

IT and Public Policy - Oct. 7, 2004

IT Ecosystem

Inventing Institutions

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Introduction

An IT Ecosystem?

What's An Ecosystem?

- Evolution & History
- Accidents & Optimization

The Usual Suspects

- Patents, Contracts, Grants, Prizes . . .

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Introduction

Hybrids

New Experiments

Government/Industry

- Contracts + IP
- "CRADAs"

Academic/Industry

- Grants + Patents
- "Bayh-Dole"

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Introduction

Hybrids

Can Hybrids Do Better?

- DWL, Innovation, Eliciting Innovation & Agency Problems
- Political Risks

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Government - Industry Partnerships

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Government - Industry Partnerships

Examples

- CRADAs, SBIR Grants, State Grants, University Grants, Incubators

Naïve Objection:

- Patents + Public Money = DWL + Agency Problems

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Government - Industry Partnerships

Why Hybrids?

Reason to Believe That ...

Patents Might Fail

and

Contracts Might Fail



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Government - Industry Partnerships

Why Patents Might Not Work ...

1. High cost

- Small vs. Big Projects
- Financial markets

2. High risk

- Technical and market risk
- Financial markets



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Government - Industry Partnerships

Why Patents Might Not Work ...

3. Appropriability

- IBM, AT&T ... and Microsoft?

4. Insufficient Patent Reward

- $(\pi v - c) > 0$



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Government - Industry Partnerships

A Tough Standard!

Political Hazards

Iron Triangles & Hidden Taxes

Be Skeptical!

Why Use Not Contracts?

- No DWL!



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Government - Industry Partnerships

Why Contracts Might Not Work ...

Agency Problem - Researchers

- Estimated $(v-c)$
- Going to the Beach



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Government - Industry Partnerships

In Other Words ...

1. Government Cannot Monitor Performance

- or -

2. Government Cannot Pick Winners

- Private Sector Knowledge of $(v-c)$.
- Conventional Wisdom
- Incubators



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Government - Industry Partnerships

When Patents and Contracts Don't Work ...

... Can Hybrids Help?



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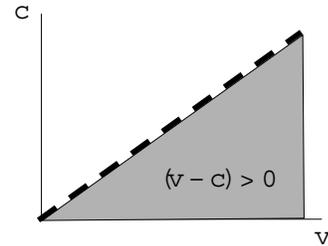
Government - Industry Partnerships

The Goal:

$$(v - c) > 0$$

Note:

- (v, c) space

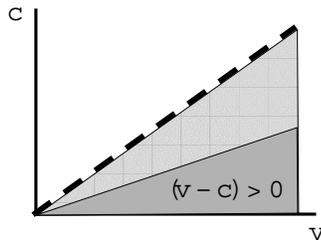


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Government - Industry Partnerships

Patents:

$$(\Pi \bullet v - c) > 0$$



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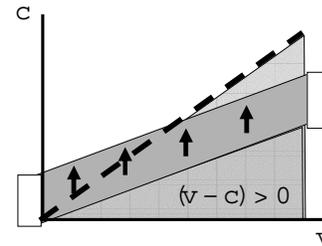
Government - Industry Partnerships

Subsidies:

$$(\Pi \bullet v + s - c) > 0$$

Note:

- Assumes government can't observe $(v - c)$



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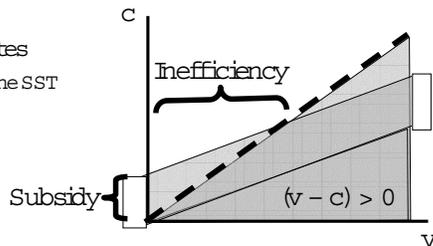
Government - Industry Partnerships

Subsidies:

$$(\Pi \bullet v + s - c) > 0$$

Notes

- The SST



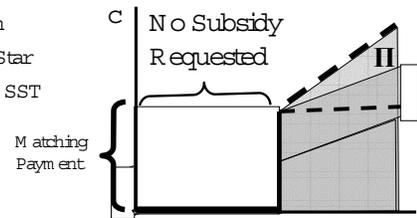
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Government - Industry Partnerships

Matching Payments

Notes

- Semitech
- Venture Star
- The New SST



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