

A Real Options Model of Stepwise Entry into Self-Employment

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Purpose

Many people do not enter directly into full-time self-employment, but choose to enter part-time. By doing so, they minimize the uncertainty related to self-employment as they can retain their employment while testing the viability of the self-employment choice. For many people, part-time self-employment represents not only a secondary income, but also a first step into full-time self-employment.

The authors of this paper examine the path toward self-employment as one that is fraught with uncertainty. That is, an individual will consider the choice to enter into self-employment and to leave employment by others as a hedge against uncertainty. Part-time entry into self-employment allows them the strategy of limiting their investment in time and money. If successful, they can enter self-employment on a full-time basis; if not, they have limited their risk, while maintaining their full-time job elsewhere.

This paper tests that hypothesis using data from a cohort of people employed in Swedish knowledge-intensive industries, following their occupational choices over two periods

Overall Findings

The authors find that entrepreneurs used part-time entry as a strategy to test their ideas when they have little information about their true value. As such, models of entry into self-employment are incomplete if they do not consider this option. Moreover, an individual is less likely to undertake self-employment if the investment requires high levels of fixed assets, which might be irreversible or hard to liquidate in the event of failure

Highlights

- The authors find evidence that uncertainty has a negative effect on the likelihood of entry. Full-time entrants are less likely to enter self-employment given uncertainty than those who have experimented with part-time options first
- Individuals using part-time entry as a means of testing the validity of their opportunities are more likely to enter full-time self-employment (after a successful trial run), and they are also more likely to exit than full-time entrants.
- An individual with a long work history of employment with the same firm is less likely to leave his or her firm to engage in entrepreneurship.
- Industry-level measures of irreversibility, such as the level of intangible assets required, had a positive impact on self-employment. This finding is not what was hypothesized by the authors..
- Having prior part-time experience significantly increased the probability of entry into self-employment, on both a part-time and full-time basis.

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Note

This paper was prepared for presentation at the Babson Entrepreneurship Research Conference. The report references “space limitations” and “suppressed” control variables in the tables. The authors needed to comply with strict guidelines for submission to the BEREC, including a page limitation. The Office of Advocacy is releasing the BEREC version of the paper as a working paper, which adheres to these guidelines.

Scope and Methodology

The authors utilize a cohort of people employed in the Swedish knowledge-intensive industries in 1997. The data are from Statistics Sweden and cover 3.3 million individuals, representing over 70 percent of the active Swedish labor market. The larger longitudinal data set covers 1989 to 2002, providing labor market histories of the individual before and after 1997. These data can be linked to firm-level data.

Since extremely large data sets present problems in terms of computations and in identifying self-employment entry, they use state-based sampling to construct a smaller sample from the larger data set. The entry decision is modeled with a series of multinomial logit models that compare events of entry with a random sample of non-entries. Non-entries are modeled by randomly selecting 10 percent of the individual observations in the data set, and then randomly assigning each observation to an industry. Hypothesis testing on such a sample is unproblematic since state-based sampling yields unbiased and consistent coefficients for all variables except the constant term.

The final sample consists in the first wave of 5,469 instances of full entry (2.32 percent), 6,595 instances of part entry (2.79 percent) and 223,981 randomly sampled non-entries (94.89 percent). In the second wave, part-time entries switched labor market status dramatically. 2,190 exited altogether from self-employment (33.21 percent), 818 changed to full-time self-employment (12.40 percent), and the rest (3,587 or 54.39 percent) remained as part-time self-employed. Among the full-time self-employed, 1,177 made an exit (21.52 percent) and 468 changed to part-time (8.56 percent). Among the randomly sampled non-entries, 0.72 percent changed to part-time self-employment, and 0.43 percent changed to full time self-employment in 1999.

This report was peer-reviewed consistent with Advocacy’s data quality guidelines. More information on this process can be obtained by contacting the Director of Economic Research at advocacy@sba.gov or (202) 205-6533.

Ordering Information

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