

August 20, 2013

*Innovation Economics: The Race for
Global Advantage*

Presentation to: BioPharma Research Council

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Information Technology and Innovation Foundation

The Information Technology and Innovation Foundation (ITIF) is a Washington, D.C.-based think tank at the cutting edge of designing innovation policies and exploring how innovation will create new opportunities to boost economic growth and improve quality of life. ITIF focuses on:

- **Innovation “verticals”:** energy, life sciences, telecom, manufacturing, and Internet and IT transformation
- **Innovation “horizontal”:** trade, tax, talent, and tech policy
- **“Innovation economics”** as an alternative to mainstream economics



■ Today's Presentation

1

The U.S./Global Innovation Landscape

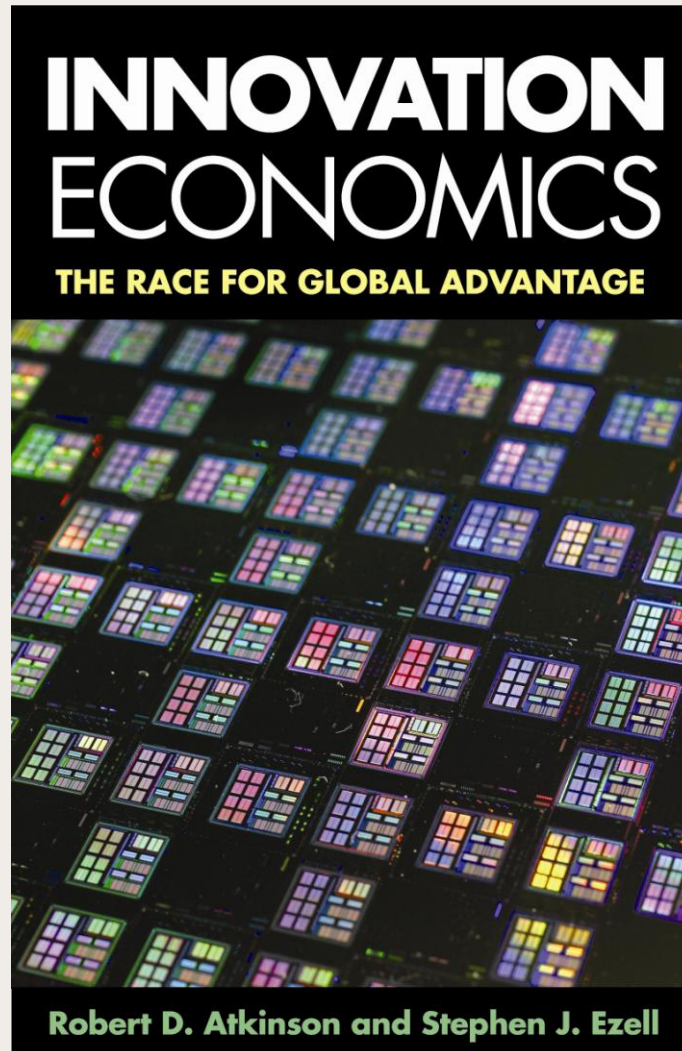
2

Life Sciences Case Study

3

Revitalizing American Innovation

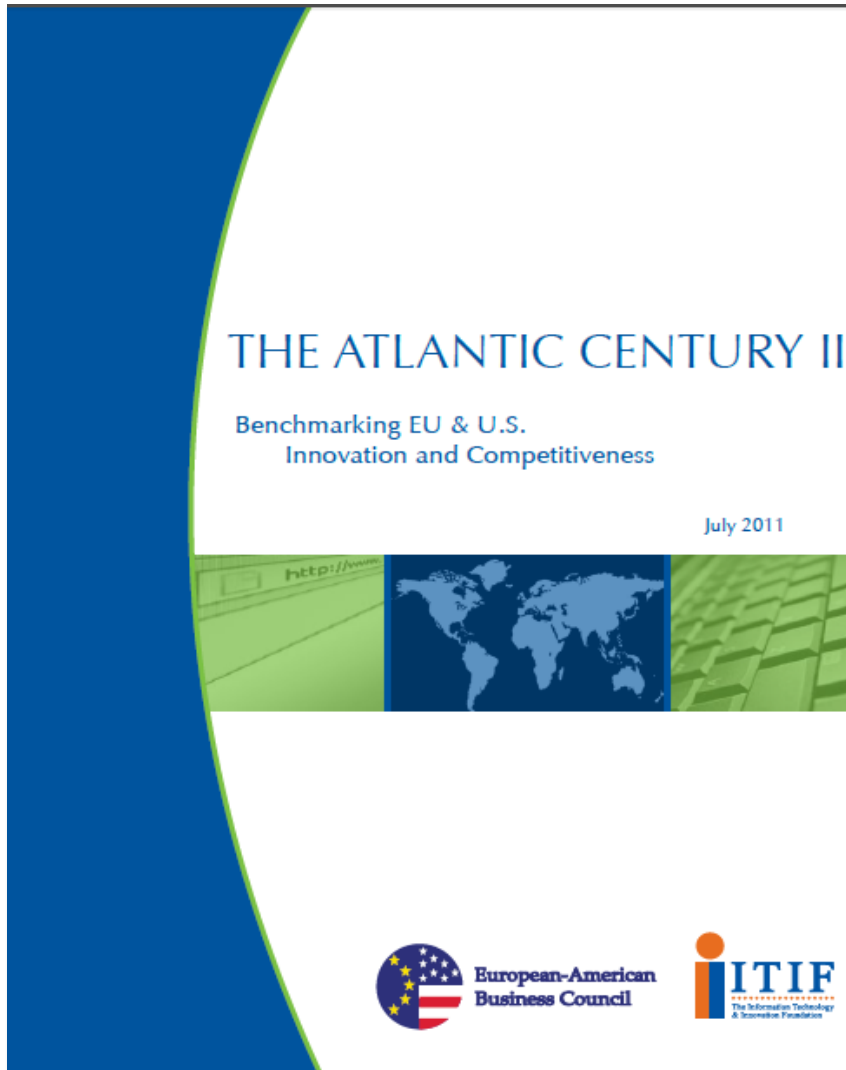
- Innovation Economics: The Race for Global Advantage



