

Federal Investment in Research: Implications for US Competitiveness

An Industry Perspective

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Partnership

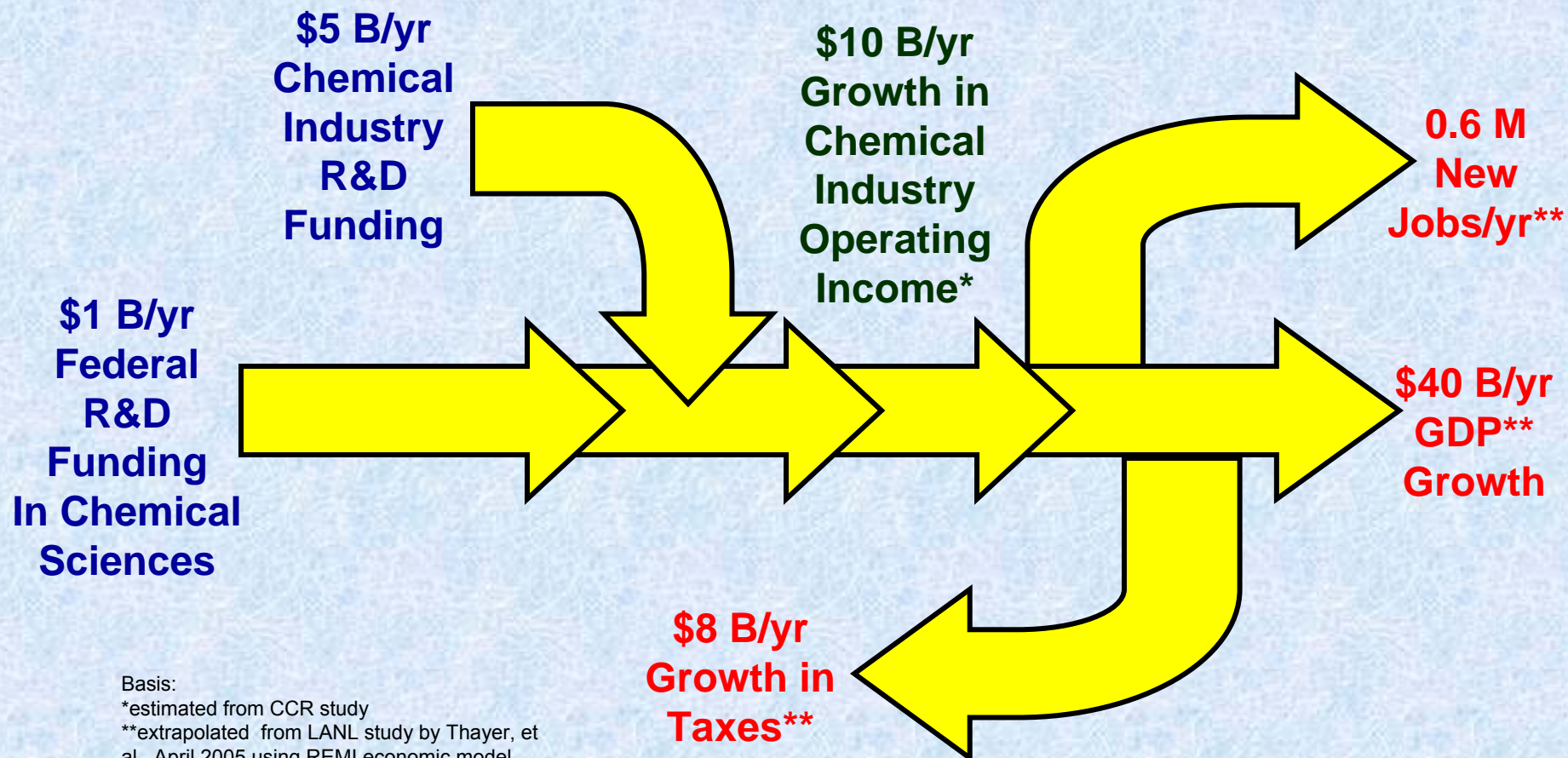
The Good News...

investment in research produces a significant return
for society and for business



CCR

Growth from Chemical Sciences R&D



Basis:

