Venture Capital and Public Policy: Evidence and Hypotheses

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Workshop | Venture Capital for Knowledge Economy
plat du jour

• **Natural questions:**
  – What can public policy do to help foster VC in a knowledge economy?
  – When public venturing most likely to get it right?

• **Today’s talk:**
  – Background:
    • Will seek to answer these questions by looking VC dynamics
  – Situation:
    • Traditionally, hard to understand public venturing success
  – Thoughts:
    • More than money needed—Consider many elements of the entrepreneurship ecosystem in parallel
Background: Venture Capital (VC)

- **Still young:**
  - 1946 (Karl Kopmton and Georges Doriot ARD); 1958 (SBIC); 1945 (UK ICFC/3i)

- **Still small:**
  - U.S.:
    - ~4,000 professionals
    - ~1,500 ventures backed in a year (2000-08)
      - ~1 million businesses started annually
    - Much less VC activity elsewhere!

- **Has a tendency to be cyclical:**
  - Poor returns since 2000
    - Reduce the private and social returns to innovations
Ratio of Venture Capital Investment to GDP, 2007

Source: Lerner, 2009
VC investment v. # of triadic patents

Source: Sahbaz, 2010 based on OECD, EVCA, and national statistics offices

Investment Amount (in 2007 US$ billion)

Year

Source: Lerner, 2009
## Poor returns:

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<td>U.S.</td>
<td>37%</td>
<td>0%</td>
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<td>Europe</td>
<td>8%</td>
<td>-5%</td>
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Source: Thomson/Reuters, as of December 2008. Numbers are capital-weighted average IRR for 1.937 funds.
VC has an important role to play in stimulating innovation:

- Over 2,500 VC-backed firms went public in the U.S. between 1972-2007:
  - 13% of all public firms
  - 8% of market capitalization (~$2 trillion)
  - 6% of total employees
    - More in high-technology industries

- More evidence:
  - VC spurs technological innovation, among both the firms receiving the financing and entire sector
  - VC appears ~3 to 4 times more powerful than corporate R&D
    - VC was only 3% of corporate R&D, yet responsible for ~10-12% of privately funded innovations
  - Greater influence and evidence in more recent years
Why is there a need for public encouragement of VC?

- Young innovative ventures pose unique financing challenges:
  - Equity gap
    - Uncertainty | Information gaps | Market conditions | Nature of assets | Difficult for banks and public markets to fund these ventures

- Public policy can frequently play a catalytic role:
  - Increasing returns ("externalities"):  
    - Much easier to do 10th deal than the 1st
  - Certification:  
    - Stamp of approval
Situation: Policies governments employ to encourage VC

- **Indirect interventions**
  - Enhancing the entrepreneurial climate and enabling innovative entrepreneurs:
    - Getting the laws right
    - Removing barriers
    - Access to technology and resources
    - Training and mentoring entrepreneurs

- **Direct Interventions**
  - There is a role and an opportunity for public sector to be directly involved in the funding of commercialization of innovative activity

- **Increases the attractiveness of the local VC market, particularly for foreign investors**
Few insights:

- **U.S.:**
  - Critical role of SBIC, SBIR, and ATP programs (~1958)
    - Soft loans from government and “fund-of-funds”
    - Direct R&D funding/support from government
    - Building critical infrastructure
    - Early VC started as SBIC funds

- **UK:**
  - Enterprise Capital Funds: Modeled after SBIC (~2005)

- **Israel, Singapore, Dutch “Aunt Agatha”:**
  - Opportunities for growing local industries, not necessarily “hot” industries
  - Matching funds carefully balancing upside-returns with downside-risks
But direct interventions are a tricky matter:

- Stepping in and providing some direct funding for innovative activities and and/or funds really needs to be done right
- Programs must be carefully designed to avoid two common pitfalls:
  - Conceptual failures
  - Problematic implementation
Conceptual failures:

- Allocating support/funds in a counter-productive manner reflecting lack of understanding of entrepreneurial process
  - Hot vs. off-beat industries
  - Entrepreneurship vs. self-employment
- Insufficient flexibility with regard to the rules of a program
- Too small or too large size of the initiative
  - There is also a considerable danger that public VC funds may lead to a crowding out of private VC suppliers
Problematic implementation:

- **Regulatory Capture:**
  - Efforts can be captured by parties seeking to benefit themselves, and not the greater social good/welfare (SBIR, BioValley, etc.)
  - More recently, it is said that at least half of the 25 clean tech firms have hired lobbyists on Washington representatives

- **Programs should avoid from micro-managing the entrepreneurial process**
- **Incentives of those who administer the policy**
- **Need for proper evaluation of programs**
Thoughts: VC and public policy
key lessons

• Creating a favorable environment for entrepreneurship:
  – More than MONEY is needed. Entrepreneurship is not in a vacuum. Entrepreneurial ecosystem is crucial

• Understanding the market:
  – Do not attempt to replicate Silicon Valley, Yozma, etc.
  – Smaller efforts can make a difference

• Not over-engineer:
  – Be flexible, help local minds reach-out globally
  – Conform to global standards
  – Playing a catalytic role with an awareness of limits

• Building a knowledge economy is a long-run endeavor that cannot be accomplished overnight!

Source: Drawn from Lerner, 2009; Auerswald and Bozkaya, 2008
Creating a favorable environment for entrepreneurship:

• **Habitat for high-growth entrepreneurship:**
  – Strong scientific and research base:
    • Increased public funding for R&D
  – University technology transfer offices should not just license technologies but also educate nascent academic entrepreneurs and introduce them to venture investors
  – Supporting spin-offs may not maximize returns from licensing for the university but may lead to greater social benefits in the longer run
  – Eased streamlined patent system
Understanding the market:

• A functioning VC market is one important element of an innovation system among others
  – Yozma vs. New Zealand Investment Fund
  – Matching funds to determine where public venturing should go

• This market is embedded in the system and that it cannot function properly if other parts of the innovation system are deficient or completely missing

• The most effective policies are likely those that focus on increasing the efficiency of private markets over the long term
More thoughts: VC and public policy

• Providing direct funding for innovative activities:
  – U.S. federal funds to support start-ups, not just struggling companies

• Angels or individual investors:
  – Crucial component of the innovation system

• Setting the stage to ensure that entrepreneurship itself is an attractive option:
  – Be very focused geographically:
    • San Jose/Francisco (29%), Boston (12%), NYC (9%)
    – Kendall Square/MIT
  – Tax incentives:
    • Tax credits for VC investments in emerging industries
References:

BOULEVARD OF BROKEN DREAMS
Why Public Efforts
to Boost Entrepreneurship and
Venture Capital Have Failed
—and What to Do about It

Josh Lerner

Financing Entrepreneurship
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Thanks!

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