Entrepreneurship and Venture Capital

Jerome S. Engel
Adjunct Professor, Haas School of Business
Executive Director, Lester Center For Entrepreneurship and Innovation
University of California at Berkeley

Jerry Engel

- UC Berkeley
  - Founder and Executive Director of the Lester Center for Entrepreneurship and Innovation
  - Chair: Entrepreneurship Faculty
  - Teach Entrepreneurship, Venture Capital & Private Equity, Technology Commercialization in the MBA and Executive Ed
- Outside of Academia:
  - Venture Capital
    - Monitor Venture Partners, General Partner
    - Co-founded: Kline Hawkes Capital early '90s
  - Entrepreneur
    - Co-Founder: AllBusiness.com, ElectroScan Inc., CardioProfile
    - Angel Investor, Board member, Advisor: Maxia, Leapfrog, MedAmerica
  - Big Company Experience
    - 1980s: Ernst & Young, Managing Partner, Entrepreneurial Services
    - Clients: Apple, Intel, Genentech, Sun, Autodesk, Fair Isaac, The Learning Company and more...
    - 1970s: KPMG

Entrepreneurship and Venture Capital

- What are the Drivers of Innovation?
- Why are Entrepreneurship and Venture Capital Important?
- What is Entrepreneurship?
- How Does Venture Capital Work
- What are the current trends?
- What does all this mean to me?
Drivers of Innovation in the US High Tech Model

U.S. Example:
Private R&D Spending Increasing

The Proportion of Research Expenditure at Our Largest Corporations is Decreasing

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>&lt;1000 employees</td>
<td>4.4%</td>
<td>9.2%</td>
<td>22.5%</td>
<td>22.4%</td>
</tr>
<tr>
<td>1,000 - 4,999</td>
<td>6.1%</td>
<td>7.6%</td>
<td>13.6%</td>
<td>15.4%</td>
</tr>
<tr>
<td>5,000 - 9,999</td>
<td>5.8%</td>
<td>5.5%</td>
<td>9.0%</td>
<td>8.4%</td>
</tr>
<tr>
<td>10,000 - 24,999</td>
<td>13.1%</td>
<td>10.0%</td>
<td>13.6%</td>
<td>14.4%</td>
</tr>
<tr>
<td>25,000+</td>
<td>70.7%</td>
<td>67.7%</td>
<td>41.3%</td>
<td>39.5%</td>
</tr>
</tbody>
</table>
Time to Market Adoption Continues to Decrease

<table>
<thead>
<tr>
<th>Interval (years)</th>
<th>Lag in Appearance of Competition (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1887–1906</td>
<td>32.75</td>
</tr>
<tr>
<td>1907–1926</td>
<td>24.70</td>
</tr>
<tr>
<td>1927–1946</td>
<td>13.84</td>
</tr>
<tr>
<td>1947–1966</td>
<td>5.75</td>
</tr>
<tr>
<td>1967–1986</td>
<td>3.40</td>
</tr>
</tbody>
</table>

Lag in appearance of competition (years) after the introduction of an innovation. Agarwal and Gort 2001

What is Entrepreneurship?

- An approach to management that starts with **opportunity**
- Not just small companies
- Not just start ups
- Not simply promoters

Entrepreneurship Bridges the Gap

Technology/Opportunity → Entrepreneurship → Value
Entrepreneurship is:

- A process
- Not a person
- About BIG companies that happen to be small
- Not about small business
- Important to BIG business

Entrepreneurship

The pursuit of Opportunity beyond the Resources you currently control

Prof. Howard Stevenson
Working Definition

Entrepreneurial Process

- Identify
  - Need
  - Solution
  - ‘Unfair Advantage’
- Acquire
  - Technology rights
  - People
  - Money
The Entrepreneur's Task….

- Key Resources
  - Technology
  - Money
  - People

Major Trends……

- Technology
  - Discoveries of large companies and universities commercialized by small companies
- Money
  - From Venture Capitalists: new structures for pooling risk-tolerant investors
- People
  - The rise of the professional entrepreneur and entrepreneurial teams as a management process

Entrepreneurial Process

- Key Mechanisms:
  - Mobile Technology
  - Mobile People
  - Mobile Money
Entrepreneurial Process

- **Mobile Technology**
  - Transfer of technology from research institutions to commercial application
    - Formal - through licensing
    - Informal - through people

Entrepreneurial Process

- **Mobile People**
  - The emergence of the “professional” entrepreneurial management team
    - Lifestyle: personal mobility, multiple employers
    - Equity compensation
    - Acceptance of the risk of failure

Entrepreneurial Process

- **Mobile Money**
  - New forms of Private Equity
    - International investments by US Venture Capital
    - Multinational corporations become more active
    - Buy-out funds becoming more active
    - Increased sophistication of the Angel communities
U.S. Investment: Overall

