June 13, 2014

Moving Forward: The Challenge of the Future

PlanSmart New Jersey: 2014 Regional Planning Summit

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Information Technology and Innovation Foundation

ITIF is a public policy think tank committed to articulating and advancing a pro-productivity, pro-innovation, and pro-technology public policy agenda internationally, in Washington and in the states. ITIF focuses on:

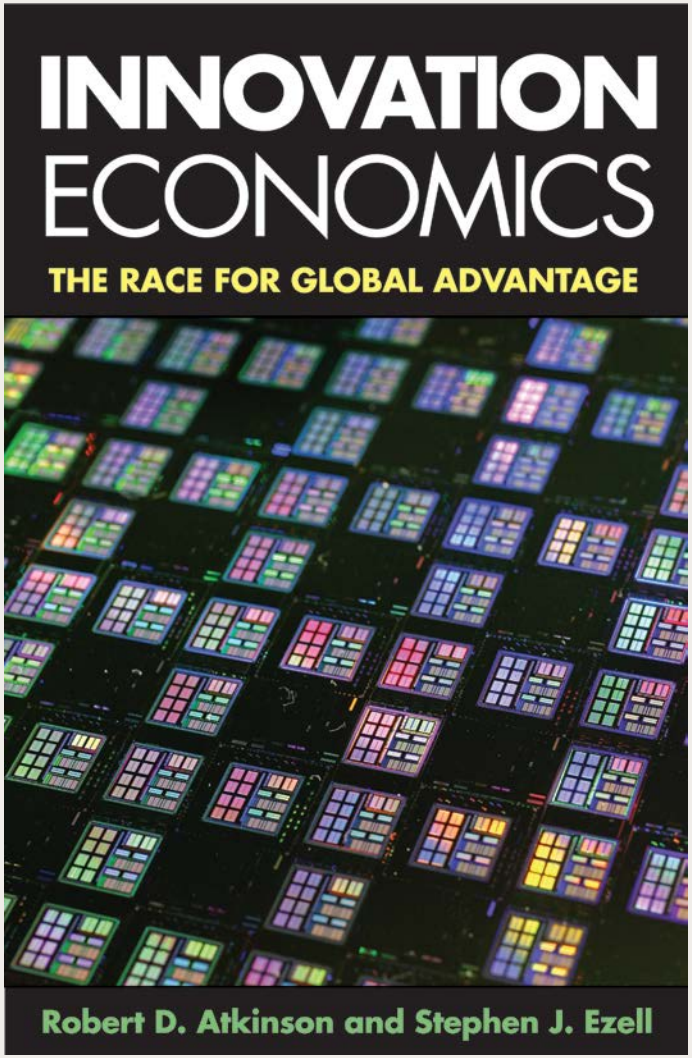
- Innovation processes, policy and metrics
- Science policy related to economic growth
- E-commerce, e-government, e-voting, e-health
- IT and economic productivity
- Innovation and trade policy
- Clean energy

ITIF
The Information Technology & Innovation Foundation

Today's Presentation

1. What is Innovation and Why Does it Matter?
2. What's Happened to the U.S. Innovation Economy?
3. How is New Jersey Faring?
4. How States & Regions Can Spur Innovation-Based Growth

