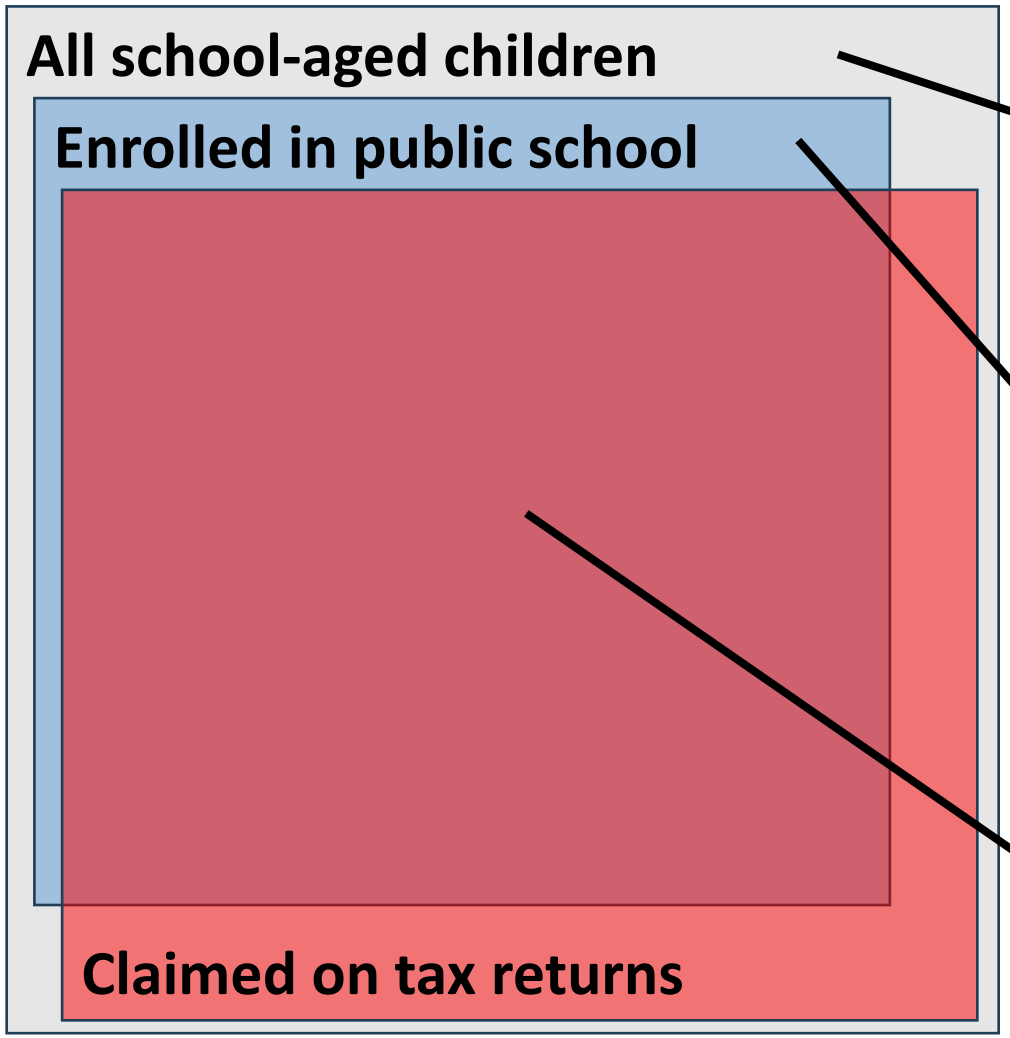
Who might the ADREC approach miss?



Kids not enrolled and not claimed are missed

No income observed for kids enrolled but not claimed

Pandemic-induced changes in the tax-filing population

- More likely to miss disadvantaged families (Clark & Bhaskar 2025)
- ACS offers helpful comparison point
  - But non-response bias still a concern

- ADREC analysis focuses on changes within inflation-adjusted income ranges as opposed to quantiles

