

# The Appraisal Mechanism: Spillover Effects of All-Cash Sales on Local Housing Markets

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## Abstract

Discounted nearby all-cash sales enter the comparable set used by appraisers, depress the appraised value for a mortgage application, and cap financing, so a mortgaged transaction either (i) bridges with cash, (ii) renegotiates down, or (iii) fails

- Impact of 1- $\sigma$  above a property's mean nearby cash share:
  - 1.39pp decrease in the appraisal value
  - 1.38pp decrease in the transaction price
  - 38 more days on market
- Bargaining power matters
  - Buyers with more outside options negotiate larger price cuts
  - Renegotiation reveals asymmetric information
    - Low-income, high-LTV, first-time, and minority buyers gain the most
  - 1- $\sigma$  above a tract's mean cash share is linked to
    - 0.59pp increase in the tract's rejection rate

Welfare trade-off: (1) a successful renegotiation transfers surplus from sellers to buyers, (2) while failed transactions generate exclusion and misallocation

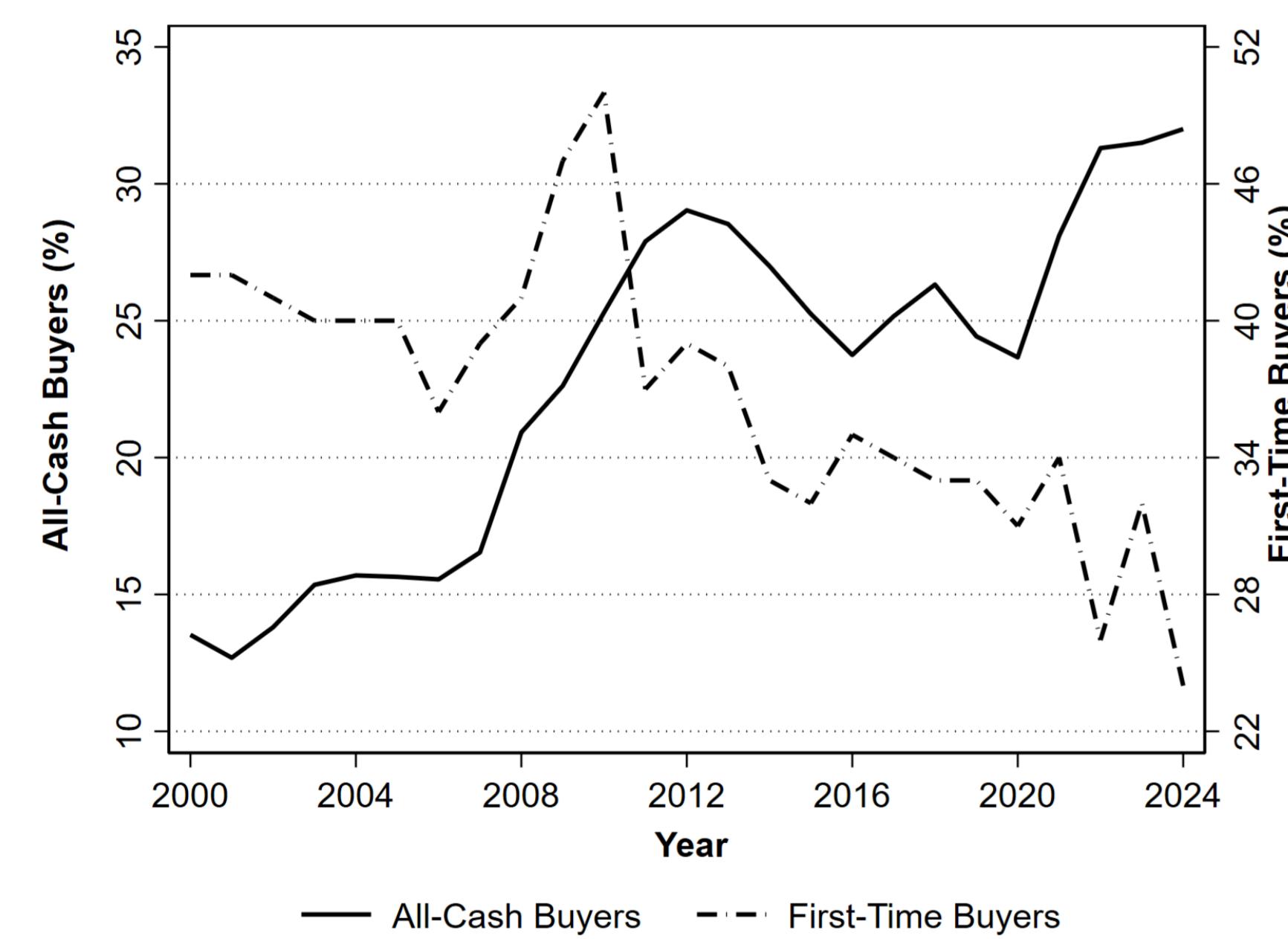
Key contributions:

- First to show that the cash-mortgage discount spills over to nearby mortgage-financed properties rather than isolated at the transaction level
- First to identify the appraisal-based financial constraint as the channel through which spillovers affect pricing, liquidity, and mortgage outcomes

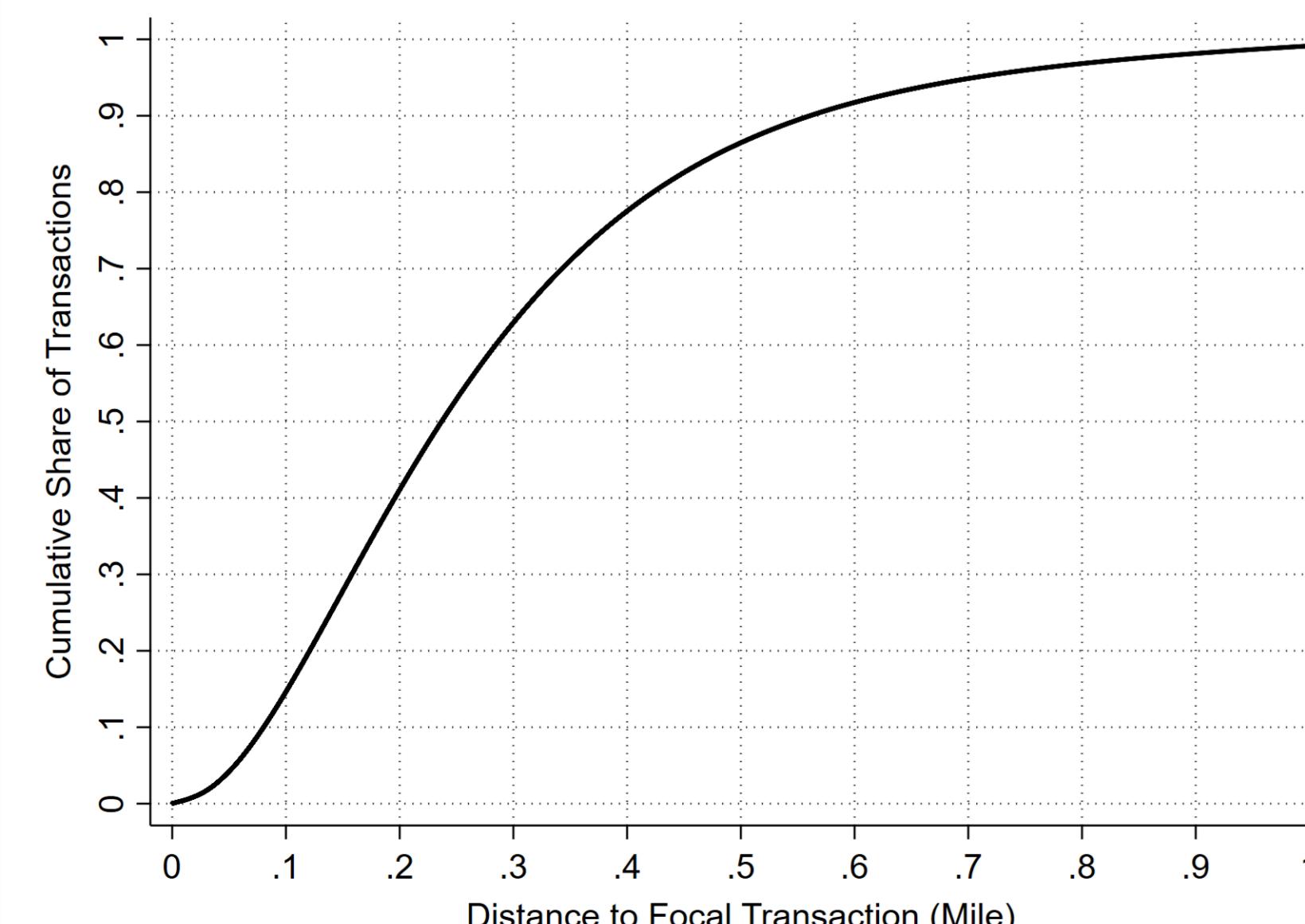
## Data

- Corelogic deed, tax, and listing records and HMDA mortgage originations merged at the transaction level
- 6.2+ million arms-length SF and townhome transactions from 2018 to 2022
  - Following Reher and Valkanov (2024 JF) on the mortgage-cash premium puzzle

Growth: Cash buyers almost tripled in the past two decades (now ~ 32%)



Comparable Sales (Comps): 92.8% realistic comps, simulated by an industry-mimicking algorithm, are within the 0.6-mile radius of a focal property



## Ring-Based Design

$$\log(Y_{i,t}) = \beta_1 C_{t-s:t}^{\text{inner}} + \beta_2 C_{t-s:t}^{\text{outer}} + \gamma X_{i,t} + \delta_{c(i),t} + \varepsilon_{i,t}$$

- $Y_{i,t}$ : appraisal, price, or TOM of property  $i$  on date  $t$
- $C_{t-s:t}^{\text{inner/outer}}$ : cumulative count in cash sales within 0.6/1.2 miles (inner/outer ring) in a recent time period,  $t - s : t$  ( $s = 11$  months)
- $X_{i,t}$ : property, buyer, and other transaction-level characteristics
- $\delta_{c(i),t}$ : tract-by-year fixed effects

