



# **Swimming with Sharks: Technology Ventures, Defense Mechanisms & Corporate Relationships**

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# Research Question

***When do young firms form  
corporate investment  
relationships?***

# Corporate Investment Relationship

## ■ What is it?

- Equity relationship between a private startup and a public company



- Amgen - SmithKline Beecham
- Transmeta - AOL, Samsung and Sony



- Focus on tech startups

# THEORY: Inter-organizational Relationships and Resource Dependence

## ■ When do relationships form?

- Well-established literature (Gulati, 95; Ahuja, 00; Powell et al., 96)
- **Cooperative view**
- vs.
- **Competitive view**

# Inter-organizational Relationships

## ■ How do executives resolve...

### FUNDAMENTAL TENSION

#### - Cooperative View [PUSH]

- Resource interdependence
- Social factors

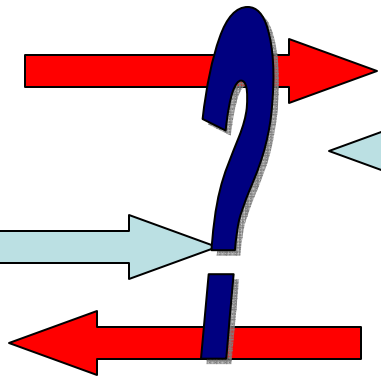
#### - Competitive View [PULL]

- Resource appropriation
- Learning races

# Corporate Venture Funding

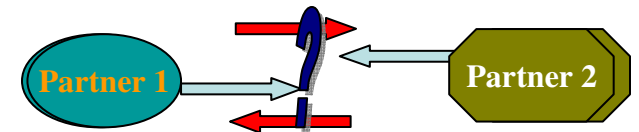


**Young Firms**



**Corporate Investors**

# Corporate Investment Relationship



## ■ Why this setting?

- Salient tension between competition and cooperation
  - Strong interdependencies & likely strategic misalignments
- Bilateral view is important
  - Both parties have alternatives; but majority of work has focused on the corporate side
- Prevalent
  - 15% of all venture funding (Chesbrough, 2002)
  - 40% of tech ventures receive corporate funding (Rosenberger, 2005)
- Not just about the money (investment)...

## Corporate Investment Relationships: Corporate Side – More than just the cash

- ***Corporate venture investment is “a source of innovative ideas”, “window on an emerging field”***

Silicon Valley interviews, 2004-2006

- ***Case Synopsys (influence on tech of venture)***
  - GE and Harris Corp. invested
  - As part of the equity investment, both corporations gained *early access to Synopsys products*, and were able to “*provide valuable insights into the development of venture’s technology*”



Business Wire, 1988

# Defense Mechanisms Hypotheses

- ***“Strategics [corporate investors] don’t care about valuation. That’s not their motivation. They’re in it for other reasons like access to the technology, market manipulation, or a jump on competitors “***