Innovation Economics: The Race for Global Advantage



Rob Atkinson

Stephen Ezell

Yale University Press
September 2012

Innovation Myths and Realities

1. Innovation is only about new or better products and services …

It's about transforming existing conditions into preferred ones…

2. Innovation is risky…

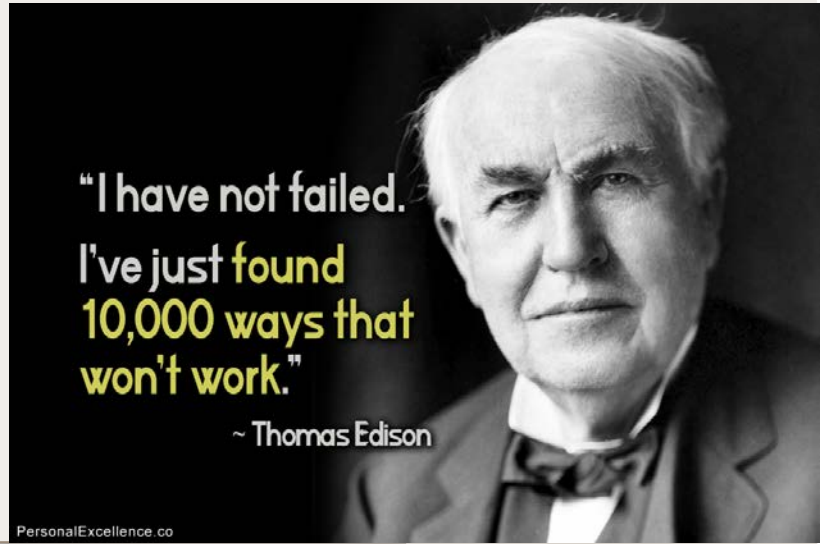
Failure to innovate is what is risky…

3. Innovation is expensive, demanding lots of resources…

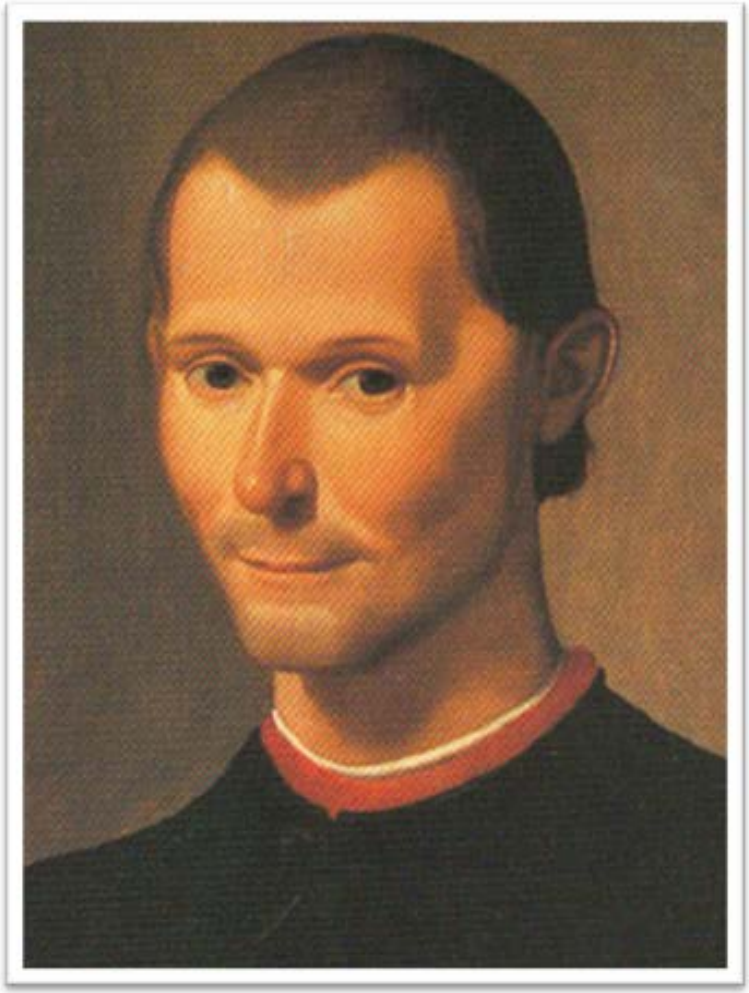
Failure to innovate is what is costly…

4. Failure is unacceptable…

Failure has value so long as it generates useful learning.



Innovation Isn't "Manna from Heaven"



