



November 19, 2009

Winning With Innovation-Based Economic Development

Workforce Economy Leadership Conference
Chicago, Illinois



Dr. Robert Atkinson

President

*Information Technology
and Innovation Foundation*



ITIF is 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

■ Innovation is Critical to Economic Success

- Shifts the industrial and occupational mix to higher wage jobs.
- Innovation in new processes boosts productivity.
- Both factors help the U.S., states, and regions maintain economic leadership, especially in the face of competition from low-wage regions.

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■ Innovation is Critical to State Income Growth

- There is a positive correlation between increases in per-capita income between 2004 and 1999 and innovation factors.
 - Information technology professionals: 0.57
 - High tech jobs: 0.51
 - Venture capital: 0.49
 - R&D investment by industry: 0.48
 - Scientists and engineers: 0.44
 - Patents: 0.27

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■ Why Does Innovation Matter?

Because it drives regional economic prosperity:

- Differences in patenting intensity accounts for 30% of the variation across U.S. regions in the average wage. (Porter)
- Patenting and R&D support greater gains in regional per-worker earnings. (Goldstein)
- Average wages in U.S. high-tech clusters are \$63,970 versus \$43,180 in non-high tech trade clusters.
- Positive correlation between increases in state per-capita income between 2004 and 1999 and innovation factors:

High tech jobs: 0.51

Venture capital: 0.49

R&D investment by industry: 0.48

Scientists and engineers: 0.44

■ This Is Innovation



■ So Is This

John Deere CEO Bob Lane says he doesn't make tractors but rather "sophisticated mobile information factories."

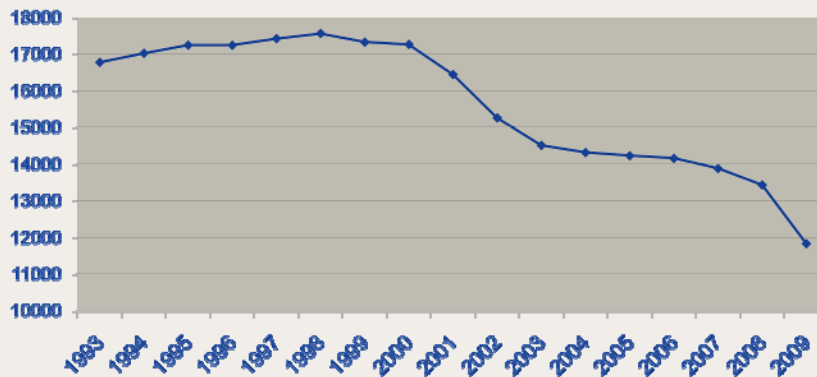


- GPS shows where it is
- Microwave sensors measure cotton flow
- RFID tags let processors know origin of each bundle
- Wireless communications
- Computing power of 8 PC's

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■ Manufacturing Jobs Are No Longer the Engine of Regional Growth

Manufacturing Jobs 1993-2009



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Manufacturing Jobs Are No Longer the Engine of Regional Growth

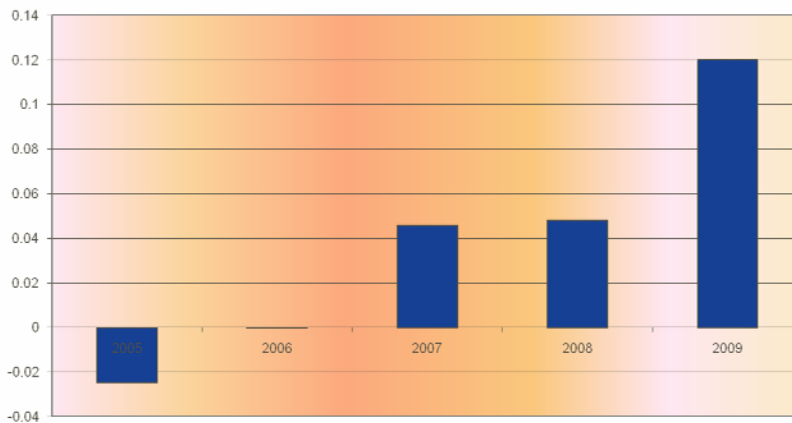
- Manufacturing jobs peaked in 1979.
- Since 2000, manufacturing jobs have declined by 5.4 million.
- The number of major manufacturing relocations and expansions have fallen 40 percent in this decade.
- Higher productivity will mean manufacturing will continue to decline as a share of employment.



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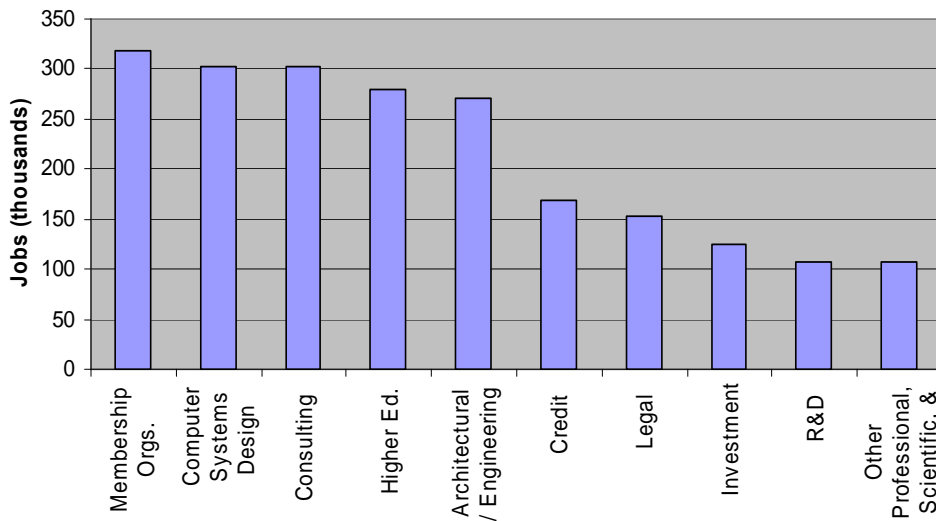
But the More Accurately Priced Dollar has Meant that Since 2007 Exports Are Growing Faster than Imports