Intuition: Measure the effects of cash activity within the inner ring ( $\beta_1$ ), beyond the area-wide trend ( $\beta_2$ ), controlling for local time-varying unobservables

## Identification Assumptions

- Quasi-random hyper-local exposure to nearby cash activity
- Stronger hyper-local neighborhood interactions
- Null effects of nearby cash activity on a focal cash sale
- Appraisers have little need to go beyond the 0.6-mile radius to find comps

Validation tests can be found in the paper

## Empirical Results

### a. Baseline Results: Appraisals and Prices

Exposure to nearby cash sales lowers a focal property's appraisal value and sale price almost one-to-one and increases its time-on-market

	(1)	(2)	(3)	(4)	(5)	(6)
	Appraisal Values			Transaction Prices		
No. Cash Sales within 0.6 miles	-0.0619*** (0.0085)	-0.0714*** (0.0092)	-0.0558*** (0.0077)	-0.0619*** (0.0086)	-0.0710*** (0.0090)	-0.0555*** (0.0075)
within 1.2 miles	0.0184* (0.0078)	0.0188 (0.0105)	0.0146 (0.0084)	0.0184* (0.0080)	0.0166 (0.0106)	0.0124 (0.0085)
List price				0.5917*** (0.0040)		0.5900*** (0.0036)
Average treatment effects						
No. cash sales within 0.6 miles						
Increase by one SD	-1.55%	-1.93%	-1.39%	-1.55%	-1.91%	-1.38%
Observations	3,532,462	3,532,462	3,532,462	3,532,462	3,532,462	3,532,462

### b. Baseline Results: Liquidity

One SD  $\uparrow$  in nearby cash sales (25)  $\implies$  ~38 days  $\uparrow$  on market