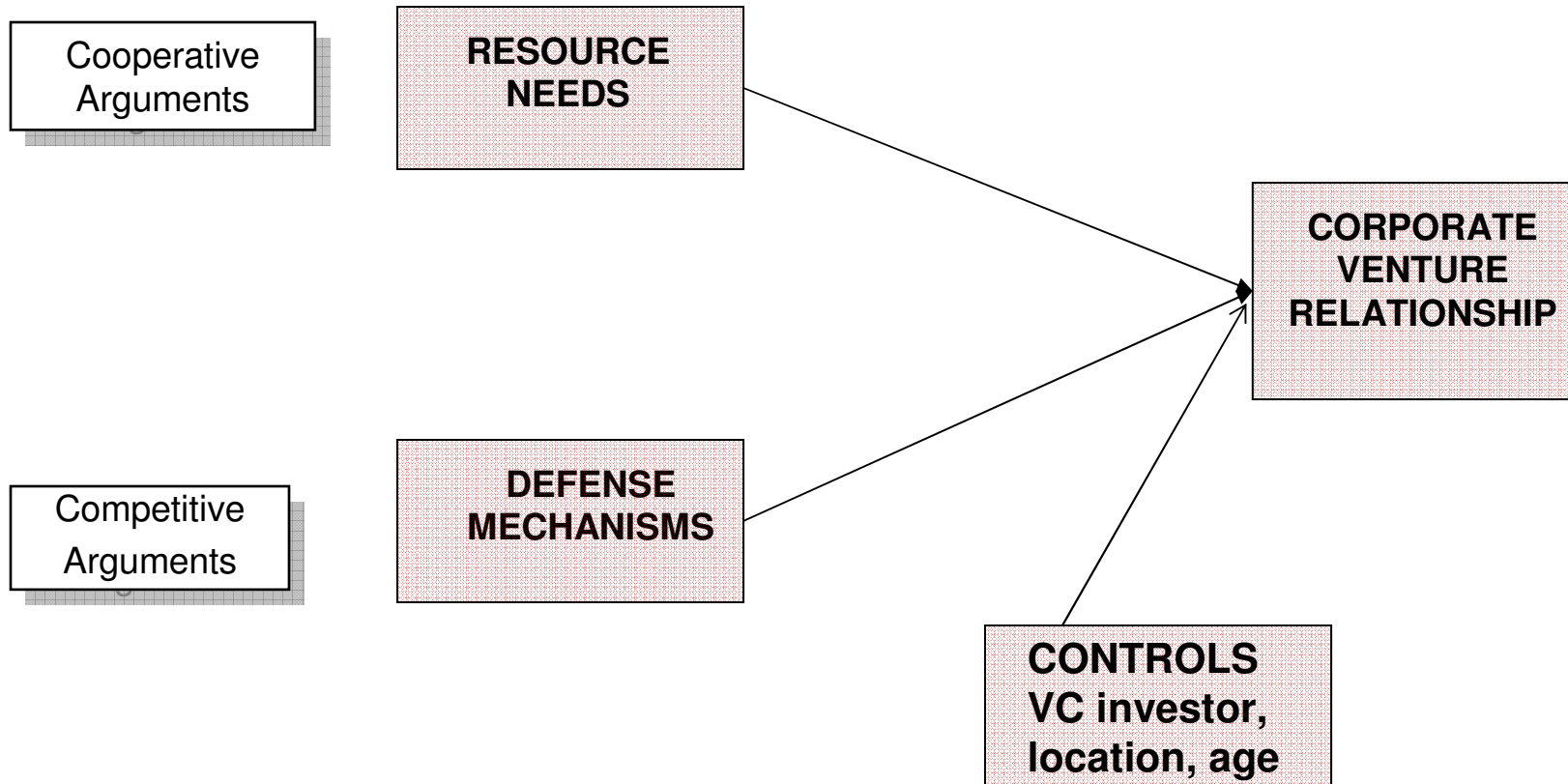
Serial entrepreneur, Silicon Valley, 2006

- ***“I just don’t think their interests are with you 100%. It is not as if there is a real departure in interest always, it may just be a prioritization of issues. It just may not be consistent. “***

Software entrepreneur, Silicon Valley, 2005

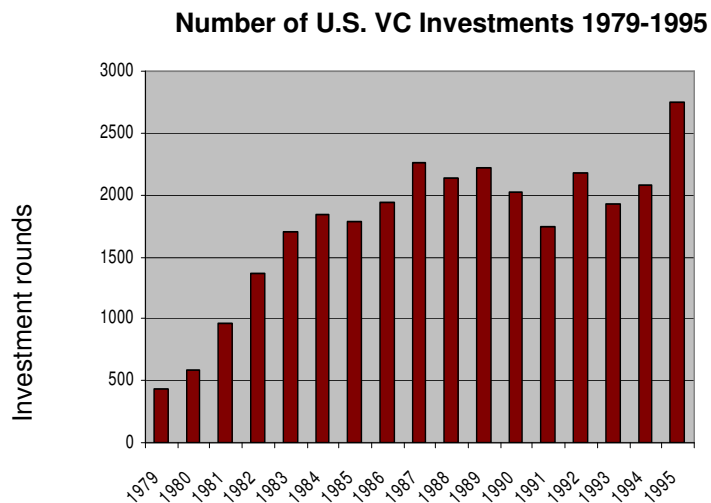


# Theoretical Framework



# Data

- **Qualitative interviews**
- **Main dataset: Quant data on technology startups**
  - 701 U.S. ventures in 5 high tech industries
    - Biotechnology, Medical, Electronics, Communications, Software
  - Initial funding 1979-1995
  - Longitudinal study; all funding rounds through 2003