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Among Traded Sectors, Services Are the Big Job

■ Gainers:

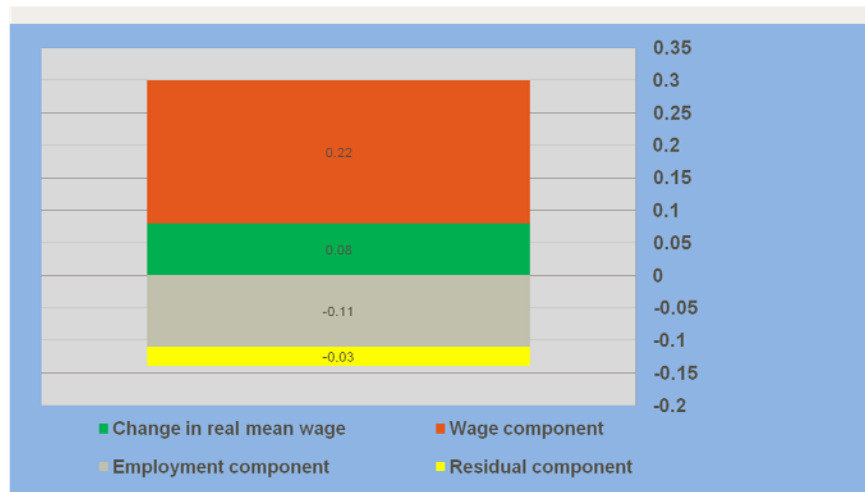


Source: U.S. DOL, Bureau of Labor Statistics, "Current Employment Statistics, Customized Tables" (BLS, 2007), www.bls.gov/ces/. 1998 to 2006

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This Sectoral Change has Pushed Against Wage

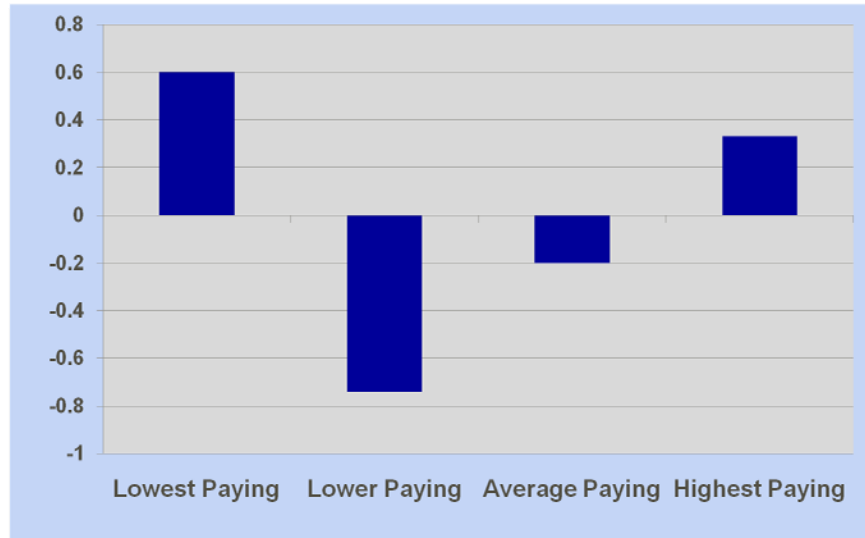
■ Increases



Source: Rebecca Keller, "How shifting occupational composition has affected the real average wage," *Monthly Labor Review*, June 2009, Bureau of Labor Statistics.

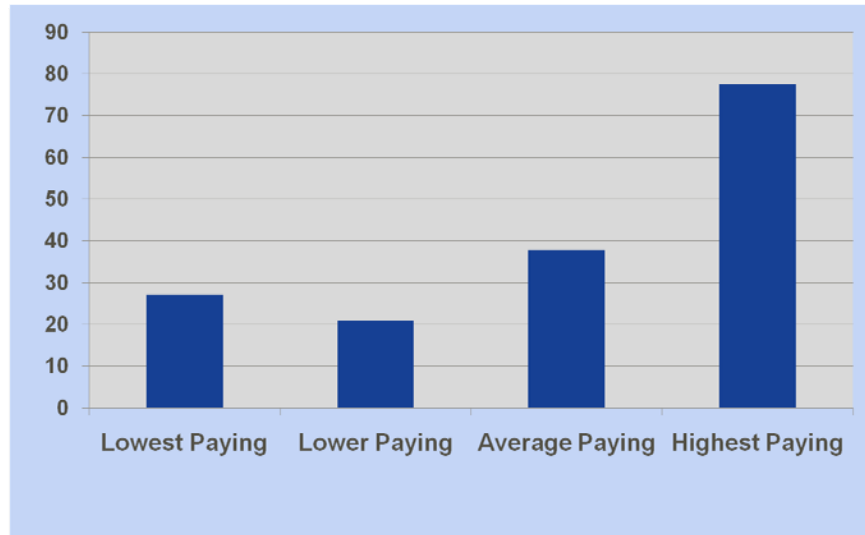
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Percent Change in Employment Share, by Income Group, 2002-2007



