

# Surging Business Formation in the Pandemic: Causes and Consequences?

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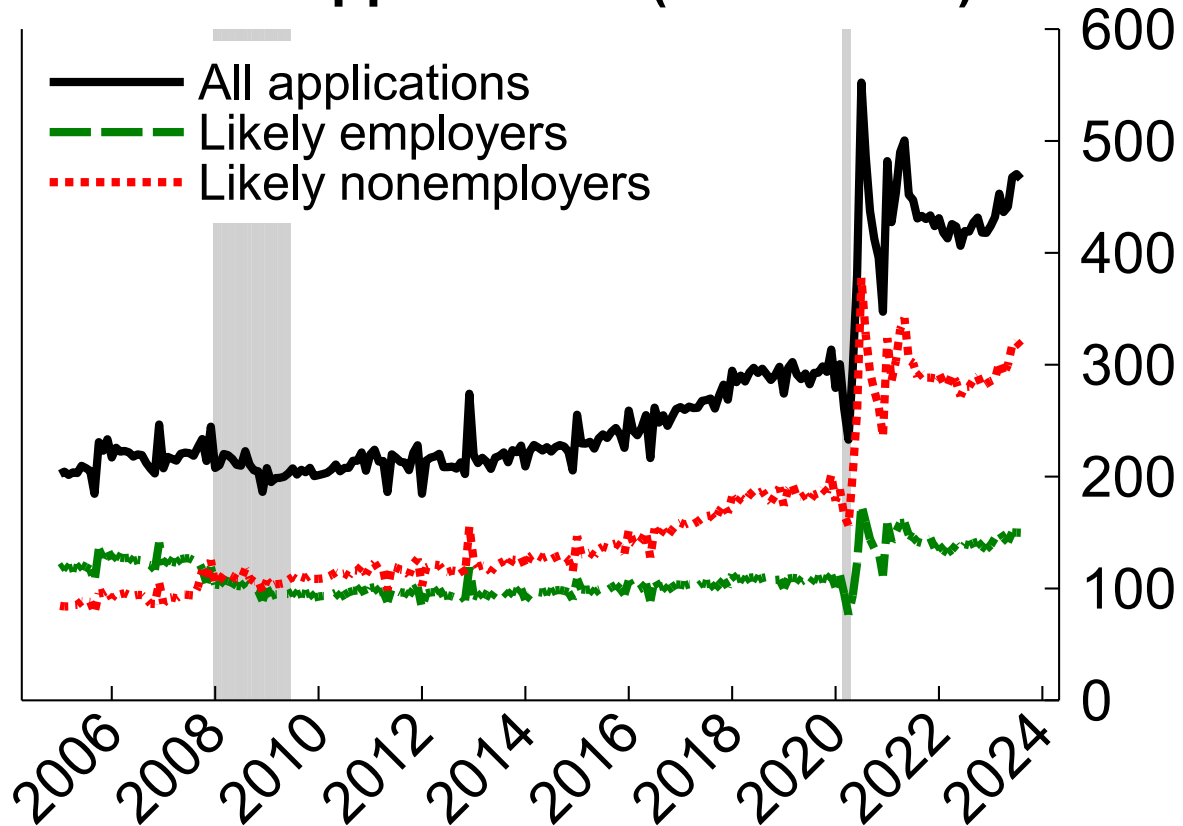
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The analysis and conclusions set forth here are those of the authors and do not indicate concurrence by members of the Federal Reserve staff or the Board of Governors.

