Appendix to "Building Costs and House Prices"
By Brian Potter and Chad Syverson

Table A1. Cross-Sectional Regressions of Compound Average Growth Rates for House Price on Construction Costs and Population Compound Average Growth Rates

Period	N	R^2	RSMeans	Population
1975-80	13	0.674	3.497	0.579
			(0.393)	(0.359)
1980-85	128	0.232	1.670	0.536
			(0.390)	(0.209)
1985-90	154	0.331	5.043	0.197
			(0.632)	(0.264)
1990-95	173	0.136	-1.634	0.436
			(0.344)	(0.196)
1995-00	177	0.020	0.099	0.291
			(0.219)	(0.158)
2000-05	177	0.016	0.989	0.294
			(0.574)	(0.271)
2005-10	177	0.018	0.891	-0.193
			(0.507)	(0.284)
2010-15	177	0.421	-0.677	1.749
			(0.160)	(0.144)
2015-20	177	0.172	0.025	0.502
			(0.194)	(0.113)
2020-24	177	0.165	0.067	1.105
			(0.298)	(0.238)

Notes: House price data are the FHFA metro-specific indexes, building costs are from RSMeans, and population is from Census. Population values for 1975, 1985, 1995, and 2005 are imputed as the average of the population in the city 5 years before and after. Kenosha, WI is not included in this sample but is in Table 3 due to changes in the MSA boundaries causing large population discontinuities. Each row is a separate calculation, using data across cities for that time period.

Table A2. Mean Reversion Test (1980-2024)

	(1) Price-Cost CAGR Diff.	(2) Price CAGR	(3) Cost CAGR
Lagged Price-Cost CAGR Difference	-0.329*** (0.0266)		
Lagged Price CAGR		-0.288*** (0.0296)	
Lagged Cost CAGR			-0.157*** (0.0284)
N	1,360	1,360	1,780
R^2	0.569	0.611	0.906
FE	City and Period	City and Period	City and Period

Note: Standard Errors clustered by City. This table shows regressions of price and cost compound annual growth rates on price and cost compound annual growth rates from the year prior. Price data are from FHFA metro-specific indexes, and building costs are from RSMeans.

Table A3. 2024 Regression of Zillow Sales Prices on RSMeans Building Cost Estimates

	(1) ln(Price)	(2) ln(Price)	(3) ln(New Construction Price)	(4) ln(New Construction Price)	(5) ln(New Construction Price per SF)	(6) ln(New Construction Price per SF)
ln(Cost)	1.568	1.325	1.996	1.687		
	(0.331)	(0.322)	(0.306)	(0.367)		
ln(Cost per SF)					2.156	2.002
					(0.331)	(0.384)
ln(Population)		0.144		0.0967		0.0430
		(0.0417)		(0.0446)		(0.0436)
N	100	100	78	78	74	74
R^2	0.237	0.313	0.531	0.572	0.586	0.594

Note: Price data are median sale prices from Zillow which can be found at https://www.zillow.com/research/data/. Costs are building cost estimates from the RSMeans Square Foot Estimator for an average two story house of average quality with stucco on wood frame siding with an area of 2000 square feet. Population estimates are from the Census Population Estimates Program's Metropolitan and Micropolitan Statistical Area Totals which can be found at https://www.census.gov/programs-surveys/popest/data.html. Robust standard errors in parentheses.

