Discussion of "Grown-Up Business Cycles"

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The Paper

- Examines the effects of the secular drop in startup rate on the dynamics of expansions and recoveries in the US.
- Drop + stronger cyclical response of startups to aggregate conditions $\rightarrow$ appearance of jobless recoveries + lower average growth rate in employment.
- Counterfactual: how would have business cycles looked had the contributions to employment from startups not declined?

The Paper

- Analysis directly complementary to two bodies of work:
  - Firm and establishment cyclical dynamics by age/size
    - Haltiwanter, Jarmin and Miranda (2013)
    - Moscarini and Postel-Vinay (2012).
  - Equilibrium models of firms' dynamics with firms of different age/size.
    - Sedlacek (2014), Schott (2014), Siemer (2014).
    - Clementi, Khan, Palazzo and Thomas (2014).

The Paper

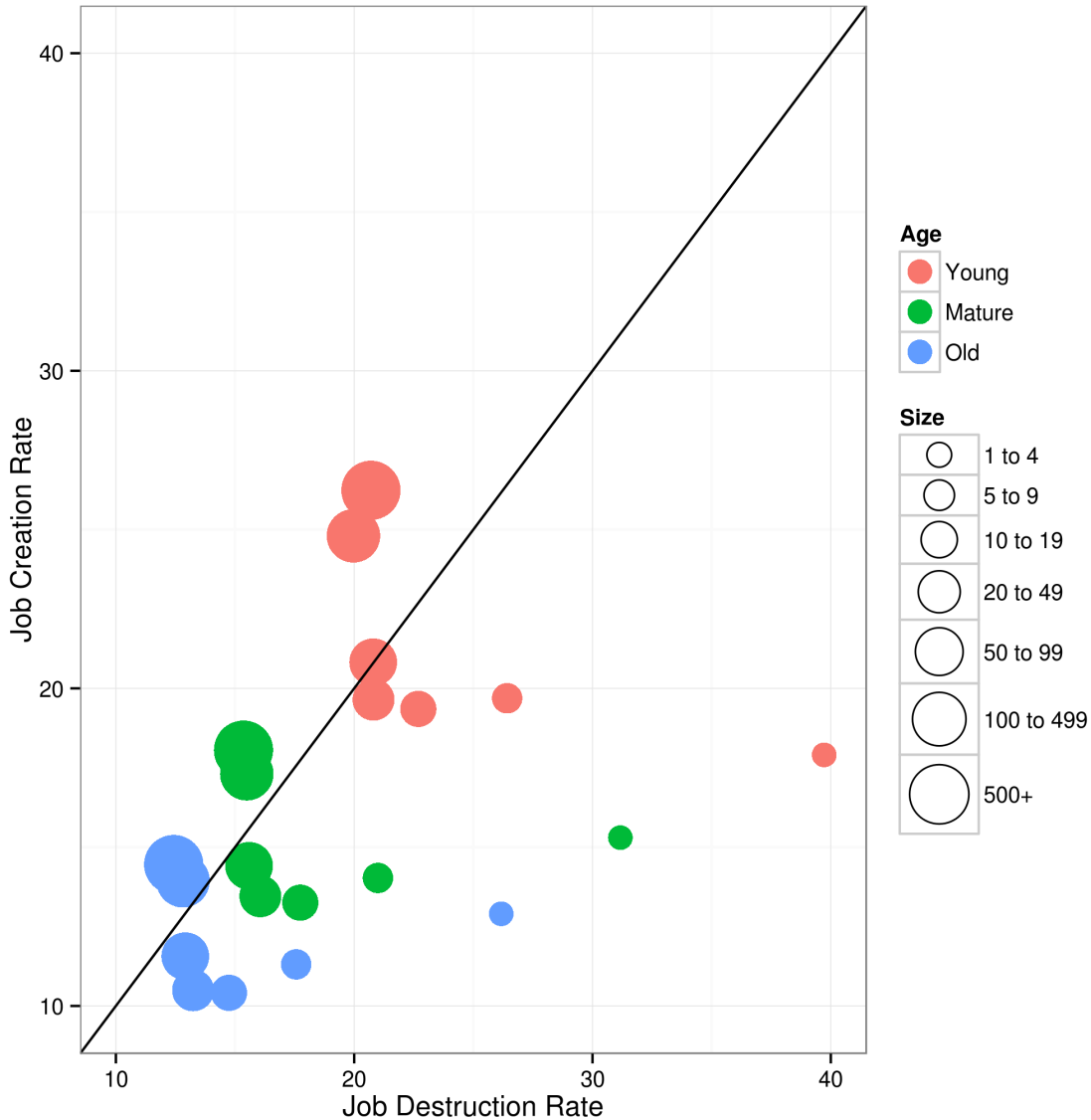
- Alternative methodology to provide counterfactual business cycle dynamics.