There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

– Niccolo Machiavelli, The Prince

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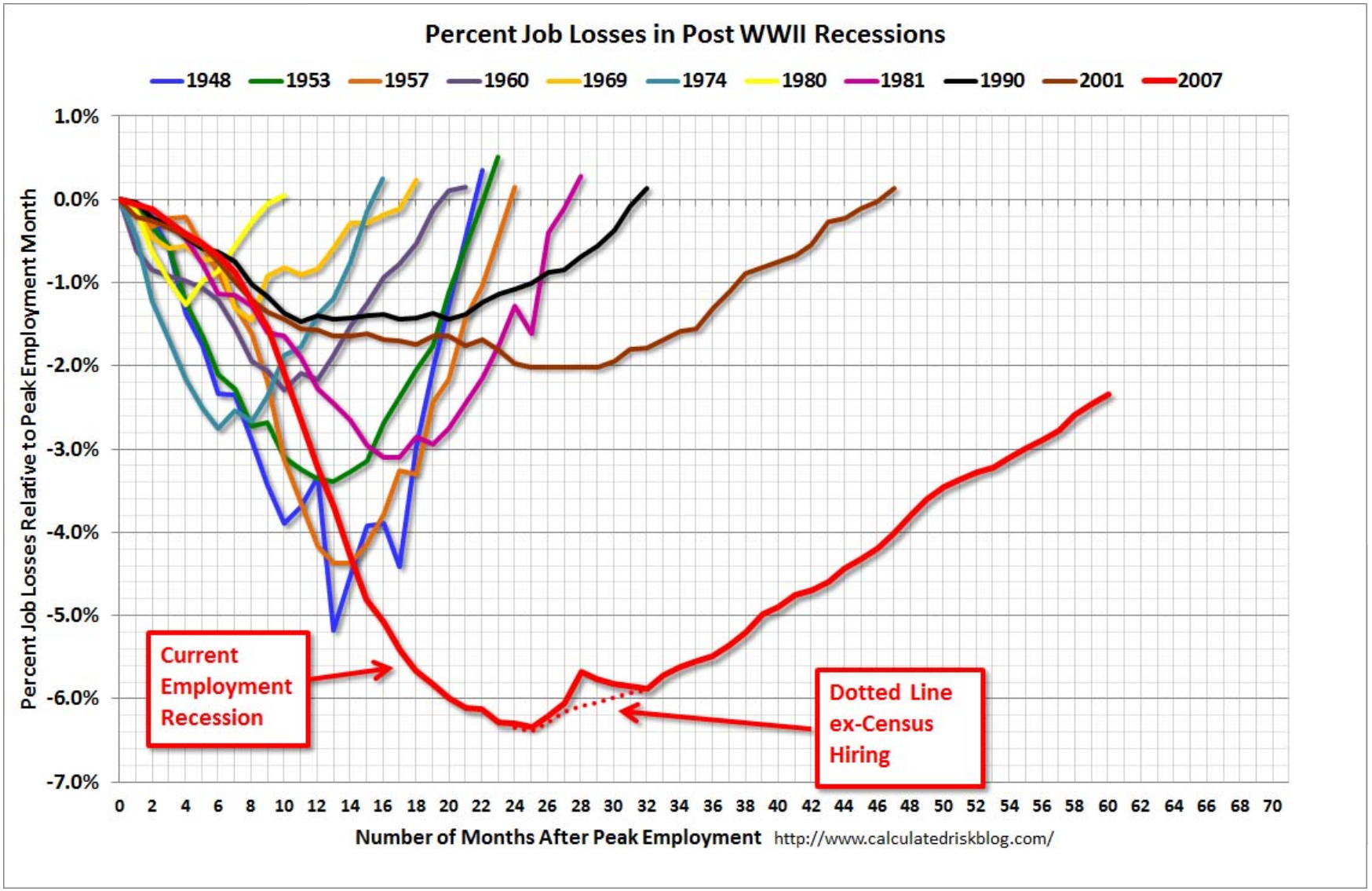
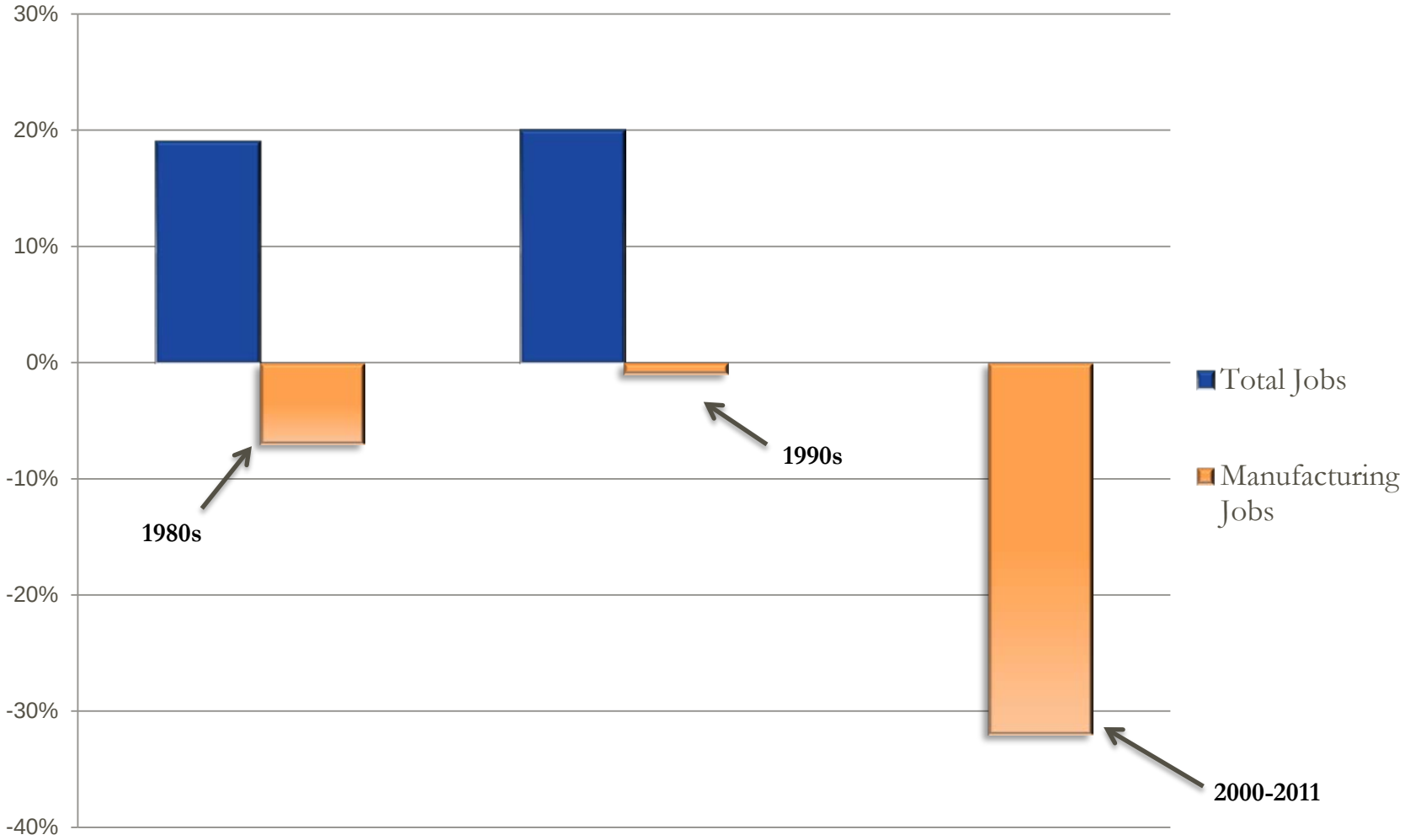
U.S.: Worst Recession Since the 1930s