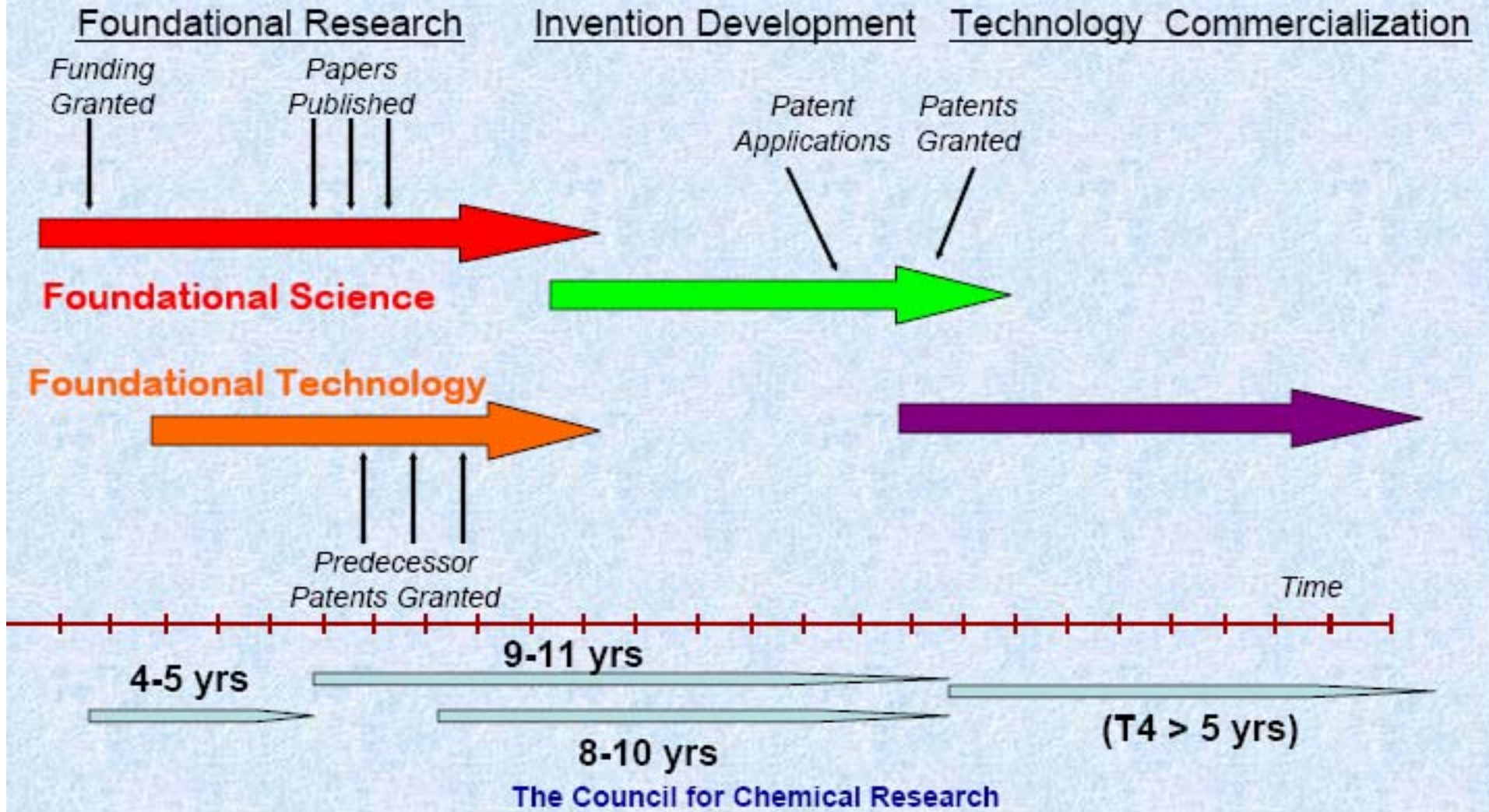
*estimated from CCR study

**extrapolated from LANL study by Thayer, et al., April 2005 using REMI economic model



CCR

Timeline from Conception to Market



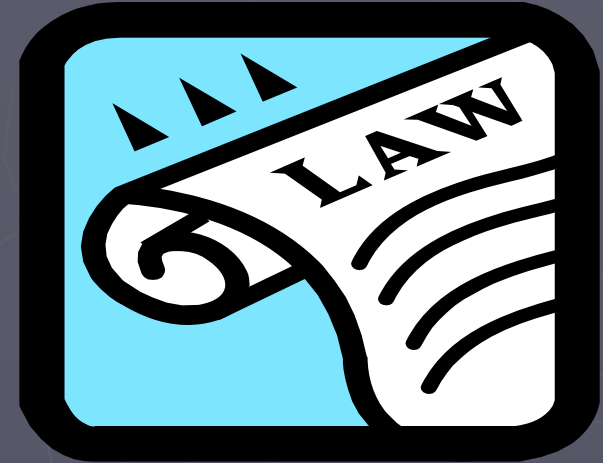
The Not So Good News...

