



The Size and Growth of Businesses Started During the Financial Crisis

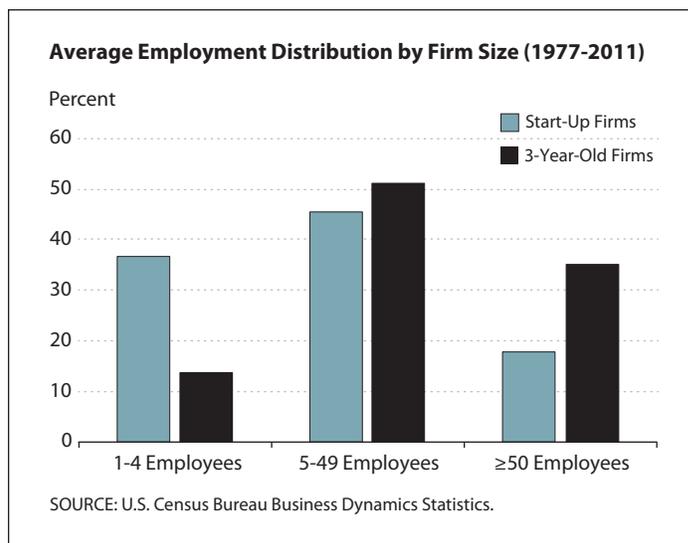
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My recent work with Cole and Greenwood finds that development of financial markets accounts for the smaller growth of firms in poorer countries than in richer ones (Cole, Greenwood, and Sánchez, 2012), a fact emphasized by Hsieh and Klenow (2012) in explaining differences in productivity between the United States, India, and Mexico. We show how financing needs vary across projects with different life cycle profiles: Ventures that grow more, similar to those in the United States, need more financing than ventures that grow less, similar to those in Mexico and, especially, in India.

In this vein, major disruption in financial markets, such as the 2008 financial crisis, may have affected the growth of ventures started during that time. This essay studies the effect of the recent financial crisis by analyzing the size and growth of firms created during 2008. How does the size of these start-ups compare with the size of start-ups during recessions and expansions? Does the growth of these three groups of firms differ during their first years of operation? To answer these questions, we rely on data from the Business Dynamics Statistics data series prepared by the U.S. Census Bureau.¹ This source provides information on the number of firms and total employment by different combinations of age, size, and year of business creation (birth). The data begin with the group of firms established in 1977 and continue through 2011. A total of 564,907 firms started in 1977; there were 1,720,560 firms by 2011.

Firms started during recessions, especially those started in 2008, have grown less during the first 3 years of their life than those started in non-recession years.

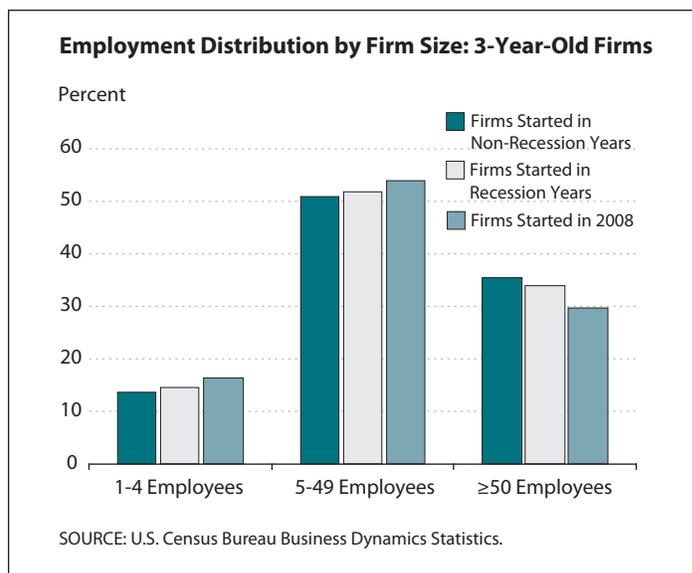
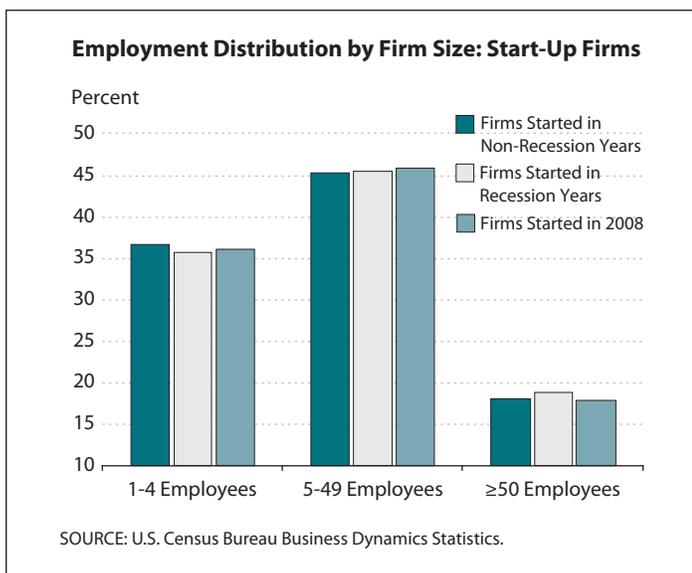
The first chart shows the growth of different-sized U.S. start-up firms versus 3-year-old firms. Note that for start-ups we use the share of employment in each firm-size category in