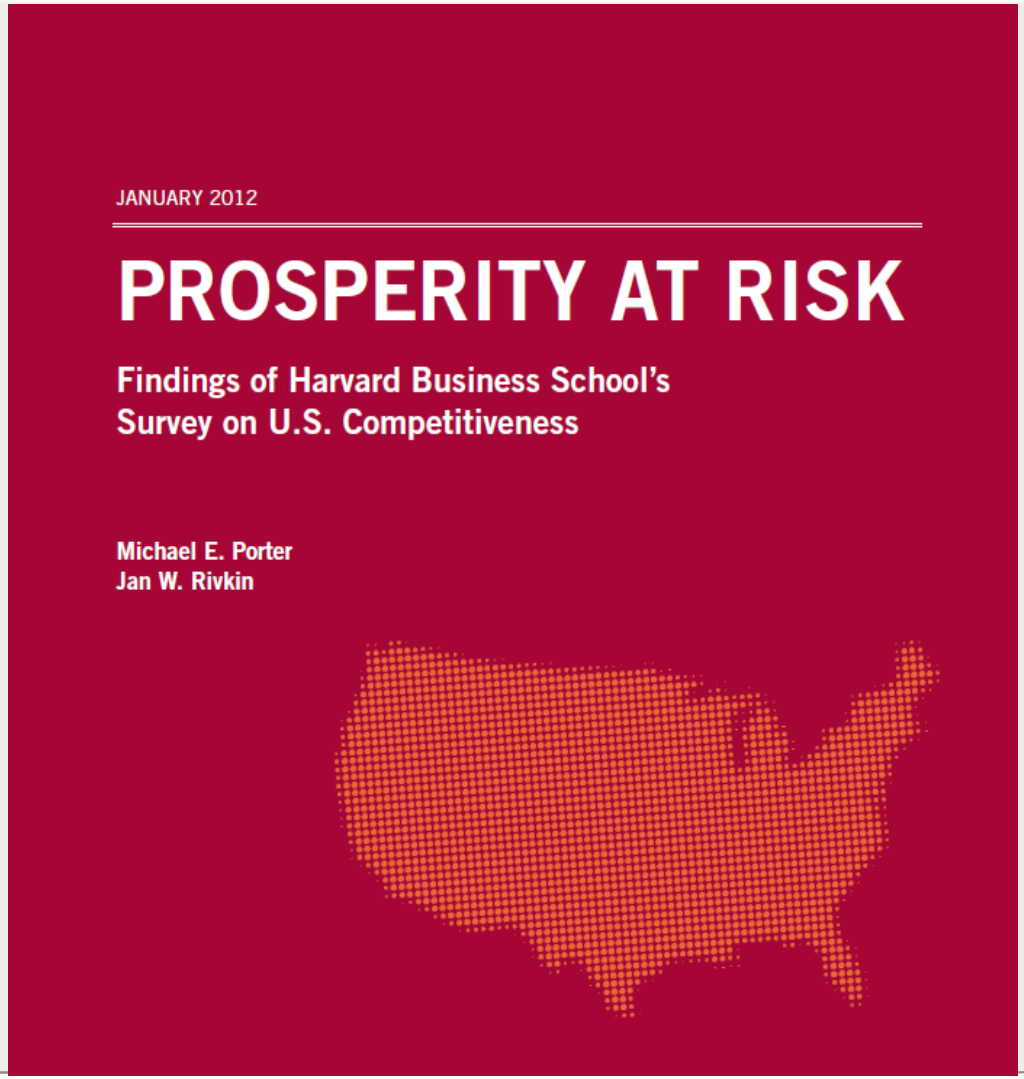
Caused by Deep Manufacturing Job Losses in the 2000s



- Companies Have Gone From Shopping the States…

…To Shopping the World

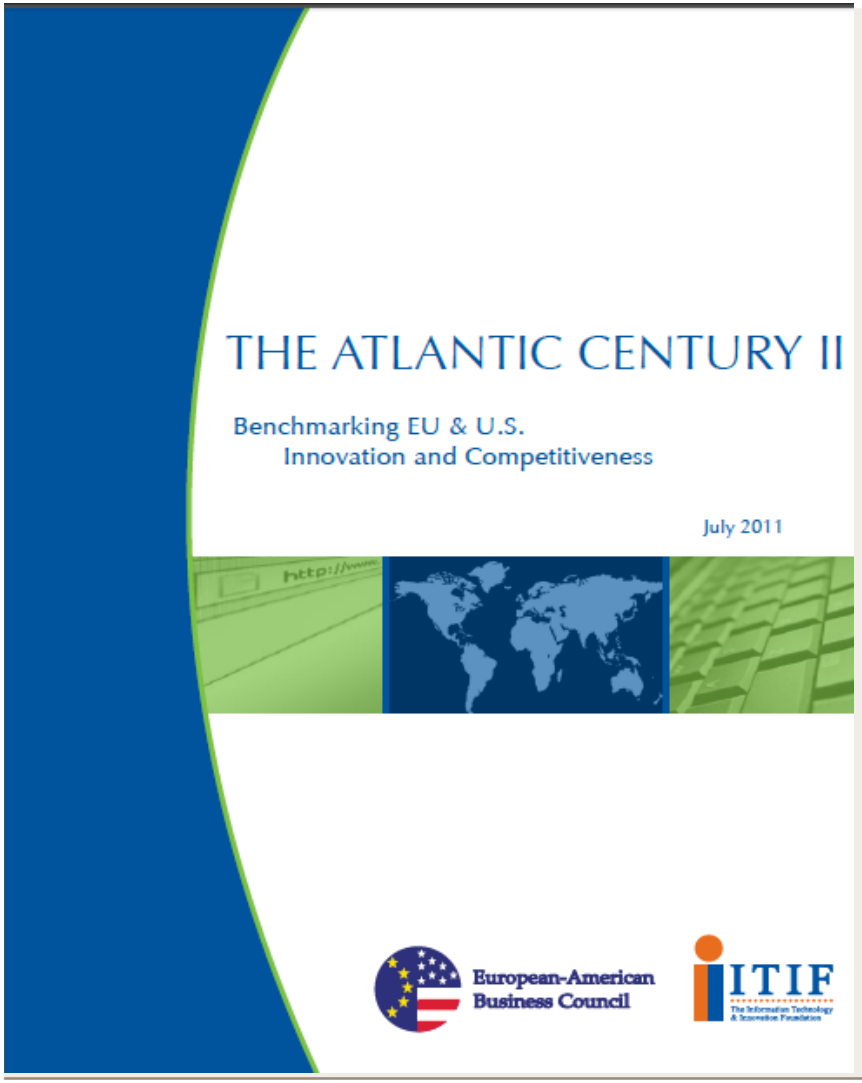
- With the U.S. Increasingly Losing Locational Decisions