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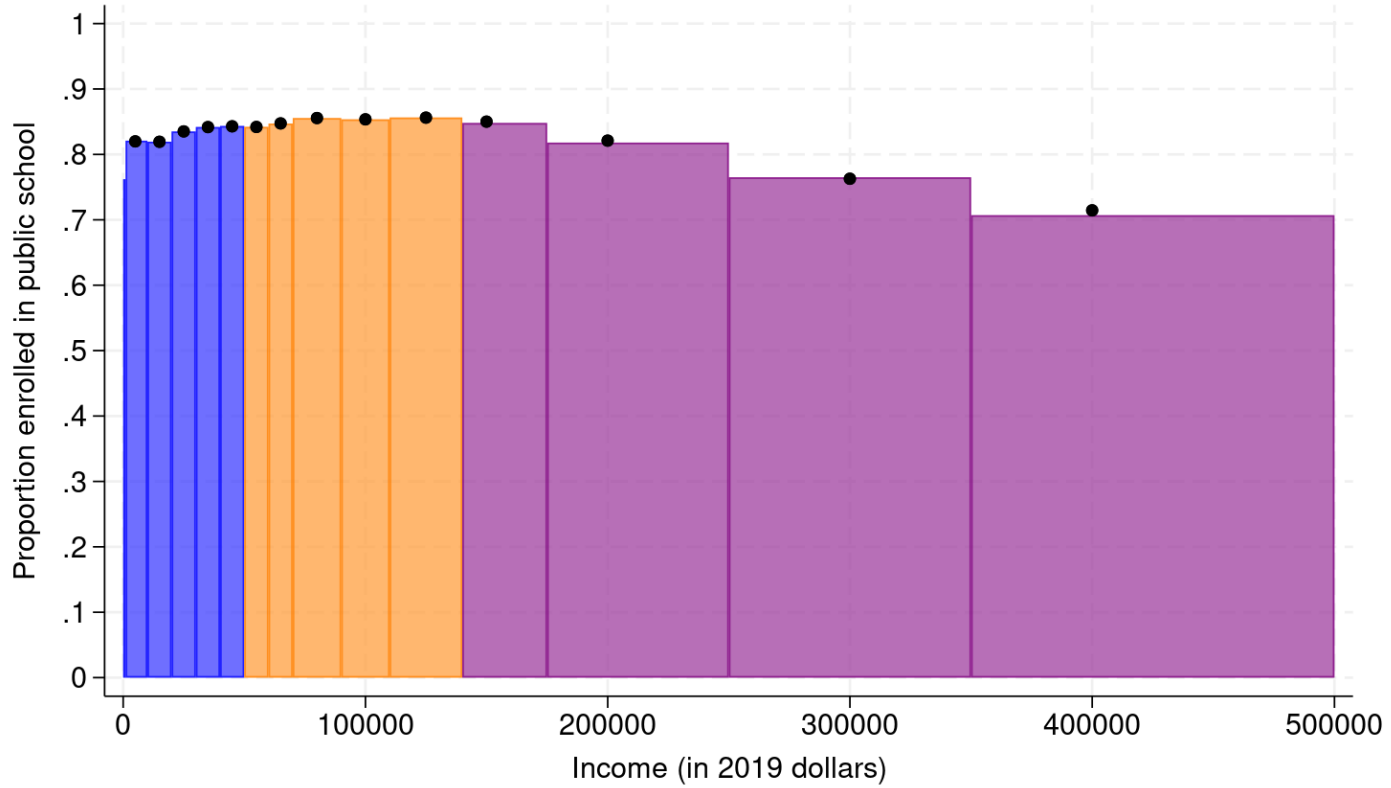
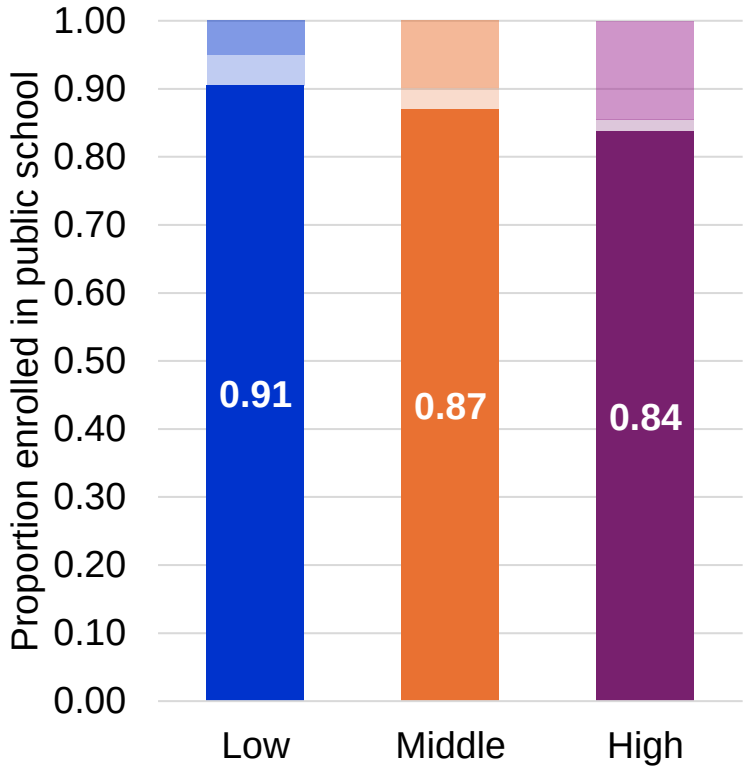
Public school enrollment by income in 2019