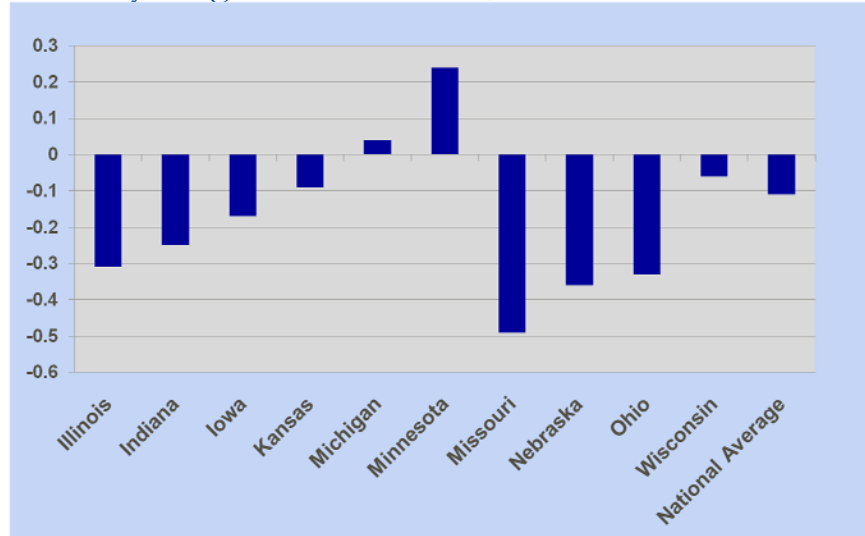
Source: Rebecca Keller, "How shifting occupational composition has affected the real average wage," *Monthly Labor Review*, June 2009, Bureau of Labor Statistics.

Percent of Pay Category's Employment that was in Occupations Whose Mean Wage Increased 2002-2007



Source: Rebecca Keller, "How shifting occupational composition has affected the real average wage," *Monthly Labor Review*, June 2009, Bureau of Labor Statistics.

Employment Component of Change in the Average Hourly Wages of U.S. States, 2002- 2007



Source: Rebecca Keller, "How shifting occupational composition has affected the real average wage," *Monthly Labor Review*, June 2009, Bureau of Labor Statistics.

THE ATLANTIC CENTURY

Benchmarking EU & U.S.
Innovation and Competitiveness



Robert D. Atkinson and Scott Andes
The Information Technology and Innovation Foundation
Washington, D.C.

February 2009



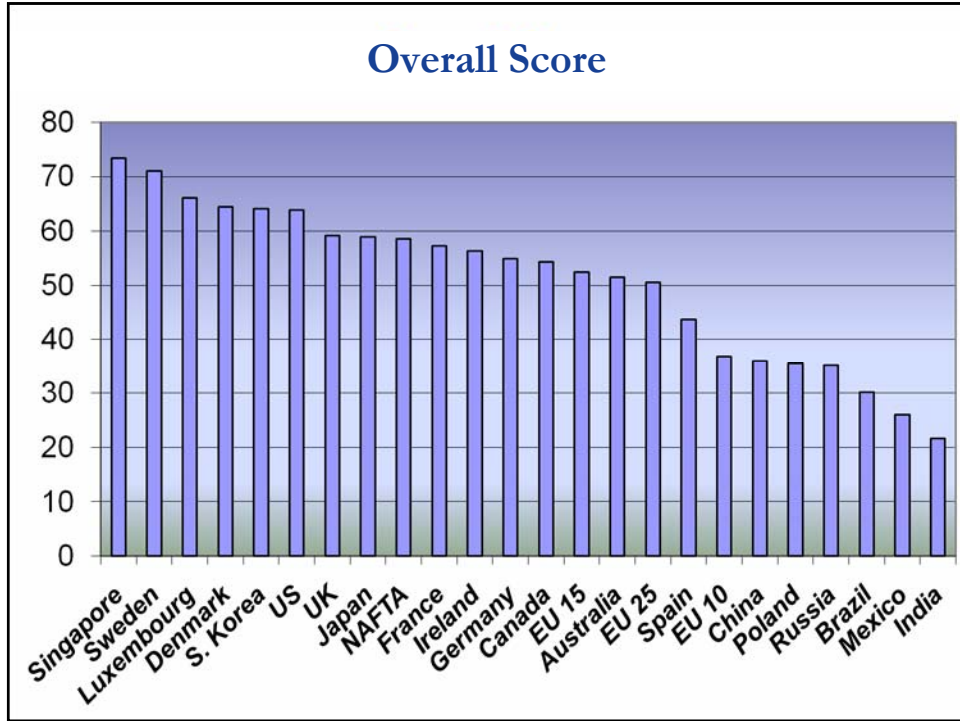
- **The Study:** comparing innovation-based competitiveness of 40 nations and regions
- **Countries:** EU and NAFTA countries, Australia, Brazil, China, India, Japan, South Korea, Russia, and Singapore
- **Regions:** EU-10, EU-15, EU-25, and NAFTA

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6 Groups of 16 Indicators to Assess Global ■ Innovation-based Competitiveness:

- **Economic Structure**
 - human capital (college education; researchers)
 - innovation capacity (corporate R&D; government R&D; scientific publications)
 - entrepreneurship (new firms; venture capital)
 - IT infrastructure (e-government; corporate IT investment; broadband)
- **Economic Policy** (corp. tax; ease of doing business)
- **Economic Performance** (trade balance, FDI, GDP per worker, productivity)

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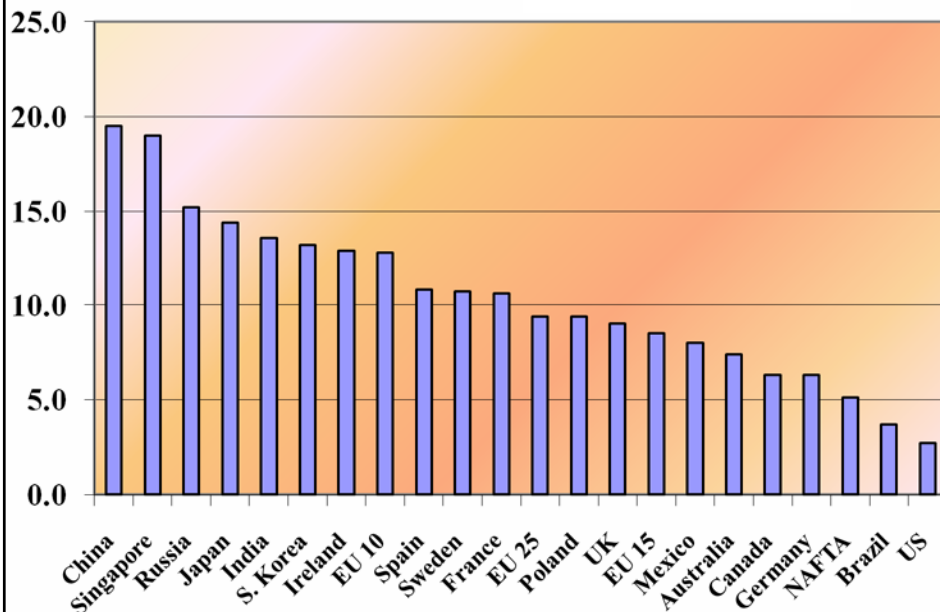
- Benchmarked Change from the Beginning of the Decade

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The U.S. is Behind....

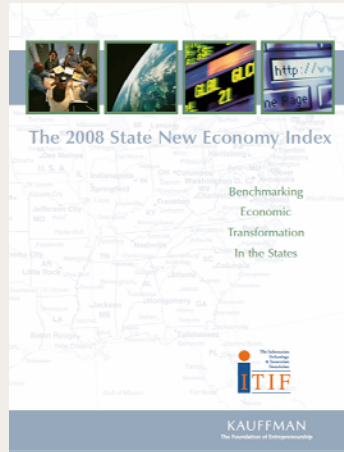
1. China	15. Latvia	28. UK
2. Singapore	16. Austria	29. EU-15
3. Estonia	17. S. Korea	30. Mexico
4. Denmark	18. Ireland	31. Netherlands
5. Luxembourg	19. EU-10	32. Australia
6. Slovenia	20. Spain	33. Finland
7. Russia	21. Sweden	34. Canada
8. Lithuania	22. France	35. Germany
9. Cyprus	23. Portugal	36. Italy
10. Japan	24. Malta	37. NAFTA
11. Hungary	25. Belgium	38. Greece
12. Slovakia	26. EU-25	39. Brazil
13. Czech Republic	27. Poland	40. United States
14. India		

Overall Change



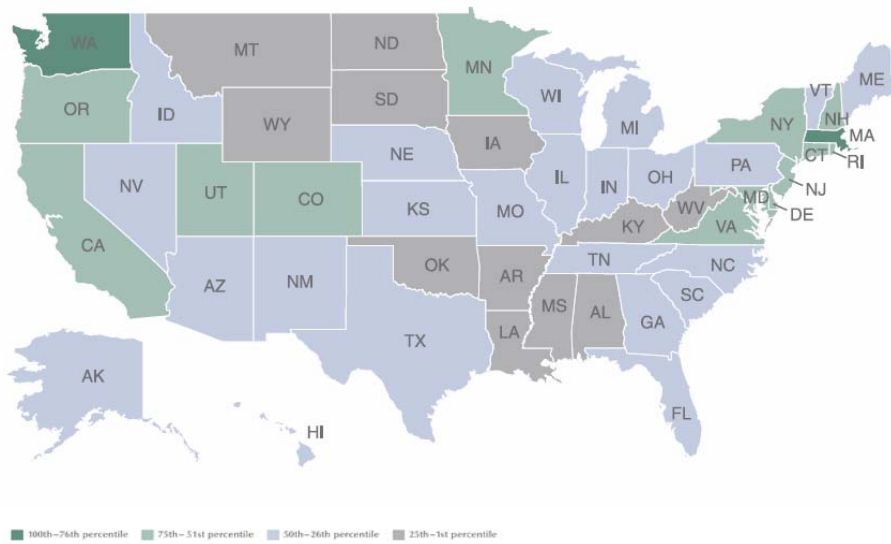
The *2008 State New Economy Index* uses 5 groups of 29 indicators to map how well places are adapting to the New Economy:

- Knowledge Jobs
- Globalization
- Economic Dynamism
- Digital Economy
- Technological Innovation