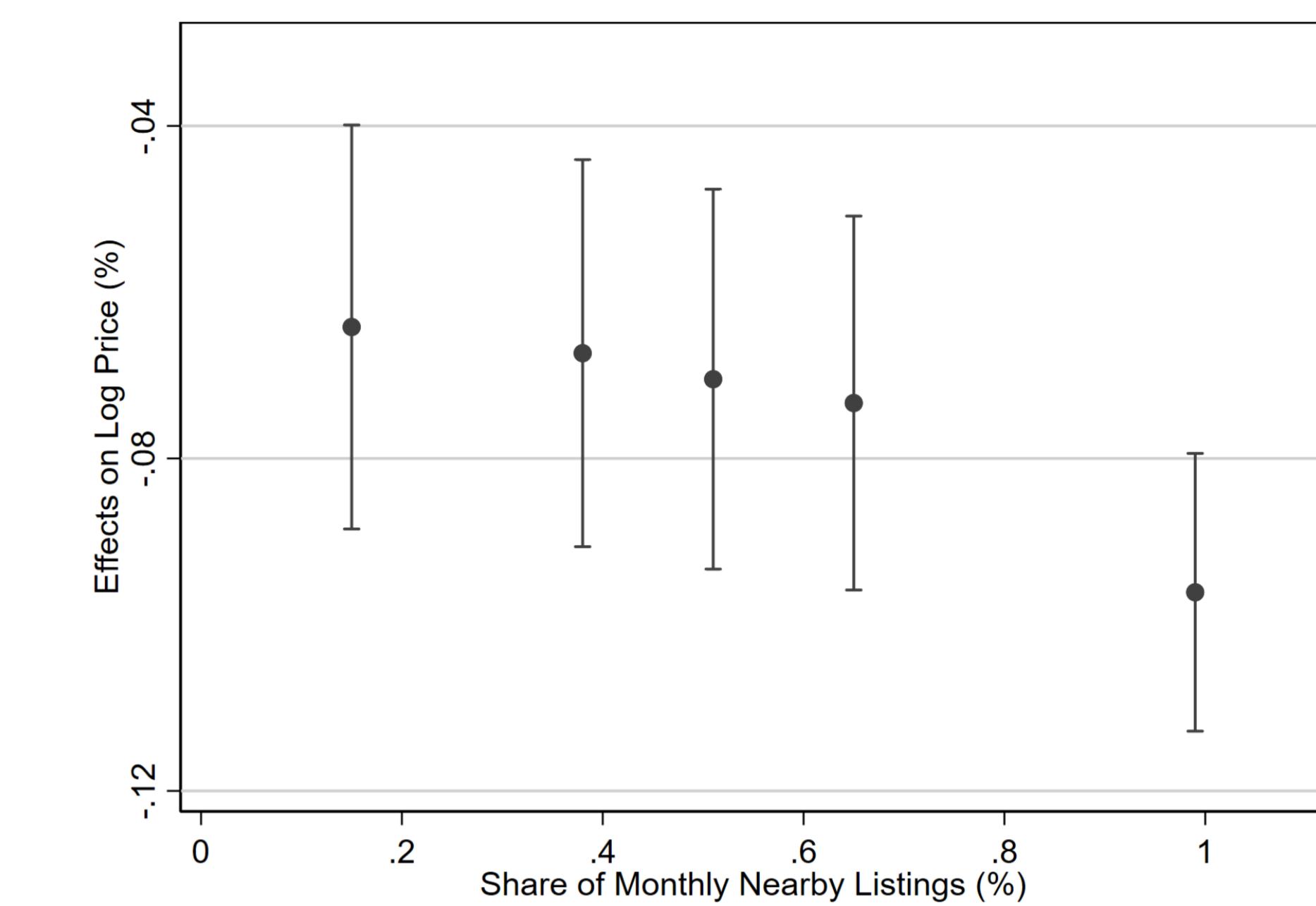
	(1)	(2)	(3)
	Days on Market		
No. Cash Sales within 0.6 miles	1.56** (0.26)	1.50*** (0.26)	1.46** (0.26)
within 1.2 miles	-0.01* (0.00)	-0.01** (0.00)	-0.01* (0.00)
List price	21.54** (0.24)	21.94*** (0.25)	21.87** (0.25)
Observations	3,467,928	3,467,928	3,467,928

Evidence supporting successful renegotiations driving down prices: a transfer from the seller to the buyer or, alternatively, seller's willingness-to-pay to avoid failure