ADREC



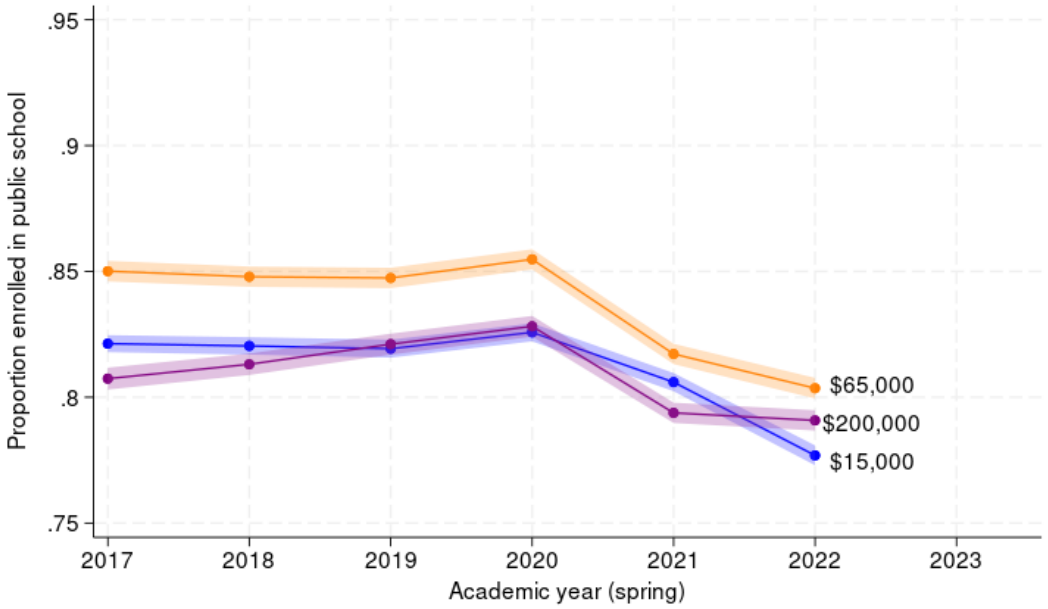
ACS



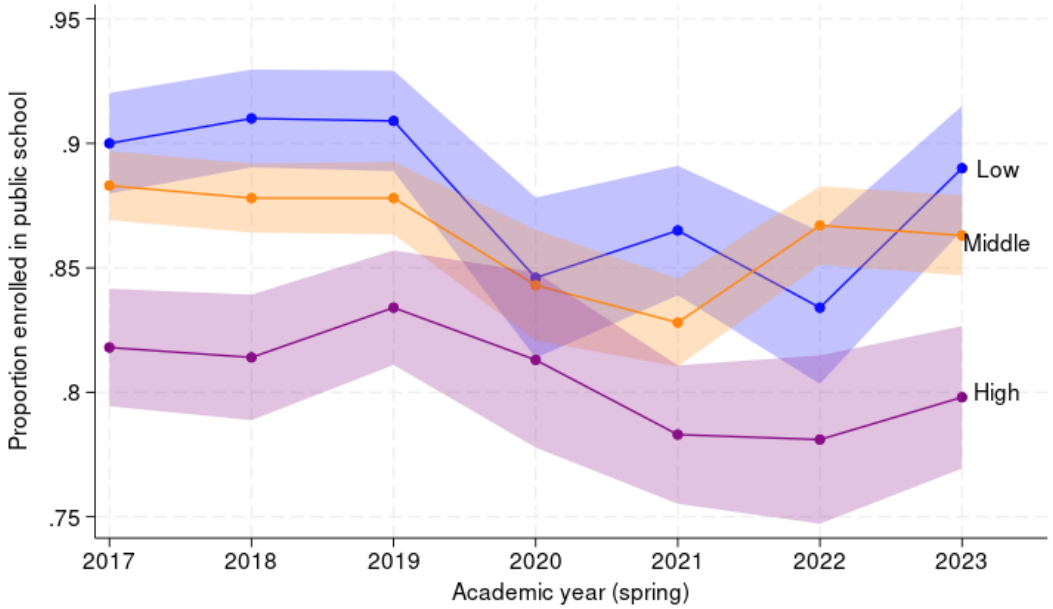
Note: bars in ADREC graph show mean enrollment for corresponding bin; black dots display model-based estimate for a given income value within the bin. In the ACS graph, the darkest portion of the bar reflects survey-reported public school enrollment, while the lightest portion reflect non-enrollment, and the medium portion at the top reflects private/homeschool enrollment.

Public school enrollment trends by income

ADREC



ACS



In the ADREC sample…

- Sustained decline for low-income students is happening in higher grades
- Kindergarten enrollment is starting to rebound, but enrollment levels remain well under pre-pandemic levels, especially at higher incomes

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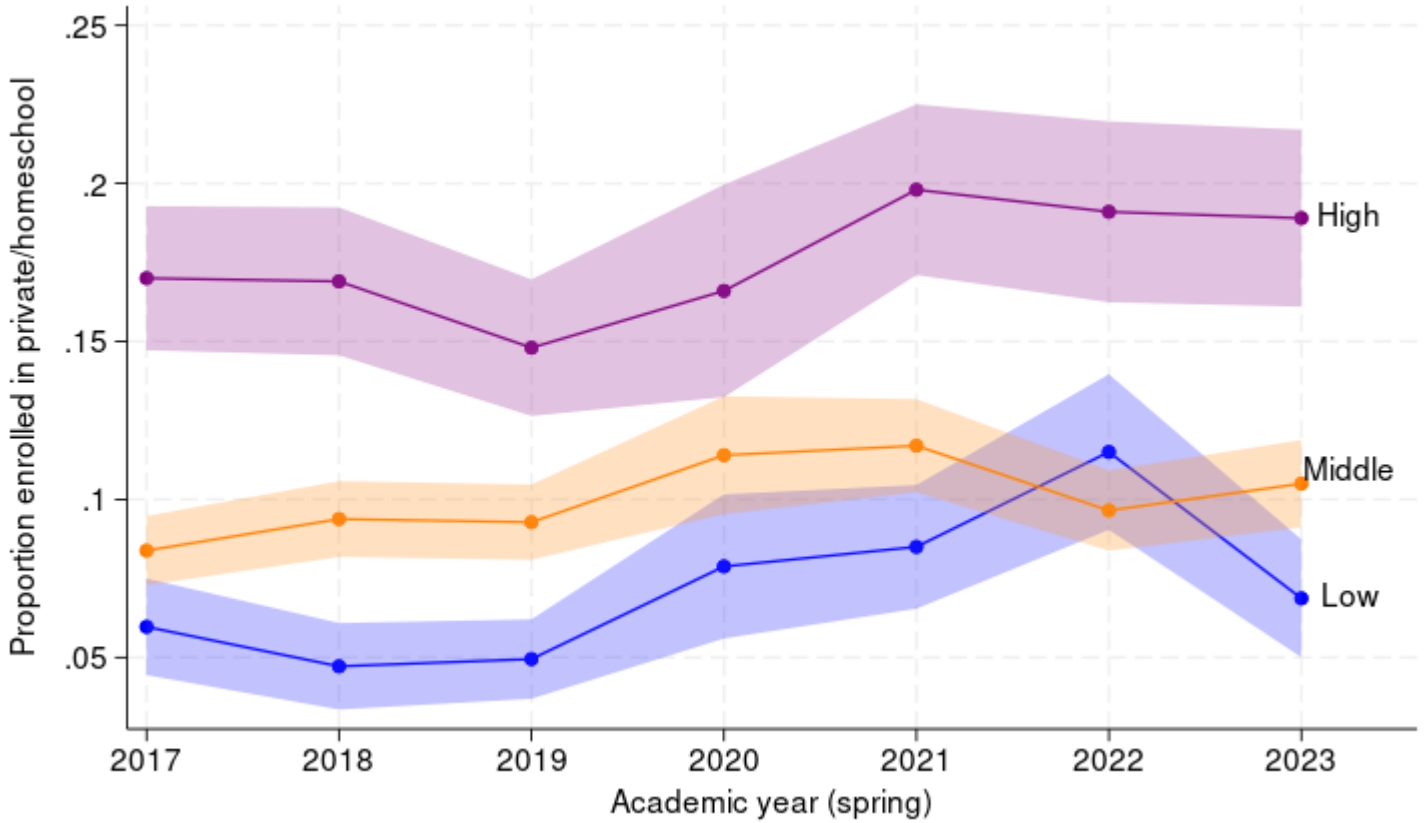
Private/homeschool enrollment in the ACS



