**Is Connecticut a Small Business State?**

*By Manisha Srivastava, Economist, manisha.srivastava@ct.gov*

"Over the past decade and a half, America's small businesses have created 65 percent of all new jobs in the country... These companies are the engine of job growth in America."

- President Barack Obama, October 21, 2009

A widely held belief is small businesses create most of the new jobs. Given the recent recession and slow recovery, there is a lot of interest in job creation and policies to promote economic growth. Using a newly available data set from the U.S. Census, this article explores the notion of job creation by both firm age and firm size, and seeks to provide some clarity on the underlying dynamics of Connecticut's labor market.

The Business Dynamics Statistics (BDS) produced by the U.S. Census Bureau is compiled using the Census Bureau’s Business Register. The Business Register covers establishments of all domestic businesses including the self-employed, but excluding private households and governments. The BDS dataset tabulates data at the establishment level (an establishment is a fixed physical location where economic activity takes place). Establishments all belong to firms (a firm may be the parent of one establishment or multiple establishments). When analyzing BDS data for Connecticut it is important to note that though the establishments are all based within Connecticut, parent firms for Connecticut’s establishments can be located anywhere in the nation. The BDS data set includes measures of firms, establishments, employment, entry and exit of establishments, and job creation and destruction by both the age and size of parent firms. BDS data is available from 1977 forward, however, the following analysis is limited to the years 1988 to 2007 to enable peak-to-peak analysis based on Connecticut’s Current Employment Statistics (CES) annual employment levels. To simplify the discussion, BDS data is grouped into small (1 to 49 employees), medium (50 to 499), and large (500+) sized firms, as well as new (age 0), young (1 to 5 years), established (6 to 10 years), and mature (11 years or older) firms.

A commonly stated refrain is “Connecticut experienced no net job growth in the past 20 years.” Though there has been little change in employment on net, according to BDS data Connecticut created about 4.35 million jobs from 1988 to 2007. Unfortunately, an almost equivalent number of jobs were also destroyed during the time period. These numbers point to the large amount of churn or dynamism there is within the labor market. To understand these figures and the relationship among job creation, firm age and firm size, Connecticut’s BDS data will first be used to look at how firms and establishments are distributed. Next, the number of establishments entering and exiting, and then employment by firm age and size will be observed. Finally, the effects of firm age and size on job creation, job destruction, and the resulting net job creation will be analyzed. To round up the discussion, Connecticut’s results will be compared to the United States (U.S.) average, as well as peer and neighboring states.

Graph 1 shows the number of firms and establishments in...
Connecticut grouped first by firm size and then further by firm age. The graph clearly shows the majority of firms and establishments are in smaller size firms. Small firms with 1 to 49 employees account for 79% of all establishments and 92% of all firms. Mature firms (11 years or older), also account for a large number of firms (47%) and establishments (54%).

Given the number of firms and establishments in smaller size firms, it is not surprising to find in Graph 2 that most establishment entry and exit also occurs in smaller size firms. Small firms account for 82% of all establishment entry. However, 80% of these entries come from new firms (by definition, new firms of age 0 can only have establishments entering). Furthermore, 85% of establishment exits also occur in small firms. Thus, small firms of all ages (new, young, established, and mature) are dynamic in the entry and exit of establishments, but overall generate a net loss in number of establishments. Conversely, large and mature firms are a net creator of establishments, accounting for, on average, 12% of establishment entry and 11% of establishment exit.

Graph 3 shows the average distribution of employment by firm age and size for Connecticut. Small firms account for 30% of employment, whereas 49% of employment is in large firms. New firms account for 2% of employment,
while mature firms of all sizes account for 79% of employment. Consequently, even though smaller firms in aggregate have more firms and establishments (and as a result more entry and exit of firms and establishments), employment is concentrated in older and especially large older firms. At 47%, employment in large and mature firms accounts for nearly half of all employment in Connecticut on average for the years 1988 to 2007.

Given that mature firms account for about 80% of all employment, it follows that mature firms also account for a large portion of job creation and job destruction, as shown in Graph 4. In fact, 62% of job creation and 71% of job destruction occurs in mature firms. Concentrating on firms that are large as well as mature finds 39% of job creation and 42% of job destruction occurs here. Job creation and destruction within large and mature firms is very close to that of small firms of all ages (new, young, established, mature). Small firms account for 39% of job creation and 38% of job destruction. However, about a third of small firm job creation comes from newly created firms.