U.S. Economy Significantly Underperforming

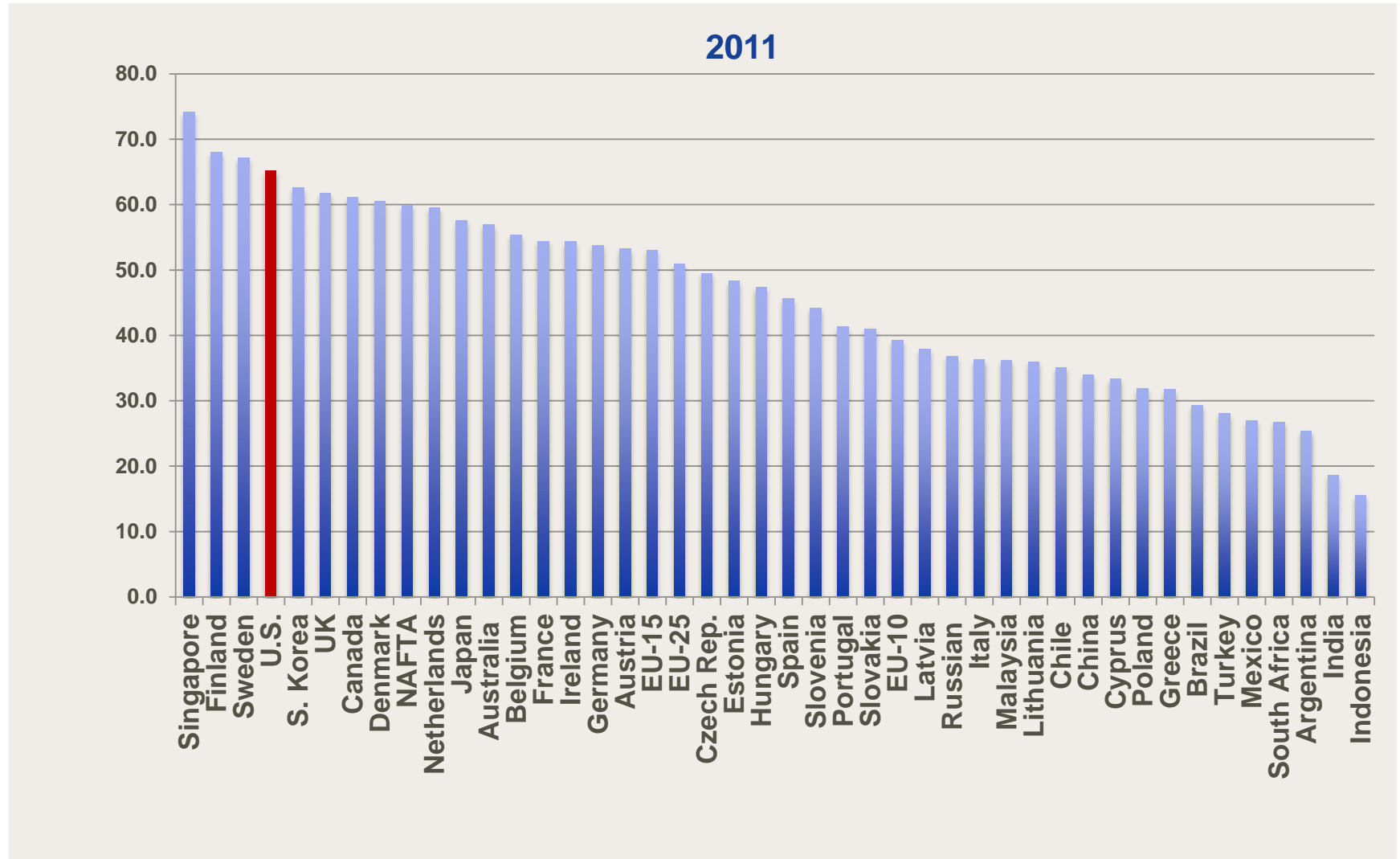
- Median household incomes stagnant since 1983
- Labor force participation rate lowest since 1979
- Lost 1/3rd manufacturing jobs last decade
- \$7 trillion trade deficit over past decade
(-\$100B ATP)
- Average national debt per taxpayer: \$150K