# The surprising surge in business applications...

## Business applications (thousands)

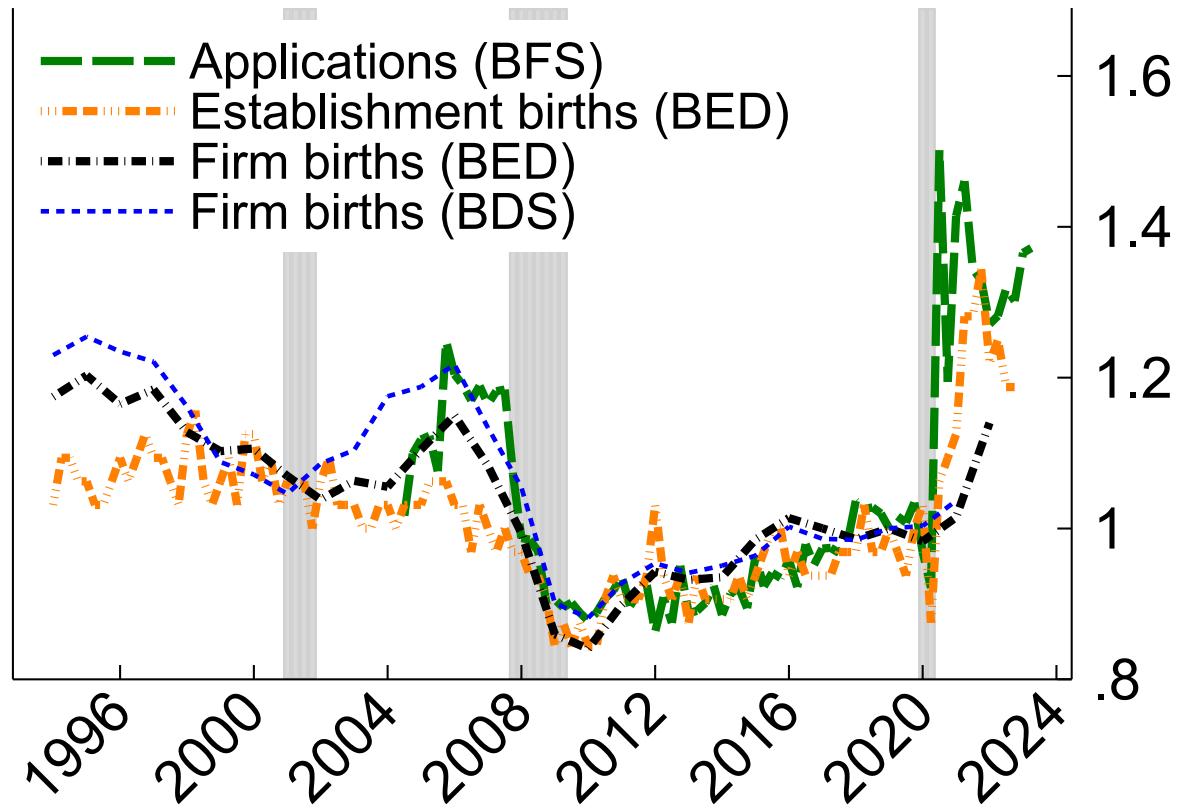


Note: All applications = BA series; likely employers = HBA series; likely nonemployers is residual.

- Business Formation Statistics (BFS): Applications for Employer Identification Number (EIN).
  - Excluded: trusts, estates, financial instruments, etc.
  - “**Likely employer**” – traits predictive of actual employer firm birth; “High-propensity” in BFS data
- Pandemic pattern:
  - Two waves: 2020, 2021-present
  - **Likely employers** and **likely nonemployers** move together (in cross section too)
- **Did *applications* transition to actual *employer businesses*?**

...was followed by surging *employer* entry.

### Entry rate indexes (2019:Q1 = 1)

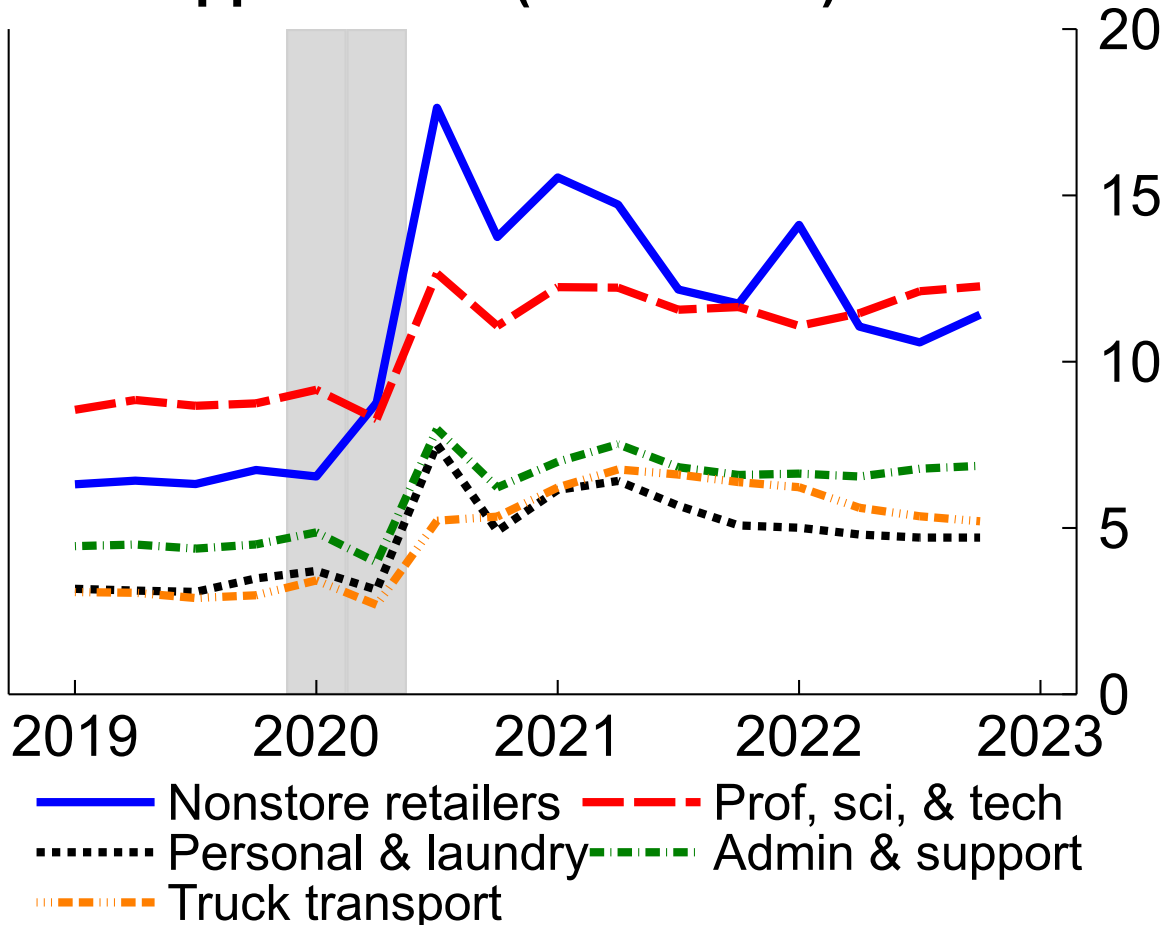


Note: Applications are likely employer (HBA).  
All series expressed as rates except BFS.

