

# Locked in by Leverage: Job Search during the Housing Crisis

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## Labor and housing markets are linked



## Labor market dislocation causes housing market distress



- Hsu, Matsa, and Melzer (2018)
- Ganong and Noel (2020)
- DeFusco and Mondragon (2020)

## Housing market distress also affects the labor market



## Housing bust reduced aggregate demand, leading to a large contraction in labor demand

- Eggertsson & Krugman (2012)
- Mian & Sufi (2011, 2014)
- Guerrieri & Lorenzoni (2015)



## How does a housing bust affect labor supply?



# A housing market bust can affect labor supply by reducing household mobility

## Reduced household mobility

- Less capital for next down payment (Stein 1995)
- If underwater, need additional cash to close (Chan 2001)
- Nominal loss aversion (Genesove & Mayer 2001)

Focus job search on nearby positions

Broaden search nearby, incl. lower positions

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## We examine the housing market's effect on labor supply to specific jobs

### OUR APPROACH

- Unique data to distinguish effect on labor supply from demand
  - 4 million applications (through online job board) to jobs at large financial firms across U.S. in 2008–2009
  - Monthly ZIP code-level home value measure (12,157 ZIP codes)
  - Cross-state differences in mortgage recourse
- Both panel and spatial regression discontinuity analyses

Key to identification strategy:

**Local labor markets encompass many hyperlocal housing markets**

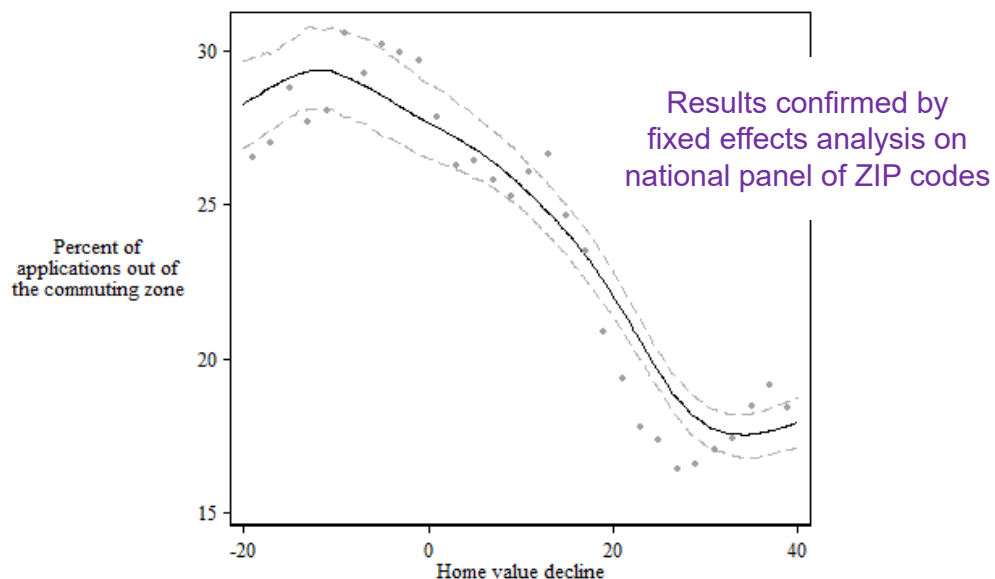
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## We first analyze applications to jobs requiring relocation

- Use commuting zones to characterize geographic breadth of search
  - 709 zones nationwide
  - Approximate local labor markets (Autor & Dorn 2009, 2013)
  - Delineate local economies, not political boundaries
- Obtain similar results when we use distance
  - Jobs greater than 50 or 100 miles away

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## Home value declines $\Rightarrow$ Fewer applications to jobs requiring relocation