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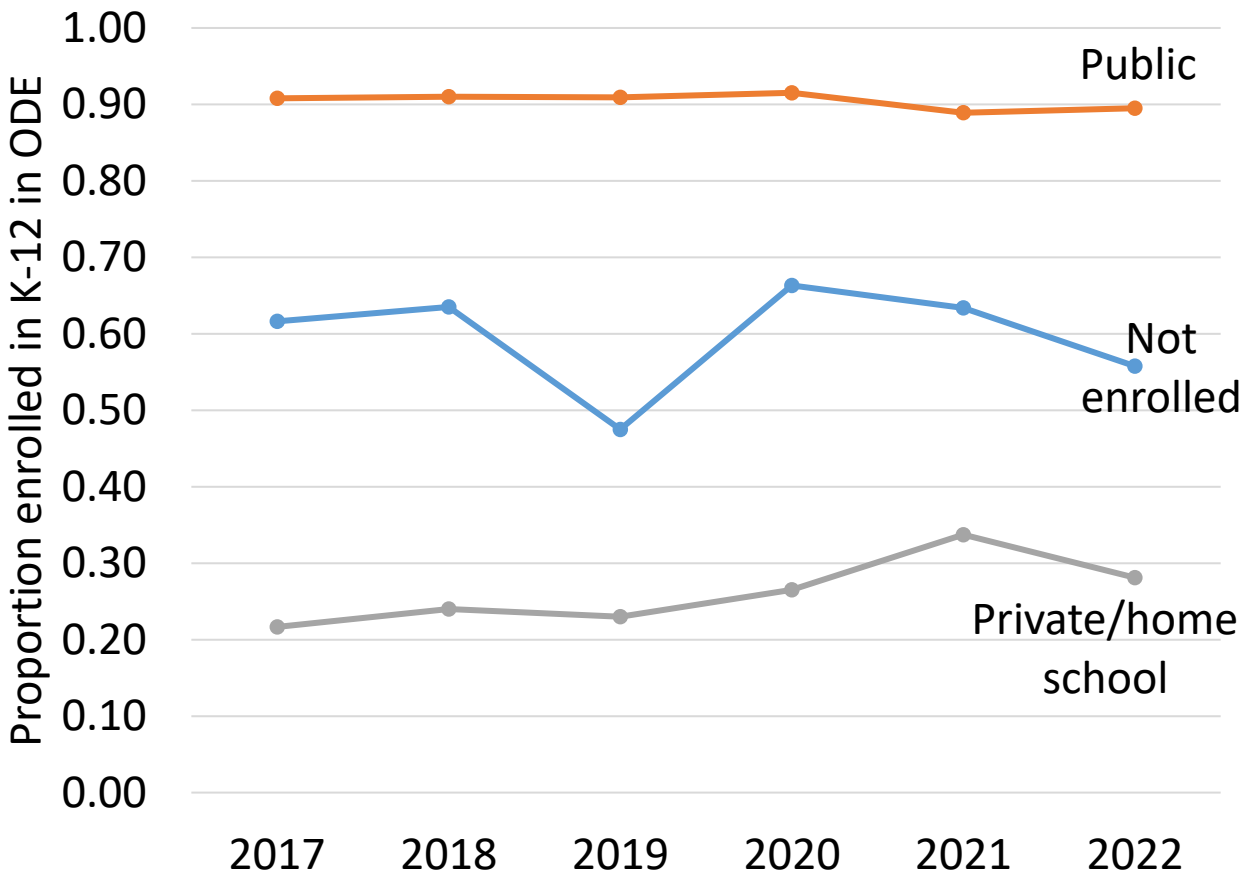
Observed ODE enrollment by ACS response

- Restricts the ACS sample to children with PIKs and links in ODE enrollment flags
  - Sample weights rescaled by inverse prob. of having PIK
- For each ACS school enrollment response, what proportion appear in ODE K-12 administrative records?



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Next steps

- Add additional years of data—is there a recovery?
- Evidence of “true” high school dropout among low-income students?
- Who is opting into virtual schooling?
  - Do virtual students appear as enrolled in public school or homeschool on the ACS?

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Thanks!

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Appendix

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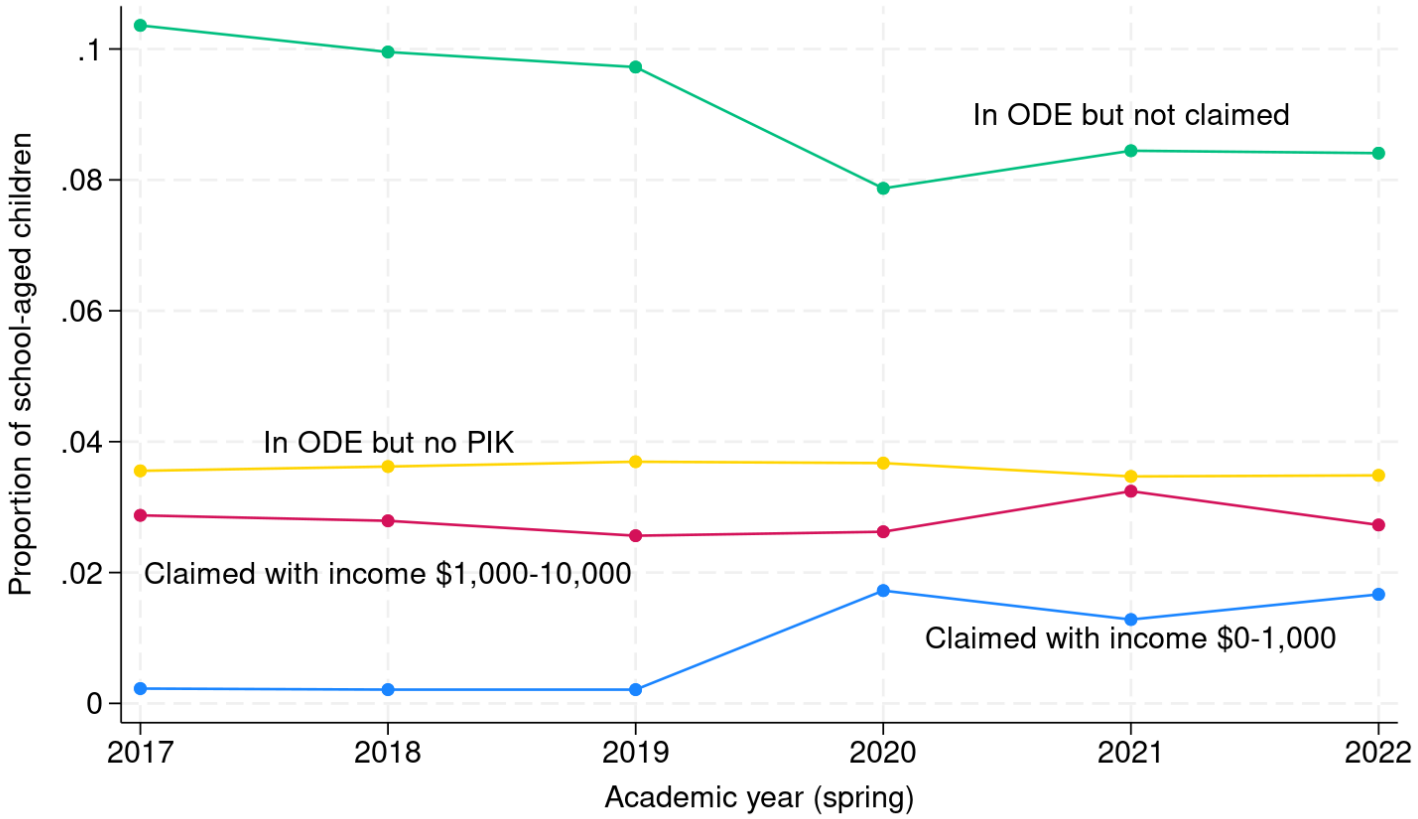
Pandemic-induced tax filing and income changes