The job creation and destruction dynamics shown in Graph 4 net to an average of 2,900 jobs created per year from 1988 to 2007. Graph 5 shows essentially all net job creation came from new firms, which accounted for 31,600 new jobs. Of these, 84% came from small firms. However, by definition a new firm cannot destroy jobs, which explains why net job creation is high in new firms. Furthermore, Graph 5 shows small firms end up destroying a majority of the jobs they create as they age from new into young, established, and mature firms. Mature firms, which account for the majority of job creation and destruction, account for negative net job creation of -16,800, of which 70% comes from small firms.

Summary of Findings
Most firms and establishments fall in the small firm category. As a result there is greater dynamism in establishment entry and exit within small firms. By contrast, employment is mainly concentrated in mature firms, especially large mature firms, and to a lesser degree
in small firms. Greater employment levels lead to greater dynamism (job creation and destruction) in mainly mature, but small firms as well. When job creation and destruction is netted out, Graph 5 shows new firms, especially small and medium sized new firms, generate the most jobs on net.

Graph 6, which displays net job creation by just firm size or firm age, shows further evidence of the findings in Graph 5. Medium sized firms with between 50 to 499 employees actually created about 2,000 more jobs on net from 1988 to 2007 than small businesses. Since new firms typically do not enter into the large firm category, large firms do not have the advantage of including job creation from new firms, and as a result have negative net job creation. Analyzing by age, only new firms created jobs on net, as was shown in Graph 5. However, established firms between the ages of 6 to 10 actually destroyed about 1,500 fewer jobs than young firms between the ages of 1 to 5. Mature firms destroy the most number of jobs.

The Ultimate Question

The above discussion shows that the answer to who creates jobs depends on how the question is framed. Ultimately, however, what job seekers and policy makers need to know is where jobs are being created, not just where jobs are being created on net. When looking for employment individuals need to know where the most jobs are being created, giving them a higher probability of finding employment.

Turning Graph 4 around and comparing job creation and destruction simply by size and age (Graph 7) shows the majority of job creation occurs in mature firms that are 11 years or older. Even though a greater number of jobs are also destroyed by mature firms, the number of opportunities available from mature firms outweighs availability of jobs from firms of all other categories, including small businesses. After mature firms, large firms create the most number of jobs, followed by small businesses.

The checkered bars in Graph 7 show job creation by firm age that is not attributable to small firms. The white bars in Graph 7 show job creation by firm age that is not attributable to new firms. The results hold even after removing small firms from the age categories and new firms from the size categories: mature firms create the most number of jobs, followed by large firms and then small firms.

How does Connecticut compare to the U.S. and other states?

A comparison of Connecticut on the above discussed metrics to the U.S. as a whole, to neighboring states in the Northeast, and to peer states with similar employment levels, all show one same phenomenon - Connecticut has more activity and dynamism in mature firms. Table 2 above shows the percentage of employment, firms, establishments, job creation and job destruction that occurs in mature firms in Connecticut against the comparison groups. Connecticut leads in every metric.

Graph 8 provides a better understanding of how Connecticut stacks up on job creation compared to the rest of the U.S. first by firm size, then by firm age.
size and then by firm age. The line in each size and age category shows the range for the percent of job creation occurring in each state and the District of Columbia (D.C.). Immediately one can see there is great variability in the amount of job creation coming from small and large firms, and that mature firms are generally where most job creation occurs for all 50 states and D.C. The boxes in Graph 8 show the first and third quartiles for each category, or where the middle 50% of states fall. Job creation specifically for Connecticut and the U.S. as a whole are also identified in Graph 8. Even though there is great variability between states on job creation from small and large size firms, Connecticut is very close to the national average. However, Connecticut is about six percentage points above the national average for job creation coming from mature firms. It is interesting to note that high job-growth states like California, Texas, and Florida are on the lower end of percent job creation coming from mature firms.

Conclusions

The above discussion shows there is no definitive answer to who creates jobs. The answer will change depending on how the question is framed. If the desired metric is net job creation, then new firms create the most jobs, albeit partly due to the definition of new firms (there is no job destruction in new firms). If the question is net job creation by size of business (regardless of age), then medium followed by small sized businesses create the most jobs. If the desired metric is simply job creation, then mature firms create the most, followed by large firms on average, and then small businesses.

1 Due to privacy concerns, some of the data for young large firms are not disclosable. This data is withheld from the BDS data set, and as a result from the analysis of this paper. Data on young and large firms is missing from the employment, job creation, job destruction, and net job creation data sets. However, not many firms grow large at a young age. Therefore, the missing data is negligible and would not change the overall results.

2 As noted in footnote 1, BDS data by both firm age and size has non-disclosable fields. However, all data is available in BDS data by firm size only or by firm age only. Graphs 6 and 8, as well as Table 1, were created using this latter data set.