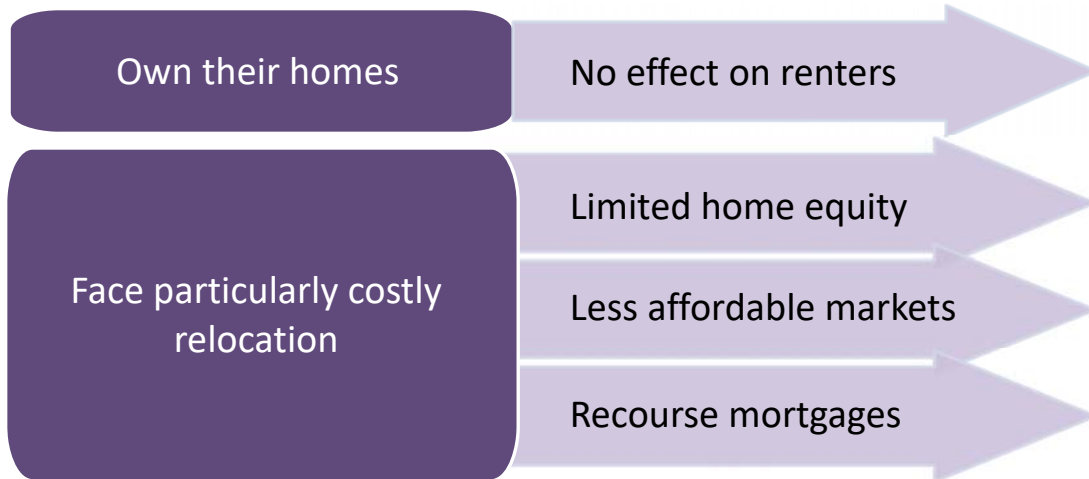


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# Effect is robust & driven by affordability

## HETEROGENEITY IN EFFECT

Only affects job seekers who:



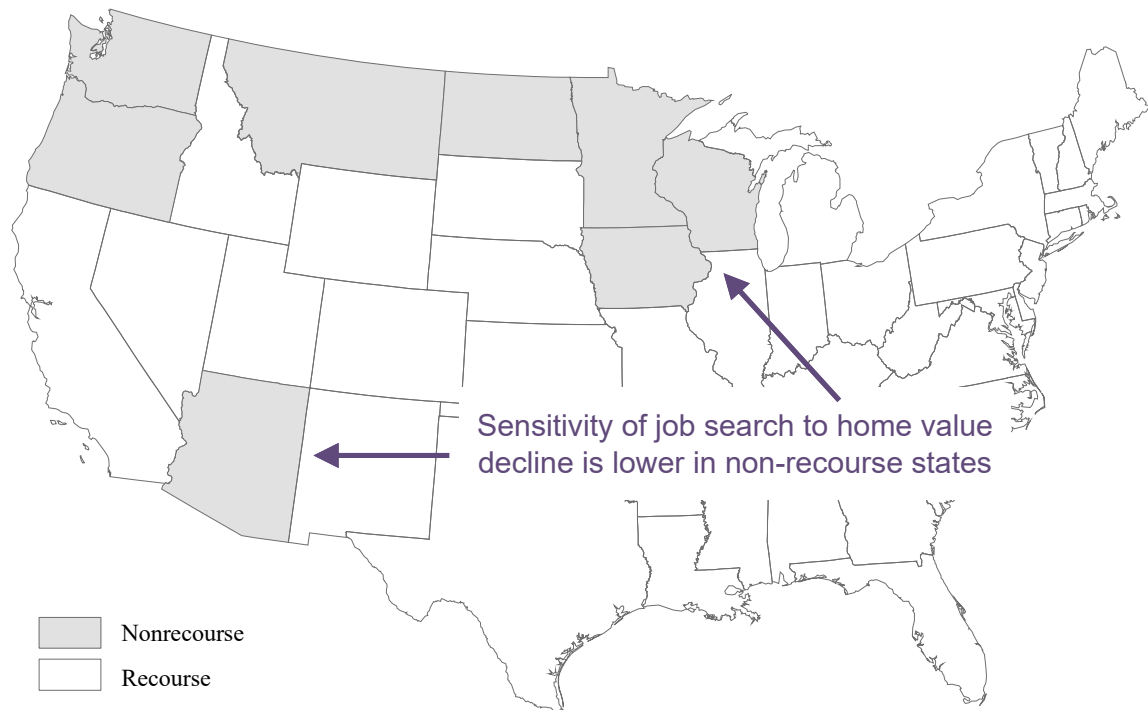
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# Recourse loans make relocating more costly after home values crash

## RECOURSE

- If mortgagor defaults, lender seizes/sells the property
- If property sale cannot cover the full debt, lender can typically pursue borrower's other assets
- But nine states forbid lender from pursuing other assets
  - Artifact of historical events  
(e.g., foreclosure rates on farms in 1930s; see Ghent 2014)