■ The Atlantic Century II

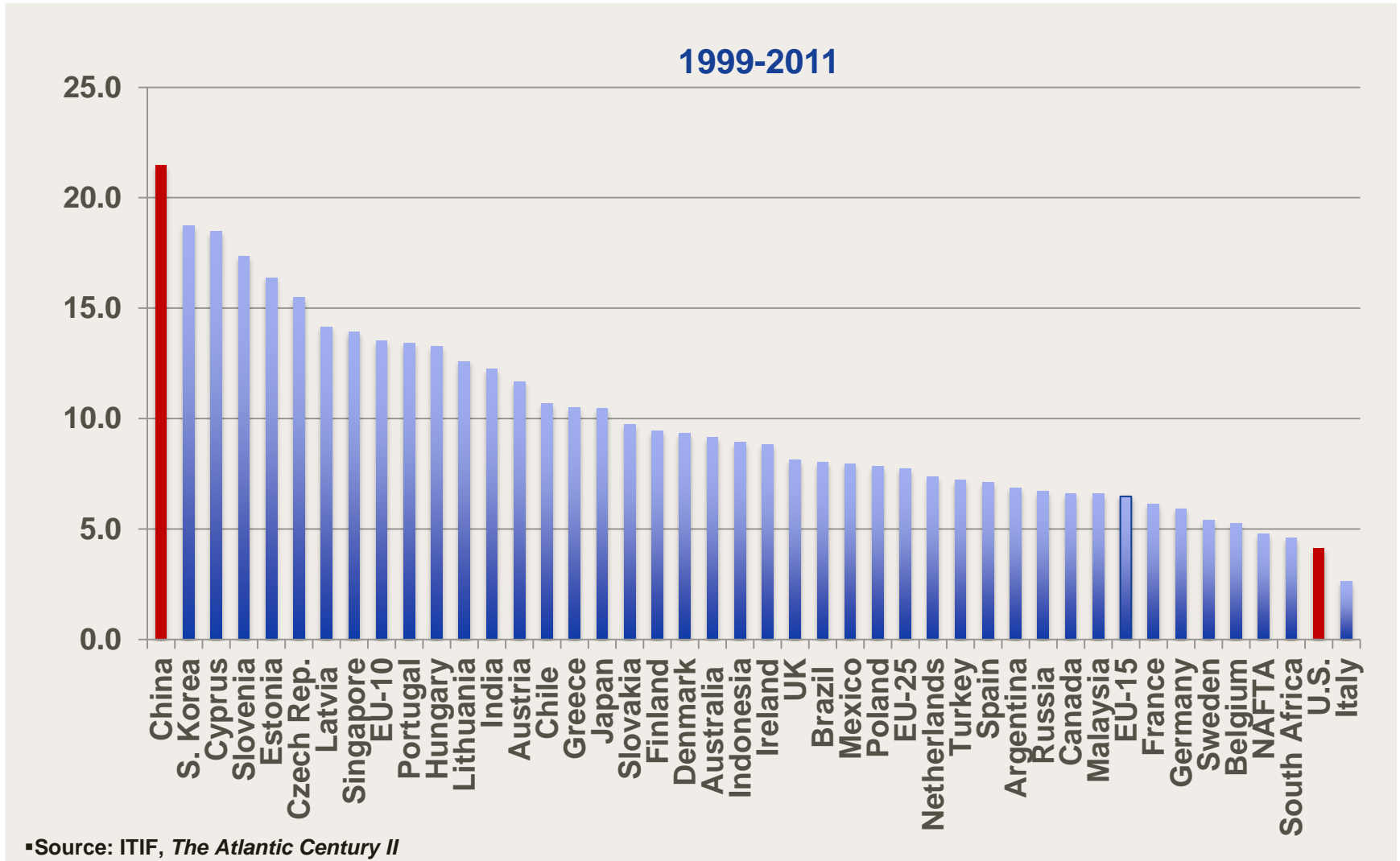


- **The Study:**
Compares innovation-based competitiveness of 44 nations and regions.
- **16 indicators:**
Including corporate and government R&D, scientists and engineers, new firms, corp. tax, productivity growth and others.

Overall Score for Global Competitiveness and Innovation



■ But U.S. Second to Last at Improving Innovation Capacity



- Companies Have Gone From Shopping the States...



- ...To Shopping the World



■ With the U.S. Increasingly Losing Locational Decisions

JANUARY 2012

PROSPERITY AT RISK

Findings of Harvard Business School's
Survey on U.S. Competitiveness

Michael E. Porter
Jan W. Rivkin



■ U.S. Less Attractive Location for Innovation & Investment

- Stagnant science and research funding
- Highest corporate tax rate in OECD
- 27th most generous (& unstable) R&D tax credit
- Faltering education system
- Lagging high-skill immigration policy

