

METHODOLOGY AND DATA COMPANION

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Keeping Pace with Inflation? A Panel of U.S. Jewish Day School Tuition

Methodology and data companion to the working paper

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A full white paper, with the complete introduction, related literature, data and design, results, discussion, limitations, conclusion, and references, is available on request.

© 2026 Heshbon and the author. This companion explains how the working paper was built and how to read its results. It can be shared and cited with attribution.

At a glance

Research question	How fast did published Jewish day school tuition rise, did it keep pace with inflation once prices are adjusted, and is real tuition growth linked to local home-value appreciation?
Data	An annual benchmarking panel of 165 schools (773 school-years, 2017-18 to 2025-26), a separate set of 73 verified school-division price histories carrying ZIP codes, national price indexes, and Zillow home values.
Unit of analysis	The individual school or division, repricing itself across consecutive years, rather than a family or a household.
Statistical method	A first-difference (change-score) regression with heteroskedasticity-robust standard errors, read alongside inflation-adjusted growth rates and indexed benchmark series.
Headline finding	Median tuition grew 3.43% per year, median real growth was close to zero (0.11% under national CPI-U), and no reliable link appeared between home-value growth and real tuition growth (coefficient -0.031, $p = .775$).
What it shows	Posted prices broadly preserved purchasing power on net, while the year-by-year path swung with whatever inflation happened to be doing.

The question behind the paper

The common story about Jewish day school tuition is one of runaway growth outpacing what families can absorb. This paper tests that story against an annual record of posted prices rather than a comparison of two distant endpoints, and it turns out the year-by-year path answers the question differently than the endpoints alone. It asks how fast tuition actually rose, whether it kept pace with consumer prices once inflation is netted out, and whether real tuition growth tracks the appreciation of local home values.

Where the data come from

An annual benchmarking panel. The primary source is the tuition module of a national benchmarking platform, exported for the full peer group of participating Jewish day schools. It

reports posted tuition (before financial aid, exclusive of fees) grade by grade for every year a school submitted, yielding an unbalanced panel of 165 schools and 773 school-years between 2017-18 and 2025-26. Because coverage grows over time, cumulative change is estimated on a balanced subsample of the 37 schools present in every year from 2018 onward, with the full set of 557 consecutive-year pairs reported alongside as corroboration.

A verified price dataset with geography. The benchmarking export carries no identifier finer than city and state, so the housing comparison rests on a second dataset of 73 independently verified school-division price histories that do carry ZIP codes. Each observation pairs a baseline tuition (generally 2016-17) with a latest verified tuition taken from the school's own

published page, with the exact source URL retained.

Public price and housing benchmarks. Real values deflate posted tuition by the June CPI-U (all items, U.S. city average, not seasonally adjusted). The comparison set adds Census-region CPI-U, the PCE price index, C-CPI-U, the private K-12 tuition CPI, the Employment Cost Index for private educational services, the Producer Price Index for new school construction, and the Zillow Home Value Index for each school ZIP.

The statistical method, named and explained

The core inferential tool is a first-difference regression, also called a change-score regression, estimated with heteroskedasticity-

consistent HC1 standard errors. Rather than comparing tuition levels across schools, it works in changes: the outcome is each division's annualized log change in CPI-adjusted tuition, and the main predictor is the annualized log change in its ZIP home value, with a high-school indicator and a centered baseline-tuition term as controls. Working in changes cancels out fixed differences between schools, so the estimate reflects whether faster-appreciating neighborhoods saw faster real tuition growth rather than whether expensive schools sit in expensive places. The robust standard errors guard against unequal variance across observations of different sizes. The conclusion is then stress-tested by dropping the single most extreme observation, restricting to pages that name an exact academic year, and swapping national CPI-U for regional CPI-U, none of which changes the result.

Key results from the paper

Table 1. Annual tuition change against inflation, balanced panel of 37 schools.

Year	CPI-U	Median nominal	Median real	Share below CPI
2018 to 2019	1.65%	3.73%	+2.04%	8%
2019 to 2020	0.65%	3.82%	+3.16%	5%
2020 to 2021	5.39%	3.77%	-1.53%	86%
2021 to 2022	9.06%	3.51%	-5.09%	100%
2022 to 2023	2.97%	3.05%	+0.08%	49%
2023 to 2024	2.97%	4.38%	+1.37%	11%
2024 to 2025	2.67%	4.51%	+1.79%	5%

