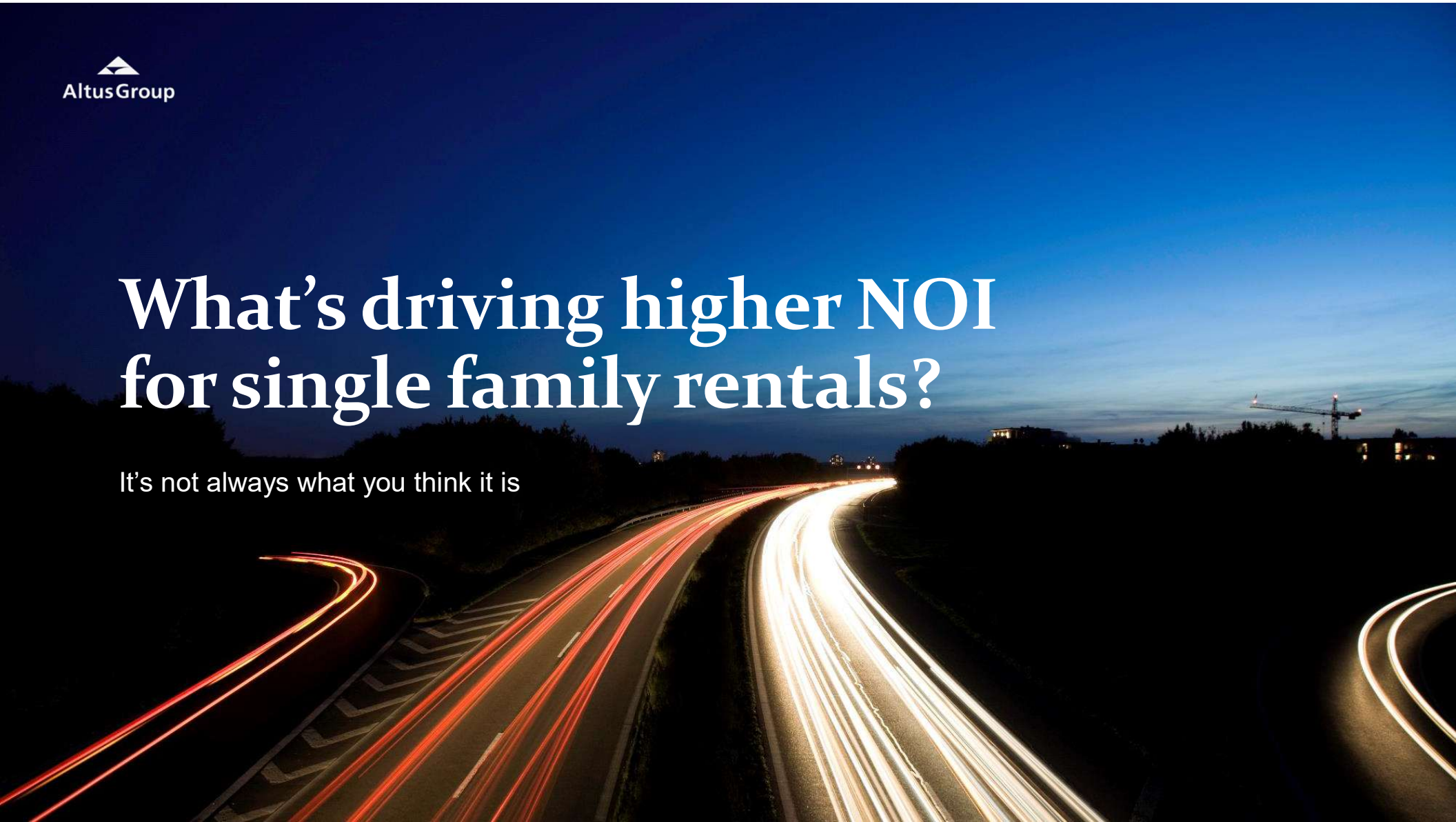




What's driving higher NOI for single family rentals?

It's not always what you think it is



Data sources and methodology

Anonymized valuation data for 21,000 SFR and BTR properties

SqFt
Bedrooms
Bathrooms
Location

NOI (one year, 2024)

Macroeconomic and demographic data at county and neighborhood levels

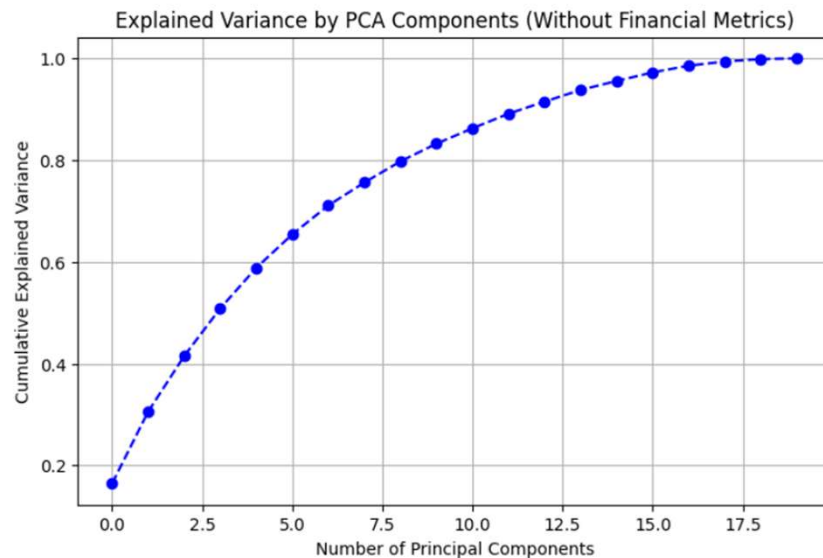
County-level data:

