Barriers to Entry and Industry Turnover: A Puzzle and a Possible Solution

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1 A puzzle

One would expect to find a negative relation between entry barriers and firm turnover. This negative relation would follow from a model such as Hopenhayn (1992) or Asplund and Nocke (2007).

I performed a quick-and-dirty test of this hypothesis by combining data from Haltiwanger (2003) on turnover rates with data from Djankov et al. (2002) on barriers to entry for a series of 17 countries.[1] The results are somewhat puzzling. In fact, they suggest no relation whatsoever between barriers to entry and industry turnover.[2]

I don't currently have enough data to perform the same test with industry level data, but my experience from looking at various data sets is that this result (turnover rates seem relatively flat) is fairly robust and is not the consequence of industry composition effects.

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[1]The list of countries includes: Australia, Canada, Chile, Colombia, Denmark, Finland, France, Germany, Israel, Italy, Morocco, Netherlands, New Zealand, Norway, Sweden, UK, USA.

[2]However, it should be noted that there are significant variations in the numbers depending on how turnover rates are measured. Sources of variation include: establishment data vs firm data; whole economy vs manufacturing only; time period; and others. A more promising avenue would be to look at cross industry data in a country where there is sufficient variation in industry specific barriers to entry.
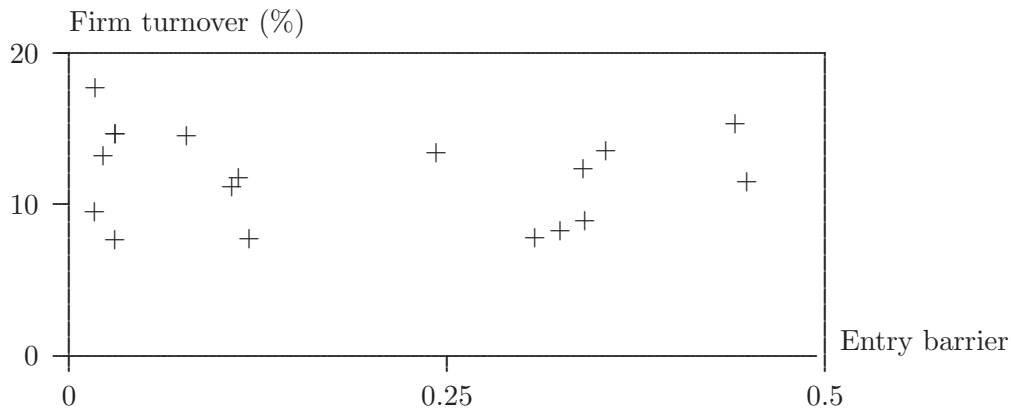
Figure 1: Barriers to entry and firm turnover in 17 countries. Turnover rates are average of gross job creation and destruction rates, as reported in Haltiwanger (2003). Barriers to entry are taken from Djankov et al. (2002).

2 A possible solution

The answer to the above puzzle may simply be that we are omitting relevant variables. In particular, there is some evidence of a positive relation between barriers to entry and capital market imperfections. Morocco, for example, has higher barriers to entry *and* less perfect capital markets than the U.S.

I conjecture that a combination of entry barriers and capital market imperfections may produce an industry turnover at levels similar to countries with low barriers to entry and low turnover. Note however that the nature of turnover is then very different. In high-entry-barriers, imperfect-capital-market countries, we have a case of "bad" turnover: Most firms enter because expected profits upon entry and survival are very high and then exit because they lack the financial means to survive initial negative shocks. This contrasts with the notion of "good" turnover, where higher productivity firms replace low productivity firms. In other words, in low-entry-barriers, imperfect-capital-market countries, firms exit because they get bad signals of their efficiency (a la Jovanovic) or bad productivity shocks (a la Hopenhayn), and so turnover leads to a higher average productivity level.

Specifically, the solution I propose to the puzzle presented int he previous section is that: (a) entry barriers lead to lower industry turnover; (b) limits to borrowing by active firms lead to greater exit; (c) to the extent that

entry barriers and limits to borrowing are correlated, we may observe a flat relation between barriers to entry (or limits to borrowing) and industry turnover.

To the extent that we have industry level data and there is enough variation across industries, this hypothesis could also be tested with data from a single country.

References

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