

# Do Appraiser and Borrower Race Affect Valuation?

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Syracuse Chicago Webinar on Property Taxation

*Discussant: Troup Howard*

# Summary of Findings

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Baseline: Slightly lower appraisal values for Black & Hispanic homeowners: 90bps & 70bps

Central role of fixed effects in empirical design:

- Comparing within appraiser...
- ...after absorbing spatial differences (by zip)...and after absorbing annual variation.

Relevant statistic is  $\frac{\textit{appraised value}}{\textit{market value}}$

- Racial differences in  $\widehat{\textit{market value}}$  may confound estimates
- After adjustment, larger inequality: 360bps & 200 bps respectively
- *However:* existing literature suggests 200-300bps racial differences in transaction prices

No evidence that race of **appraiser** plays meaningful role.

# Overall Reaction

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Great paper!

Important & timely topic.

Very careful execution; findings are convincing.

# Comment #1: More, Please!

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This paper:

Are appraisers biased?

- Widespread public interest driven by popular press articles
- Homeowner anecdotes **highly** aligned to RCT / Audit Study analysis

# The New York Times

*(August, 2020)*

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The Hortons live just minutes from the Ortega River, in a predominantly white neighborhood of 1950s homes that tend to sell for \$350,000 to \$550,000. They had expected their home to appraise for around \$450,000, but the appraiser felt differently, assigning a value of \$330,000. Ms. Horton, who is Black, immediately suspected discrimination.

The couple's bank agreed that the value was off and ordered a second appraisal. But before the new appraiser could arrive, Ms. Horton, a lawyer, began an experiment: She took all family photos off the mantle.

... On the day of the appraisal, Ms. Horton took the couple's 6-year-old son on a shopping trip to Target, and left Mr. Horton alone at home to answer the door.

The new appraiser gave their home a value of \$465,000 — a more than 40 percent increase from the first appraisal.

# The Washington Post

*(January, 2021)*

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“Because I’m Black, we realized he picked the houses from the Black side of Park Hill,” says Lorenzo, an IT engineer and technology developer. “That was the first red flag.”

Dismayed, the couple scheduled a second appraisal. But this time they decided to experiment: Gwen, who is White, remained alone at the home to greet the appraiser.

The second appraiser gave the home a value of \$550,000 — a \$145,000 increase from the first appraisal.

“We didn’t change the house at all,” says Gwen, a clinical psychologist and associate professor at University of Denver. “We didn’t paint any walls or mow the lawn or do anything different.”

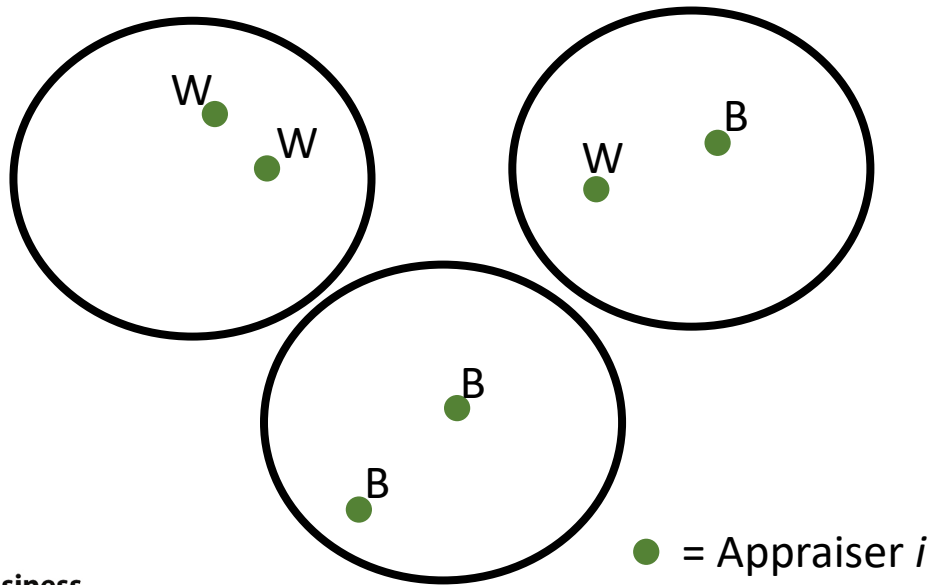
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- Paper's empirical design parallels this:

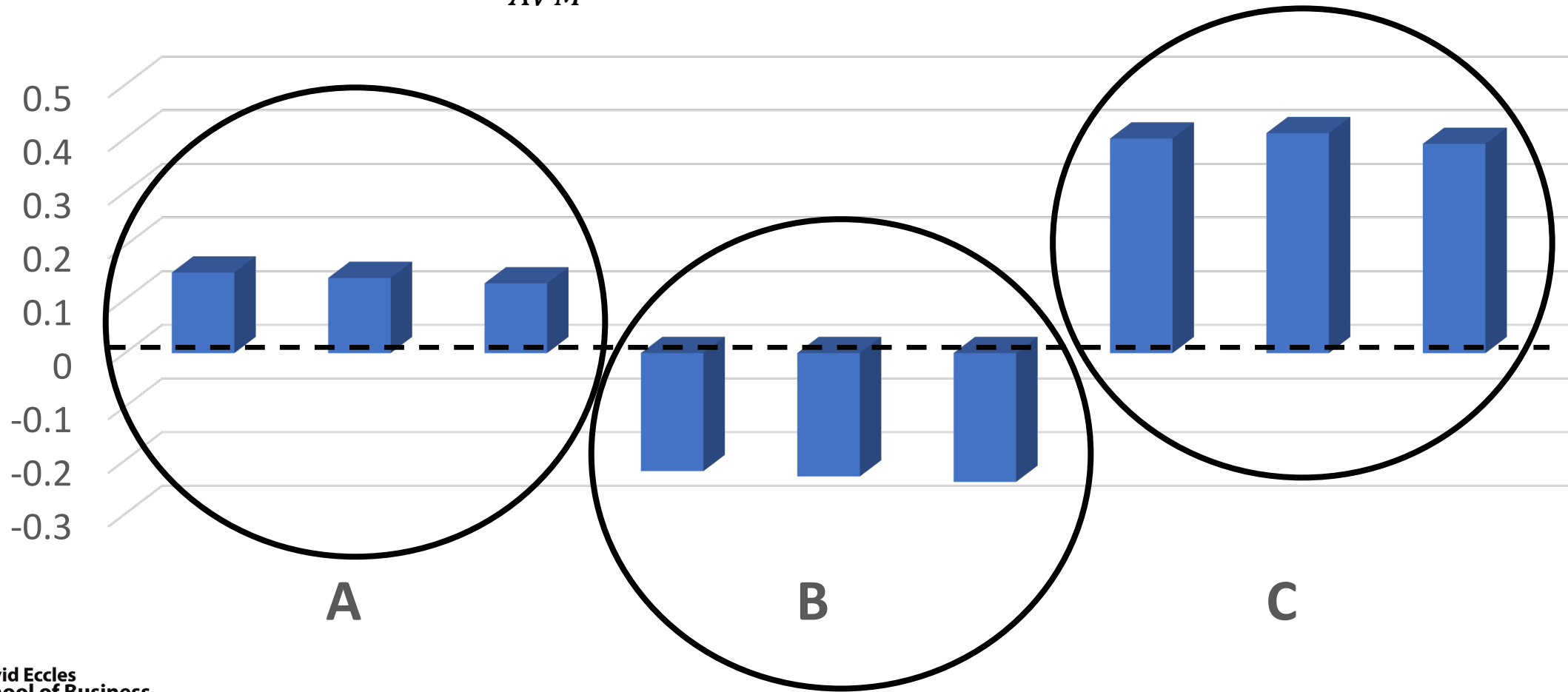


- 1) Remove differences by neighborhood
- 2) Remove differences by year
- 3) Measure inequality:  $\bar{B} - \bar{W}$
- 4) Estimates: wgt'd sum over all appraisers