- Annual per capita GAP, 2024
- Pct. growth annual gross area product (GAP, \$mil), 2021-2024
- Pct. growth annual per capita GAP, 2021-2024
- Pct. growth labor force, 2021-2024
- Pct. of population, No health insurance coverage, 2024
- Pct. growth median HHI, 2021-2024
- Pct. growth median home value, 2021-2024
- Absolute growth of annual permit units by size class, 2021-2024

Neighborhood data:

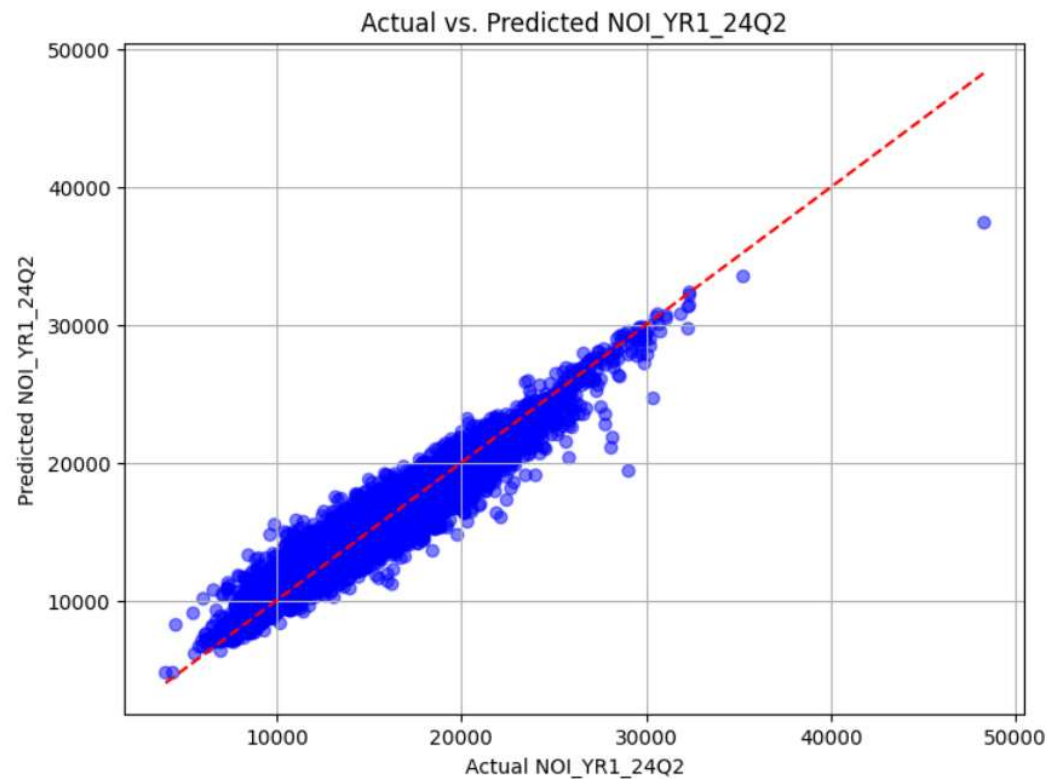
- Pct. growth median HHI, 2021-2024
- Pct. growth median home value, 2021-2024
- Pct. of all population, BA or higher, 2024
- Median age
- Median HHI
- Pct. growth population, 2021-2024
- Population density, 2024
- Pct. of all households, Renter, 2024
- Urban (1)/ Suburban (2)/ Rural (3)
- School Rating (Quant)
- Pct. of all households, with household type including children, 2024

Scaled data, ran PCA, tested models, ran 5-fold XGBoost



How accurate was the machine learning model?

Cross-validated R^2 scores: [0.8000701 0.81172984 0.80485108 0.80960474 0.79216541]



