

My first employee

PRINCIPAL TOPIC:

Since the pioneering work by David Birch (1979), the job-creating process of small firms has received a huge amount of attention from researchers and policymakers alike (Haltiwanger et al., 2010). However, little is known about what constitutes the single biggest growth event facing any growing firm – the challenge to solo entrepreneurs to double their workforce. In this paper we focus on the micro-foundations of firm growth. More specifically we look at the change in new venture performance when adding an employee by investigating growth in sales and profits.

In a Danish context, if all 159,723 firms without employees in 2009 took on one additional employee, this would solve the unemployment problem (98,200 individuals were registered as unemployed in 2009). Although this statement is rather simplistic (e.g. not all the unemployed are employable; there may be insufficient demand for the output), it remains that self-employed individuals have considerable job creating potential. Furthermore, once they overcome the hurdle of recruitment, subsequent growth will be easier, and they will develop a taste for further growth (Delmar and Wiklund, 2008). Nevertheless, solo-entrepreneurs who seek to take on their first employee also face great uncertainty as well as the daunting prospect of trusting someone else with their 'baby' (Gartner, 1997).

We draw on existing theory to posit that entrepreneurs are over-optimistic about their abilities – that is, the average entrepreneur considers their abilities to be far above average ('illusory superiority'). The flip-side of this cognitive bias is that they wrongly consider the abilities of others to be lower than average. This makes them underestimate the gains to hiring a new employee. Although the benefits of hiring of a first employee may be systematically underestimated, our results may help to correct for this systematic cognitive bias, if we can demonstrate that those solo self-employed that take on their first employee enjoy favourable outcomes, compared to a suitable control group who remain solo self-employed.

The entrepreneur is better at dealing with uncertainty when having access to more resources through employees (Shane, 2003; Sarasvathy, 2008). Moreover, research shows that life satisfaction of the self-employed is on average higher than the life satisfaction of employees; nonetheless, the life satisfaction of the self-employed-with-employees is even higher (Blanchflower, 2004, p.54). This suggests that encouraging entrepreneurs to grow will be beneficial to the entrepreneurs themselves. But asymmetric information between the entrepreneur and the possible employee creates problems related to adverse selection and moral hazard (Shane, 2003) resulting in more "marginalized" workers being hired in new ventures (Bhidé, 2000). According to Parker (2004), employees in new ventures are more likely to be part-time workers, be less educated, to receive lower wages and benefits, to receive less training, to work longer hours, to be injured, and to have lower job tenure (Parker, 2004, p.197).

METHOD:

The data used for the main analysis is a longitudinal matched employer-employee register of all individuals and firms in Denmark (e.g. used in Nanda and Sorensen 2010, Dahl and Sorenson, 2012 and Sarasvathy and Nielsen 2011), see also Timmermans 2010. We identify 16,592 new ventures with only one registered founder in the period 2001-2004. The main analysis is to compare the performance – growth in sales and profits – of start-ups that hire an employee compared to those that do not. More specifically, we observe the 16,592 solo-self-employed start-ups at time t , ensure that they do not hire in $t+1$, and then distinguish between those that hire one employee in $t+2$ (634 firms) versus those that do not hire an employee in $t+2$ (6265 firms). While these data restrictions are strong, nonetheless our narrow sampling strategy provides clean evidence on the impact of the first employee compared to a suitable control group (and moreover, our large-scale national dataset means we have enough observations). Semi-parametric matching estimators and a carefully-selected control group allay endogeneity concerns. Matching is based on industry, region, and sales. Furthermore, control variables of entrepreneur characteristics are included, e.g.: age, education level, education type, industry experience, and entrepreneurial experience of parents.

RESULTS:

Initial results show that the likelihood of hiring the first employee (i.e. doubling the workforce) is increased by founder age (at a decreasing rate) and founder start-up industry experience while longer formal education has a negative effect on hiring the first employee. Moreover we estimate the likelihood of being the first employee in a new venture compared to being a new employee in an established firm (more than 20 years old) in the same time period, using multivariate regressions. The likelihood of being recruited in a new venture increases with age (at a diminishing rate), origin (non-Danish), previous unemployment, related industry experience, and entrepreneurial parents while previous income and long further education decreases the likelihood. Turning to the main analysis of the study, matching estimators reveal that those who hire an employee enjoy superior outcomes (sales, profits) in the years after the hire. Furthermore, those that hire in $t+2$ enjoy faster sales growth in the *previous* year, suggesting that sales growth Granger-causes the first hire. This novel and important finding suggests that not all entrepreneurs can hire their first employee – only those with sufficient sales growth to justify the workforce expansion. The first employee then boosts sales growth in subsequent years.

The first employee also makes an overall positive contribution to subsequent profits, although an analysis of the distribution of outcomes reveals lower profits in a minority of cases.