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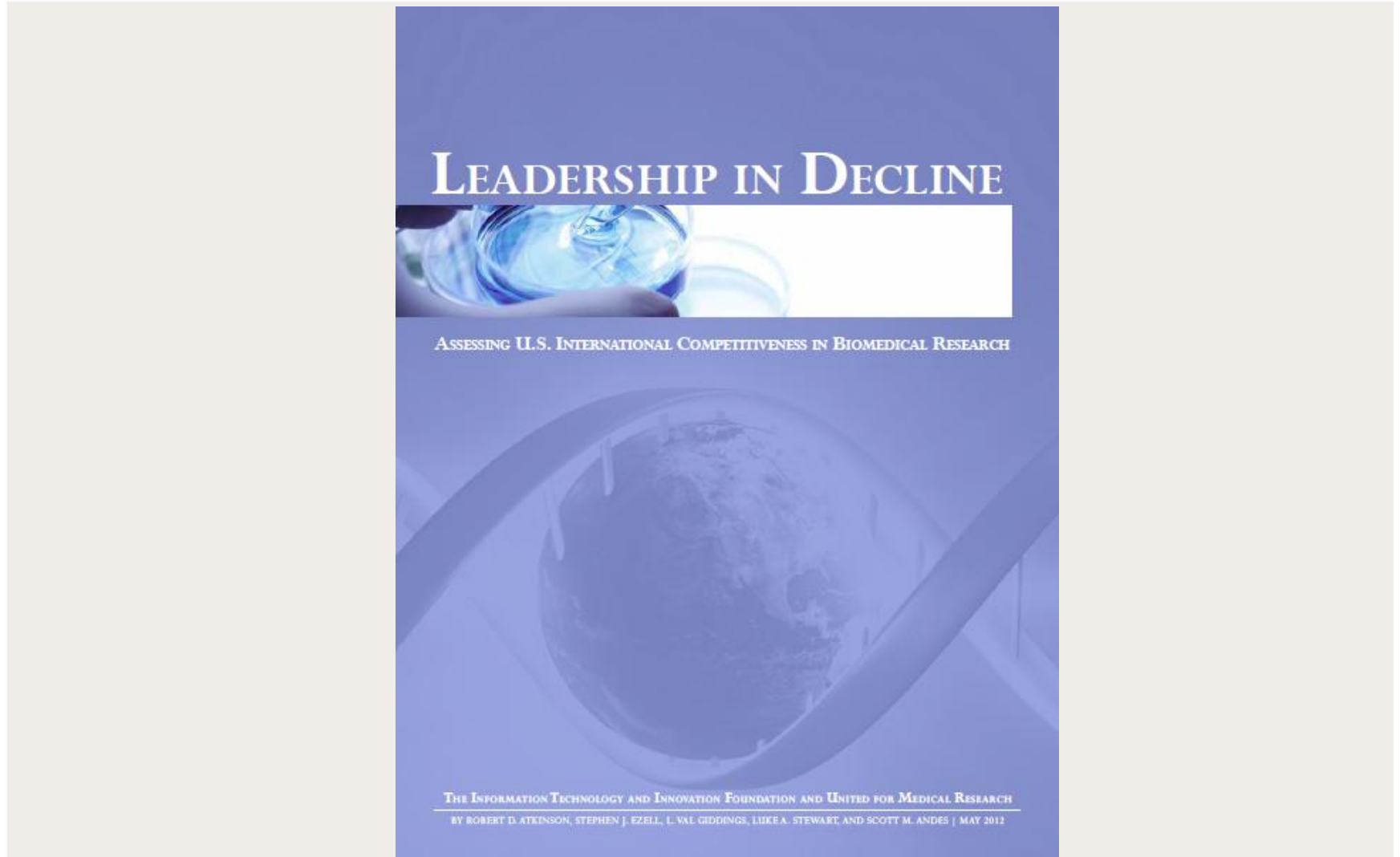
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■ U.S. Competitiveness in Biomedical Research