Note: The groups “In ODE but not claimed” and “In ODE but no PIK” are excluded from the analyses presented for the ADREC sample generally, since these students are all enrolled in ODE by definition. However, the decline of the proportion “In ODE but not claimed” reveals changes in tax-filing behavior that may be moving more children into our sample. Many of these children may be linked to income between $0-1,000, so we isolate this income range in our modeling approach, and focus on trends for income levels less likely to be impacted by changes in tax-filing behavior.

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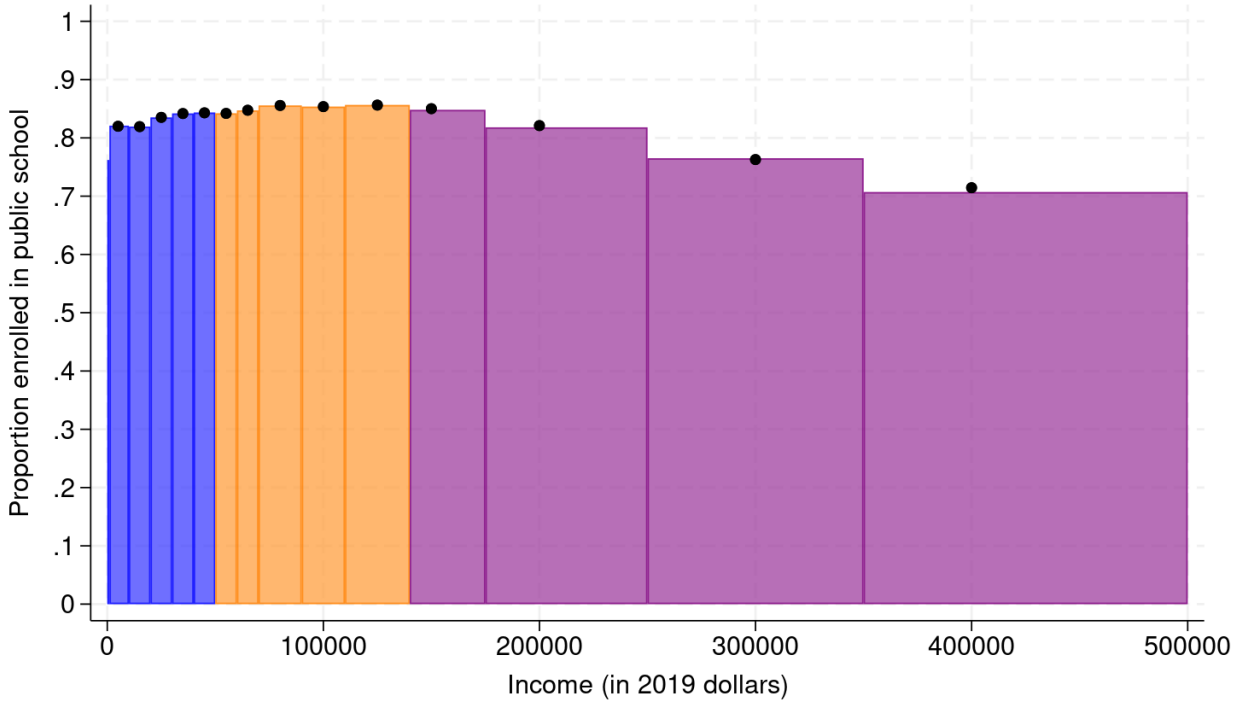
ADREC modeling approach



- Regress an indicator for public school enrollment on ln(income) interacted with indicators for each income bin depicted in the figure
  - Essentially fitting a spline
- Black dots reflect predicted values at key incomes of interest (e.g., $200,000)
  - Bars reflect mean enrollment for entire income bin