- **Employer business formation surged** starting in 2021:Q2.
  - **Establishment births:** 1 million jobs per quarter, 2021:Q2-2022:Q4
  - **Firm birth** data less timely, but jump in year ending March 2022
- *This paper:*
  - Public-use data, various sources
  - Characterize the surge in applications and employer entry
  - Relate to pandemic themes: geographic and industry restructuring, “Great Resignation”
  - Is “dynamism” back?

# Applications tell pandemic industry stories...

Total applications (thousands)



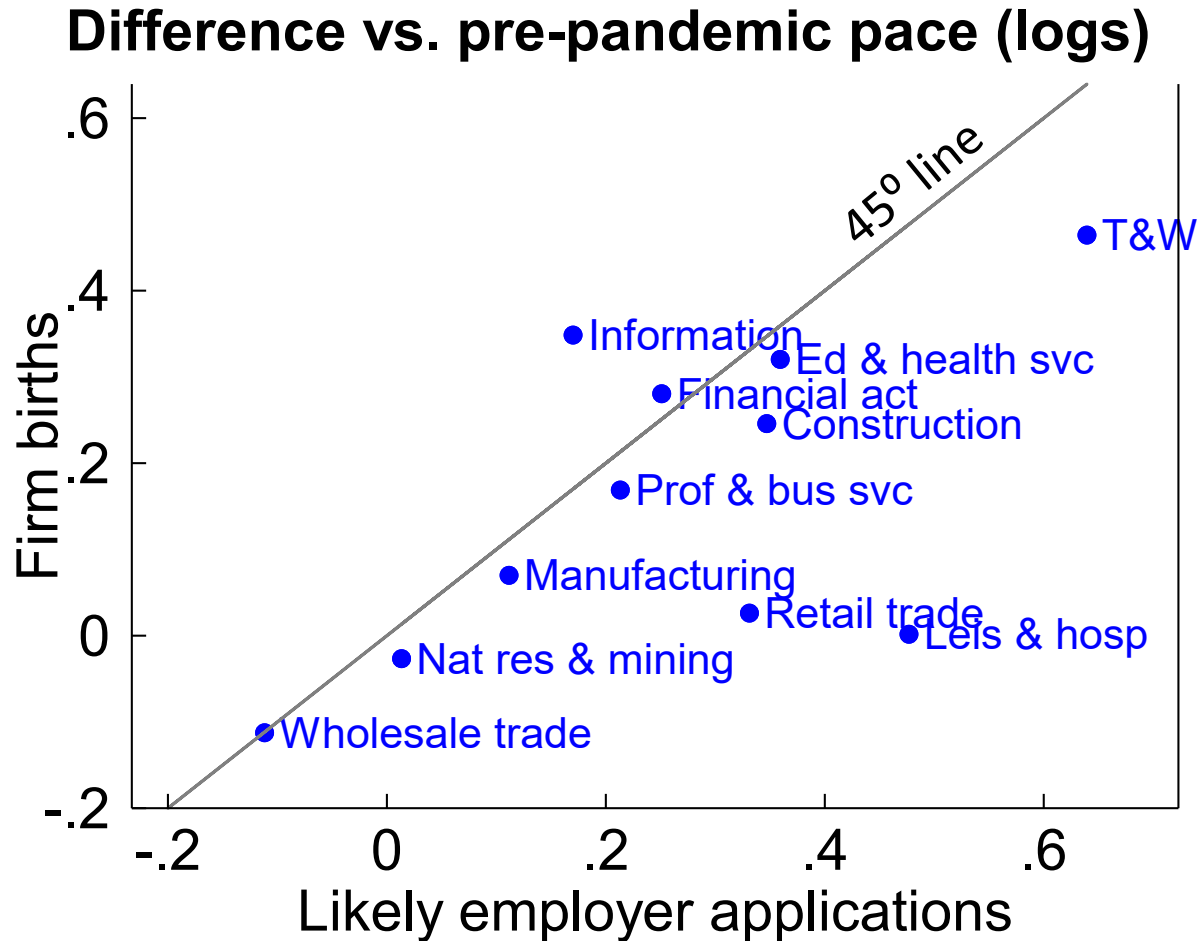
Note: Average weekly pace by quarter.

- Top industries for application surge:

- **Nonstore retailers**: online retail, others
- **Professional, scientific, & technical services**: includes architectural design, computer systems design, R&D, etc.
- **Personal & laundry**: pet care, others.
- **Administrative & support services**: Temp help, document preparation, call centers, landscaping, etc.
- **Truck transportation**: general & specialized freight.