- Pros:
  - No questionable structural assumptions.
  - Easy to deal with (can compute lots of transitions).
- Cons:
  - Incumbent firms do not respond to changes in environment.

Cyclical Response of Startups

- Startups' cyclical response
- Vast majority of startups small.
- Moscariani and Postel - Vinay (2012): Employment at larger firms is more cyclical.
  - Age vs. Size.
  - What is the "cycle"?

Turnover by Age and Size



The Decomposition

- Start with firms. There are $F_t = (F_t^s, F_t^y, F_t^m)'$, number of firms by age group.
- Firms may enter or exit. Enter as s, exit as y or m. Denote survival probabilities at from $t-1$ to t by x_t^y and x_t^m.
- Some y firms become m firms. This happens at rate q_t between t and $t-1$.
- Laws of motion for firms:

$$F_t^s = F_t^s$$

$$F_t^y = F_{t-1}^s x_t^y + (1 - q_t) x_t^y F_{t-1}^y$$

$$F_t^m = F_{t-1}^y q_t x_t^m + F_{t-1}^m x_t^m$$

The Decomposition

- Now employment. There are $N_t = (N_t^s, N_t^y, N_t^m)'$, employees on average per firm in each group. So total employment in each age group a is $F_t^a N_t^a$.

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$$N_t^y F_t^y = N_{t-1}^y (1 + n_t^y) F_{t-1}^s x_t^y + N_{t-1}^y (1 + n_t^y)(1 - q_t) x_t^y F_{t-1}^y$$

$$N_t^m F_t^m = N_{t-1}^m (1 + n_t^m) F_{t-1}^y q_t x_t^m + N_{t-1}^m (1 + n_t^m) F_{t-1}^m x_t^m$$

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$$E_t^s = E_t^s$$

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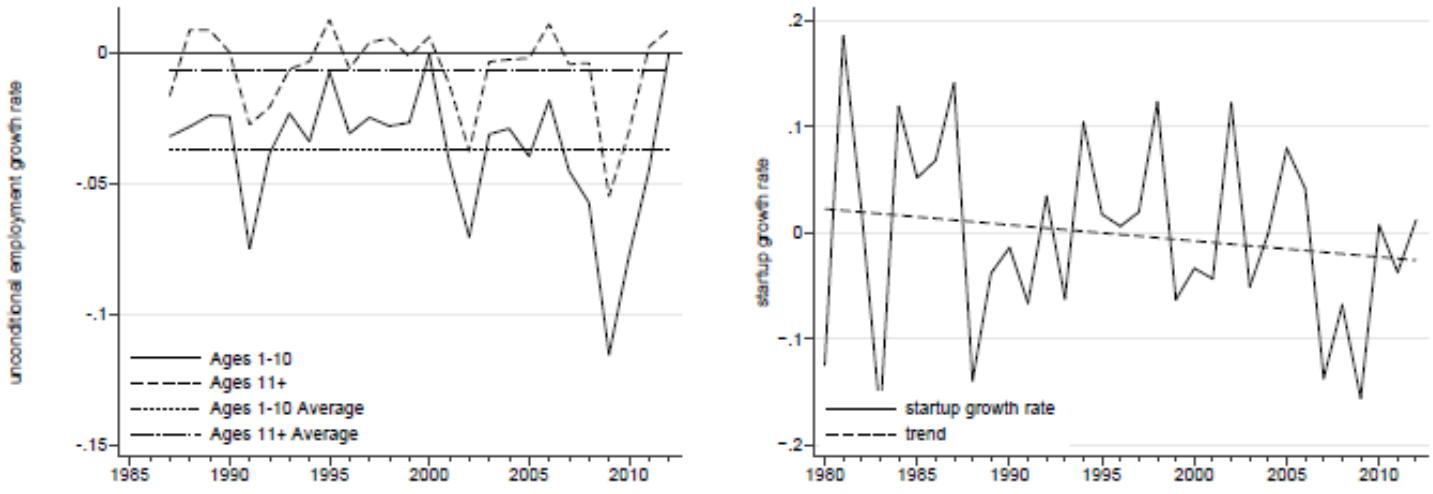
$$E_t^m = (E_{t-1}^y q_t + E_{t-1}^m)(1 + n_t^m) x_t^m$$

Conditional Growth

Figure 3: One-year conditional growth rate n_t at young (ages 1 to 10) and mature (ages 11+) firms

Unconditional Growth



(a) Young g_t^y and mature g_t^m from 1987 to 2012

(b) Startup growth g_t^s from 1980 to 2012

Figure 4: Unconditional incumbent growth rates and startup employment growth

Trends in Unconditional Growth

- Trend Coefficient (Startups): -0.15% (-0.913).
- Trend Coefficient (Young): -0.10% (-1.118).