# Sample firms

**TABLE 2: EXAMPLE VENTURES AND CORPORATE INVESTORS IN THE SAMPLE**

## Ventures

<b>Biotech</b>	<b>Communications</b>	<b>Medical</b>	<b>Semiconductors</b>	<b>Software</b>
Amgen	Advanced Fibre Communications	4-D Neuroimaging	Cirrus Logic	Avid Technology
Genzyme	Ascend Communications	Abaxis	Cymer, Inc.	Clarify
Gilead	Auspex Communications	Acuson Corporation	Form Factor	Electronic Arts
IDEC Pharmaceuticals	Bridge Communications	Aksys	Lam Research	Great Plains Software
Immunex	Cascade Communications	Cephalon	Novellus	Intuit
Isis Pharmaceuticals	Echelon Systems	Dura Pharmaceuticals	Paradigm Technology	Object Design
Martex Biosciences	Efficient Networks	Endocardial Solutions	Sanmina-SCI Corporation	Rational Software
Matrix Pharmaceuticals	Grand Junction Networks	Hologic	SDL	Slate Corporation
Nanogen	Network Equipment Technologies	InSite Vision	Transmeta	Sybase
Tularik	StrataCom	SangStat Medical	Xilinx	Verisign

## Corporate Investors

<b>Biotech</b>	<b>Communications</b>	<b>Medical</b>	<b>Semiconductors</b>	<b>Software</b>
Abbot Labs	3Com	Abbot Labs	AT&T	Apple Computer
Baxter	Ameritech	American Hospital Supply	Asahi Chemical	EMC
Dow Chemical	Apple Computer	Baxter	Cypress Semiconductor	Fairchild
Eastman Kodak	AT&T	Eli Lilly	General Electric	Hewlett Packard
Eli Lilly	General Electric	General Electric	Lucent Technologies	Hughes Aircraft
Hoechst	General Instrument	Hoffmann-La Roche	Raytheon	IBM
Johnson & Johnson	Hughes Aircraft	Johnson & Johnson	RCA Corp	Microsoft
Proctor & Gamble	Intel Corporation	Medtronic	TRW	Nortel
Schering-Plough Corp.	Nortel Networks	Raychem	Wang	Novell
Smith Kline Beecham	Olivetti	Smith Kline Beecham	Xerox	Xerox

# Sampling Technique

- **Stratified random sample**

- ~140 startups in each industry
- 18,168 investments in 4,077 funding rounds

- **Unit of analysis**

- Venture funding round
- Avg. ~5 rounds/venture

# Example: Communications Startup

- **Founded in 2/96**

- **Round 1 (6/96): VC \$2M**
- **Round 2 (8/96): VC's \$9M**
- **Round 3 (9/97): VC's and corp. investors (UUNet, Siemens, Ericsson, 3Com, and Lucent) \$46M**
- **Round 4 (3/99): VC's and corp. investor (Ericsson) \$34M**

- **IPO in 6/99**

# Contributions

- **Counterpoint research that emphasizes corporation as the primary decision-maker**
  - Ventures matter!
  - Relationships are **integrative negotiations** that accommodate the reinforcing preferences of both parties
- **Bridge competitive and cooperative views**
  - Relationships with sharks form when ventures can gain unique resources and when they are protected
- **Contribute to renaissance of resource dependence theory**

# Opportunities for Future Work

- **More theory**
  - Theoretical contribution
- **More actors**
  - Include all parties, not just the corporate side!
  - Multilateral view on corporate relationships
- **More integrated methods**
  - Combine qualitative and quantitative data