→ **Industries conducive to pandemic work, lifestyle, and business**

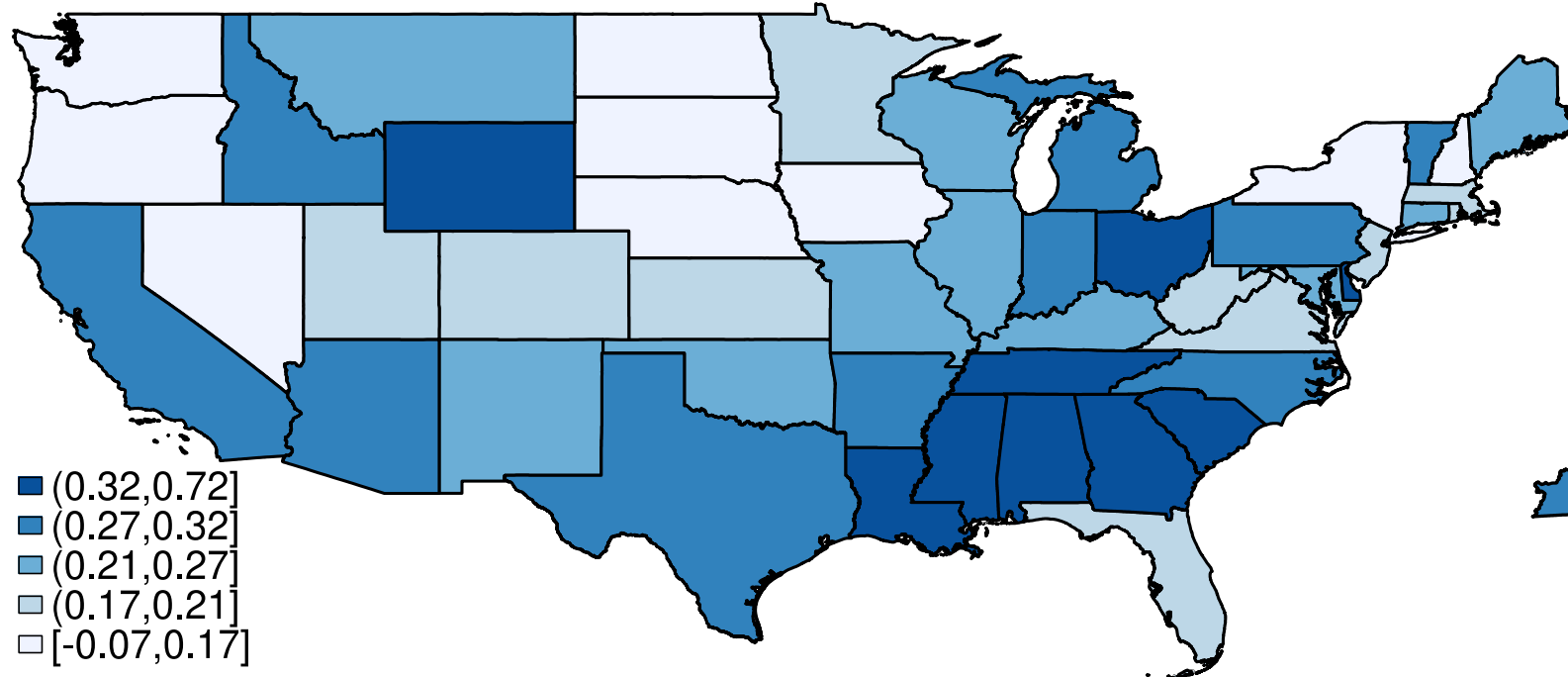
...with similar patterns for employer entry.



Note: 2021-2022 vs 2011-2020, March reference month.

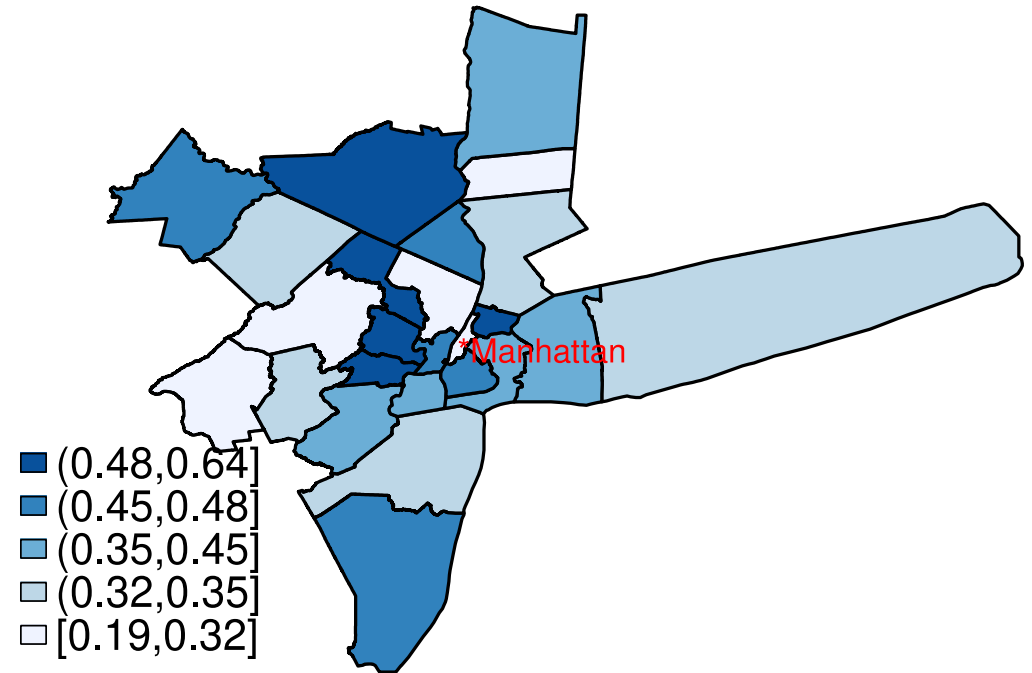
- Sectors with large “likely employer” applications surge tend to also see surges in firm births (through March 2022)
- Similar for establishment births through 2022:Q4
- At narrower (3-digit) industry level, correlation 0.34 and statistically significant (*all* applications, establishment *openings*)

