Can Stay-at-Home Orders Create a Pandemic Housing Boom?[1]

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Preliminary Results

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Research Question

- Covid-19 shutdown or stay-at-home orders (SAH) prevented in-person viewings, inspections, and other supporting business.

- This provides a natural setting to test the dynamic housing market responses to a temporary increase in home search costs.

- This project aims to address the following questions through the lens of a search-based model:
  - ▶ How did the restrictions affect home search behavior and hence house price and sales during and after SAHs?
  - ▶ How did the changes in home search behavior indirectly affect new construction?
  - ▶ Could these restrictions create a post-SAH housing boom? Or is that just a recovery?

- We use the variation in the timing of SAHs to estimate the effects of these SAHs on the home search and housing markets.

- Data: Zillow, ZTRAX, Redfin, NAR, Census, John Hopkins, ACS.

## Staggered Adoption of Stay-at-Home Orders

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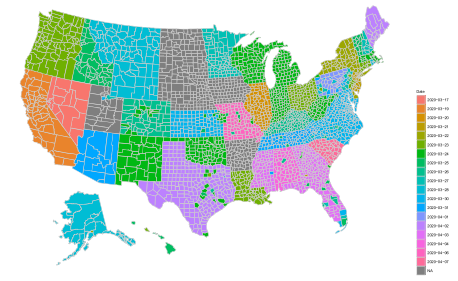
Empirical Specification

$$Y_{c,t} = \alpha_t + \sum_{m=0}^{M} \text{underSAH}_{m,c,t} + \sum_{m=0}^{M'} \text{After SAH}_{m,c,t} + I_{c,t}\beta_I + FE_c + \varepsilon_c$$

- t - month, c - county,

- $Y_{c,t}$ - the outcome of interest in county c in month t,

- $\text{underSAH}_{m,c,t}$ is equal to one if county c is under the stay-at-home order for the mth month within a month t,

- $\text{afterSAH}_{m,c,t}$ - equals one if county c is in mth month after the end of the stay-at-home order within a month t,

- α_t - month-year fixed effects,

- $I_{c,t}$ - mean daily & % increase in infections 2 months before t,
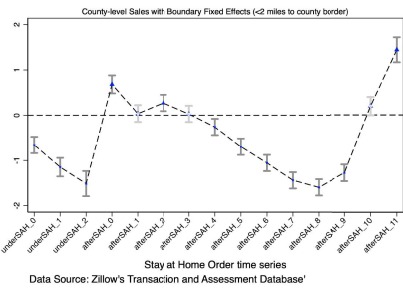
- FE_c - county fixed effects.

SAH Effects on Quality Adjusted House Price (ZHVI)

Data Source: Zillow

SAH Effects on Sales Volume

Data Source: Redfin

SAH Effects on Sales Volume
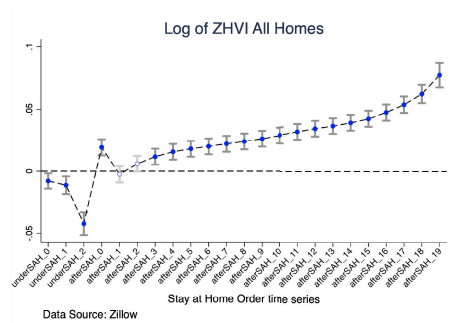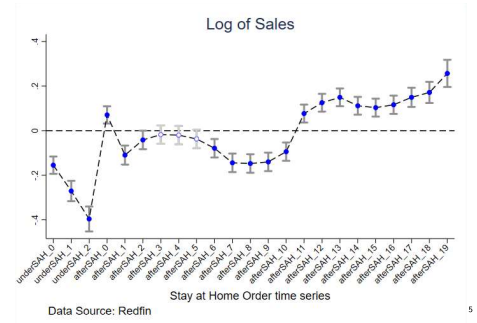
Data Source: Zillow's Transacion and Assessment Database'

A Random Matching Model in a Nutshell

We provide a search-based explanation of the housing market dynamic during the pandemic:

- SAHs increased the search costs for buyers and sellers.

- This reduces the joint surplus of buyers and sellers.

- Reduced surplus leads to lower prices, dampened sales, longer time on the market, and fewer listings.

- Buyers and sellers that would have met under SAHs postponed transactions to a later time, creating the make-up demand and listings after the SAHs.

- Once SAH was lifted, most motivated buyers and sellers were pushed out to the market first, followed by less motivated ones.

Additional evidence from cross-segment differences and search behavior from buyers and sellers.
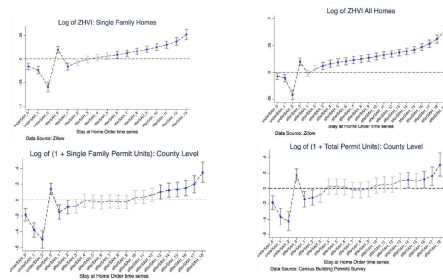

Prices Respond More in Segments with Higher Search Costs
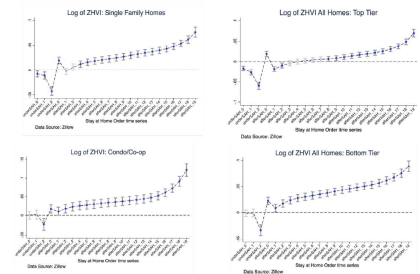
SAH Effects on Search Behavior
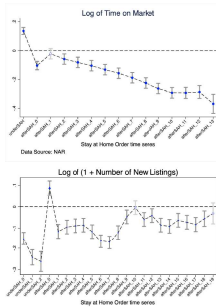
SAHs Affect Construction Dynamics Through Price

Summary

- A sudden and temporary increase in search cost dampened house price and sales initially.

- Postponed transactions created an initial spike followed by a long and slow recovery after the SAH.

- SAHs also affected the dynamics of new constructions through price.

- The make-up demand after the SAH, combined with the lagged construction responses, created a pandemic housing boom.

- These effects are larger in less liquid housing segments.