Final Model Performance: MAE = 731.85

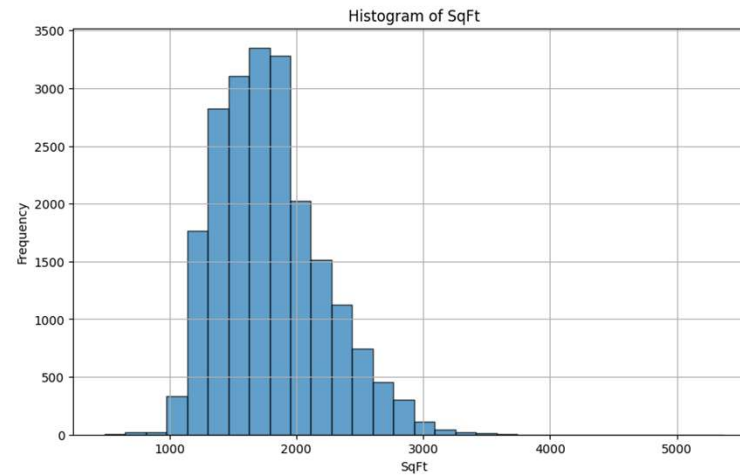
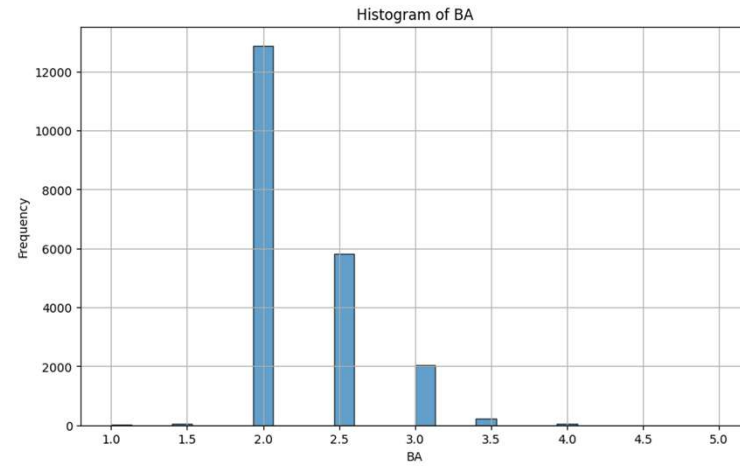
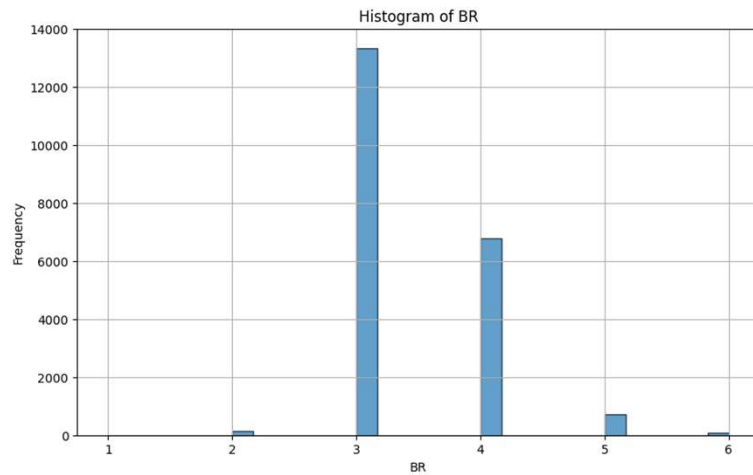
Poll question #1

What portion of attributable SFR NOI is from the home's physical characteristics?

- ☐ Almost all of it
- ☐ About three-quarters
- ☐ Around half
- ☐ A quarter or less

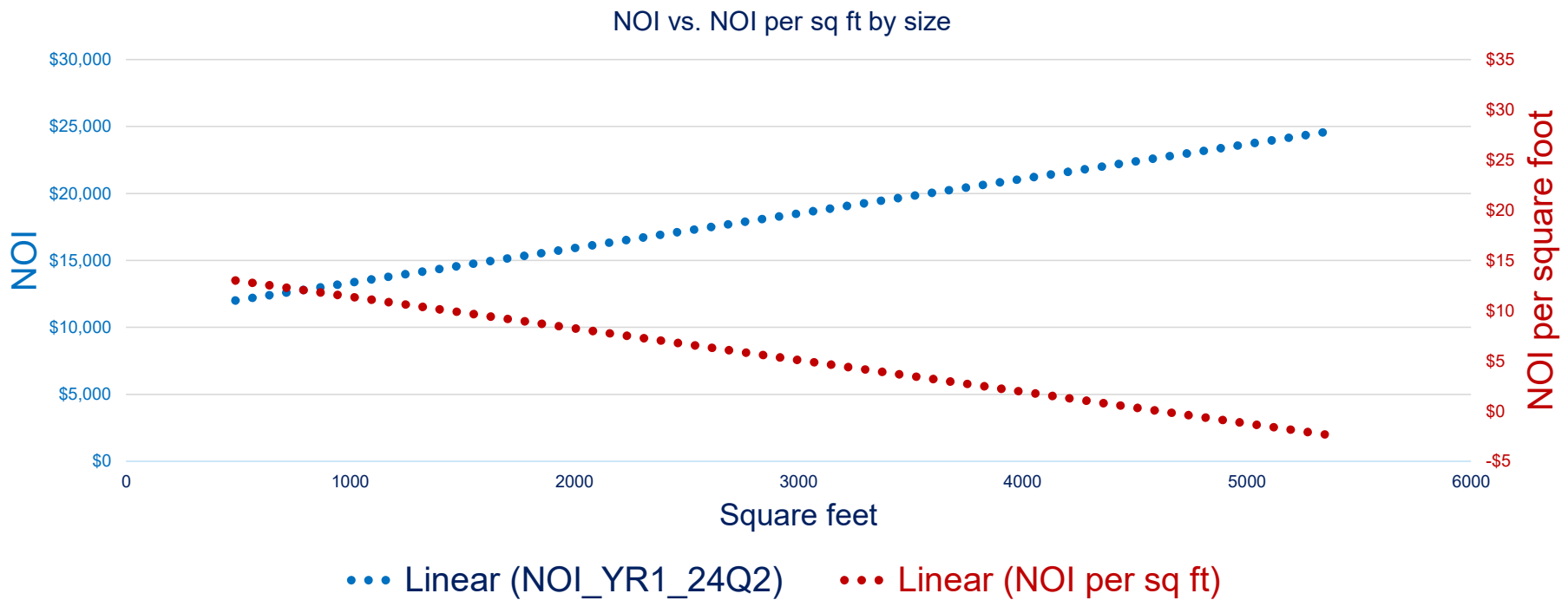
About 25% of NOI variance can be explained by the home's physical factors