# Applications show cross-country and within-city restructuring...



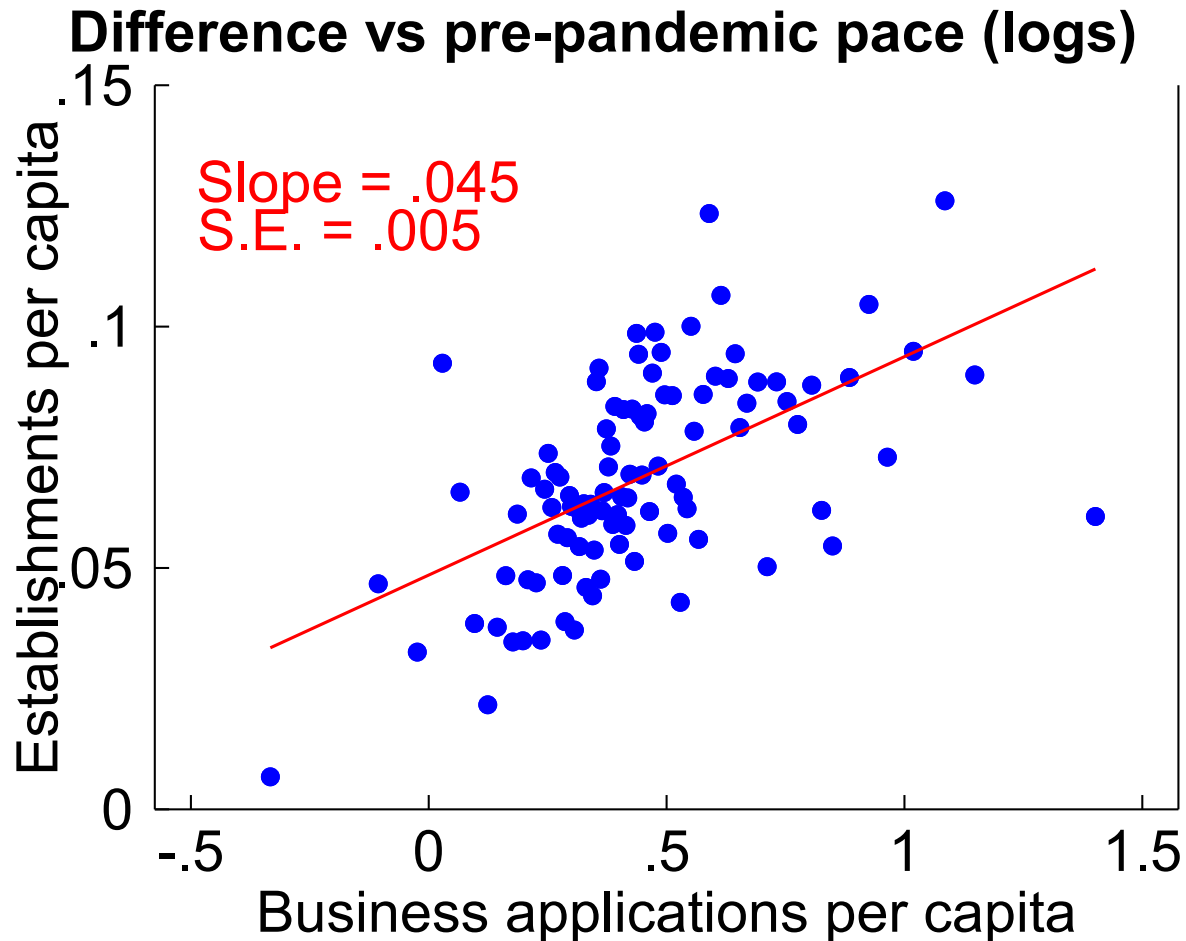
Note: Difference of average (log) likely employer applications per capita, 2020-2022 vs. 2010-2019.  
Source: Census Bureau Business Formation Statistics and population estimates.

- **Donut effect** in cities related non-linearly to pop density, estab density, and changes in WFH.