U.S. Now a Less Attractive Location for Investment

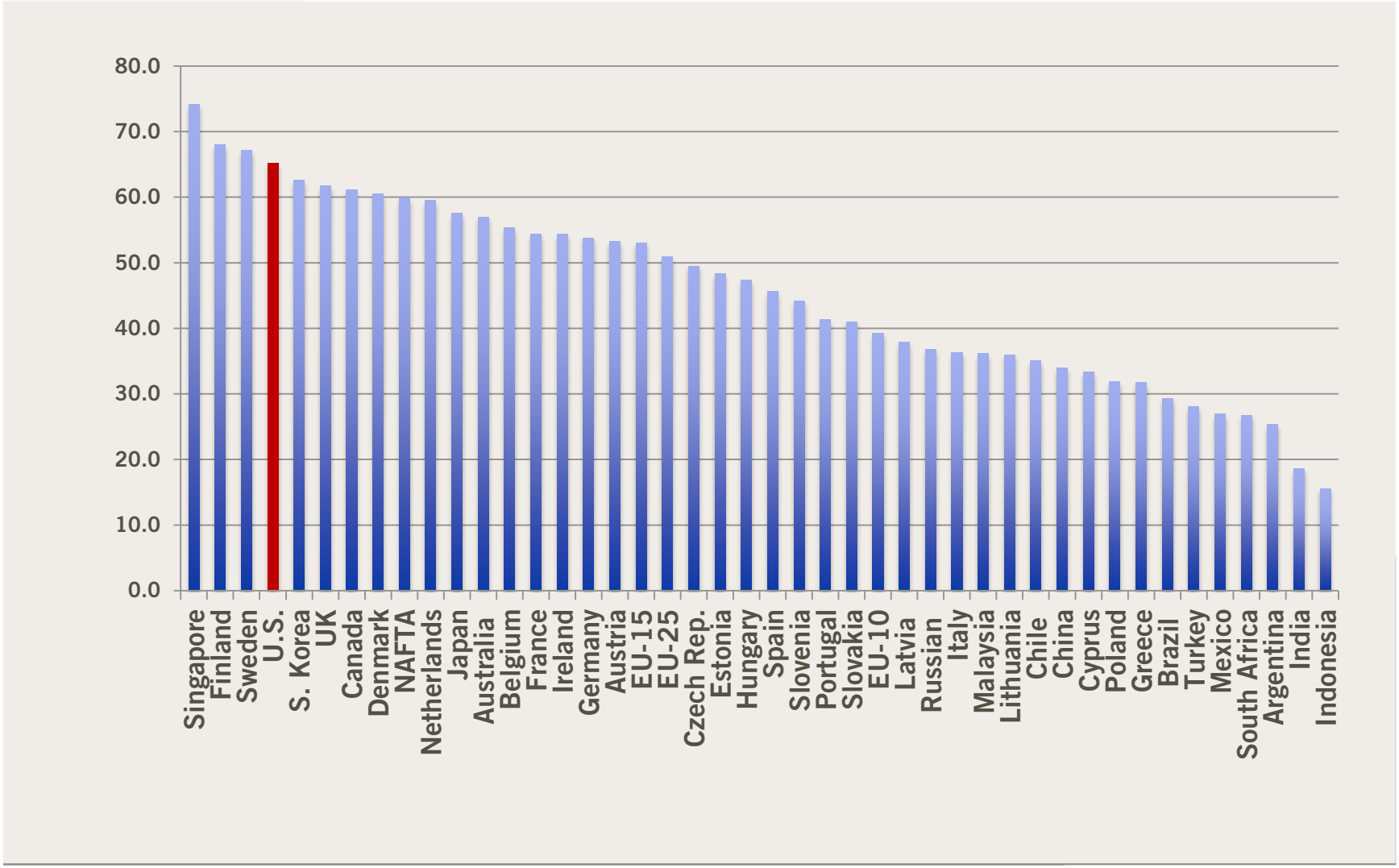
- Highest corporate tax rate in the OECD
- 27th most generous (& unstable) R&D tax credit
- Stagnant science funding (22nd in university research funding)
- Faltering education system (23rd in science education)
- Inadequate physical infrastructure (23rd in quality)
- Counter-productive high-skill immigration policy