Mostly 3 bedroom, 2 bath homes ~1800 sq.ft, avg. 17 years old



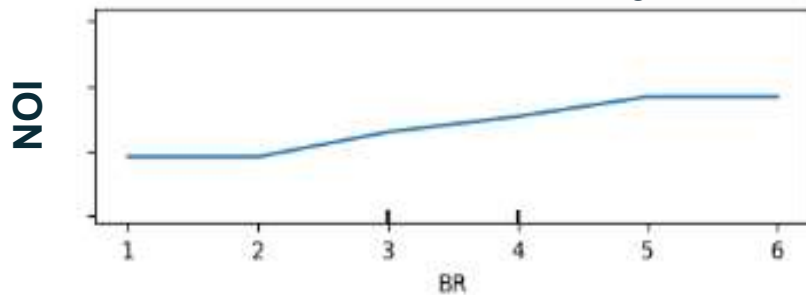
Bigger is not always better

As sq. footage increases, NOI increases but NOI per sq. foot decreases

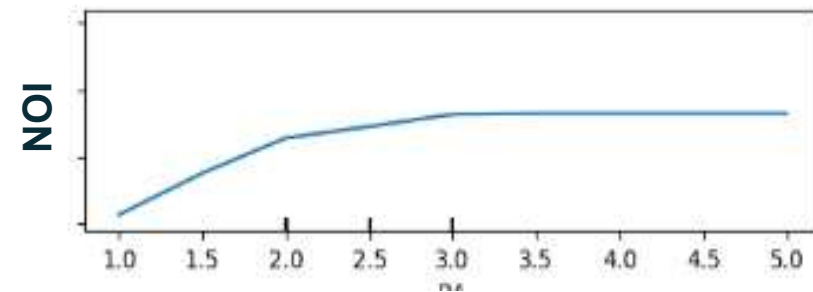


And more bedrooms and more baths might not deliver much ROI

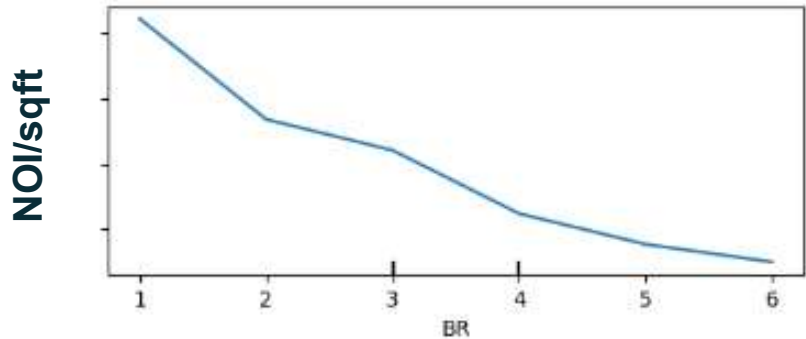
NOI flat from 1 or 2 beds, increases from 3 beds to 5, then flattens again



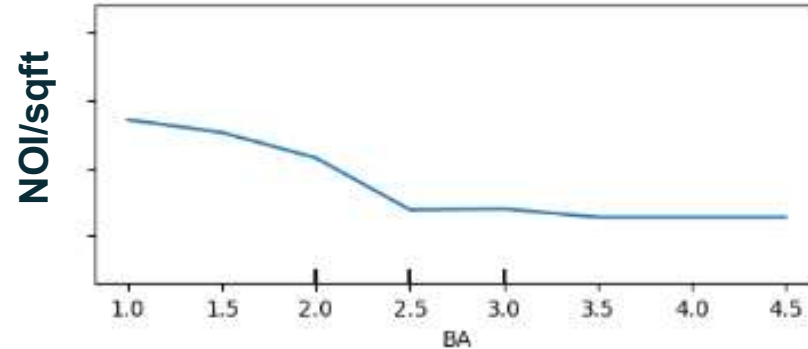
NOI increases sharply to 2 baths, then levels off for 3 or more



