Job Creation, Small vs. Large vs. Young, and the SBA

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Abstract

One of the few areas of recent consensus across all major political groups in the US is the allegedly important role played by small businesses in job creation. The policies justified by this belief include a variety of small business loan and support programs, largely through the Small Business Administration (SBA), as well as preferential treatment of small businesses in contracting and regulatory requirements.[2] The empirical basis for the belief goes back to Birch (1987), although the underlying methods and data were questioned by Davis, Haltiwanger, and Schuh (1996). More recently, Neumark, Wall, and Zhang (2011) have reconfirmed, using improved data and methods, the Birch conclusion, but Haltiwanger, Jarmin, and Miranda (HJM, 2013) have shown that the size-growth relationship is not robust to controlling for age (as had Evans (1987) for a much smaller data set on manufacturing industries). Indeed, HJM find that the relationship may even reverse signs, so that larger firms contribute more to job creation, once age is taken into account.

This research has attracted considerable attention both from scholars and journalists, and it is very useful as an empirical description of the economy and as an attempt to set out the correct "facts" that can be juxtaposed against theories of firm and industry dynamics. But the firm size-growth relationship has no clear policy implications. On the basis of their analysis, HJM (p. 360) conclude that "to the extent that policy interventions aimed at small businesses ignore the important role of firm age, we should not expect much of an impact on the pace of job creation." The problem with this inference is that we have no a priori reason to believe that the responsiveness of employment in different categories of firms (defined by age and size) to policy interventions mimics the empirical regularities of employment in these categories more generally. It might be that the categories with the strongest record of job creation also respond the most to a given intervention, but there might be no relationship. Potentially, the types of firms that typically create the fewest jobs might even benefit the most from supportive policies.

This paper attempts to shed light on variation in the policy responsiveness of employment across firms varying by age and size. The policy we examine is the SBA's 7a and 504 loan guarantee programs. For this purpose, we have linked a complete list of SBA 7A and 504 loans to the Census Bureau's employer and non-employer business registers using probabilistic name and address matching. This allows us to further link the data to the Census Bureau's Longitudinal Business Database (LBD), which tracks all firms and establishments in the U.S.

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[2] A recent example is the JOBS Act, which loosens regulations on financing.

non-farm business sector with paid employees on an annual basis in 1976-2011. We restrict the analysis to recipients of loans in 1977-2010 and their matched controls.

We follow HJM in defining age-size classes. Our estimation method involves construction of a control sample of firms in the same age-size class. We also impose the following "exact matching" requirements: employment within 10 percent of the recipient's employment in the year of loan receipt, the same four-digit industry, and the same state (the latter only for firms with 19 or fewer employees). Probit regressions for loan receipt are run on this set of recipients and potential controls, including employment in the year before loan receipt, annual employment growth three, two, and one year before loan receipt, average wage in the year before loan receipt, firm age, and year dummies. A non-treated firm is included as a control for a particular treated firm if the ratio of the treated to the non-treated firm's propensity score is at least 0.9 and not more than 1.1. Kernel weights are applied to the controls in subsequent employment and survival regressions.

The employment panel regressions include firm fixed effects, loan-timing effects (separate dummies for the number of years before/after the treated firm's loan receipt, common to both the treated and matched control firm), and year effects. In one specification, the dependent variable is the log of employment and a post-loan (treatment) dummy for the treated firm is the variable of interest. In other specifications, we use unlogged employment as the dependent variable and examine the results with a dummy treatment, as well as with the amount of the loan, in linear and quadratic specifications. We also study the dynamics of the effect by including separate dummies for each year before/after the treated firm's loan receipt. To study survival we estimate a Cox-Proportional Hazard model including the variables in the matching probits described above, along with a treatment dummy and loan amount, in alternative specifications.

References

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