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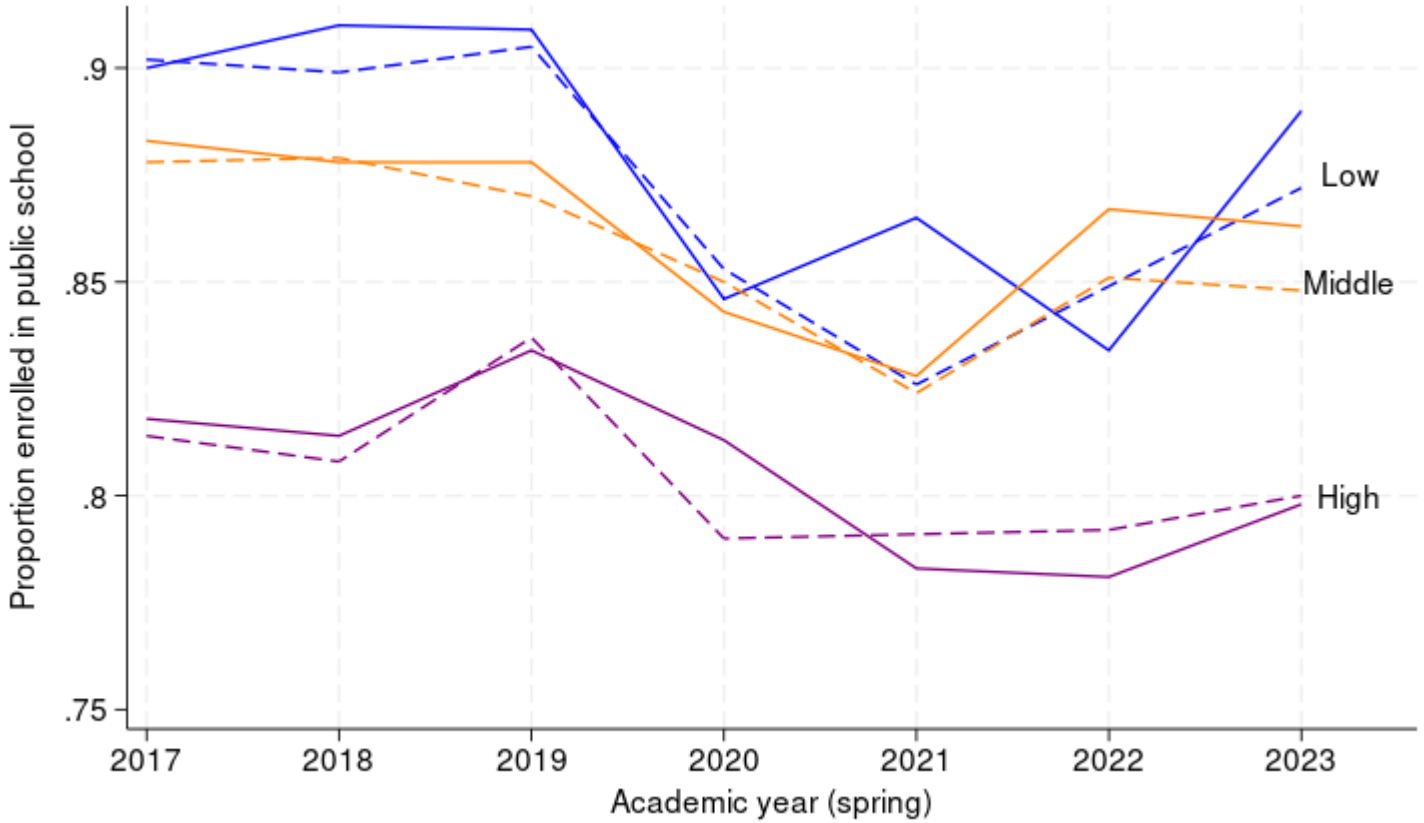
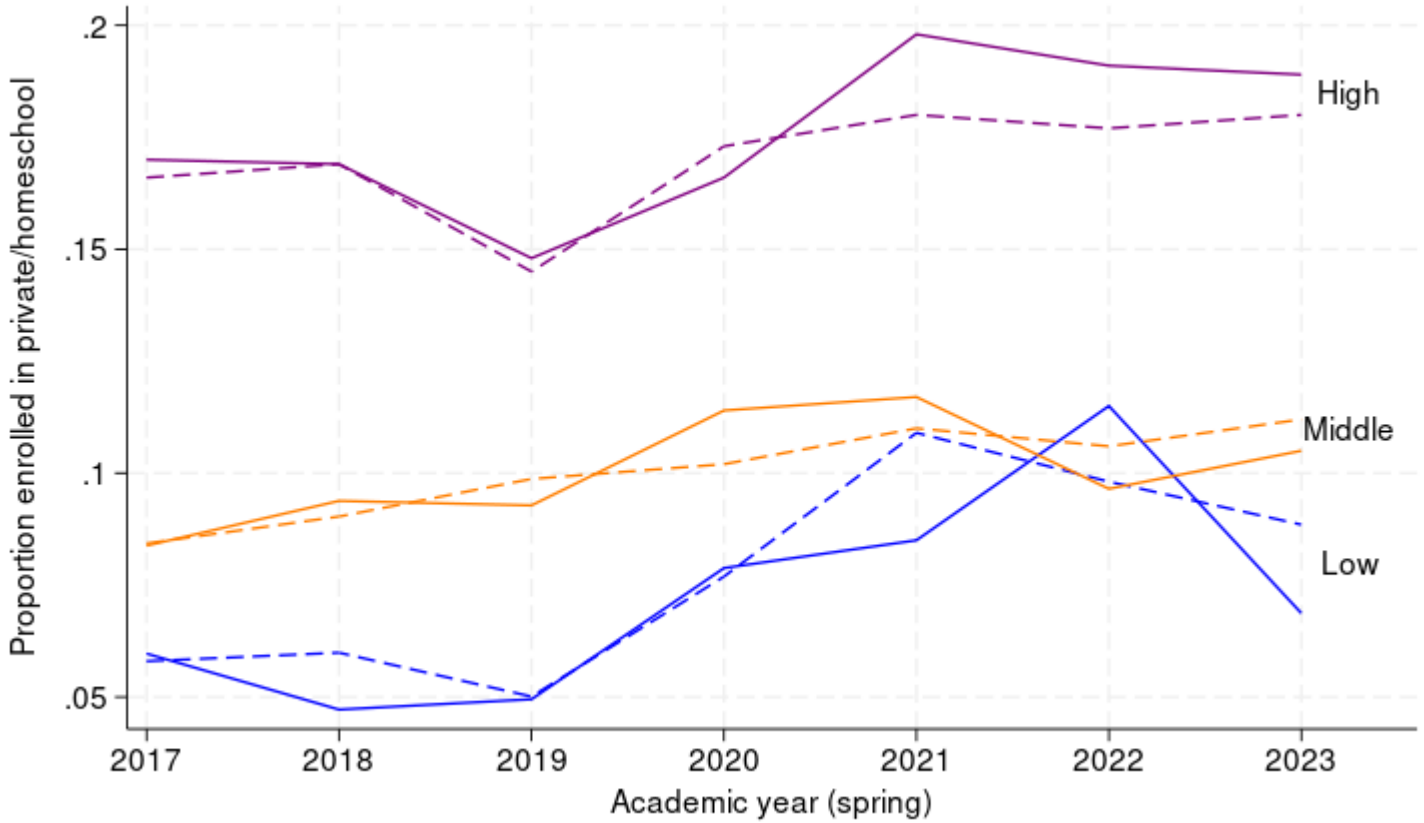
ACS public school enrollment with allocated income