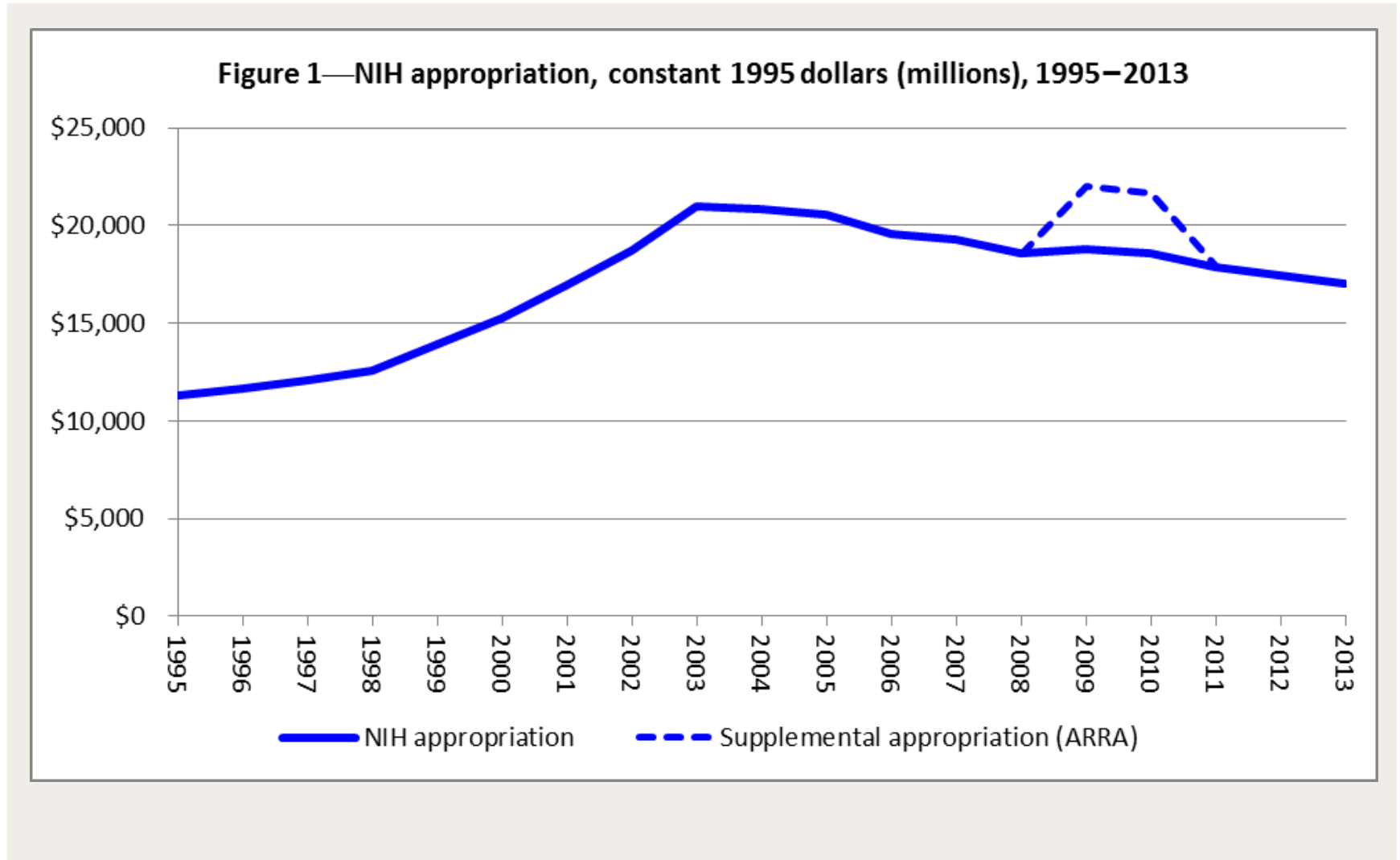


■ U.S. Leadership Today is Under Threat

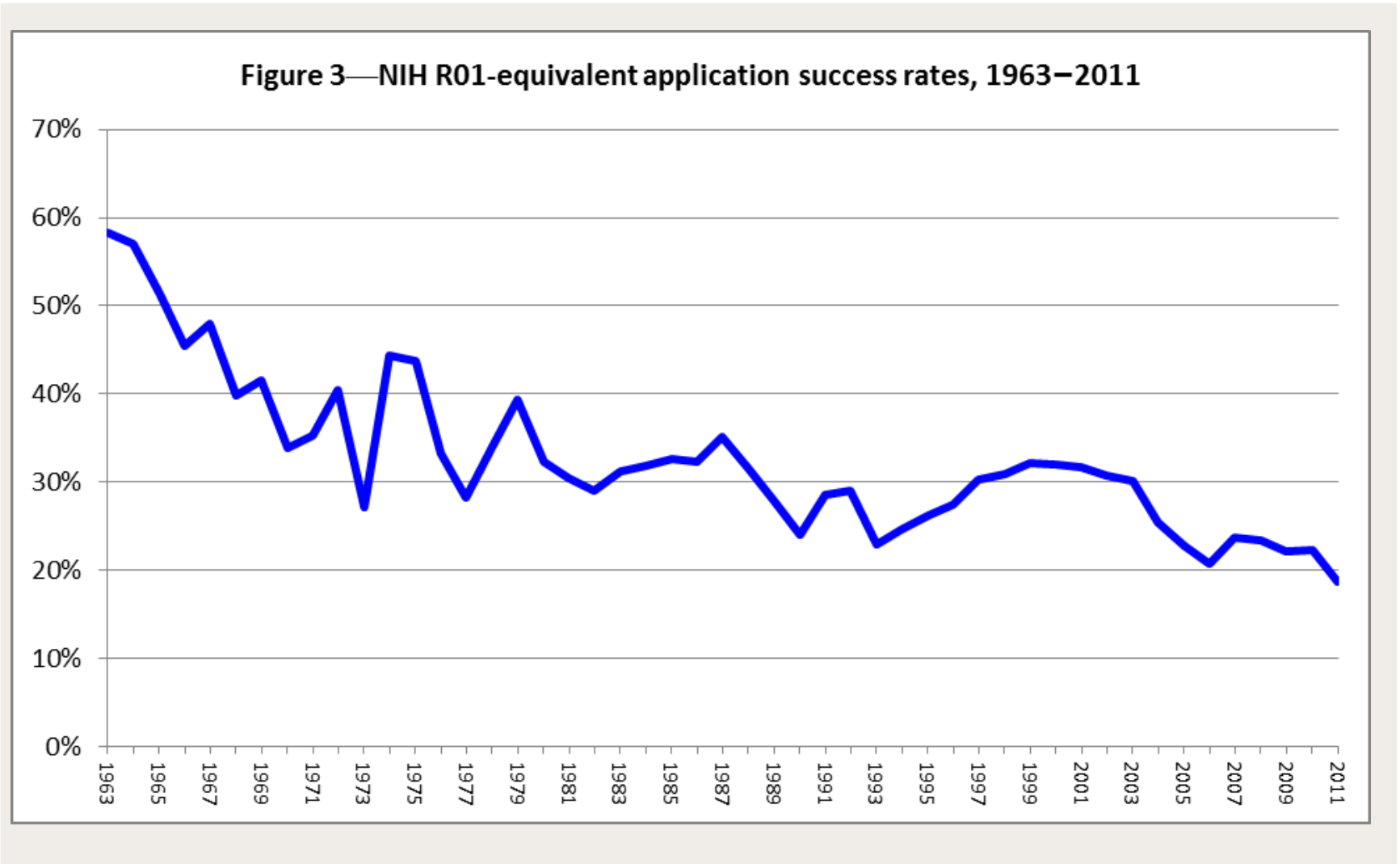
Competitors ramping up efforts with intent to stake their own claims on global leadership:

- China spending \$308B over next 5y (4x U.S. as share GDP); now leads world in DNA sequencing capacity.
- Korea's government provides 7 times more funding for pharmaceutical industry-performed research than does the United States as a share of GDP.

