Why Do Small Firms Produce the Entrepreneurs?

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Cross-tabulation (job quitters only)

<table>
<thead>
<tr>
<th>Size</th>
<th>Become self-employed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Yes (#)</td>
<td>% No (#)</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>5.7 (33)</td>
<td>94.3</td>
<td>(549)</td>
</tr>
<tr>
<td>3-9</td>
<td>3.2 (99)</td>
<td>96.8</td>
<td>(2990)</td>
</tr>
<tr>
<td>10-24</td>
<td>2.4 (90)</td>
<td>97.6</td>
<td>(3634)</td>
</tr>
<tr>
<td>25-49</td>
<td>1.6 (39)</td>
<td>98.4</td>
<td>(2419)</td>
</tr>
<tr>
<td>100-199</td>
<td>1.1 (20)</td>
<td>98.9</td>
<td>(1870)</td>
</tr>
<tr>
<td>500-999</td>
<td>0.8 (9)</td>
<td>99.2</td>
<td>(1142)</td>
</tr>
</tbody>
</table>

χ²(8) = 120.50; η = 0.079; N = 19230
Introduction

- Two “stylised facts”:
  1. Employees significantly more likely to quit small than large firms to start new ventures
     - See also Boden (1996) for US; Wagner (2004) for Germany; and Hyytinen and Maliranta (2006) for Finland
  2. More self-employment entry from paid employment than from unemployment
- Why 1.?
  - We don’t yet know!
  - May carry implications for pro-entrepreneurship policies & contribute to debate about role of small firms in economy
  - Employers and workers can also benefit from knowing why
What I do in this paper

1. Consider 3 rival theories that can potentially explain the first stylised fact:
   a. “Transmission Theory” – small firms best at transmitting pro-entrepreneurship attitudes or capabilities to their workers
   b. “Self-selection Theory” – less risk averse individuals sort into both small firms and entrepreneurship at different stages of their lives
   c. “Blocked mobility” – workers stuck in small firms cannot access good jobs in large firms so escape into self-employment

2. Obtain testable implications of the theories and test them using 13 waves of BHPS, 1991-2003
Data source: BHPS:

- Rich data on workplace, job and personal characteristics
- Nationally representative; 10,000 individuals interviewed p.a.

Note:

- Unconditional quit rates higher in small than in large firms
  - E.g., because worse conditions or higher failure rates
- So we will study the conditional probability of entrepreneurship entry by size, S
  - I.e., conditional on workers quitting at all
Structure of rest of the talk:

1. The three theories and hypothesis derivation
   a. Transmission theory
   b. Self-selection theory
   c. Blocked mobility theory
2. Data and measurement
3. Results
   a. Entry into self-employment
   b. Joining paid employment
   c. Interpretation
4. Conclusion
1a. The transmission theory

● Tasks in small firms more diverse
  • Introducing workers to networks of suppliers and customers
  • Obtain a rounded view about what it takes to run a small firm themselves
  • Lots of experiences makes it easier to identify novel venture ideas
  • Entrepreneurs are “jacks-of-all trades” (Lazear, 2005), having diverse human capital

● Small firms provide stronger role models
  • More visible in small firms than in large ones
  • Worker is closer to owner-manager (fewer management layers between workers and entrepreneur)
● **Hypothesis 1:**
  • Managers (M) in small firms have greatest learning and networking opportunities, so M×S should *decrease* entry probability

● **Hypothesis 2:**
  • Workers with long job tenure (T) in small firms have the greatest exposure to role models, so T×S should *decrease* entry probability

● **Hypothesis 3:**
  • If role models are context specific, job-changing workers are more likely to remain in the same industry or occupation (IO), so IO should *increase* entry probability
1b. The self-selection theory

- Simple moral hazard model of worker sorting predicts:
  - Large firms offer insurance (smoothed wage) whereas small firms run by risk averse individuals who offer workers more variable wages
    - testable and true!
  - Hence the most (least) averse sort into large (small) firms
  - If exogenous opportunities to found a risky firm improve, the least risk averse (who sort into small firms) do best (need to offer a smaller risk premium to their newly hired workers) by quitting to take them.
  - Also, if these new firms close, entrepreneurs being less risk averse are more likely to return to small firms
• **Hypothesis 4:**
  • Entrants to entrepreneurship are less likely to have been trade union members or to remain in same occupation or industry (because less risk averse) when they change jobs

• **Hypothesis 5:**
  • Entrepreneurs who re-enter paid employment are more (less) likely to join small (large) firms than employees who take new jobs in paid employment

• **Hypothesis 6:**
  • Smaller firms offer more volatile wages than large firms
1c. Blocked mobility theory

- Two ingredients: Dual labour markets and frustration:
  - Small firms in the secondary sector offer poor earnings and conditions
  - Employees frustration decreases with firm size S
  - Small firm employees cannot join large firms in the primary sector
  - So escape into entrepreneurship

- And for managers, the top job is blocked in most small firms by the presence of the owner-manager!
Hypothesis 7 [Small firms are secondary sector]:
- Bad jobs (B) are temporary, and lack training and promotion prospects; so $B \times S$ should decrease entry probability
- Good jobs (G) have long tenure, high earnings, and unions in workplace; so $G \times S$ should increase entry probability

Hypothesis 8 [Frustration]:
- Frustration (F) is higher for dissatisfied workers and managers who are blocked; so $F \times S$ should decrease entry probability

Hypothesis 9:
- Entrepreneurs who re-enter paid employment are still blocked from large firms so are more (less) likely to join small (large) firms than employees who take new jobs in paid employment
Summary