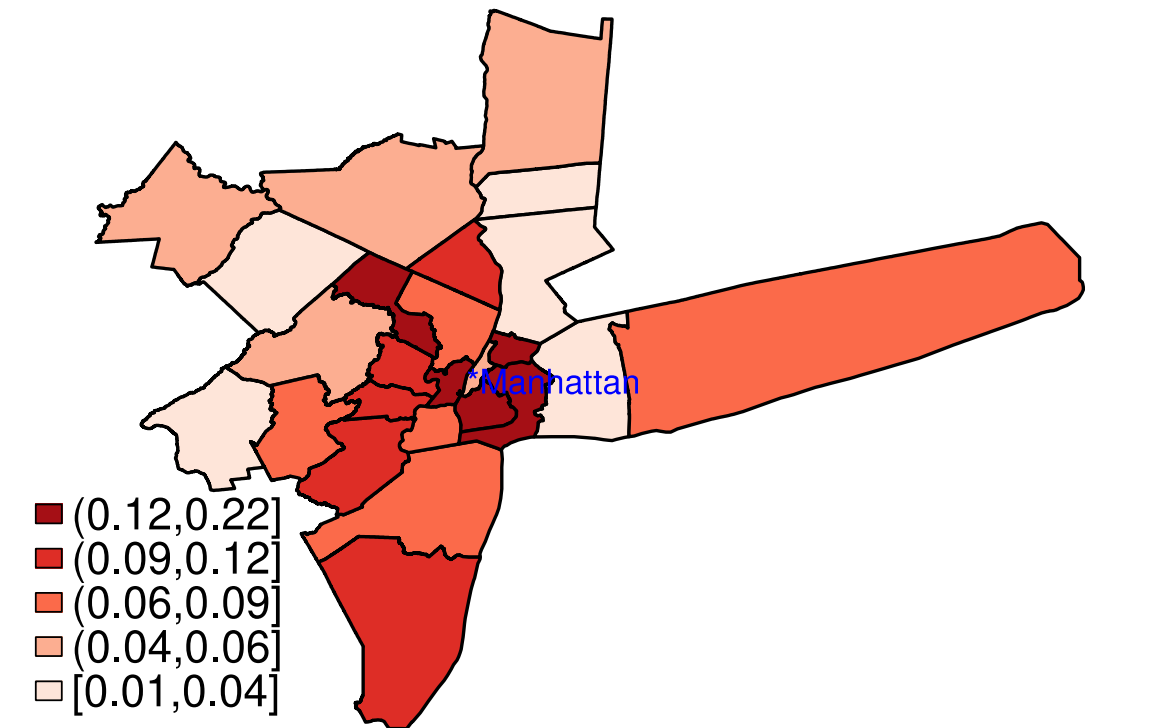


Note: State data for likely employer applications; county data for total applications

...and employer entry exhibits similar geographic patterns.



Note: 2020-2022 vs 2010-2019. County-level binscatter.