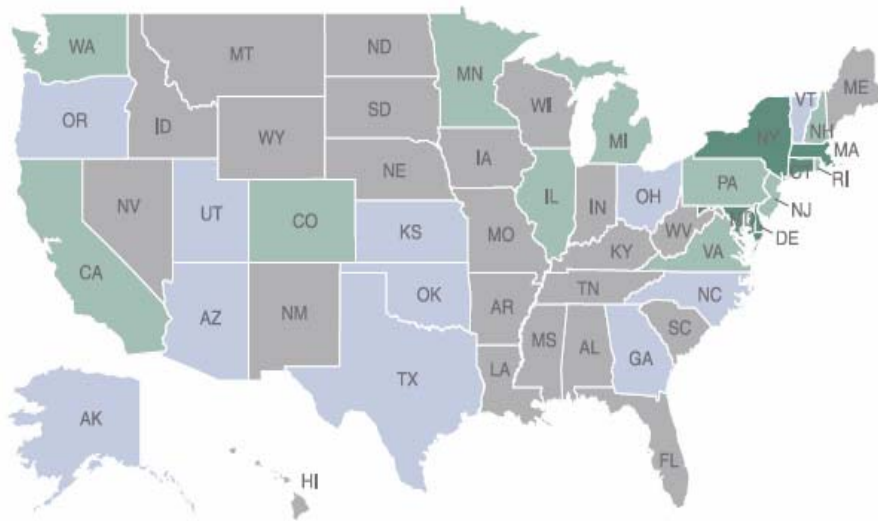


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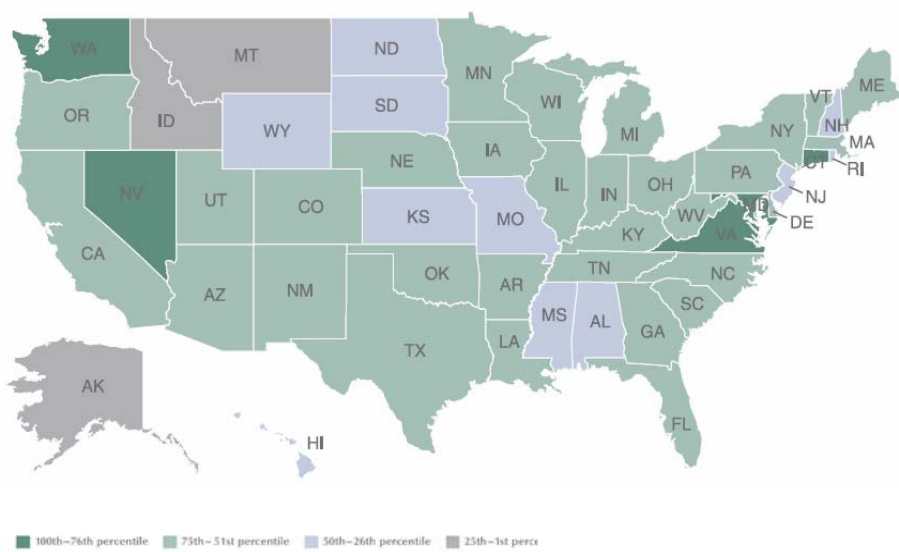
2008 SNEI Overall Scores



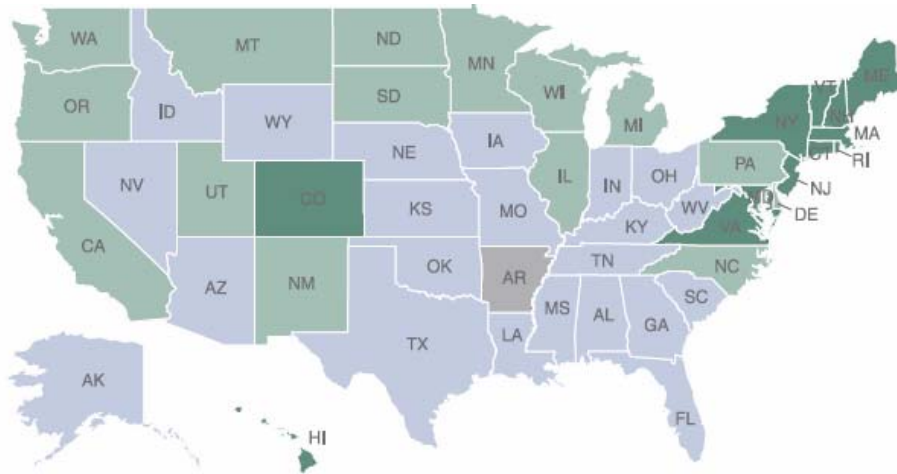
Managerial, Professional, and Technical Jobs