- Lots of testable predictions
- Some of the theories generate similar, others different, predictions about variables
  - See Table 1 of the paper
- Hence empirical strategy is to build up a composite picture about which if any theory is most consistent with the data
  - A horse race?
  - But more than one horse can win!
2 Data and measurement

- Entrepreneurship measured as self-employment
  - Self-assessed; includes incorporated self-employed
- Data on 3732 job changing employees present in at least two consecutive waves
  - Leads to 19230 observations over the panel
- Ca.1.25% workers become self-employed each year
- Ca.11.8% self-employed join paid employment each year
- BHPS data on workplace characteristics:
  - Size, industry, whether unions present (yes in 42%), whether private sector (yes in 67%)
BHPS data on job characteristics:

- Tenure in present job (ave 4.4 years in PE; 9.16 years in SE) *
- Whether a manager (20% in PE); whether manual (9%)
- Usual monthly net earnings (ave: £927.71)
- Whether job covered by a union (27% were)
- Whether job temporary (6% were)
- Whether job switches were in same industry/occupation (23% and 34% were for SE; 40% and 45% were for PE)
- Dissatisfaction with promotion (9%), boss (3%), lack of training (2%) and job overall (2%)
- Lack of training (62%) and promotion prospects (43%)
• BHPS data on personal characteristics:
  • Female (48%)
  • Self-employed status (12%)
  • Marital status (73%)
  • Poor health (5%)
  • Age (average = 38 years)
  • Highest qualifications achieved (5 dummies)
  • Regional dummies

• Empirical methods:
  • Random effect probit for entry and exit corresponding to Hypotheses 1-5 and 7-9 above
## 3a. Results: Entry into self-employment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Sig?</th>
<th>Hypothesis</th>
<th>Verdict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager × Size</td>
<td>-0.02</td>
<td>No</td>
<td>1 (TT) and 8 (BM): –</td>
<td>No support for TT or BM</td>
</tr>
<tr>
<td>Tenure × Size</td>
<td>0.02</td>
<td>No</td>
<td>2 (TT): –</td>
<td>No support for TT</td>
</tr>
<tr>
<td>Same ind/occ</td>
<td>-0.29 / -0.16</td>
<td>Yes</td>
<td>3 (TT): + and 4 (SS): –</td>
<td>Support for SS, <em>not</em> TT</td>
</tr>
<tr>
<td>Union member</td>
<td>-0.19</td>
<td>Yes</td>
<td>4 (SS): –</td>
<td>Support for SS</td>
</tr>
<tr>
<td>Temp × Size</td>
<td>0.01</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
<tr>
<td>No trg × Size</td>
<td>-0.12</td>
<td>Yes-just (Bonf)</td>
<td>7 (BM): –</td>
<td>Marginal support for BM</td>
</tr>
<tr>
<td>No prom × Size</td>
<td>-0.02</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Sig?</td>
<td>Hypothesis</td>
<td>Verdict</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
<td>---------</td>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Wage × Size</td>
<td>0.03</td>
<td>No</td>
<td>7 (BM): +</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Union @ × Size</td>
<td>0.05</td>
<td>No (Bonf)</td>
<td>7 (BM): +</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Job dissat × Size</td>
<td>0.03</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Promotion dissat × Size</td>
<td>0.02</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Boss dissat × Size</td>
<td>0.09</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
<tr>
<td>Training dissat × Size</td>
<td>-0.27</td>
<td>No</td>
<td>7 (BM): –</td>
<td>No support for BM</td>
</tr>
</tbody>
</table>
3b. Results: Joining paid employment

<table>
<thead>
<tr>
<th>Dep var</th>
<th>Indep var</th>
<th>Coeff.</th>
<th>Sig?</th>
<th>Hypothesis</th>
<th>Verdict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join small (1-2)</td>
<td>Self-emp at t-1</td>
<td>1.49</td>
<td>Yes</td>
<td>5 (SS) &amp; 9 (BM): +</td>
<td>Consistent with SS &amp; BM</td>
</tr>
<tr>
<td>Join small (1-9)</td>
<td>Self-emp at t-1</td>
<td>1.25</td>
<td>Yes</td>
<td>5 (SS) &amp; 9 (BM): +</td>
<td>Consistent with SS &amp; BM</td>
</tr>
<tr>
<td>Join large (100+)</td>
<td>Self-emp at t-1</td>
<td>-1.16</td>
<td>Yes</td>
<td>5 (SS) &amp; 9 (BM): –</td>
<td>Consistent with SS &amp; BM</td>
</tr>
</tbody>
</table>
Interpretation:

- In addition, small firms have significantly more volatile wages – consistent with Hypothesis 6 (SS)
- So results so far are consistent with SS but BM lacks consistent support and TT gets none
- Evidence from variables in levels that lack of promotion & training and temporary jobs are associated with self-employment entry in all firms, not just small ones
  - So poor job quality can explain some quits but not the size-entry relationship
4. Conclusion

- Self-selection based on risk attitudes a more convincing explanation of why small firms spawn so many entrepreneurs than:
  - Transmission of capabilities & attitudes, or
  - Blocked mobility of disadvantaged workers

- More employees than unemployed become self-employed:
  - So this may carry implications for policies seeking to promote self-employment
  - Though modest if risk attitudes are fixed (ent education?)
  - Kaufmann internships won’t generate expected value added?
Limitations of the present study:

- May have omitted some hard-to-observe characteristics that affect entrepreneurial entry (e.g., job tasks)
- Lack of direct measures of risk aversion in BHPS
- More generally, imperfect proxies for the theories
  - Though we did try out a range of different proxies!
- "Good practice" of TT may have been "swamped"
- Alternative theories beyond the 3 considered here?
- Different data sets to explore for other countries
- Policy implications?