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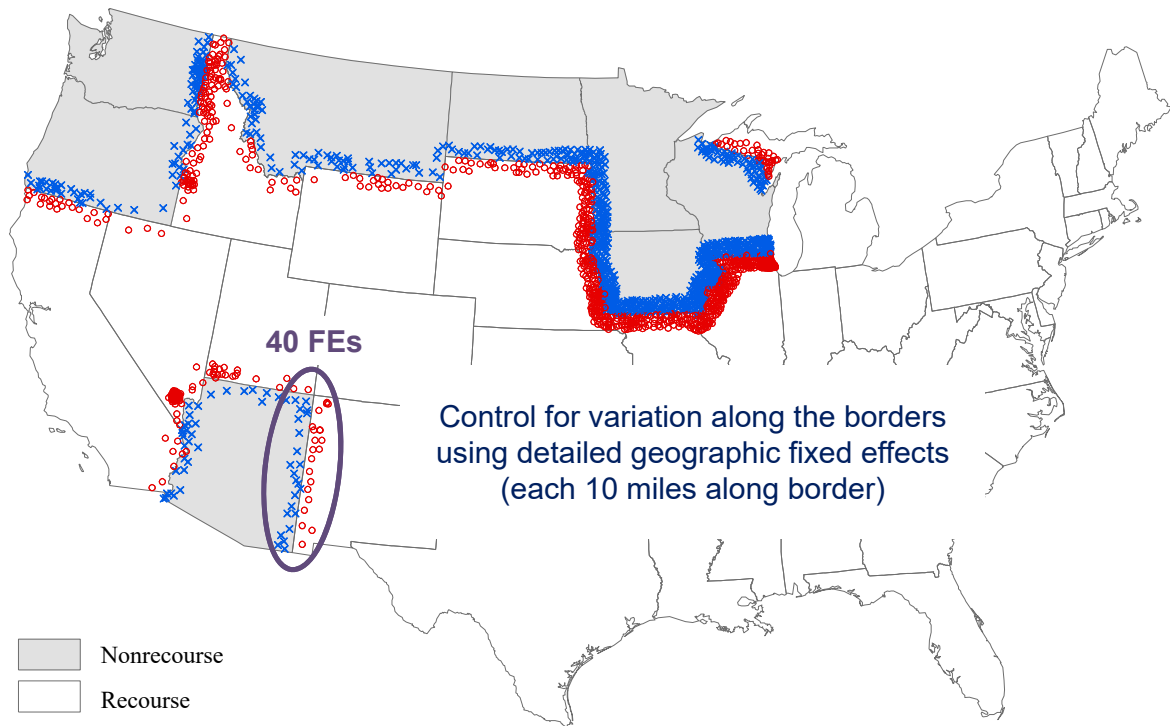
## Are the results driven by changes in the *types* of workers searching in bad times?

### POTENTIAL CONCERN

- We aim to identify housing-induced changes in job search
- But what if a different *type* of applicant searches during a downturn?
  - e.g., less educated workers are both
    - less mobile (Machin, Salvanes, and Pelkonen 2012)
    - more exposed to job loss during recessions (Hoyne, Miller, and Schaller 2012)

A spatial regression discontinuity analysis addresses this possible, subtle selection bias

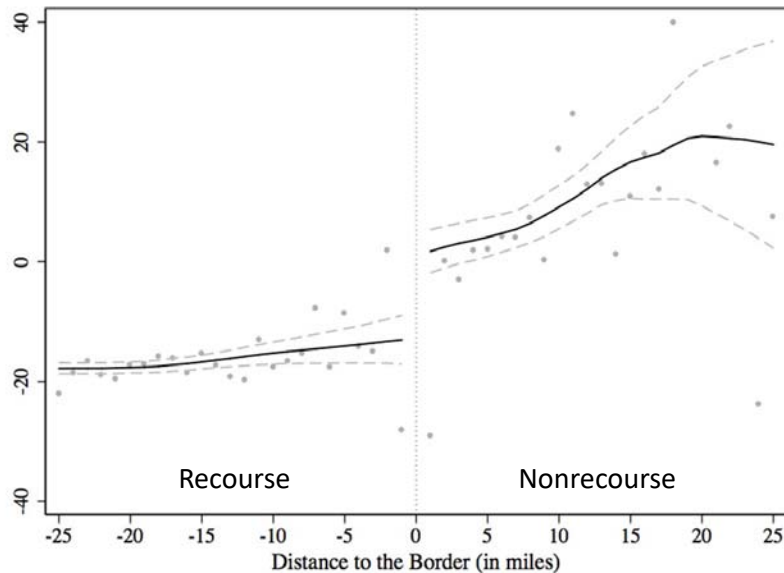
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## Job seekers in recourse states submit fewer applications to positions requiring relocation

Percent of applications to jobs out of the commuting zone



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## Job seekers in recourse states submit fewer applications to positions requiring relocation

### ROBUSTNESS TESTS

- Essentially no observable differences in ZIP codes on different sides of border (housing market conditions, UI, demographics)
- Effect is
  - Isolated to high-income areas where recourse matters
  - Larger in areas with larger home value drops

## We also explore whether households broaden their search for nearby positions

### Reduced household mobility

- Less capital for next down payment (Stein 1995)
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Focus job search on nearby positions