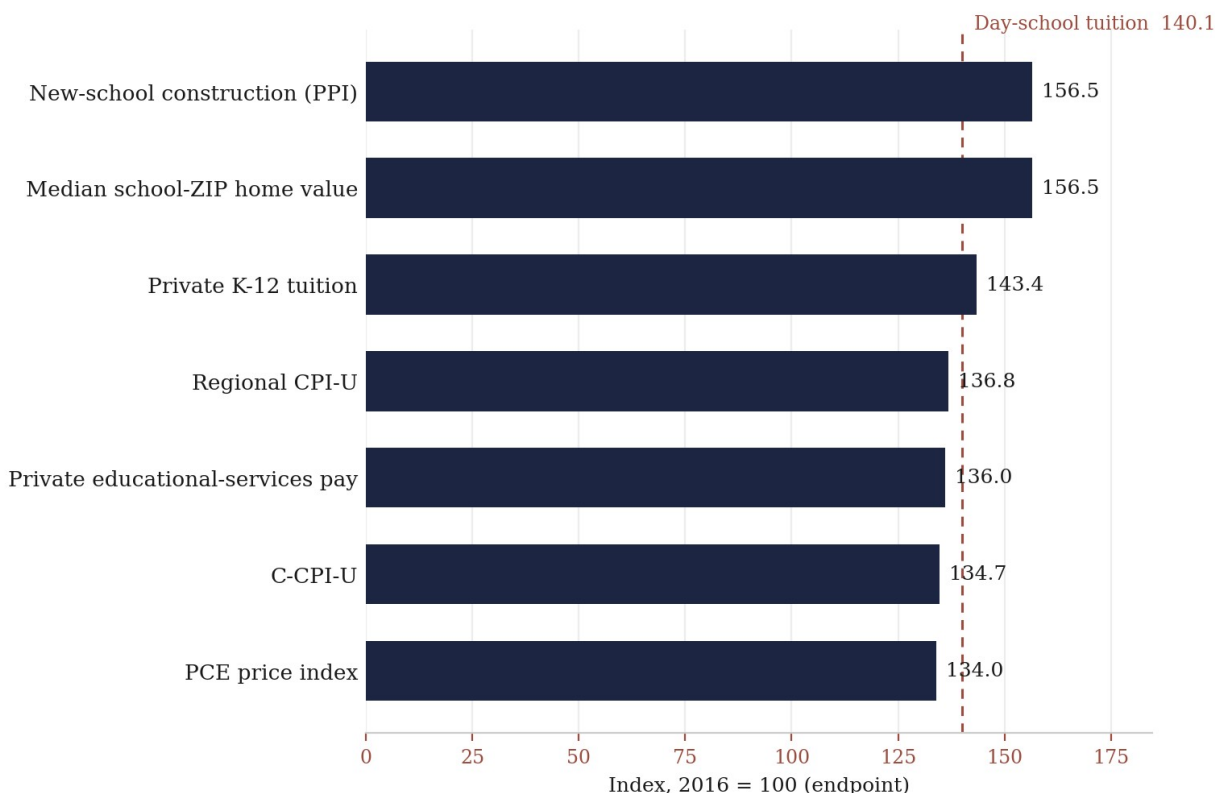
Note. CPI-U is June to June. Nominal and real changes are medians of within-school year-over-year changes.

Table 2. First-difference regression predicting annualized real tuition growth.

Predictor	Coefficient	HC1 SE	p
Intercept	0.0040	0.0054	.460
Annualized log ZIP home-value growth	-0.0310	0.1078	.775
High-school division	-0.0021	0.0042	.625
Centered log baseline tuition	-0.0124	0.0120	.304

Note. N = 73. Outcome is the annualized log change in CPI-U-deflated tuition. R2 = .093; adjusted R2 = .054; RMSE = .0176.

Figure 1. Where tuition landed against its benchmarks, 2016 = 100.



Note. Endpoint index values. The dashed line marks day-school tuition at 140.1; bars above it outpaced tuition, bars below it trailed it.

How to read the results

Table 1 is the heart of the paper. Inflation over these years ran from 0.65% to 9.06%, a spread of more than eight points, while median nominal tuition growth barely moved, holding near 4% throughout. The real column then follows almost mechanically: an ordinary nominal increase delivered a real gain in the calm year of 2019-20 and a 5% real cut in the peak-inflation year of 2021-22, when every school in the balanced panel fell below CPI. Table 2 shows that once real growth is regressed on local home-value appreciation, the coefficient (-0.031) is small and statistically indistinguishable from zero, so faster-rising neighborhoods did not see faster-rising real tuition. Figure 1 places the seven-year endpoint (140.1) just below the private K-12 tuition index and well below both construction costs and home values, both near 156.5.

What the numbers do not claim

These are posted prices, not net prices, so real-price stability is not the same as affordability: the figures measure what schools ask, not what families pay after aid, sibling policies, and discounts. The panel skews toward larger and

more established institutions that participate in benchmarking and away from the Chassidic and yeshiva sector, and the cumulative estimate rests on 37 schools, small enough that the seven-year magnitude should be read with its uncertainty in view. Because the data contain only Jewish day schools, the study cannot say whether near-fixed nominal repricing is distinctive to this sector or common across independent schools.

Reproducing the analysis

The benchmark series are public: the CPI-U, regional CPI-U, PCE, C-CPI-U, private K-12 tuition, Employment Cost Index, and construction PPI series come from federal statistical agencies, and the home-value series comes from Zillow. The 73 verified division prices trace to each school's own published tuition page, with source URLs retained, and the cleaned observations, derived variables, indexed benchmarks, and regression output are held together in the study's supplementary workbook so the growth rates and the first-difference regression can be rebuilt from the same records.