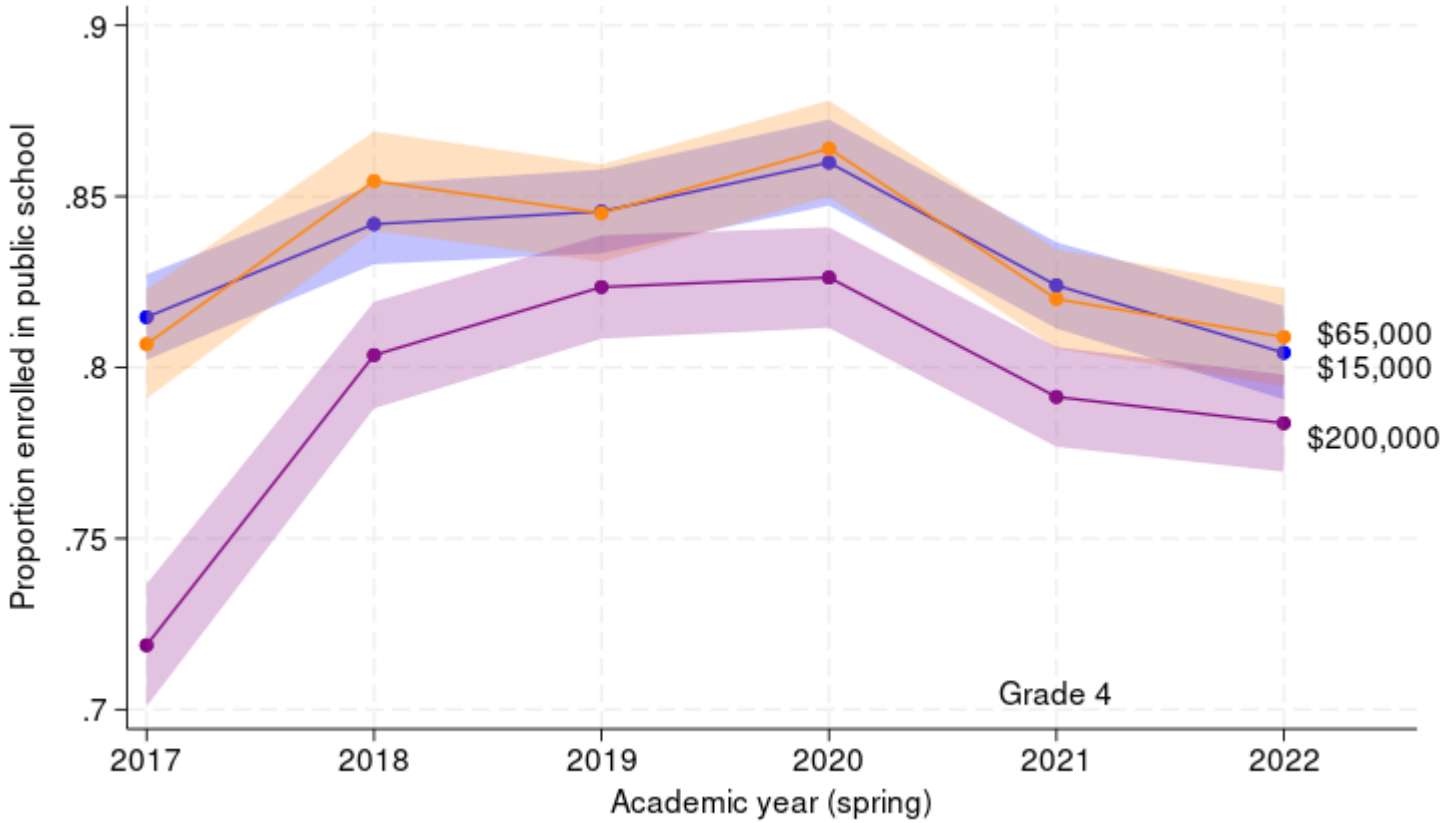
Note: Solid lines exclude records with allocated (imputed) income—roughly one-third of the sample. Dashed lines retain these records. We prioritize the solid lines in the main presentation due to evidence that imputation might overstate household income.

ACS private/homeschool enrollment with allocated income



Note: Solid lines exclude records with allocated (imputed) income—roughly one-third of the sample. Dashed lines retain these records. We prioritize the solid lines in the main presentation due to evidence that imputation might overstate household income.