it is becoming less attractive for companies to partner with US universities and national laboratories to invent and commercialize technology

Factors that Impact US Universities and Their IP Policies

► Bayh-Dole Act of 1980

- University owns IP resulting from federally sponsored research
- University has obligation to try to commercialize IP



• Tax Laws

- not-for-profit status (UBIT)
- use of tax exempt bonds (Rev Proc 97-14)

US Bayh-Dole Act

- ▶ Intended to promote commercialization of inventions resulting from federally funded research
- ▶ An exception is made for privately-funded research
 - **Sec. 401.1 Scope.**
 - ▶ a.1 To the extent that a non-government sponsor established a project which, although closely related, falls outside the planned and committed activities of a government-funded project and does not diminish or distract from the performance of such activities, inventions made in performance of the non-government sponsored project would not be subject to the conditions of these regulations. An example of such related but separate projects would be a government sponsored project having research objectives to expand scientific understanding in a field and a closely related industry sponsored project having as its objectives the application of such new knowledge to develop usable new technology.
- ▶ Many universities interpret Bayh-Dole to apply as long as “one federal dollar touches” the privately-sponsored project and claim a statutory right to own subject inventions and control their licensing
 - typically require sponsor to pay patenting cost and offer only an option to negotiate a license
- ▶ **This interpretation makes US universities less attractive as partners in privately-sponsored research**

US Tax Code & Revenue Procedure 97-14

- ▶ Comes into play when tax-exempt bonds are used to finance buildings where research is performed
 - tax-exempt status of a bond is jeopardized if research for “private benefit” exceeds 5 or 10%
 - defines a “safe harbor” for privately sponsored research
 - ▶ sponsor may not receive preferential treatment in licensing inventions from the research
 - inventions must be licensed at fair market value
 - licensing terms can not be included in the research agreement
- ▶ **This barrier is unique to the US and is a competitive disadvantage**

Factors That Impact US & Multinational Companies

▶ Globalization of business

- markets
- manufacturing
- R&D



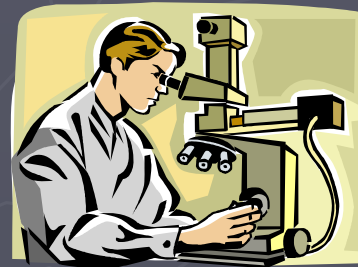
▶ Globalization of communication

- internet, e-mail, shared databases
- inexpensive telecommunication
- inexpensive air travel



▶ Increasing quality of foreign universities

- students
- research
- infrastructure



2003 Industry Survey

Polled members of the External Technology Directors Network of the Industrial Research Institute

Question: Do you/your company agree with the following statements:

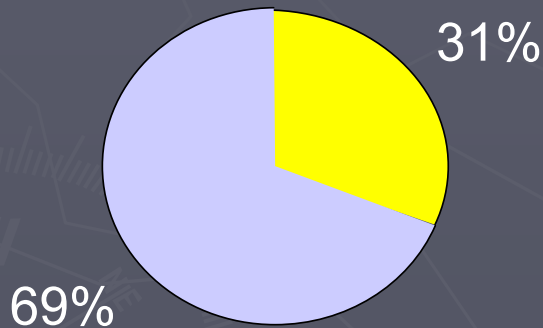
- A) IP issues are an impediment to working with US universities
- B) We sometimes choose to work with a foreign university (rather than a US university), **and** getting better IP terms is one of the reasons for doing this

Responses:

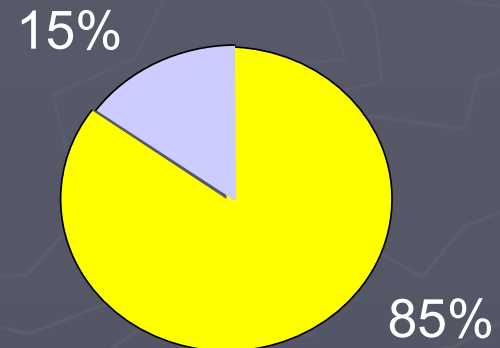
- ▶ **100% agreed with statement A**
- ▶ **50% agreed with statement B**

