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

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
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

Home value declines ⇒ Fewer applications to jobs requiring relocation

Results confirmed by fixed effects analysis on national panel of ZIP codes
Effect is robust & driven by affordability

HETEROGENEITY IN EFFECT

Only affects job seekers who:

- Own their homes
  - No effect on renters
- Face particularly costly relocation
  - Limited home equity
  - Less affordable markets
  - Recourse mortgages

Recourse loans make relocating more costly after home values crash

RECOUERCE

- 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)
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 (Hoynes, Miller, and Schaller 2012)

A spatial regression discontinuity analysis addresses this possible, subtle selection bias
Job seekers in recourse states submit fewer applications to positions requiring relocation

Percent of applications to jobs out of the commuting zone
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)
  ▪ 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
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
Panel B. Out of the commuting zone

Concentration of search for positions requiring relocation is unaffected

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% ↓)
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)