NOI **per sq. ft.** steadily declines with additional bedrooms



NOI **per sq. ft.** steadily declines, flat after 2.5 bathrooms

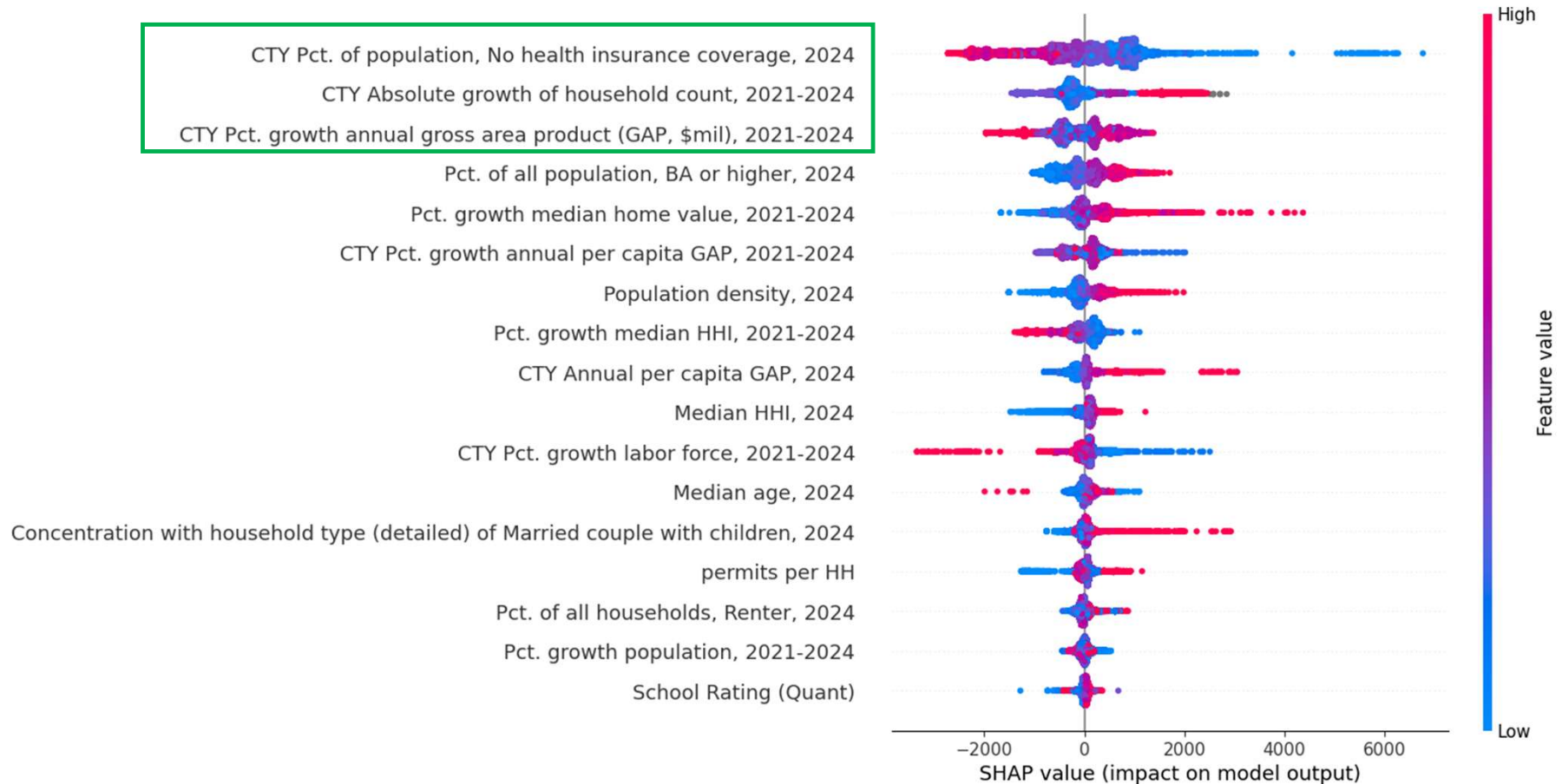


Poll question #2

Which of these has the greatest effect on SFR NOI?

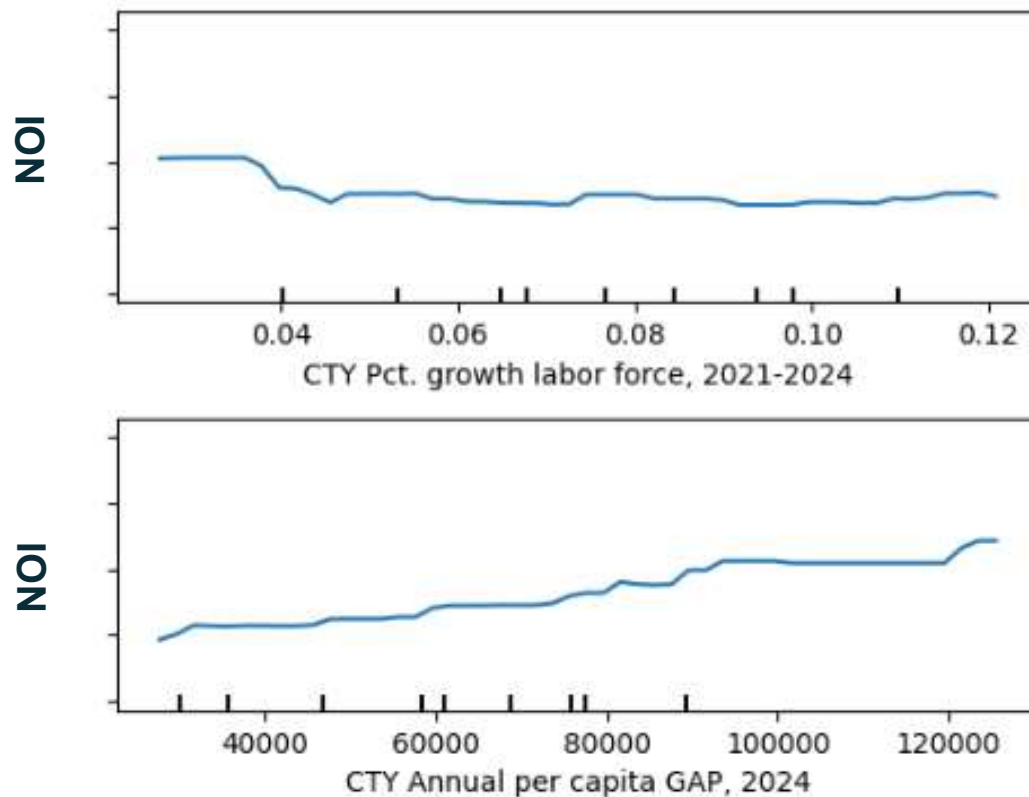
- ☐ Percentage of the area population without health insurance
- ☐ Local school quality
- ☐ Labor force growth
- ☐ Proximity to brew pubs and open space