ADREC Cohort: Students in Grade 4 in AY2021



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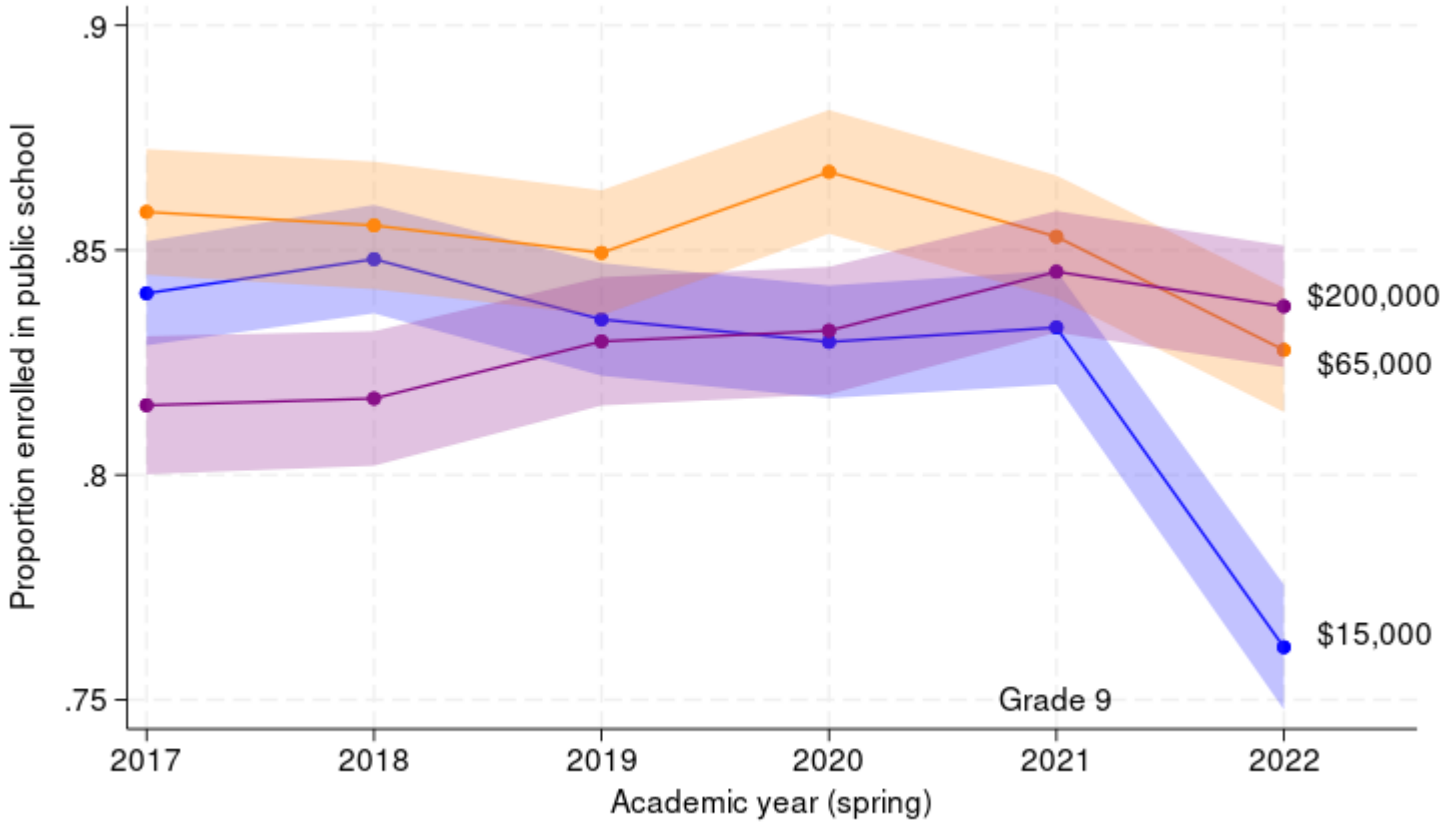
ADREC Cohort: Students in Grade 9 in AY2021



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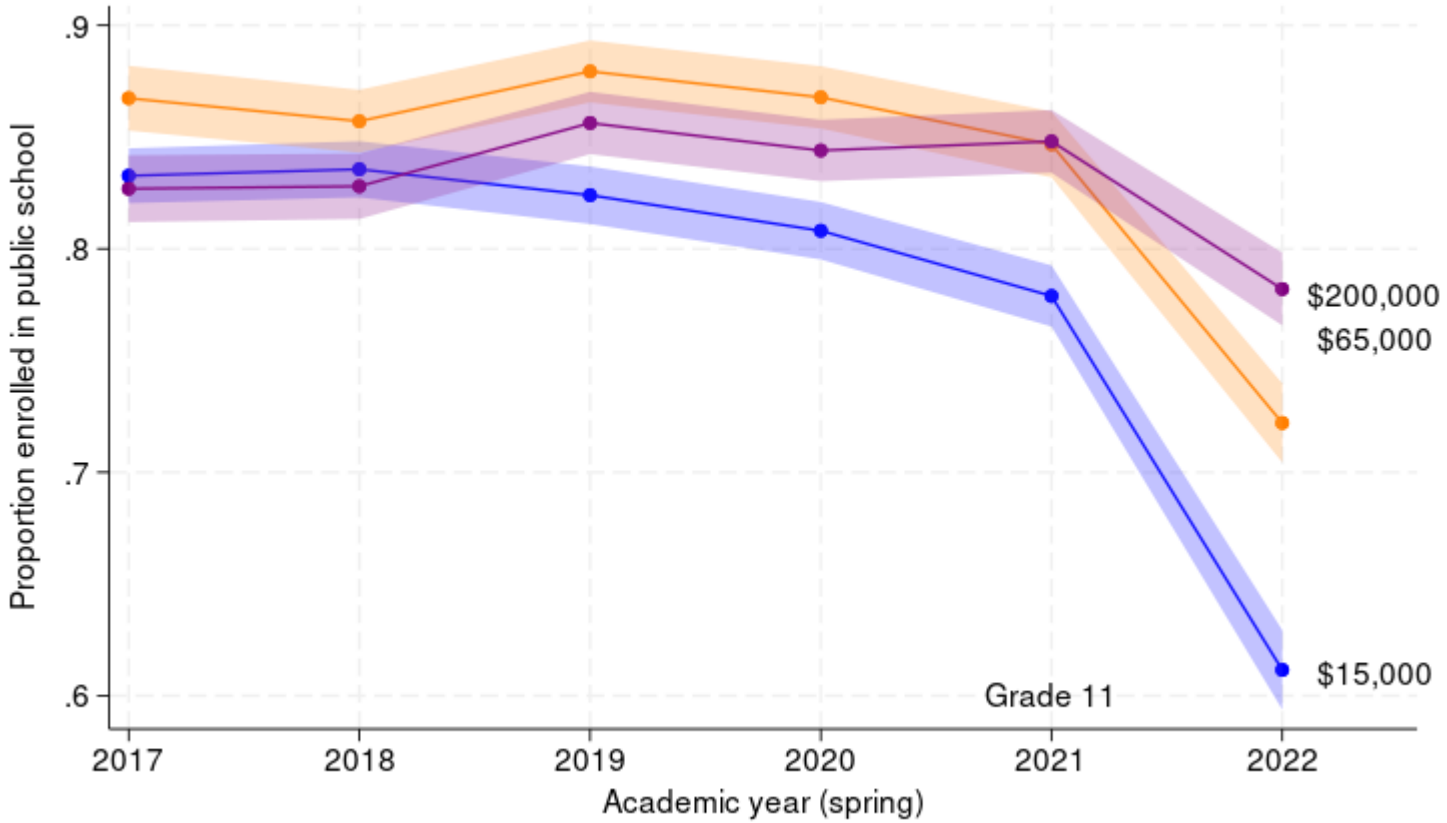
ADREC Cohort: Students in Grade 11 in AY2021



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