The Financing Choices of Young Firms

David T. Robinson

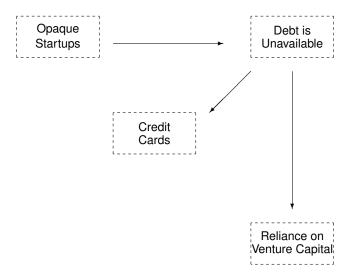
Duke University

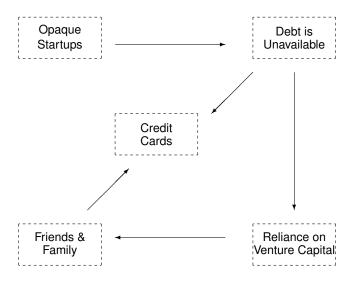
National Bureau of Economic Research

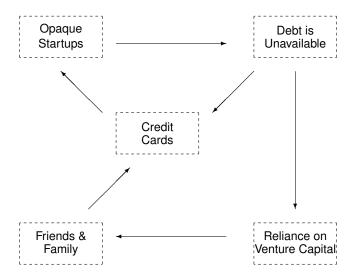
Institute for Financial Research, Stockholm

Opaque Startups

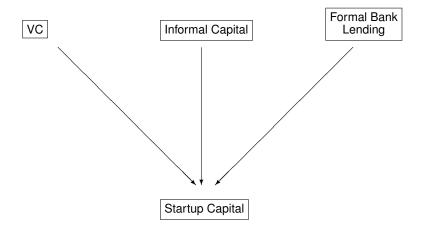








A more accurate picture?



Overview

- Evidence on the role of debt in funding startups
 - Distinct from the role of banks in small business activity
- The importance of housing as a source of collateral
- Policy conclusions

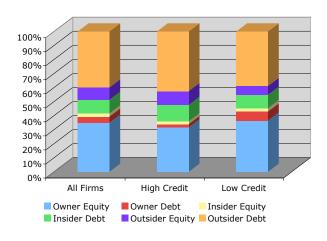
Overview

- Multi-year panel on roughly 5,000 firms that were formed in 2004. 'Formation' means that for the first time in 2004, they:
 - Paid state unemployment taxes, or FICA tax;
 - Established a legal status for the business or used a tax id number;
 - Used a Schedule C on a personal tax return.
- This generates a heterogeneous panel in terms of owner and business characteristics at founding
- Highly detailed data on business relationships, financial structure, founder background information.

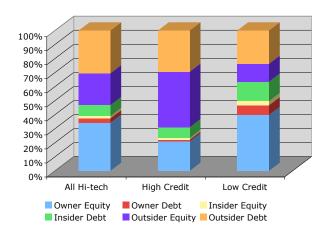
Key Survey Statistics

- Founder Demographics
 - Overwhelmingly white, non-hispanic, males
 - Median age is 35-44; over $\frac{1}{3}$ are over 45
 - The median respondent has > 10 yrs. industry experience
 - More than 40% of respondents have had at least one prior startup
 - About ½ have at least a Bachelor's degree
- Operating Statistics
 - About $\frac{1}{3}$ are pre-revenue; but around $\frac{1}{6}$ have revenues that exceed \$100K

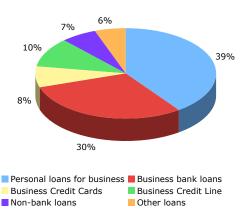
All Firms



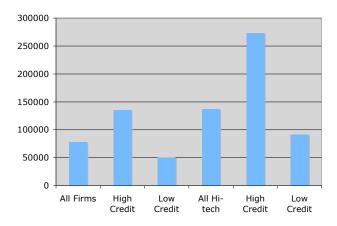
High Tech Firms



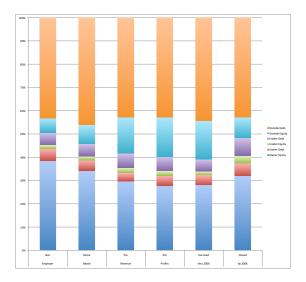
A Closer Look at Debt



The Difference: Total Capital

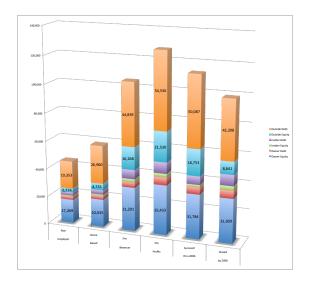


What about Garage businesses?