External market factors explain about 70% of attributable NOI

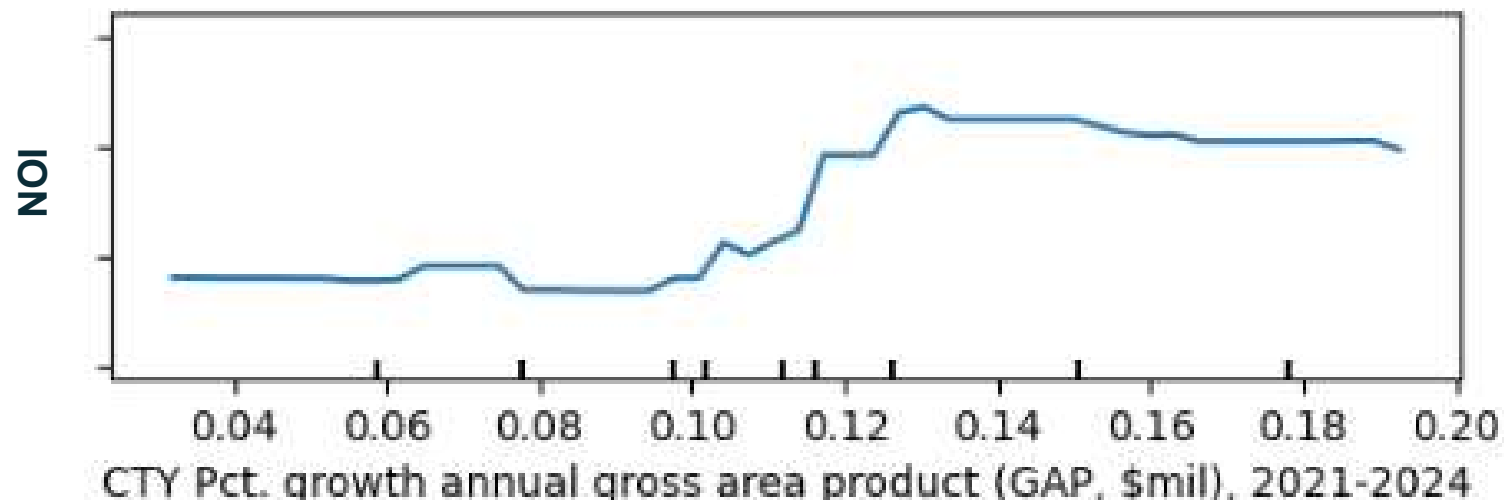


Productivity more impactful than labor force growth

Per capita GAP (productivity) has a higher impact on NOI than labor force growth

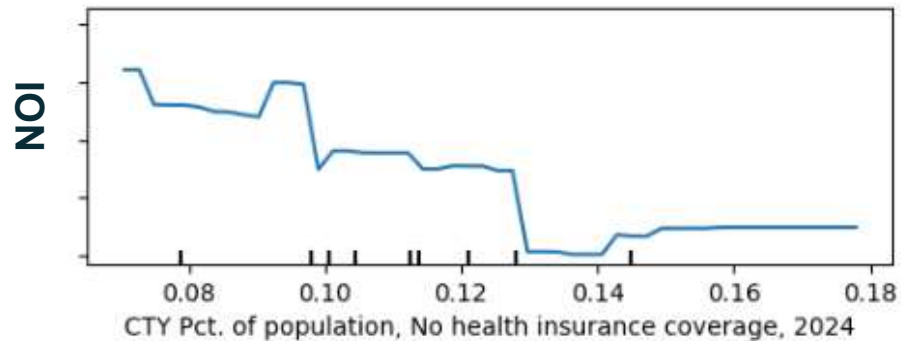


GAP growth > 12% past three years produces the highest SFR NOI

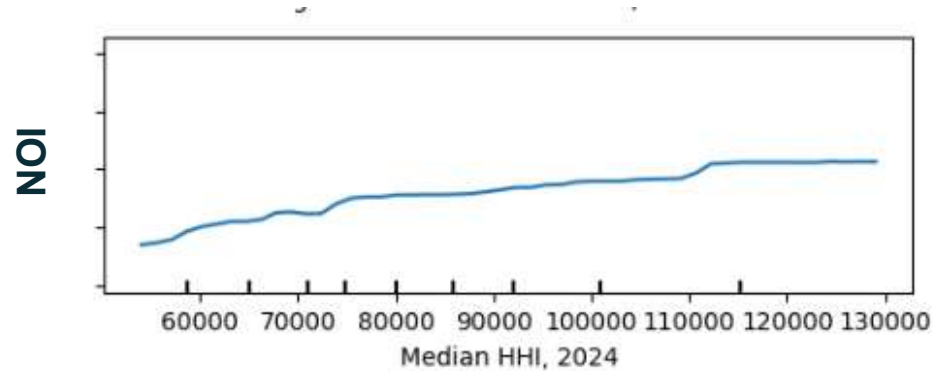