Broaden search nearby, incl. lower positions

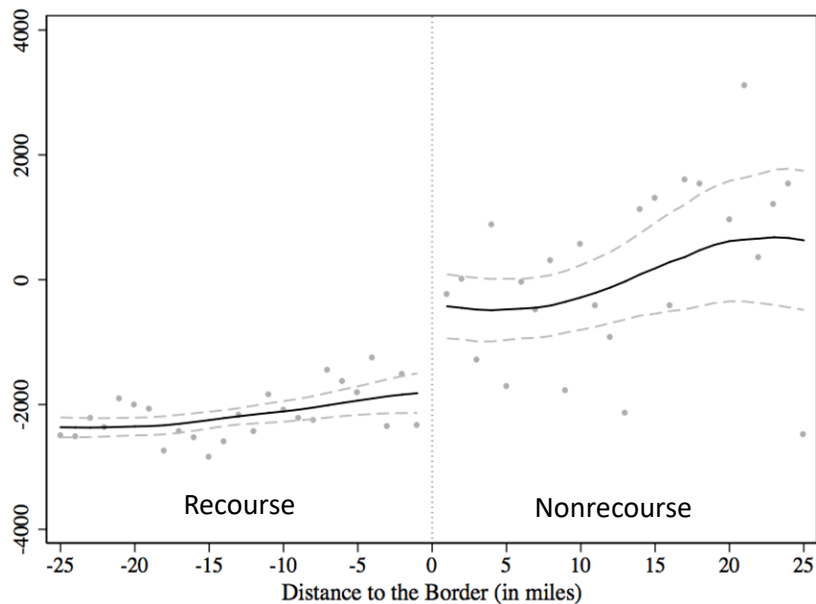
## Job classifications allow us to characterize the breadth of applicants' search

### SEARCH BREADTH

- Posted jobs assigned up to 4 of 19 job codes
  - e.g. administrative/clerical, sales, customer service, management, executive, entry level
- Define combination of job codes as a unique job type
  - e.g. an entry-level sales position
- Construct HHI for job types in a ZIP code-month

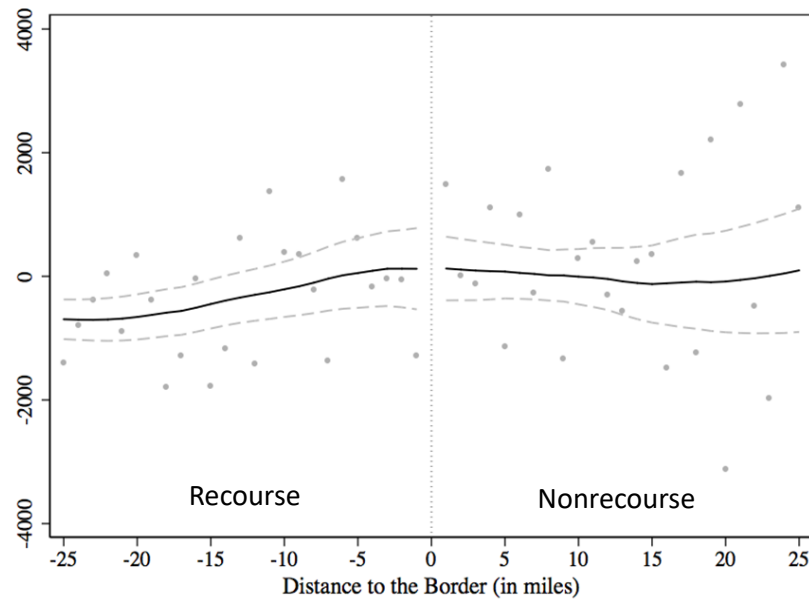
## Search for nearby positions is 50% less concentrated in states w/ recourse mortgages

Panel A. In the commuting zone



## Concentration of search for positions requiring relocation is unaffected

Panel B. Out of the commuting zone



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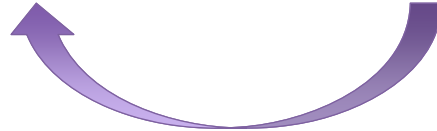
## Nearby search becomes less ambitious, shifting toward lower level positions

### JOB TYPES

- More
  - Entry-level positions (Recourse ~ 62% ↑)
  - Jobs requiring <1 year of experience (44% ↑)
- Fewer
  - Management positions (26% ↓)
  - Executive positions (49% ↓)

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# Housing market distress interferes with supply of labor



- Focus search on jobs within commuting distance
- Consider lower level positions accessible without moving

## Mixed implications for firms

### IMPLICATIONS FOR FIRMS

When workers focus their search to local positions, firms...

- Lose access to the national labor market
- Face less competition from broader labor market
  - More qualified applicants for a given position
  - Potentially hire workers at lower cost

# Impact on workers could be costly and long-lived

## IMPLICATIONS FOR WORKERS

- Constrained workers applying to jobs they would otherwise avoid crowds out other job seekers
- Imposes costs on both workers
  - Lose opportunities to build human capital
  - Costs can be long-term, even if housing constraints are not
- Employment status during a recession affects labor market outcomes years later (Yagan 2016)