Trends in Unconditional Growth

- Does this distinction affect quantitative results? Probably not for the aggregate counterfactual (work with actual P_t).

- Unclear about other results. Trend component of growth defined as:

$$s_{t-1}(1 + u_t^s) + (1 - \omega_{t-1})\bar{g}^y + \omega_{t-1}\bar{g}^m$$

Where the Paper is Going

- Work on workers' demographics and business cycles: Ríos-Rull (1996), Jaimovich and Siu (2009), Lugauer (2012).

- Work on firms' demographics and business cycles: Clementi, Khan, Palazzo, Thomas (2014), Schott (2014), Sedlacek (2014), Siemer (2014).

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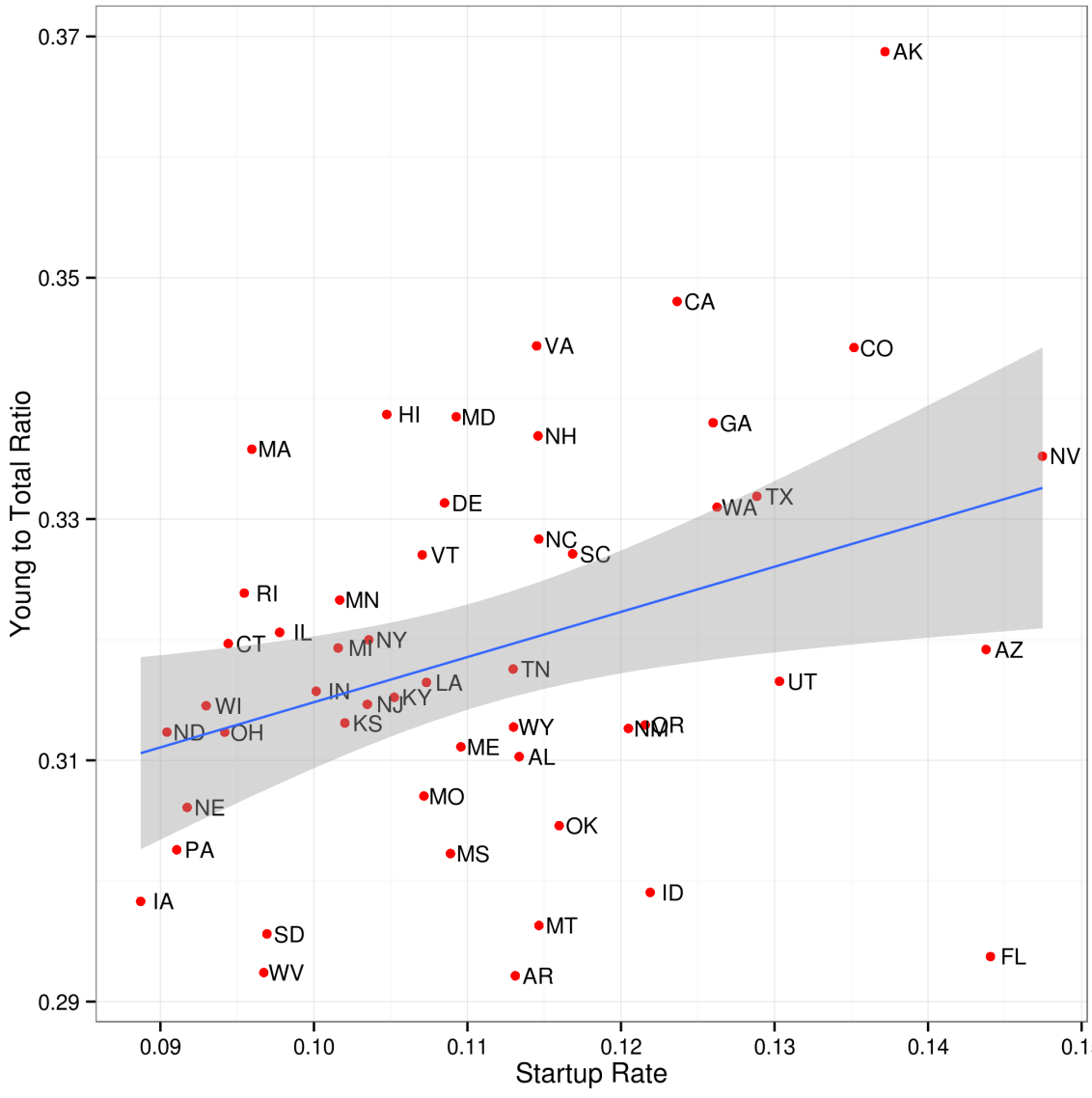
- Workers' demographics and firms' demographics: Lazear and Liang (2014).