Household financials

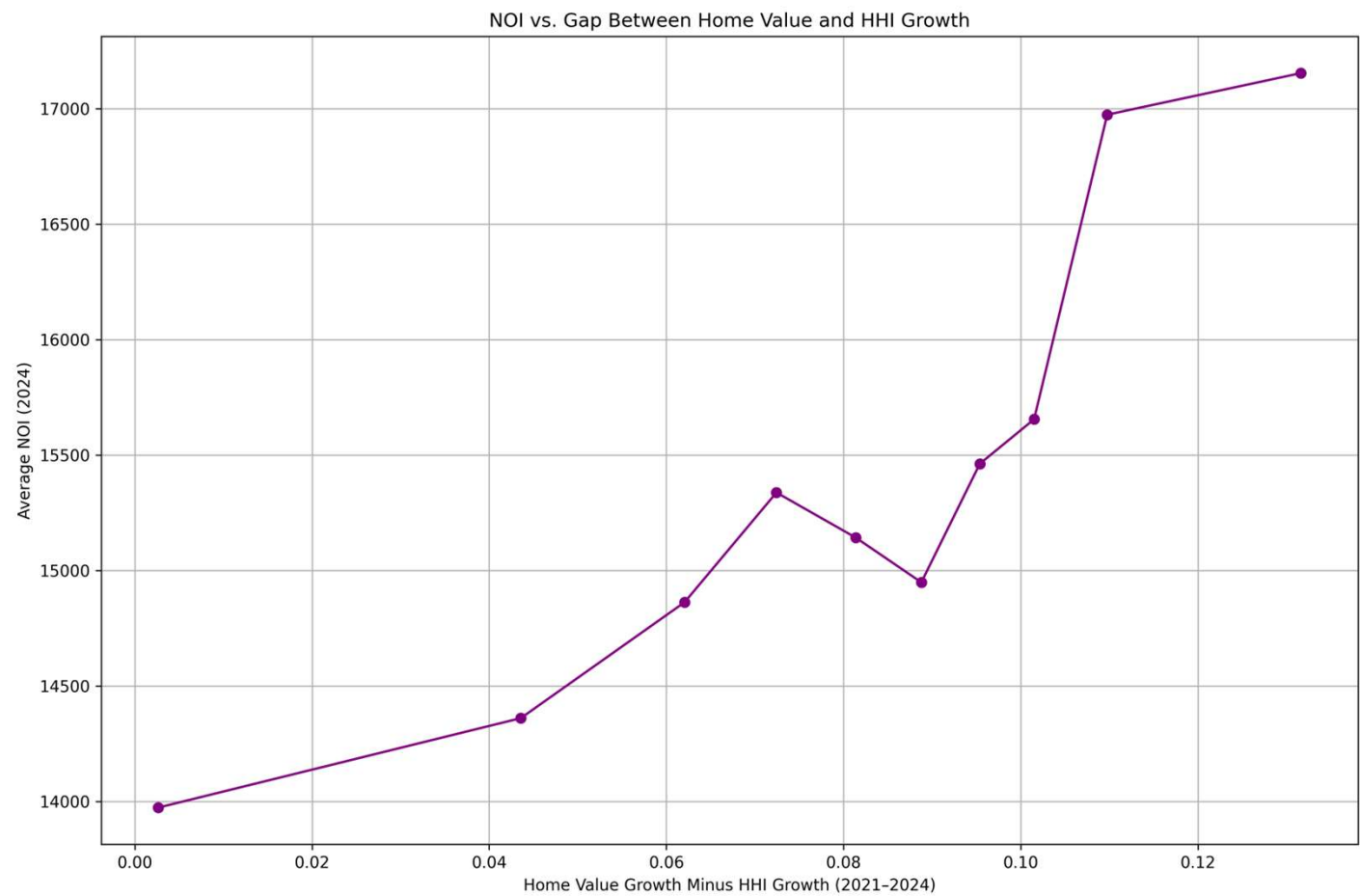
Higher percentage of pop. with no health insurance results in lower NOI



Higher median HHI results in higher NOI

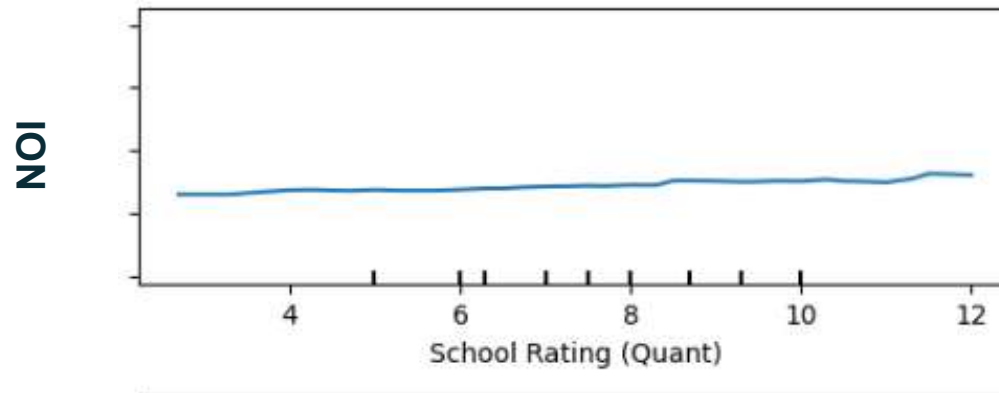


The relationship between HHI income growth and home value change



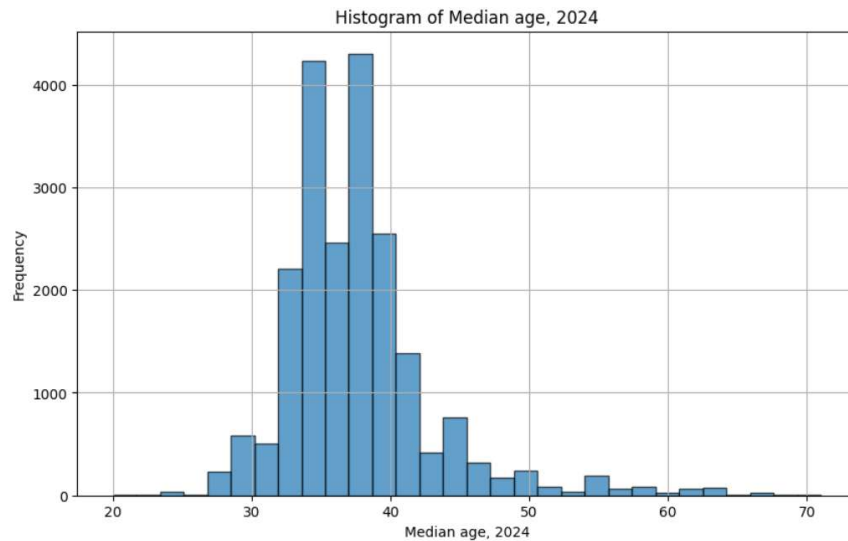
School quality is generally recognized as critical for home buyers...