Foreign Universities Offer Better IP Terms to Research Sponsors

US Universities



Foreign Universities



 Sole university inventions assigned to Dow or owned jointly

 Sole university inventions solely owned by University

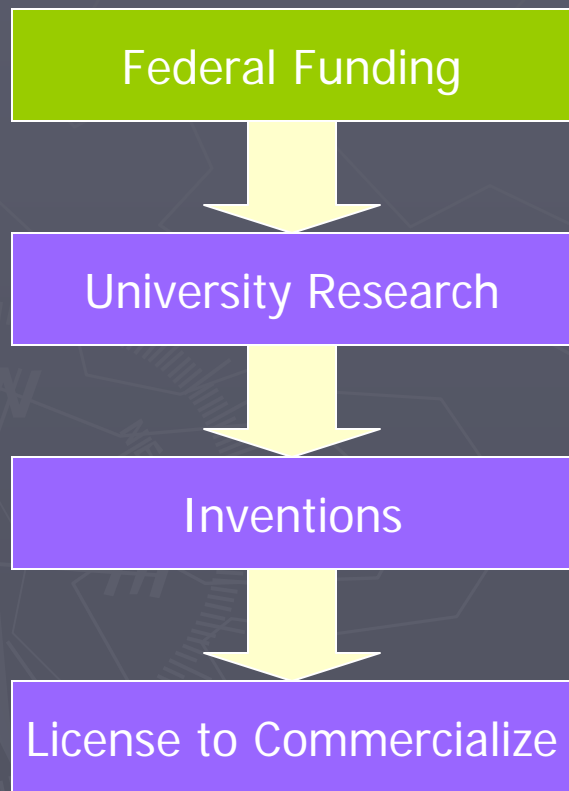
What is the Problem?

- ▶ Negotiation of intellectual property rights in sponsored research agreements has become a barrier to industry-university research collaboration in the United States.
 - more contentious
 - takes longer
 - increases transactional costs
 - little/no benefit results

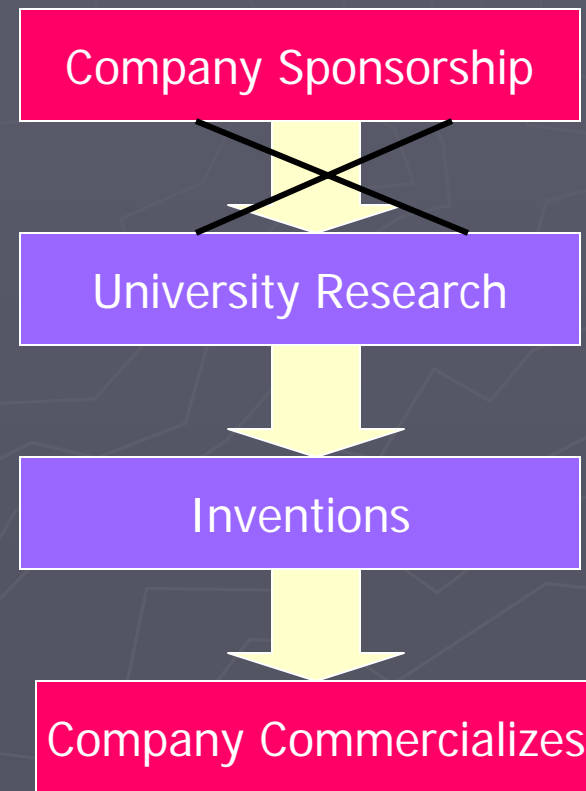


US Practices Discourage Industry Sponsored University Research

Licensing Model



Sponsored Research Model



The Impact

- ▶ The US innovation engine is very powerful but not fully engaged for the benefit of society or business
- ▶ Companies and universities can resolve some of the issues
- ▶ The federal government can
 - remove some of the legal/tax barriers
 - increase the allowed federal overhead rate to cover true cost of university research



University-Industry Congress 2003 - 2006



Joint Sponsorship

- ▶ Government – University – Industry Research Roundtable (GUIRR)
- ▶ Industrial Research Institute (IRI)
- ▶ National Council of University Research Administrators (NCURA)





The University-Industry Demonstration Partnership

- New organization operating under auspices of GUIRR (NAS)
- Companies and universities are developing new partnership paradigms that will benefit both
 - **67 organizations have joined UIDP**
 - 47 universities
 - 17 companies
 - 3 foundation
 - **First project is TurboNegotiator**
 - **Two meetings held (December 2006, April 2007)**

UIDP

<http://www.uidp.org>

University-Industry Demonstration Partnership