Can Stay-at-Home Orders Create a Pandemic Housing Boom?*

Alina Arefeva
University of Wisconsin-Madison
Wisconsin School of Business

Lu Han
University of Wisconsin-Madison
Wisconsin School of Business

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Research Question

- Covid-19 shutdowns or stay-at-home orders (SAHs) 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.
- The 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 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 effect of these SAHs on the home search and housing markets.
- Data: Zillow, Zillow Transaction and Assessment Dataset (ZTRAX), state-level data on COVID-19 testing and infections.

Empirical Specification

\[ y_{ct} = \alpha_c + \sum_{m=1}^{M} \text{underSAH}_{ct}^{m} + \sum_{t=1}^{T} \text{afterSAH}_{ct}^{t} + I_{ct} + F_{ct} + \epsilon_t \]

- \( t \) - month
- \( c \) - county
- \( y_{ct} \) - the outcome of interest in county \( c \) in month \( t \)
- \( \text{underSAH}_{ct}^{m} \) is equal to one if county \( c \) is under the stay-at-home order for the \( m \)-th month within a month \( t \)
- \( \text{afterSAH}_{ct}^{t} \) is equal to one if county \( c \) is in month \( t \) after the end of the stay-at-home order within a month \( t \)
- \( \alpha_c \) - month-year fixed effects
- \( I_{ct} \) - mean daily & % increase in infections 2 months before \( t \)
- \( F_{ct} \) - county fixed effects

SAH Effects on Quality Adjusted House Price (ZHVI)

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 reduced the 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 SAH 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.

SAH Effects on Search Behavior

SAHs Affect Construction Dynamics Through Price

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.

Prices Respond More in Segments with Higher Search Costs

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.