Who Creates Jobs? Small vs. Large vs. Young*

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The Debate on the role of small businesses and job creation still rages

“This week, we are honoring our nation’s job creators—the entrepreneurs who generate roughly 70% of all new positions.” - Rep. Nydia M. Velázquez (D-NY), the Chairwoman of the House Small Business Committee, 5/20/09

“One of the most enduring lies in American politics is the myth of small-business job creation.” - Steven Pearlstein, WA Post 7/8/09
Why?

• Some element of truth to finding that on average small businesses have higher net growth rates...
• But reflects factors beyond those often used in the interpretation of this finding...we shed light by using new Business Dynamic Statistics (and underlying LBD)...
  – Statistical issues (regression to the mean)
  – Role of firm births and young firms
    • Startups make substantial contribution
    • Most startups are small
  – Net vs. Gross:
    • Young, small firms are very volatile. They create and destroy lots of jobs.
    • “Up or Out” dynamic of young businesses
      – Dominant role of idiosyncratic factors – can’t pick winners
<table>
<thead>
<tr>
<th>Firm Age</th>
<th>Firm Size (Base Year)</th>
<th>a) 1 to 4</th>
<th>b) 5 to 9</th>
<th>c) 10 to 19</th>
<th>d) 20 to 49</th>
<th>e) 50 to 99</th>
<th>f) 100 to 249</th>
<th>g) 250 to 499</th>
<th>h) 500 to 999</th>
<th>i) 1000 to 2499</th>
<th>j) 2500 to 4999</th>
<th>k) 5000 to 9999</th>
<th>l) 10000+</th>
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</table>

Data

- The Longitudinal Business Database
  - 1975-2005 (08) – long time series permits analysis by firm age
  - Private Non-Farm Economy
  - Establishment level with Firm identifiers
  - High quality establishment links to identify entry/exit
    - Also permits firm level analysis abstracting from M&A
  - Firm Size: constructed by aggregating employment up to firm
  - Firm Age: constructed from age of oldest establishment at time of firm birth
    - Here we focus on 1992-2005 so rich and consistent measures of firm age (1-15, 16+)
  - Other: Payroll, Industry, Location…
The Size/Age Relation

Firm startups are small. Larger firms are older.
Regression to the Mean

Negative autocorrelation greater for smaller size classes suggests transitory shocks more important for smaller firms.
Regression to the mean...

- Given negative correlation in firm and establishment growth rates, regression to the mean effects imply:
  - If use base year size, negative correlation between size and growth
    - Businesses with negative transitory shock in t-1 more likely to be in smaller size class and exhibit growth
  - If use end year size, positive correlation between size and growth
    - Businesses with positive transitory shock in period t more likely to be classified in larger size class
- Davis, Haltiwanger and Schuh (1996) suggest average “current” size in t-1 and t balances these two extremes
- In practice, closely approximates BLS dynamic sizing method
- Ideally, measure driving forces (shocks) and examine response to transitory and permanent shocks.
Firm Size, Firm Age and Employment Growth: Methodological Approach

- Employment-weighted regressions
- Establishment-level and firm-level with firm characteristics
- Controls for detailed Industry and Year
- Non-parametric Firm Size and Firm Age
  - Yields within cell employment-weighted means by firm size and age classes
- Note: All estimated effects interpreted relative to omitted group
Key Firm vs. Establishment Conceptual Differences

- Firm entry implies establishment entry but not the converse
  - Much entry of establishments for mature firms
- Firm exit is the shutting down of all establishments
  - But many continuing firms have establishment exit.
- Within firm reallocation
  - Firms may have within firm restructuring reflecting creation and destruction within firms (expansion, contraction, entry, exit of establishments)

- Technical/measurement note: There are some transitory startups and shutdowns but they are relatively uncommon and confined mostly to young and small firms/establishments
Firm Size: Sensitivity to controlling for age and size methodology

Net Employment Growth Rates by Firm Size

Note: Each reported point reflects the estimate for the size class in question relative to the omitted firm size class (10,000+) . Results equivalent with establishment and firm level regressions.
Decomposing Net Change

Regression to the mean effects most important for continuing establishments

With age controls, larger businesses more establishment entry
Modest overall relationship between net and firm age (excluding startups!)

Note: Each reported point reflects the estimate for the age class in question relative to the omitted firm age class (16+).
But this masks “up or out” for Young Firms

These patterns robust to size controls

Using firm-level regressions
Picking winners?

• Startups and surviving young firms contribute disproportionately to net growth
• Idiosyncratic factors dominate:
  – Detailed industry*state*year effects account for less than 10 percent of variance of net growth rates across establishments
  – Detailed industry*state*year effects account for about 16 percent of variance of net growth rates across establishments in first five years after firm birth
  – There are systematic differences across detailed industries in firm birth rates but this mostly reflects differences in firm turnover patterns (e.g., low sunk cost industries).
Interpretation

• More nuanced view of role of small businesses as “primary creators of jobs”?
  – More informative to focus on firm startups and firm age
    • Firm startups contribute substantially to gross and net job creation
    • Firm startups tend to be small
    • Young firms very volatile (up or out)
    • Firm age patterns don’t yield patterns that can be misinterpreted given regression to the mean effects

• Firm startup and firm age contributions to job growth consistent with models of industry evolution that stress importance of firm entry, learning, experimentation and selection
  – Dominant role of idiosyncratic factors

• Interpret current economic trends through this lens:
  – Did recent financial collapse adversely impact these young/small firm dynamics?
But need also to stress need to look beyond counting jobs...

- **Productivity and earnings**
  - Firm dynamics literature has shown that these life cycle dynamics of firms important for productivity and innovation
    - Lower productivity businesses exit
    - Conditional on survival, younger businesses more rapid productivity growth than mature businesses
  - Firm heterogeneity literature has shown productivity and earnings highly correlated
  - Insights from linked employer-employee data (e.g., LEHD)?
    - What types of workers work at young volatile businesses?
    - What are their longer-run labor market outcomes?