the year t (say 1985) of firms that started in the same year t (i.e., 1985), while for 3-year-old firms we use the share of employment by firm-size category in the year $t+3$ (say, 1988) of firms that started in year t (i.e., 1985). We use this approach for every year from 1977 to 2008 and plot the average for each group (start-up firms vs. 3-year-old firms). This approach shows changes in the share of employment in each firm-size group over the life cycle of the firms.

What do the data tell us about the firm-size groups? First, we consider new (start-up) firms. About 36 percent of the workers in these firms are employed by firms with 1 to 4 workers; only 18 percent of workers are employed by firms with 50 or more employees. The opposite is true for 3-year-old firms: Only 14 percent of workers in these firms are employed at firms with 1 to 4 workers, while about 35 percent of workers are employed by firms with 50 or more employees. Thus, we see a shift in the distribution of employment toward larger employers over the life cycle of the firm. Firms grow, in terms of employment, as they age.

To analyze the effect of the financial crisis, we compare three groups: (1) the firms started in 2008, (ii) the firms



started in any other recession year since 1997, and (iii) the firms started in non-recession years. The second chart compares the size distribution for start-up firms for these three groups of firms. The differences are only minimal. Thus, we conclude that the financial crisis did not have an important effect on the size of start-ups.

Looking at the second chart could lead to the conclusion that the financial crisis of 2008 had no effect whatsoever on the size distribution of U.S. firms. But recall that the largest differences between the size distributions for the United States, Mexico, and India do not occur in a firm's first year but in the following years. The financial crisis may have affected the growth of these firms over the life cycle. Given that data are available only through 2011, we can analyze only the growth of firms during their first 3 years of life. In particular, we can compare the distribution of employment by firm size at age 3.

The third chart shows the same distribution as the second chart but for 3-year-old firms. The differences here are more marked. The share of employment in firms with 1 to 4 workers is larger for firms started during recession years and even larger for firms started during 2008 amid the financial crisis. The opposite is true for the largest firms: The share of employment in firms with 50 or more employees is larger for firms started in non-recession years than for firms started during recessions. This share is even smaller for firms started in 2008. Thus, firms started in 2008 are relatively smaller 3 years later. Together, the second and third charts indicate that firms started during recessions, especially those started in 2008,

have grown less during the first 3 years of their life than those started in non-recession years.

How can a financial crisis affect the growth of firms in the next four years? There are at least two mechanisms that can deliver this result. First, the access to credit was limited not only in 2008 but also in the following years, so young firms that needed financing to grow could not do so. Second, the choice of venture made in 2008 has an irreversible component (for instance, the products introduced by firms started that year had less research and development investment, so their expansion is slower). The evidence here suggests that one of these mechanisms may be operating. In light of the literature cited previously, these findings suggest there may be some long-lasting productivity losses from the financial crisis. ■

Note

¹ Specifically, we use the “Firm Age by Firm Size” table (http://www.census.gov/ces/dataproducts/bds/data_firm.html).

References

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