*Aside: assessor-by-zip FE infeasible?*

# Neighborhood Variation: Important/Interesting

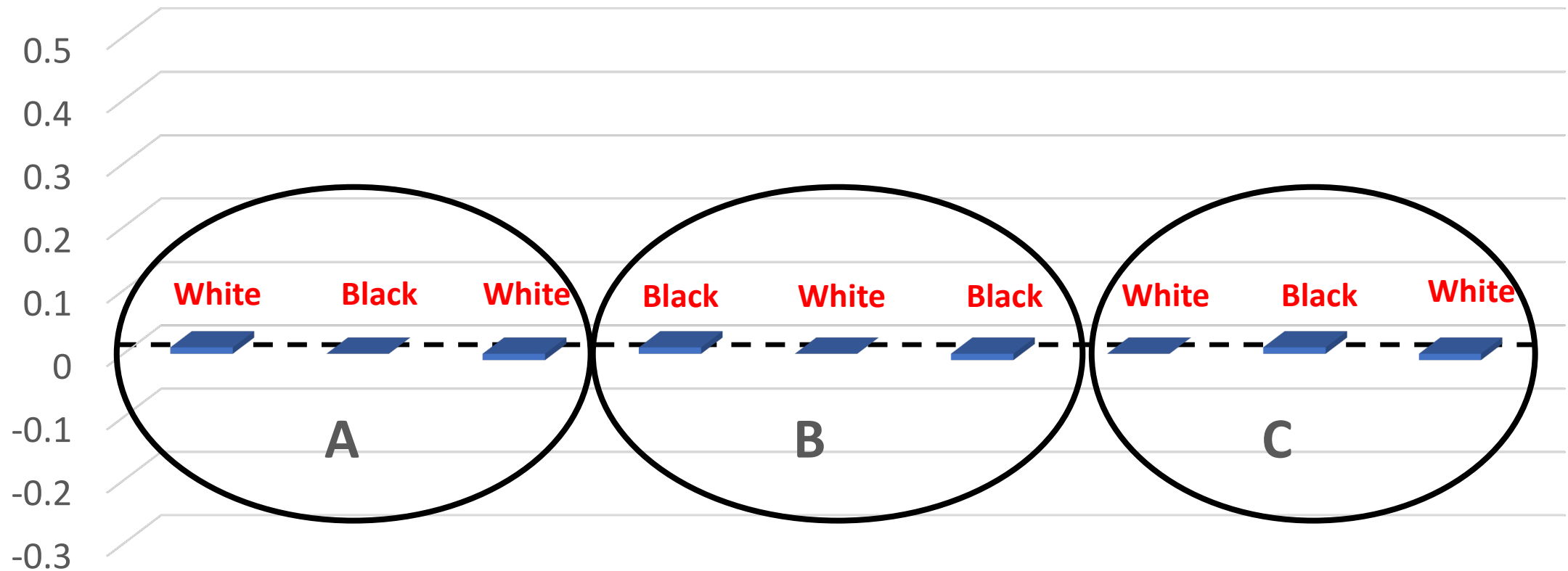
$\left(\frac{App}{AVM} - 1\right)$  By Neighborhood