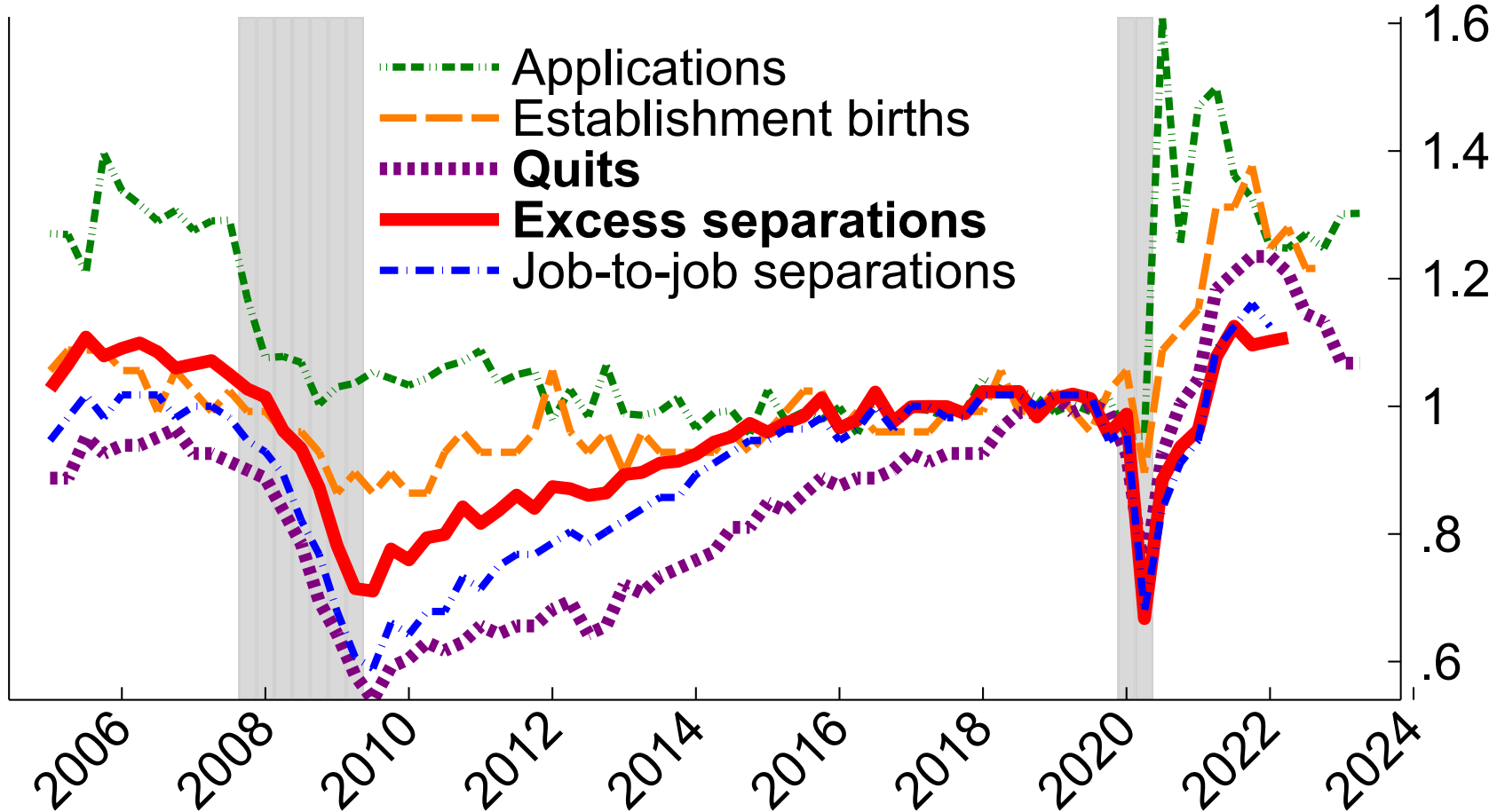


Note: Difference of average (log) establishments per capita, 2020-2022 vs. 2010-2019.

Source: QCEW and Census Bureau population estimates.

# Entry surge coincides with “Great Resignation” ...

Business entry and worker quits (2019 = 1)

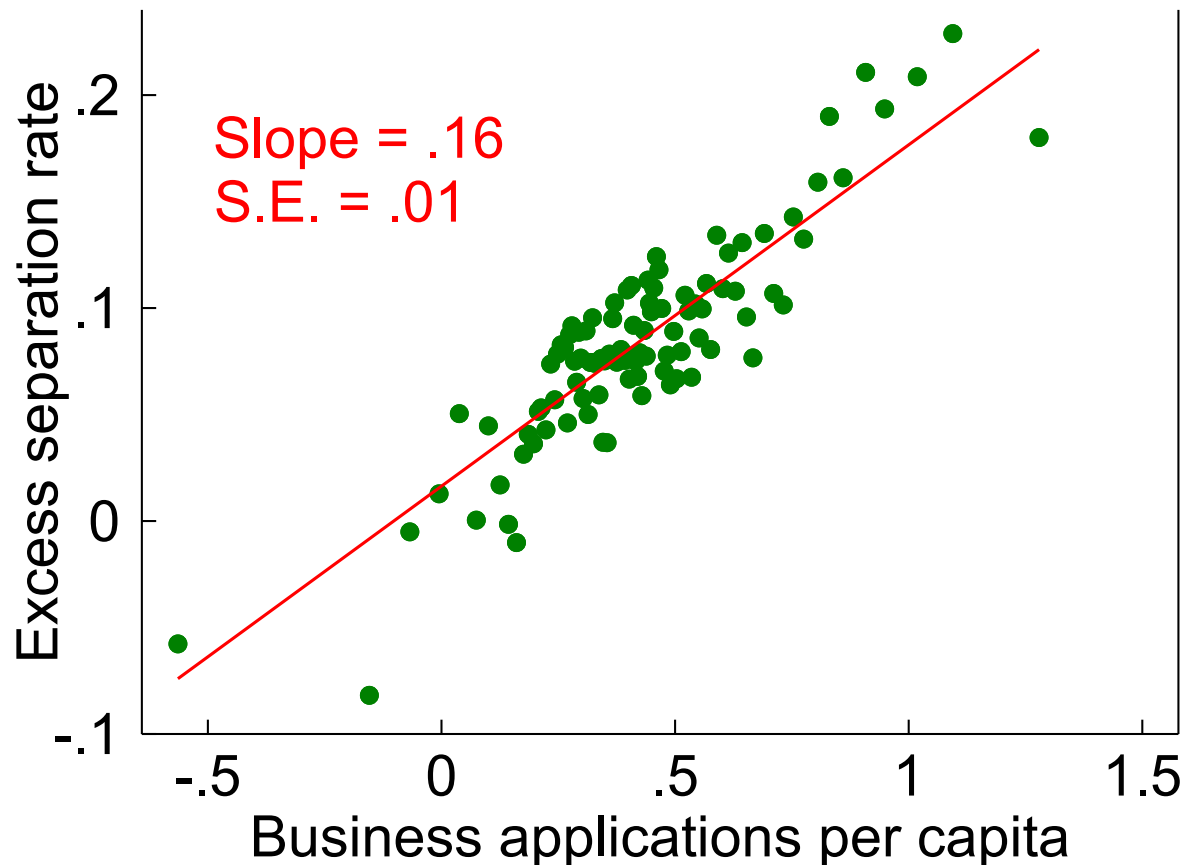


- Great Resignation: persistent surge in **quit rates**
- At county level, use proxy: **Excess separations** (separations in excess of job destruction)