■ NIH Funding Trajectory – Constant dollars

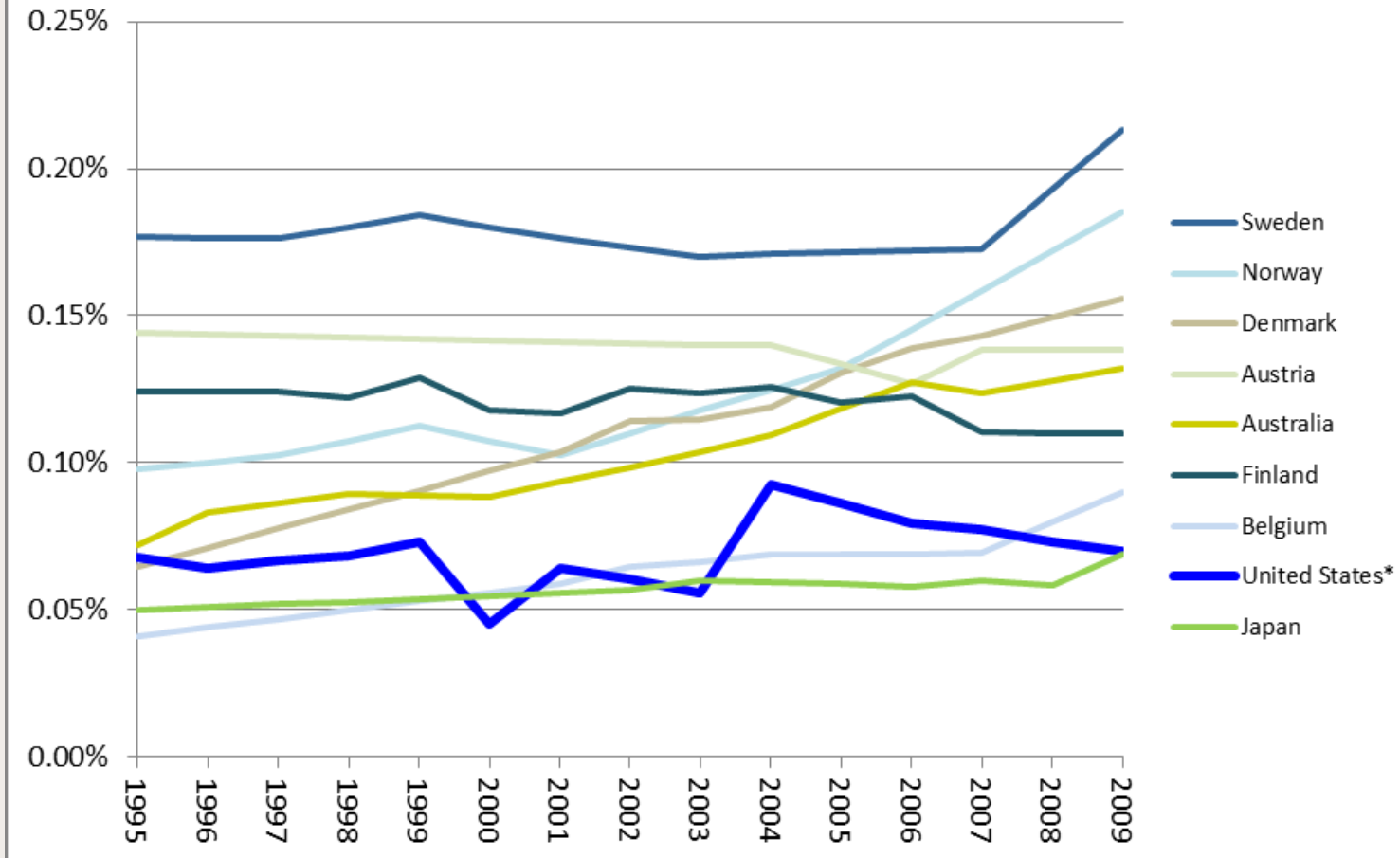


■ NIH Grant Applicant Success Rates

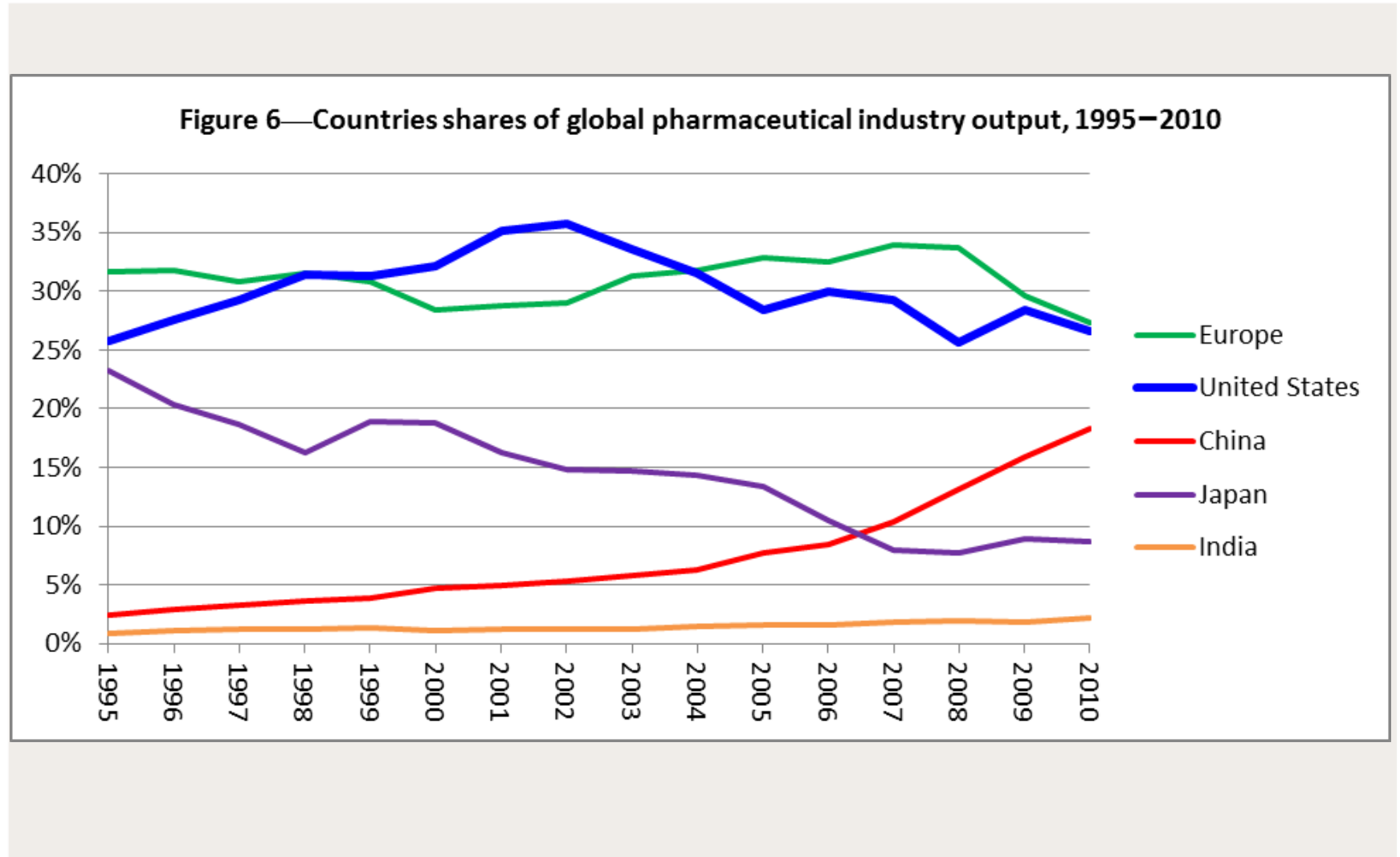


■ Government Funded R&D for Medical Science