But school quality scores have a weak relationship with SFR NOI

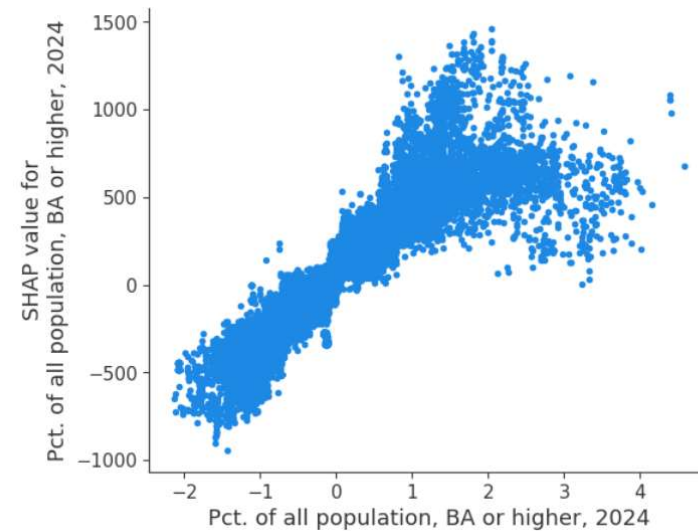


It's all about who is renting SFR homes

Most residents are likely in their 30s

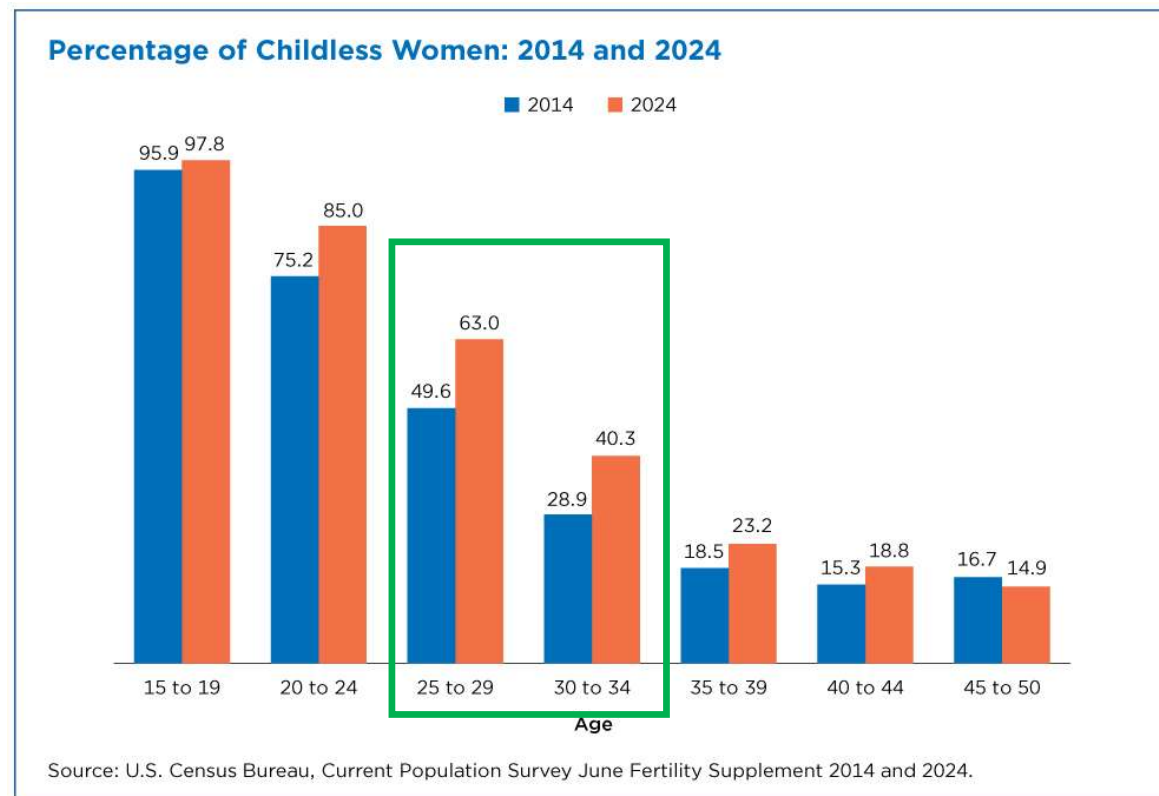


Higher levels of educational attainment drive higher NOI



Women are delaying childbirth

And women w/college degree delaying first childbirth even longer than average



Parting thoughts

Consider 3 bed/2 bath, 1800 sq. ft.
configuration for new construction

Look into markets with higher GAP
growth & productivity levels vs.
labor force growth

Disposition strategy tempers
importance of school scores in site
selection

For future consideration...

Thank you!