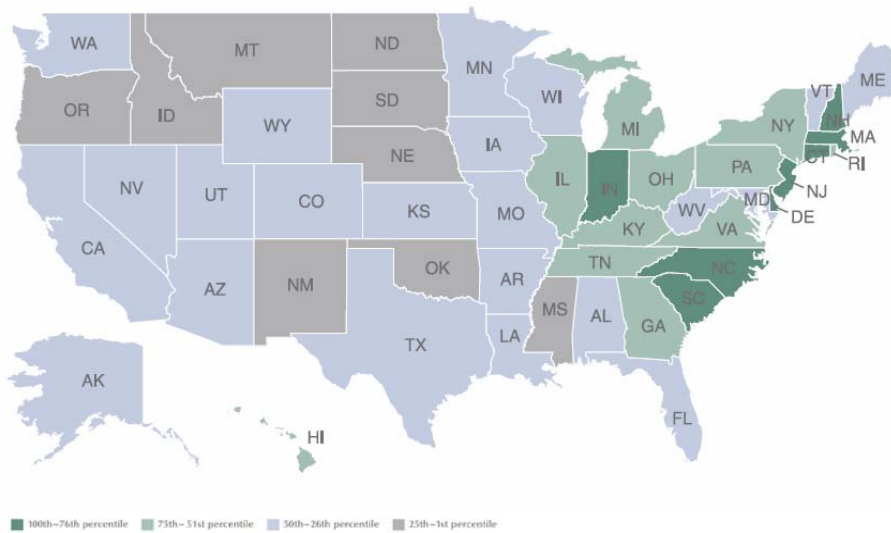
Manufacturing Value-Added



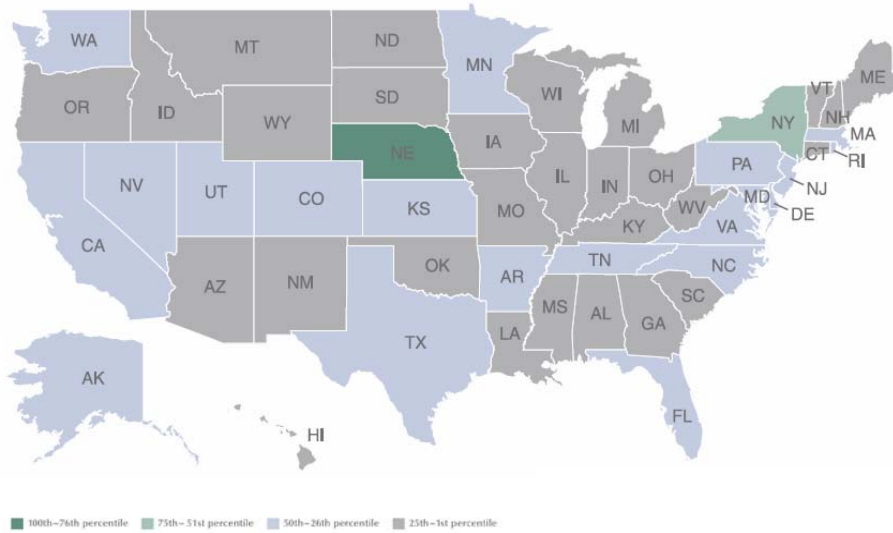
U.S. Migration of Knowledge Workers



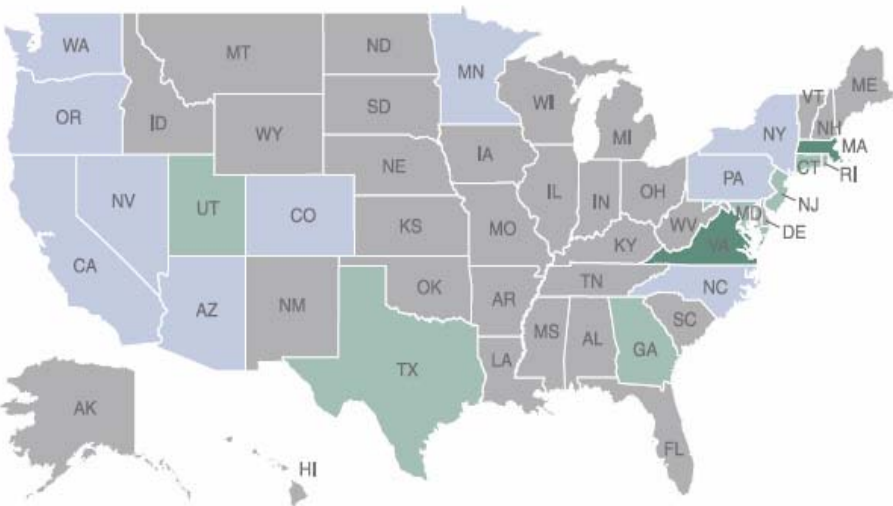
Foreign Direct Investment



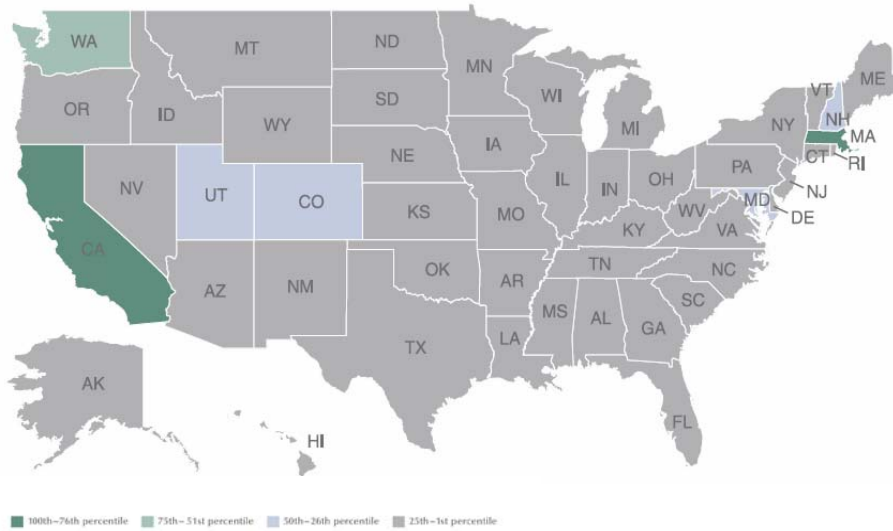