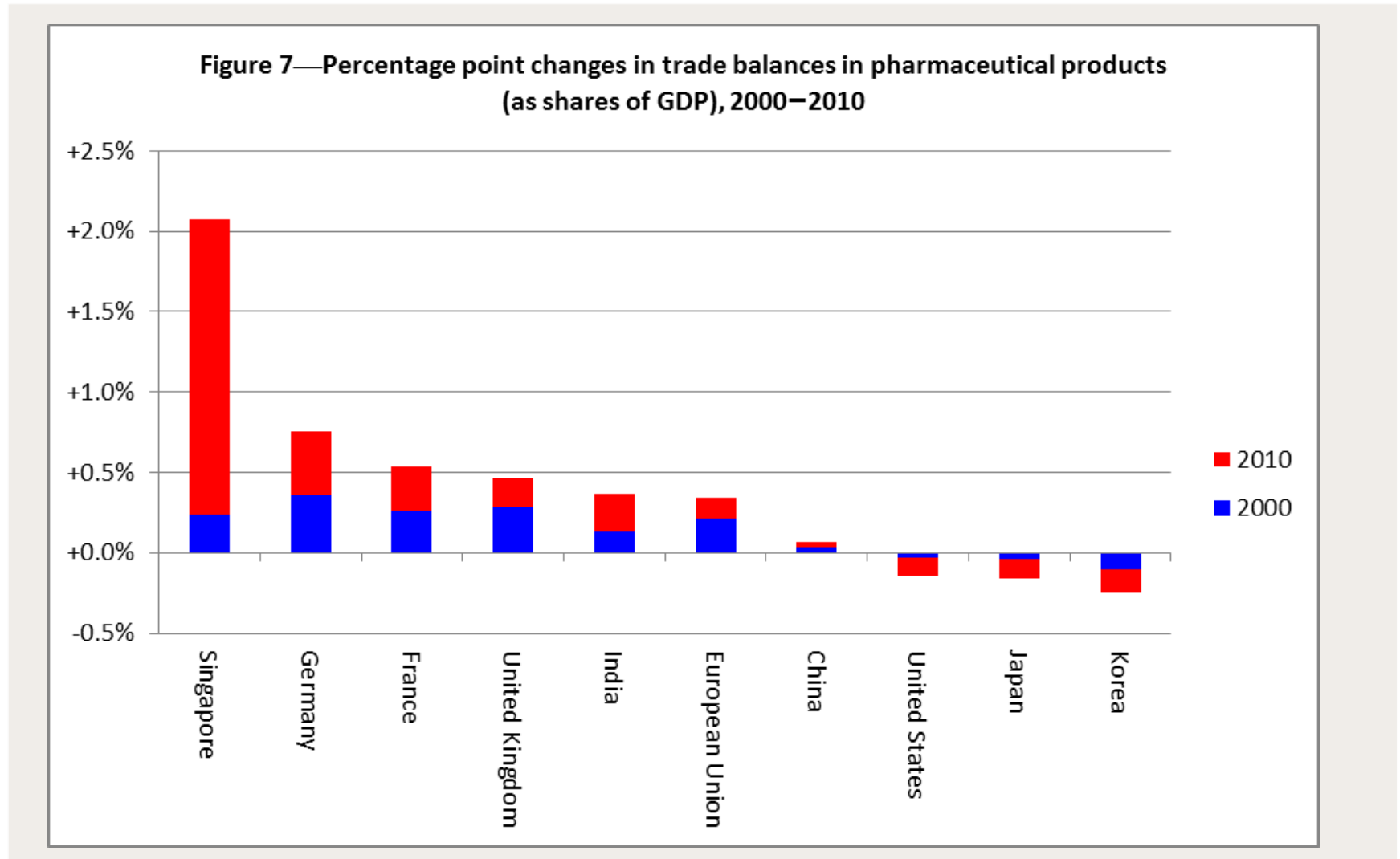
Figure 4—Government-funded R&D for medical science performed by the academic and non-profit sectors (as shares of GDP), 1995–2009