The Atlantic Century II

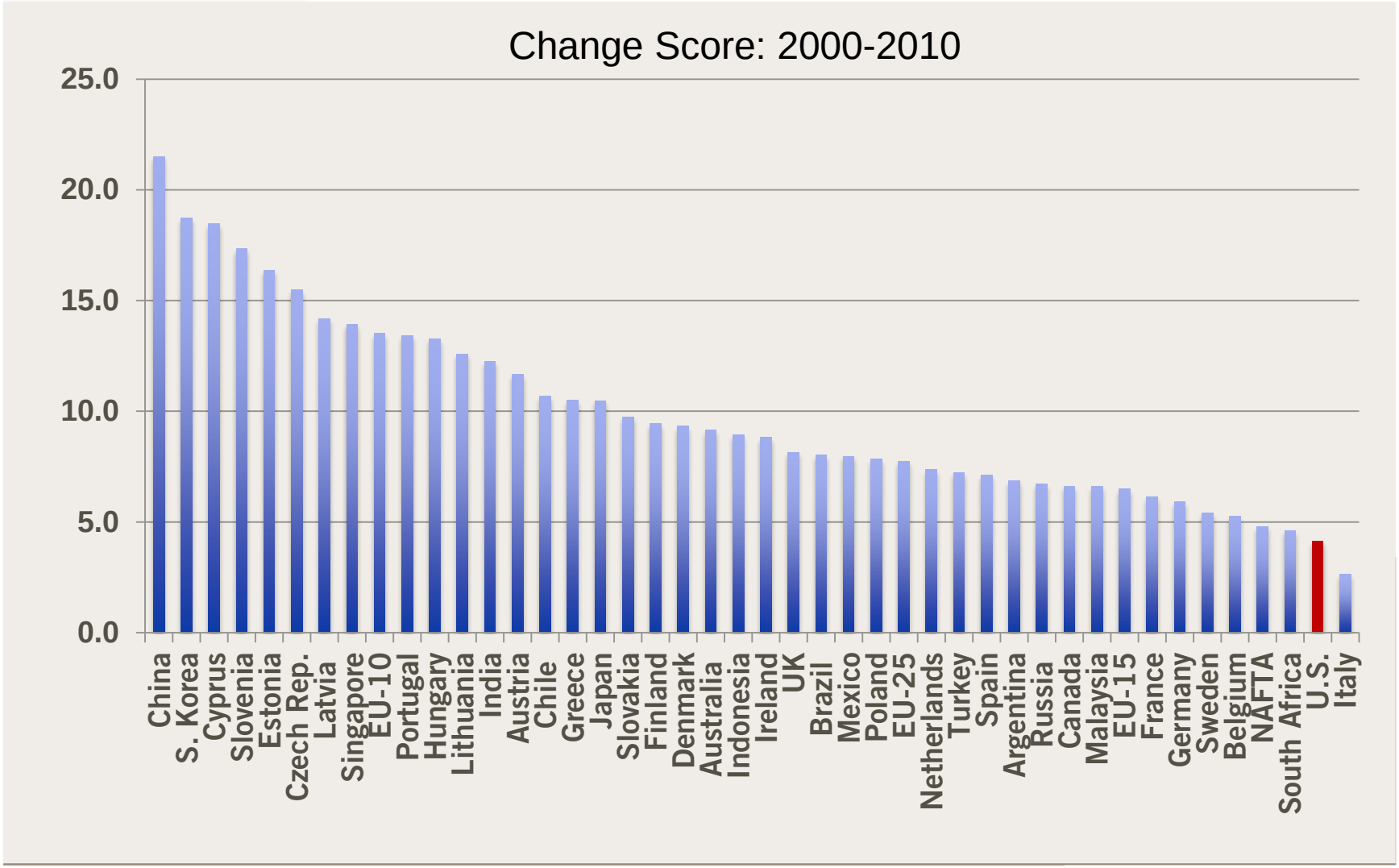


- **The Study:** compares innovation-based competiveness of **44 nations and regions**.
- **16 indicators:** including corporate and government R&D, scientists and engineers, new firms, corp. tax, productivity growth and others.

Overall Score for Global Competitiveness and Innovation



Near Bottom at Improving Innovation Capacity



Weaknesses of the U.S. Innovation System

1. Believe we'll always be #1 without having to do anything about it.

2. Don't believe we're in economic competition with other nations.

3. We lack a political consensus that technology and innovation drive economic growth.

    - We demean proactive innovation-promoting policies as "industrial policy."