“Gazelle” Jobs



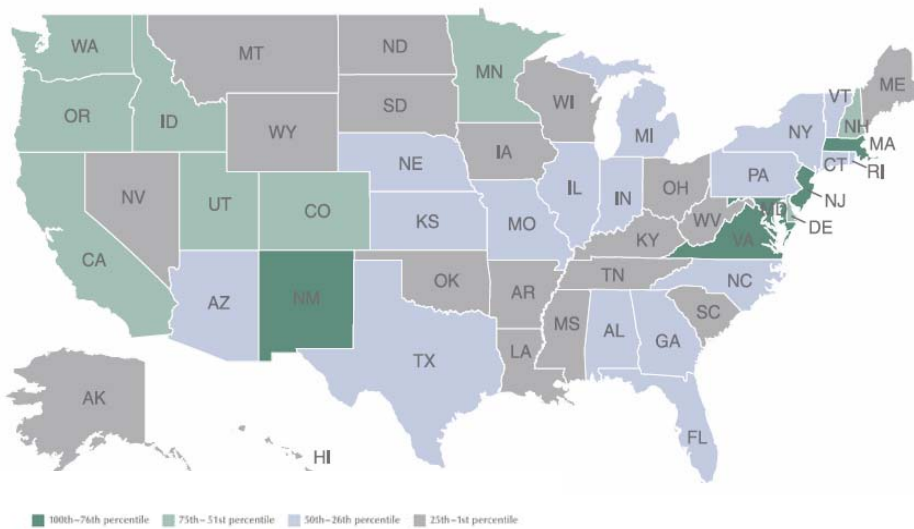
Fastest-Growing Firms



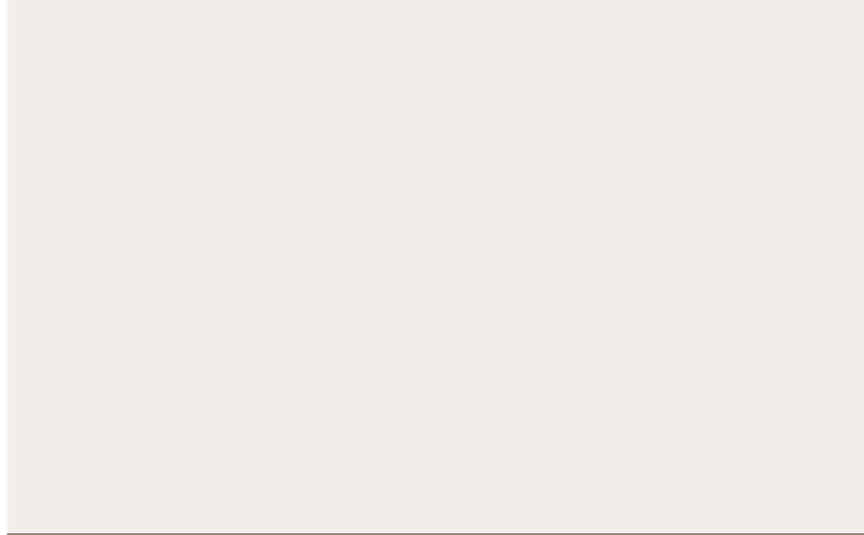
Venture Capital



High-Tech Jobs



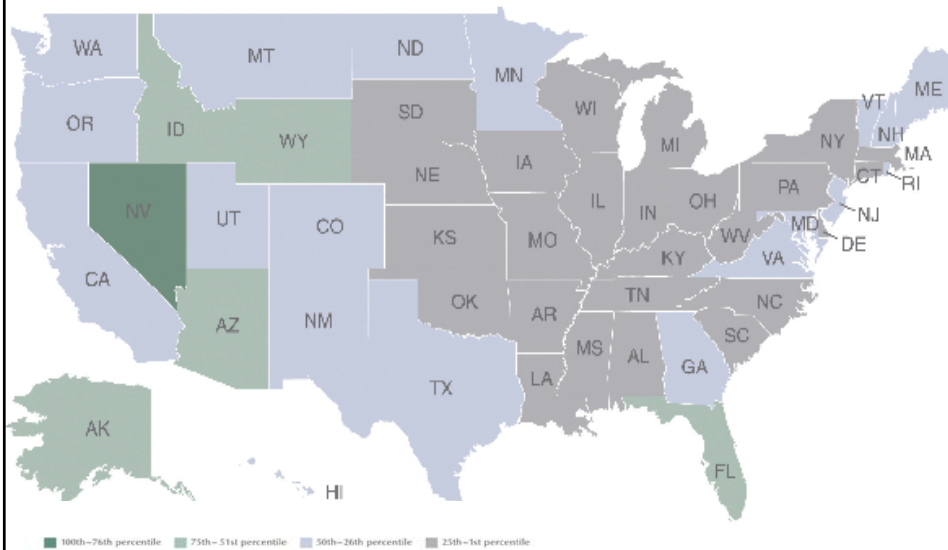
■ So, Do These Rankings Matter?