■ Country Shares of Global Pharmaceutical Output



■ Changes in Pharmaceutical Trade Balances



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Revitalizing American Innovation

■ Boosting National Innovation Competitiveness

1. Embrace “Innovation Economics”



Paul Krugman

“Productivity growth is the single most important factor to our economic well-being. *But it is not a policy issue, because we are not going to do anything about it.*”

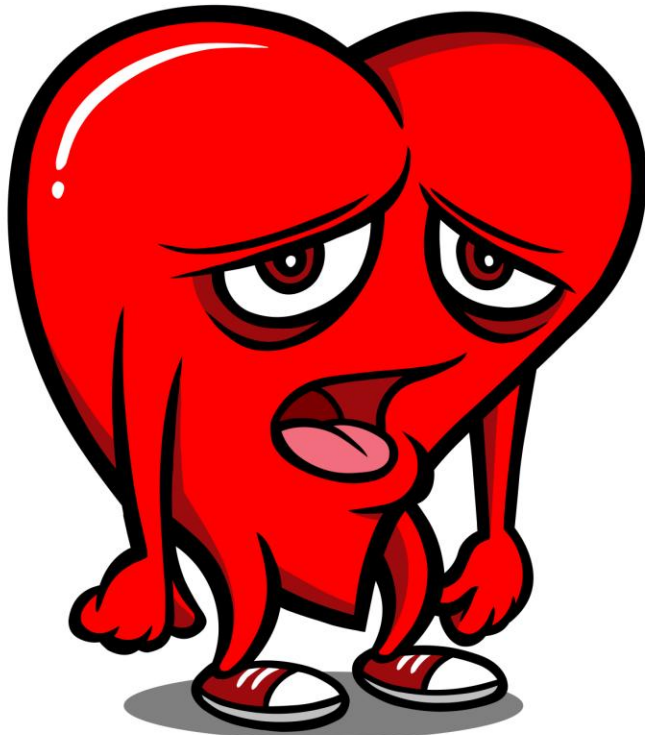


Joseph Schumpeter

- The central goal of economic policy should be to spur higher productivity and greater innovation.
- Science, technology, innovation, and entrepreneurship should be at the heart of economic policymaking.

■ Boosting National Innovation Competitiveness

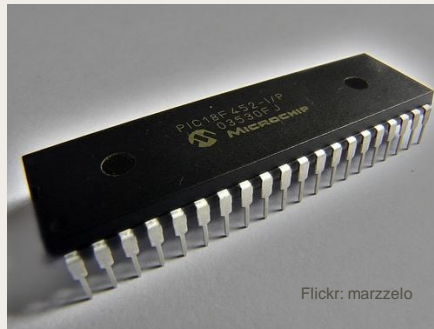
2. Strengthen the Heart of our Economy



■ Boosting National Innovation Competitiveness

3. Get the “4 Ts” Right

Tech



Tax



Talent



Trade



■ Design the Global System to Maximize Innovation

4. Compete based on “Good” Innovation Policies

		World	
		Wins	Loses
Country	Wins	“Good” (e.g. R&D Support)	“Ugly” (e.g. Currency or Standards Manipulation)
	Loses	“Self-destructive” (e.g. Limiting High-Skill Immigration)	“Bad” (e.g. Failing to Protect IPRs, Compulsory Licensing)

■ Innovation and Competitiveness Shouldn't Be Partisan

5. Work Together



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Thank You

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