Figure A1. Cumulative Housing Price – Construction Cost Ratio

Panel A. Cumulative Price-Cost Ratio (1950 = 1)
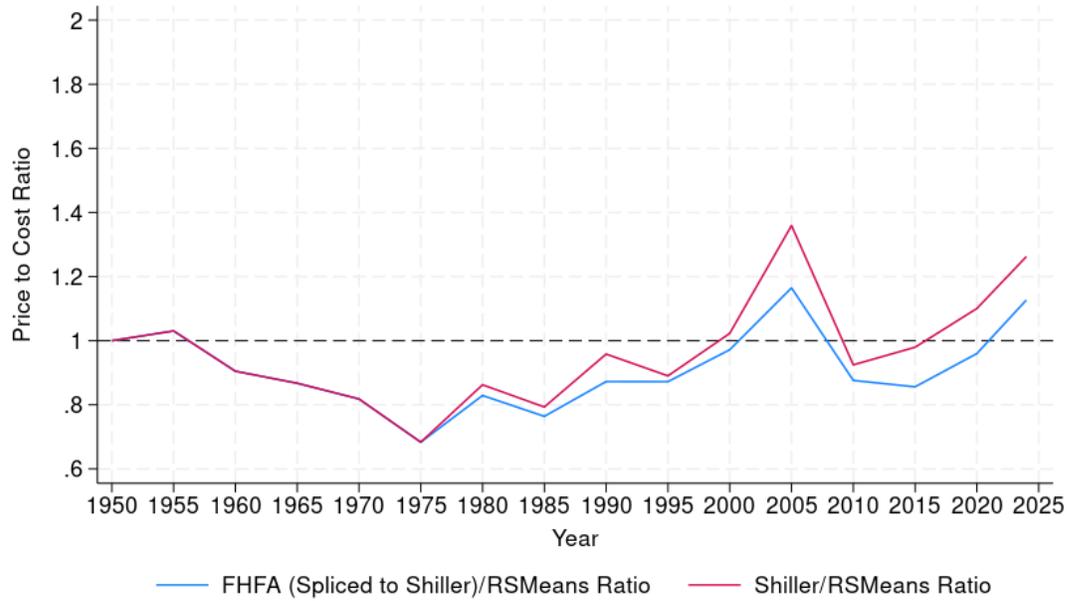
Panel B. Cumulative Price-Cost Ratio (1975 = 1)
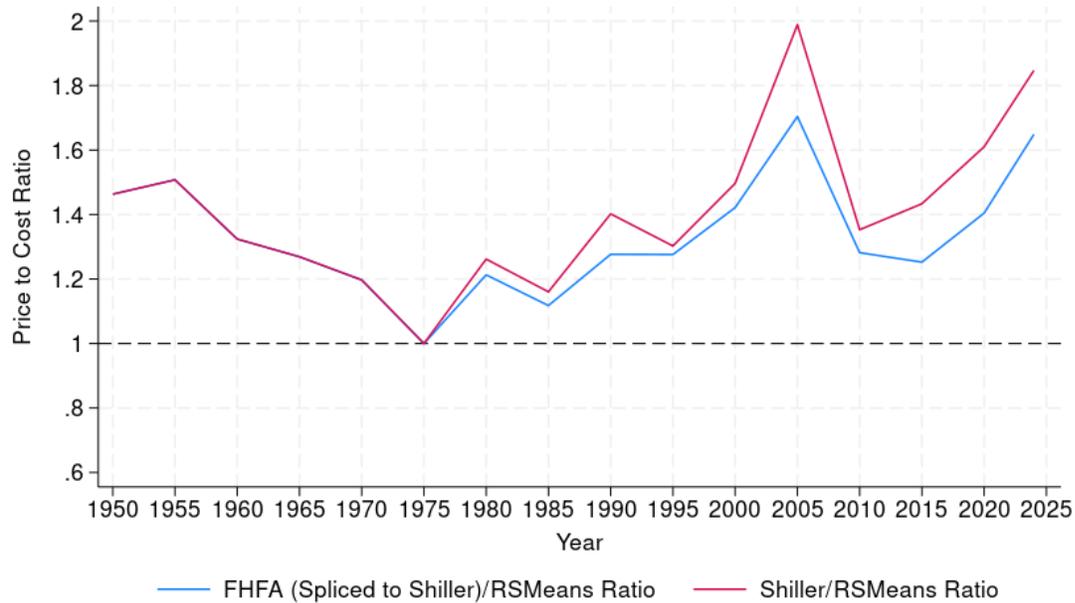
Notes: The figure compares the ratio of two house price indexes to the RSMeans Cost Index. The FHFA index only starts in 1975, so we splice it to the level of the Shiller index that year. We use the series values in every fifth year (those ending in "0" or "5"). Panel A scales the ratio to be 1 in 1950 while Panel B scales the ratio to be 1 in 1975.

Figure A2. Zillow Median New Construction Prices vs. RSMeans Building Cost Estimates
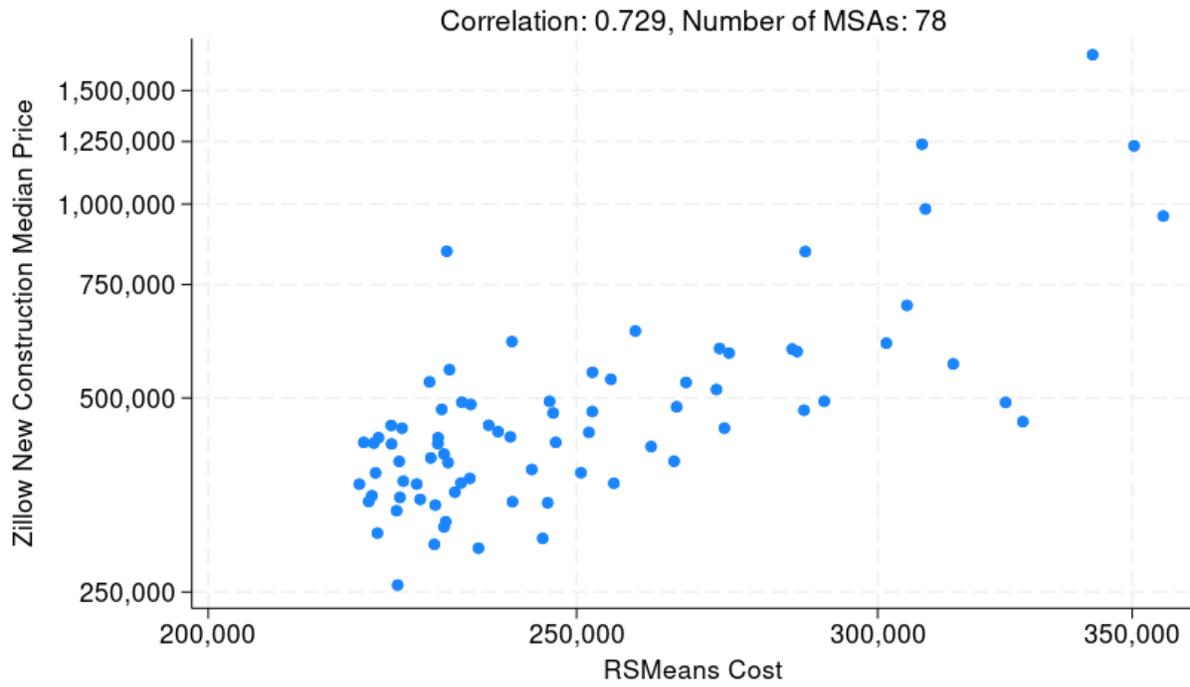
Notes: The Zillow data series are available at https://www.zillow.com/research/data/. The building cost data is from RSMeans.