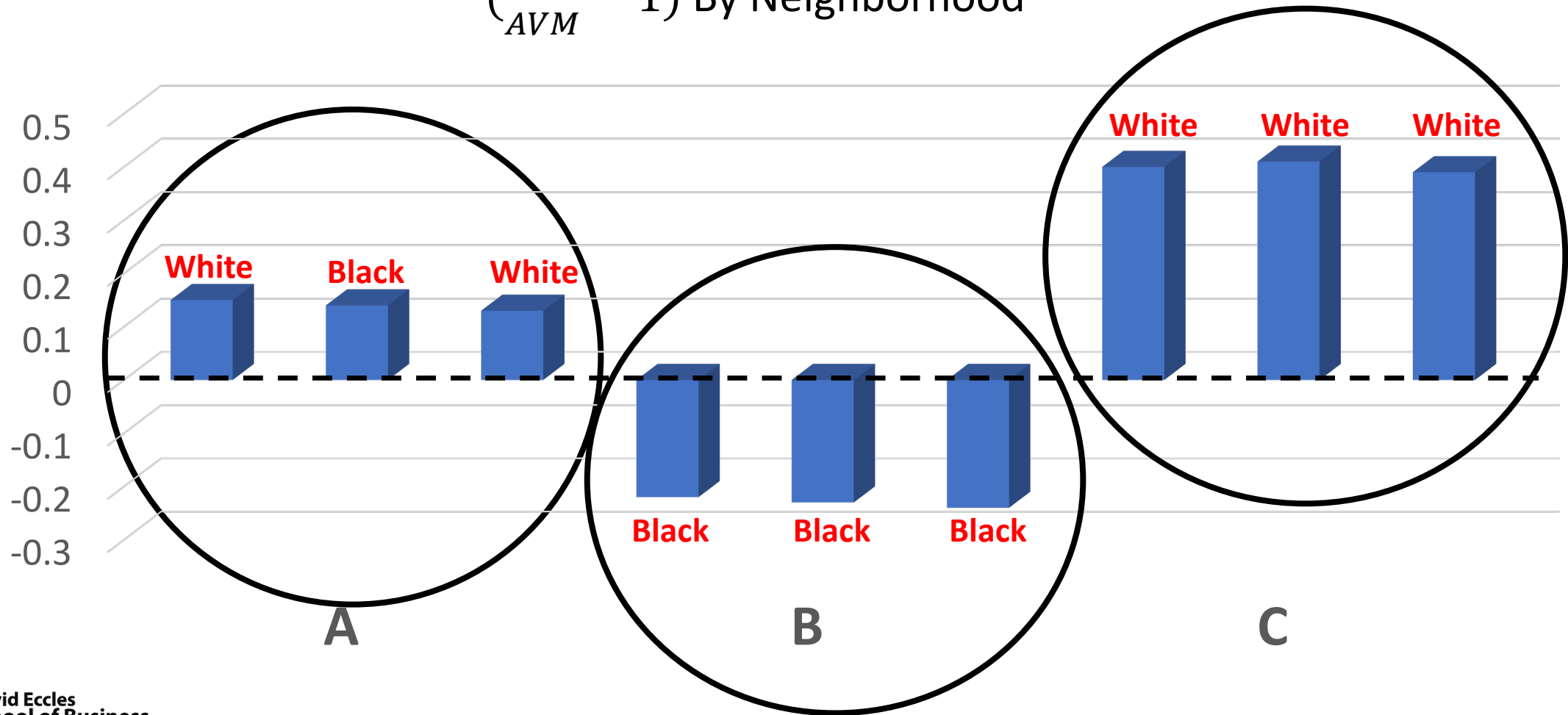
# Neighborhood Variation: Important/Interesting

Demeaned ( $App/AVM-1$ ) By Neighborhood



# Neighborhood Variation: Important/Interesting

$\left(\frac{App}{AVM} - 1\right)$  By Neighborhood



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**Alternate question:**

Are appraisals biased?

- $E[ A/V \mid black ]$  vs  $E[ A/V \mid white ]$ ? *(Table A3: zip FE important!)*
- Property features vs. home location?
- Role of residential segregation?
- Inequality attributable to individuals? *(lots of answers already)*

# Comment #2: Racial Differences in AVM

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(many) AVMs known to have stylized patterns of error that correlate with race

Authors adjustment:

$$\ln(P_i) = \rho \ln(AVM_i) + \beta_{race_i} + \gamma_t + \alpha_a + X_i\beta_2 + \epsilon_i$$

$$\hat{V}_i = \exp\{\ln(\hat{P}_i) + \frac{\hat{\sigma}^2}{2}\}$$

Assessment Literature<sup>1</sup>:

- $P \sim AVM$  or  $AVM \sim P$  generates bias in  $\rho$
- Will also lead to bias in racial coefficients?

If  $(\hat{\sigma}^2|black) \neq (\hat{\sigma}^2|white)$ , is this mechanically creating racial differences in  $\hat{V}$ ?

# Comment #2: Racial Differences in AVM

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Another possible check:

$$\frac{\text{Assessment}_t}{AVM_t}$$

Using all Properties



$$\frac{\text{Assessment}_t}{AVM_t}$$

using just repeat sales



$$\frac{\text{Assessment}_t}{\hat{V}_t}$$

repeat sales, where:  
 $V_t = V_{t0} * HPI_{0 \rightarrow t}$

# Comment #3: Link to Outcomes?

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Is effect large or small?

- 90bps diff → \$1,800 for median home of 278k
- \$3,200 given 2022 median home (sale) price of 455k

Possible to estimate effect directly? Judges design for appraisers?

Thanks to the authors!

I really enjoyed reading paper – would urge everyone to check out.