4. We believe markets acting according to price signals alone will generate all the innovation society needs.

5. We're more concerned with protecting and redistributing existing than creating new wealth.

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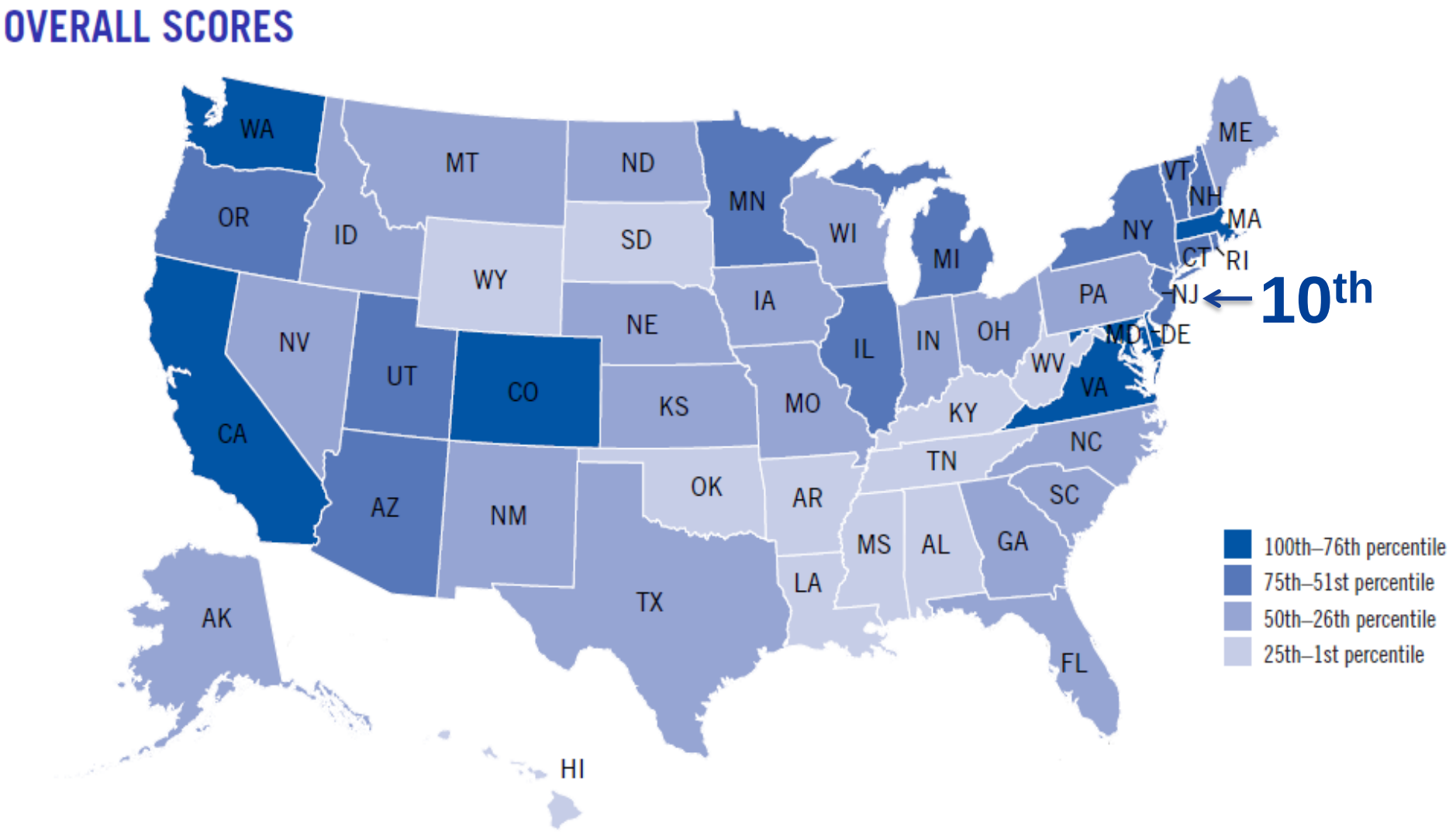
2014 State New Economy Index

The **2014 State New Economy Index** assesses U.S. states on **25 indicators**, divided into **five key** areas, that best capture what is new about the New Economy:

1. Knowledge jobs
2. Globalization
3. Economic dynamism
4. The digital economy
5. Innovation capacity

2014 State New Economy Index



The Leading States in the 2014 Index:

1. Make significant investments to support key "building blocks of innovation": infrastructure, education, and scientific research.

2. Have companies/industries oriented toward global markets, in terms of exports and foreign direct investment (FDI).

3. Are at the forefront of the information and communications technology (ICT) revolution, both with regard to ICT usage and production.

4. Have large concentrations of knowledge workers.

5. Attract high levels of domestic and foreign migration of those knowledge workers.

New Jersey in the 2014 State New Economy Index

Scores Best:

- Foreign Direct Investment (5th)
- Fast-Growing Firms (5th)
- Patents (Per Worker) (6th)
- Broadband Telecommunications Adoption (6th)
- Industry Investment in R&D (7th)

Scores Weakest:

- Non-Industry Investment in R&D (40th)
- Manufacturing Value-Added (39th)
- Entrepreneurial Activity (37th)
- Health IT (37th)
- E-government (31st)

Historical New Jersey SNEI Ranks

1999	8th
2002	6th
2007	2nd
2010	4th
2012	10th
2014	10th

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Maximizing Innovation-Based Economic Growth