Startups and Youth Across US States



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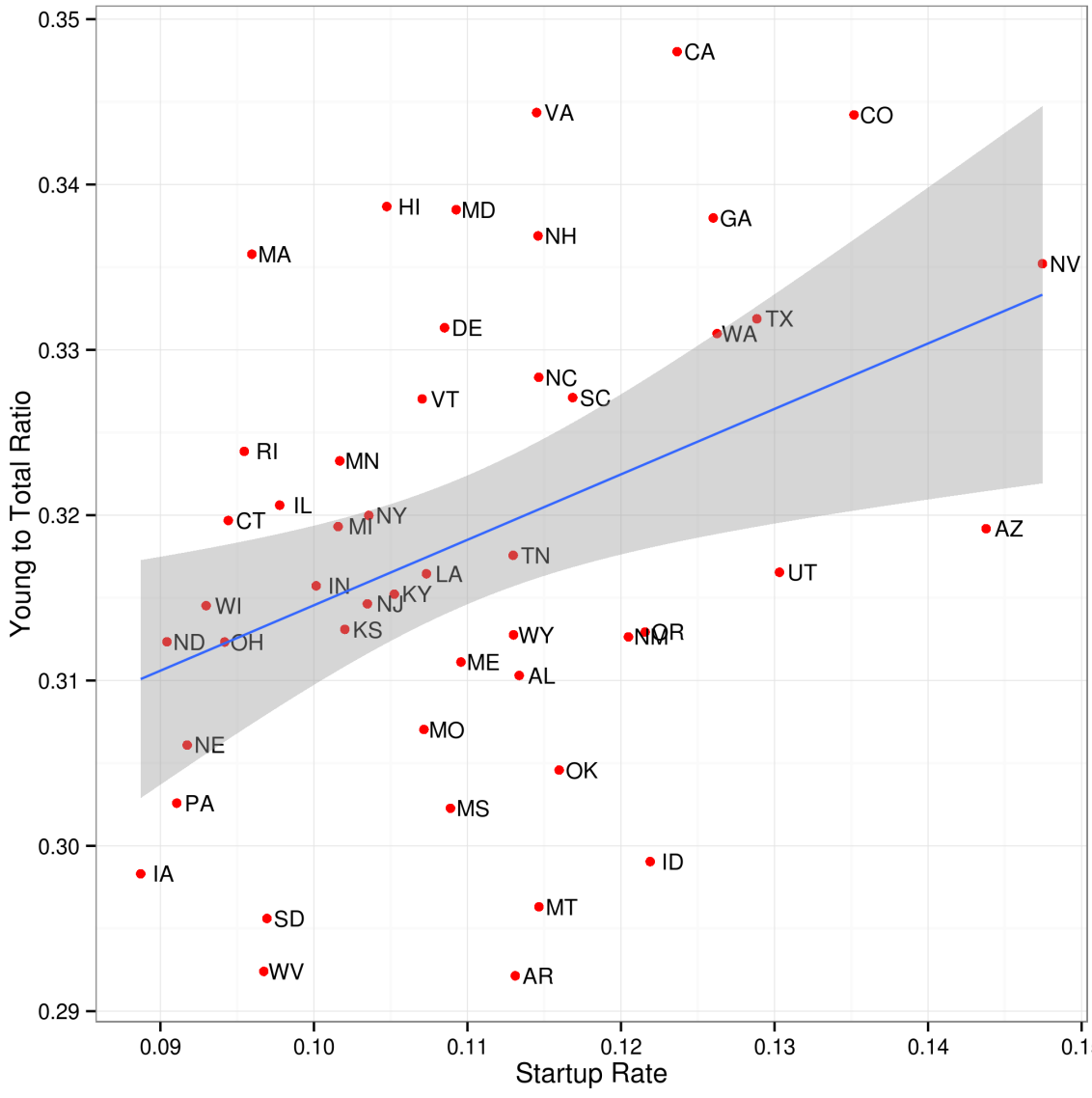

Conclusions

- Nice paper!
- Some assumptions appear counterfactual. Quantitative impact of changing them maybe large.
- Alternative approach to structural models of firms dynamics.
- Interaction of firms' and workers' demographics (and business cycle implications) seems a promising and interesting direction to go.