# ...a relationship also found for county-level pandemic growth (vs. pre-pandemic)

**Difference vs pre-pandemic pace (logs)**

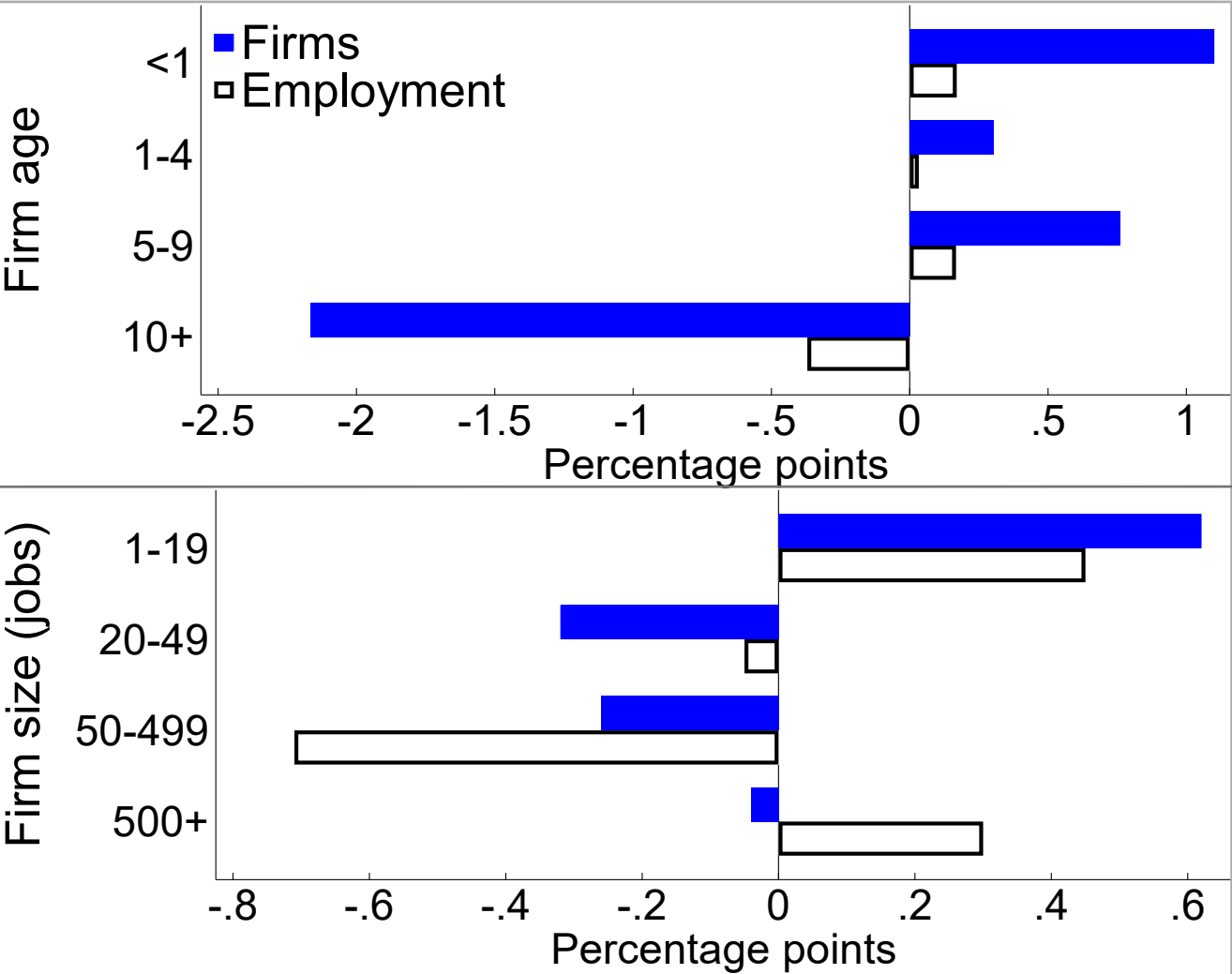


Note: 2020-2022 vs 2010-2019. County-level binscatter.

- Application surge tightly correlated with surge in quits (or proxy for quits)
- Not shown: Much weaker relationship for layoffs (or layoffs proxy), which had only an initial, short-lived spike
- What is the story?
  - Likely: Many workers quitting to join (or start) new businesses
  - Less likely: business formation surge explained by layoffs and weak labor market

# Dynamism revived?

Change in firm & employment shares, Mar 2020-2022



- Pandemic dynamism:
  - Shift of employment share toward young firms...
  - ... and small firms (though also largest)
  - Surge of reallocation
- But...
  - Pandemic entrants are small
  - Reallocation jump does not match pre-pandemic decline
  - Durable reversal of dynamism trends requires continued entry surge, robust post-entry growth

Source: BLS BED

# Final comments

- What happened?
  - Initial application wave: Short-lived in Summer 2020; Second wave: Started early in 2021, more resilient & coincides with employer entry
  - Potential entrepreneurs saw opportunities from change in patterns of consumption, work, lifestyle, and business—and went after the opportunities
  - Entry surge facilitated or followed broader pandemic economic restructuring across industry and geography
  - Many “quitters” likely flowed to new businesses
- Result:
  - Changes to geographic and industry pattern of economic activity
  - A slightly younger firm age distribution, more activity at small firms
  - A pause in declining dynamism. Reversal? Too early to tell.
- Implications for innovation and productivity?
  - Reshuffling (e.g., within-city restructuring) – unlikely to boost productivity
  - Startup surge in innovation-intensive sectors – historically connected to increase in innovation and productivity