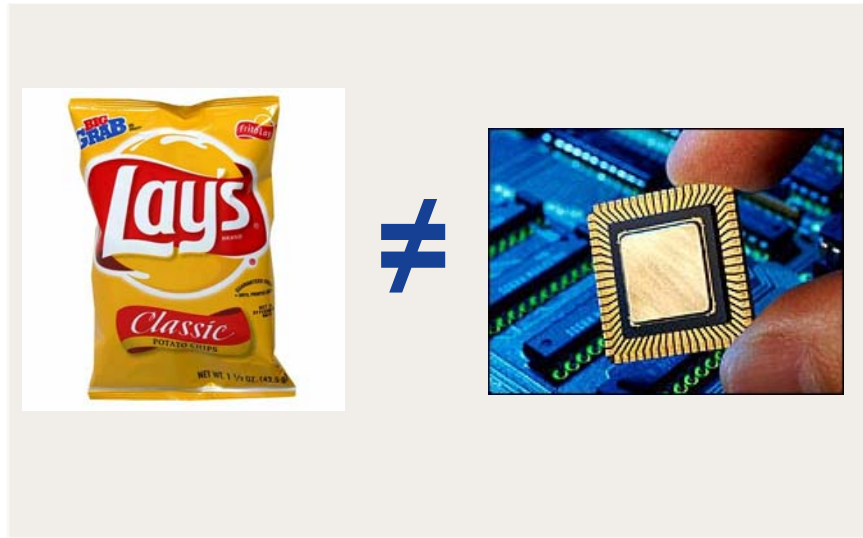
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Not for Jobs

■ Employment Growth 2002-2006



■ Replace Rubinomics with Innovationomics



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■ Economic Development Doctrines and State Economic Development Policy

	Conventional Economic Development	Neo-classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth				
Principal Economic Development Means				
Object of Policy				
Quality of Life				
Goal				

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■ Economic Development Doctrines and State Economic Development Policy

	Conventional Economic Development	Neo-classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth	Capital investment			
Principal Economic Development Means	Drive down costs through firm-specific subsidies			
Object of Policy	Recruitment of out-of-state firms			
Quality of Life	Minor importance			
Goal	Get big			

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■ Economic Development Doctrines and State Economic Development Policy

	Conventional Economic Development	Neo-classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth	Capital investment	Capital investment		
Principal Economic Development Means	Drive down costs through firm-specific subsidies	Drive down costs through lower taxes and regulations		
Object of Policy	Recruitment of out-of-state firms	Recruitment of out-of-state firms		
Quality of Life	Minor importance	Not important		
Goal	Get big	Get big		

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■ Economic Development Doctrines and State Economic Development Policy

	Conventional Economic Development	Neo-classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth	Capital investment	Capital investment	Worker incomes	
Principal Economic Development Means	Drive down costs through firm-specific subsidies	Drive down costs through lower taxes and regulations	Drive up wages, foster progressive taxes and public spending	
Object of Policy	Recruitment of out-of-state firms	Recruitment of out-of-state firms	Small and socially-conscious business	
Quality of Life	Minor importance	Not important	High importance	
Goal	Get big	Get big	Get fair	

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■ Economic Development Doctrines and State Economic Development Policy

	Conventional Economic Development	Neo-classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth	Capital investment	Capital investment	Worker incomes	Innovation and organizational learning
Principal Economic Development Means	Drive down costs through firm-specific subsidies	Drive down costs through lower taxes and regulations	Drive up wages, foster progressive taxes and public spending	Spur firm innovation through targeted supports (e.g., research, financing, skills, etc.) and incentives for firms.
Object of Policy	Recruitment of out-of-state firms	Recruitment of out-of-state firms	Small and socially-conscious business	High growth entrepreneurs and existing firms
Quality of Life	Minor importance	Not important	High importance	Moderately important to attract and retain knowledge workers.
Goal	Get big	Get big	Get fair	Get prosperous

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■ Find your Inner Economist



Take the test at:

www.innovationeconomics.org



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■ Develop a National Innovation Strategy

1. Support factor conditions
 - Research funding
 - Education and skills, including high skilled immigration
2. Support an innovation environment
 - Tax policy (e.g., R&D tax credit, Internet tax moratorium)
 - Reformulating trade policy around an innovation agenda
 - Performance-based regulation
3. Foster institutional arrangements to spur innovations.
 - \$ for Fed-state TBED partnerships
 - Sector-based industry-university-government research partnerships
 - Championing innovation in the public sector

■ Develop a National Innovation Strategy

4. Support innovation platforms.

- Sectors (e.g., health IT, smart grid, Intelligent Transportation Systems, housing, education)
- Functions (e.g., digital identification, mobile payments)
- Technologies (e.g., robotics, green energy, expert systems; genomics and proteomics)

5. Build federal capabilities

- National Innovation Foundation
- Office of Innovation Review
- Innovation in Innovation policy
- Better national and regional innovation metrics

Getting Back on Track:

■ Innovation Economics and State Policy

▪ Get the fundamentals right

- Regions' competitive future rest on innovation and entrepreneurship.
- It's businesses that export goods or services out of the region that matter.
- Focus on economic base firms with high wages.
- Focus on "gazelles," not small business per se.
- Focus on demand first, supply second.
- Build on strengths and capabilities, not "field of dreams."
- Its not just the number of jobs, but the quality and wage/salary level of the jobs.

Getting Back on Track:

■ Innovation Economics and State Policy

- Focus on sectors and clusters. Clusters are geographic concentration of companies and institutions with systemic relationships to one another based on similarities or complementarities.
- Employer-led regional skills alliances.

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Getting Back on Track:

■ Innovation Economics and State Policy

- Be more than program managers: Be system managers and drivers of institutional reform.
- Use limited money to do drive institutional innovation (e.g., tie university and college funding to how closely they work with employers).
- Use limited money to drive innovation (e.g., link workforce funding and other incentives to adoption of high-performance work practices).

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- In periods of stability, you can afford to relax



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- In periods of rapid change, you can't



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Thank you!

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