## Empirical Results

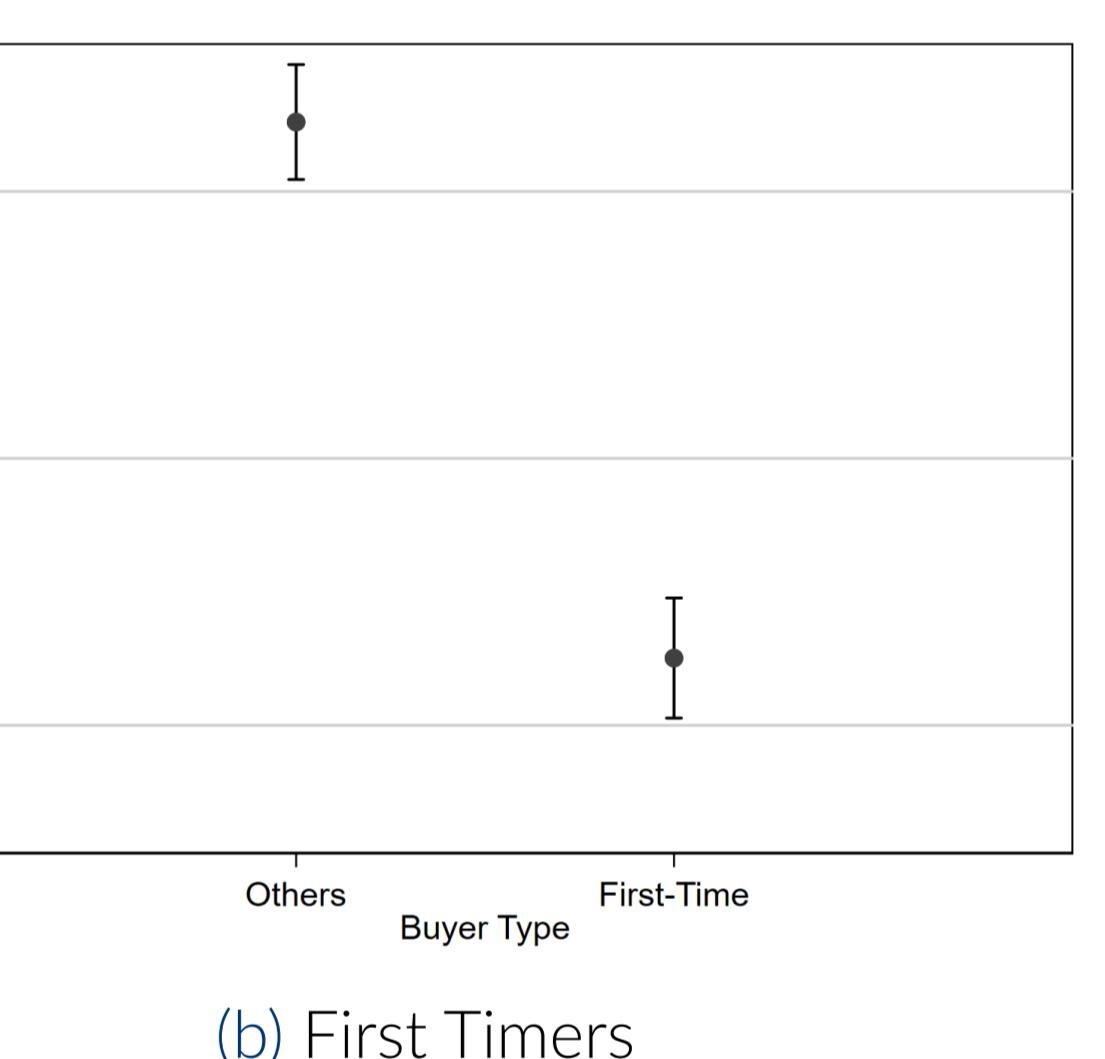
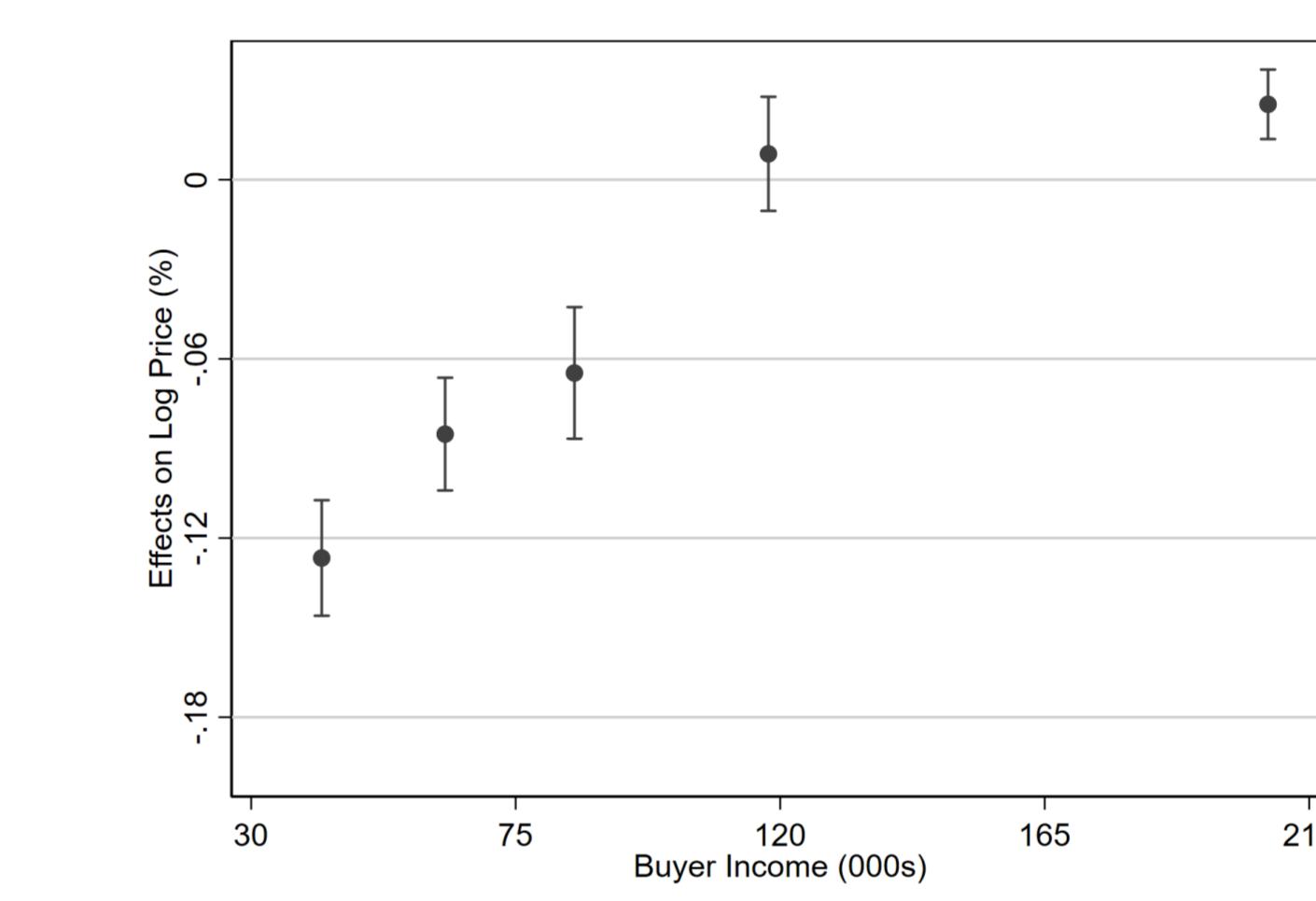
### c. Bargaining Power Matters

The buyer negotiates a larger price cut with more outside options, measured by the number of nearby listings relative to local housing stock



### d. Negotiations Help with Asymmetric Information

- ✓ Disadvantaged buyers would benefit from more information
- ✗ Sellers negotiate more with less sophisticated or poorly informed buyers



### e. The Mortgage Failure Channel

- Higher tract-level cash activity is associated with more "approved-but-not-accepted" mortgage outcomes

### f. A Buyer-Seller Bargaining Model Highlights Welfare

## Conclusion

The cash-mortgage discount is not isolated at the transaction level; instead, discounted cash sales indirectly impact the pricing, liquidity, and the mortgage approval rate of nearby mortgage-financed properties through how appraisals work. Under the appraisal constraint, a model maps welfare:

- A successful renegotiation directly transfers surplus from sellers to buyer
- A failed renegotiation or transaction generates exclusion and misallocation by pricing out high-evaluation home buyers

## Contact Information

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