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."*

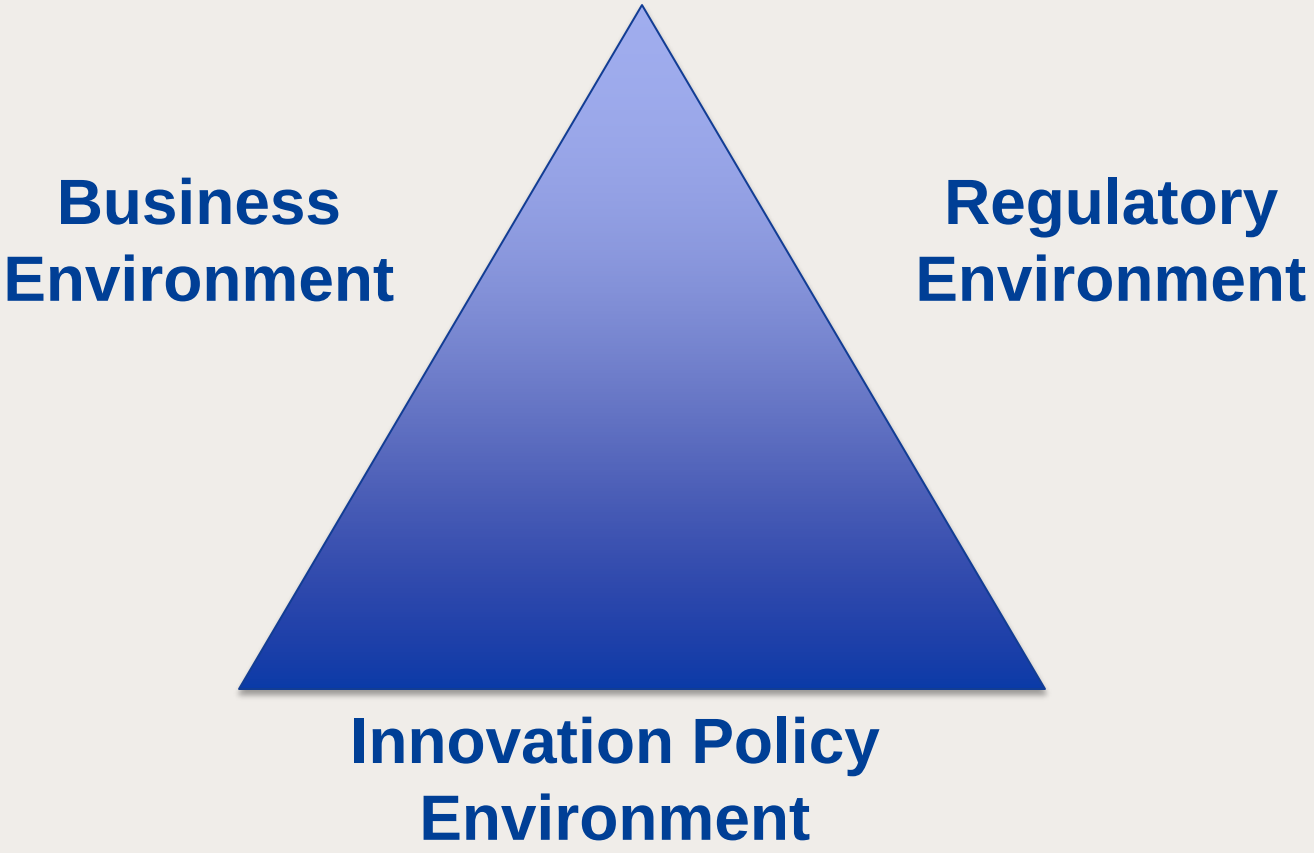
Joseph Schumpeter

- The central goal of economic policy should be to spur higher productivity and greater innovation.
- Markets relying on price signals alone will not always be as effective as smart public-private partnerships in spurring higher productivity and greater innovation.

2) Master the "8 I's" of Innovation Policy

1. Inspiration – Set ambitious goals.
2. Insight – Learn from the best practices of others.
3. Intention – Commit to specific actions.
4. Investment – Increase funding for innovation/productivity.
5. Incentives – Incent desired firm and individual behaviors.
6. Institutions – Doing new things in new ways.
7. Information Technology – ICT as an innovation platform.
8. International – Bolster traded-sector competitiveness.

3) Get the "Innovation Triangle" Right



Business Environment

1. Vibrant capital markets;
2. High levels of entrepreneurship;
3. Strong management skills;
4. Strong ICT adoption, especially among business;
5. Embrace dynamic churn and change (e.g. creative destruction).

Regulatory Environment

1. Transparent policies (including regarding land use policies);
2. Reasonably enforceable property rights;
3. Make it easy to start and operate businesses;
4. Support pro-competition regulatory policies and foster economic clusters.

Regulatory Principles for the Innovation Economy

1. **Anticipate innovation** – especially in high-tech industries;

2. **Embrace transparency** – gives interested parties the chance to place in context information provided by others;

3. **Trust the customer** – they are likely to be the best judges of what constitutes good corporate behavior;

4. **Place more emphasis on avoiding Type I errors**;

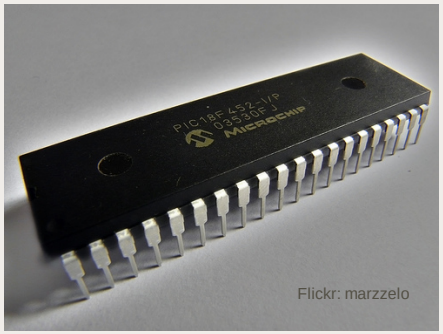
5. **Adhere to cost/benefit analysis**;

6. **Concentrate on "metagoals"** – agencies should decide what really matters to them and communicate that to stakeholders.

Innovation/Technology Policy Environment

1. Strong STEAM-D education approach;
2. Active policies to spur digital transformation;
3. Incentives to invest in R&D, capital equipment, workforce training;
4. Support for technology transfer from universities to private sector;
5. Funding for research, especially that which is commercially oriented.

- 4) Just Remember the "4 Ts"

Technology	Talent
	
Tax	**Trade**
	

Collaboration is Essential

- For many states/regions/cities, the main competition isn't the one next door—it's half a world away.

- Everyone has to collaborate/coordinate to create a more competitive environment for NJ/U.S. enterprises.

Thank You

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