IT Leads Deal Allocation
Deal Flow Allocation by Industry Sector

Source: Dow Jones VentureOne/Ernst & Young
IT Dollars Pick Up in 3Q’06
Investment Allocation by Industry Sector

Investment in IT Companies Stable in 3Q’06
Equity Investment In Information Technology Companies

Software Garners Most IT Investment
IT Investment Allocation by Sector
**Bay Area Draws Most Investment Dollars**
Regional Investment in the United States 3Q'06

- Bay Area: 38%
- Southern California: 11%
- New York Metro: 10%
- New England: 10%
- Texas: 5%
- Potomac: 4%
- Washington State: 3%
- New York Metro: 8%
- All Other US: 19%

Source: Dow Jones VentureOne/Ernst & Young

**45% of Deals in California Companies**
Regional Deal Flow in the United States 3Q'06

- Bay Area: 35%
- Southern California: 10%
- New England: 10%
- Texas: 5%
- Potomac: 4%
- Washington State: 3%
- New York Metro: 2%
- All Other US: 24%
- Research Triangle: 1%

Source: Dow Jones VentureOne/Ernst & Young

**European Investment: Overview**
Perspective on European Market
Equity Investment in Venture-Backed Companies, US vs. Europe ($)

Biopharm Leads Investing
Equity Investment in European Venture-Backed Companies by Industry, 3Q'06

UK & France Garner Over Half of Deal Flow
Total Deals in Europe by Country, 3Q'06
Valuation of the Venture Capital Funded Venture

U.S. Investment: Valuations

This section will be updated in December.

Valuations Continue Upward Trend

Median Premoney Valuation by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Premoney Valuation ($M)</th>
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<tbody>
<tr>
<td>1995</td>
<td>$9.3</td>
</tr>
<tr>
<td>1996</td>
<td>$11.1</td>
</tr>
<tr>
<td>1997</td>
<td>$13.0</td>
</tr>
<tr>
<td>1998</td>
<td>$15.5</td>
</tr>
<tr>
<td>1999</td>
<td>$21.0</td>
</tr>
<tr>
<td>2000</td>
<td>$25.2</td>
</tr>
<tr>
<td>2001</td>
<td>$26.0</td>
</tr>
<tr>
<td>2002</td>
<td>$16.0</td>
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<tr>
<td>2003</td>
<td>$10.7</td>
</tr>
<tr>
<td>2004</td>
<td>$10.0</td>
</tr>
<tr>
<td>2005</td>
<td>$13.0</td>
</tr>
<tr>
<td>2006</td>
<td>$15.0</td>
</tr>
<tr>
<td>2007</td>
<td>$20.0</td>
</tr>
</tbody>
</table>
2Q'06 Valuations Soar
Median Premoney Valuation

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Median Premoney Valuation ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2Q03</td>
<td>8.8</td>
</tr>
<tr>
<td>3Q03</td>
<td>10.1</td>
</tr>
<tr>
<td>4Q03</td>
<td>11.9</td>
</tr>
<tr>
<td>2Q04</td>
<td>13.0</td>
</tr>
<tr>
<td>3Q04</td>
<td>13.0</td>
</tr>
<tr>
<td>4Q04</td>
<td>13.0</td>
</tr>
<tr>
<td>1Q05</td>
<td>16.0</td>
</tr>
<tr>
<td>2Q05</td>
<td>15.8</td>
</tr>
<tr>
<td>3Q05</td>
<td>17.5</td>
</tr>
<tr>
<td>4Q05</td>
<td>23.0</td>
</tr>
</tbody>
</table>

Second Round Valuations Climb
Median Premoney Valuations by Round Class (All Industries)

<table>
<thead>
<tr>
<th>Round Class</th>
<th>Median Premoney Valuation ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Later Stage</td>
<td>$19.5</td>
</tr>
<tr>
<td>Second Round</td>
<td>$36.8</td>
</tr>
<tr>
<td>First Round</td>
<td>$19.5</td>
</tr>
<tr>
<td>Seed Round</td>
<td>$22.8</td>
</tr>
</tbody>
</table>

Rising IT Valuations Surpass HC
Median Premoney Valuations by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Median Premoney Valuation ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>$15.5</td>
</tr>
<tr>
<td>Information Technology</td>
<td>$22.5</td>
</tr>
</tbody>
</table>
U.S. Liquidity

M&A's Remain Primary Exit Option

What are the Trends we have Observed?

- Venture Capital is a very special and unique category of PE
- It is highly concentrated in a few unique locations and industries
- Cyclicality and uncertainty are key factors
- There are surprising consistencies given these factors
- UC Berkeley, right here, right now – is a unique and great place to study VC!
Thank You