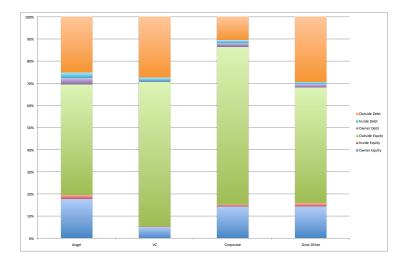


What about Garage businesses?

Garage businesses vary by size

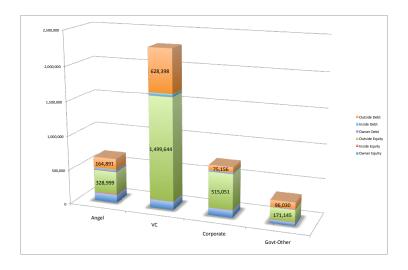


What about Equity-backed Businesses?



What about Equity-backed Businesses?

Again, Size Varies



To summarize

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- This is an extremely robust fact:
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 - Robust over time: debt continues to be the primary source of funding throughout the first four years of the firm's life.
 - Complementarity of debt/equity demonstrates that financing constraints are present.

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- This is an extremely robust fact:
 - Robust across firm types.
 - Robust over time: debt continues to be the primary source of funding throughout the first four years of the firm's life.
 - Complementarity of debt/equity demonstrates that financing constraints are present.
- Variation in firm characteristics has a first order effect on startup size, but only a second order effect on the mix of debt/equity.
- Evidence that the variation in supply of debt is partly responsible for findings.

Capital Structure and Housing

Access to outside debt is greater when homes are more pledgable as collateral.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|-----------------------|-----------------------|-----------------------|----------------------|-----------------|-----------------------|-----------------------|
| Home supply elasticity | 0.0163*** (0.0058) | 0.0156*** (0.0058) | 0.0153*** (0.0059) | 0.0149** (0.0058) | | 0.0150*** (0.0058) | 0.0163*** (0.0058) |
| State bankruptcy exemption | | | | | -1.92 (1.33) | | -2.52* (1.48) |
| Industry dummies | No | Yes | No | Yes | Yes | Yes | Yes |
| Owner characteristics | No | No | Yes | Yes | Yes | Yes | Yes |
| Credit score dummies | No | No | No | No | No | Yes | Yes |
| Observations R^2 | 2,564 0.004 | 2,564 0.029 | 2,466 0.040 | 2,466 0.058 | 3,389 0.048 | 2,466 0.061 | 2,466 0.062 |

The Home Equity / Entrepreneurship Channel

Adelino, Schoar and Severino, 2012

Between 2002-2007, areas with strong exogenous home price growth saw stronger employment growth

- This employment growth was strongest among the smallest firms
 - Effect for 1-4 employee firms is ~ 3x that of > 20-person firms
- And among firms with lower capital requirements
 - Effect for small firms: 3 times larger in low capital-intensive sectors than high intensive ones
 - There is generally no housing effect on "large" establishments in capital intensive industries

The Small Business Employment Myth

Haltiwanger, Jarmin, Miranda, 2012

- Controlling for age, there is no systematic relationship between firm size and employment
- "Small firms" are not job creators.
- Young firms are job creators.
 - They typically start small.
 - The good ones grow, the bad ones die, destroying jobs.
 - On net, creation outweighs destruction.

What Do These Facts Say About Policy?

To me, they point to three policy challenges associated with promoting entrepreneurship:

- We need to be careful to decouple policy towards business starts from policy towards small business.
- We need to embrace the fact that promoting innovative growth almost surely means rethinking the way we provide access to debt.
- We need to understand that the housing crisis is also an entrepreneurship crisis.

In Conclusion

- Most "small business employment growth" is actually "young business employment growth"
- Startups access bank debt even at their earliest stages of life.
- Variation in firm characteristics has a first order effect on startup size, but only a second order effect on the mix of debt/equity.
- Home equity is an important source of collateral for startups.
- This means that in terms of policy, we need to embrace creative solutions to debt access for small firms