Indiana Competitiveness:
Creating a State Economic Strategy

Professor Michael E. Porter
Harvard Business School

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For further material on regional competitiveness and clusters: www.isc.hbs.edu/econ-clusters.htm
For state economic profiles: www.isc.hbs.edu/econ-statesregions.htm
The Economic Challenge for Governors in 2012

Achieving Fiscal Stability

Enhancing State Competitiveness
What is Competitiveness?

• Competitiveness is the **productivity** with which a state utilizes its human, capital, and natural endowments to create value

• Productivity determines **wages, jobs, and the standard of living**

• It is not **what** fields a state competes in that determines its prosperity, but **how productively** it competes
Where Does Productivity Come From?

Businesses and government play different but interrelated roles in creating a productive economy

- Only **businesses** can create **jobs** and **wealth**
- **States** compete to offer the **most productive environment** for business
Agenda

1. How is your state doing?  
   State Performance Scorecard

2. Why?  
   Explaining your state’s performance, strengths, and weaknesses

3. Where to go from here?  
   Action Steps
Comparative State Prosperity Performance
2000 - 2010

Source: BEA. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.
Comparative State Labor Force Productivity Performance

2000-2010

Real Growth in Gross Domestic Product per Labor Force Participant, 2000-2010

Sources: BEA, BLS. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.
Comparative State Employee Productivity Performance
2000-2010

Highly productive and productivity rising versus U.S.

U.S. GDP per Employed Worker
Real Growth: 1.42%

High but declining versus U.S.

Low and declining versus U.S.

Low but rising versus U.S.

Real Growth in Gross Domestic Product per Employed Worker, 2000-2010

Gross Domestic Product per Employed Worker, 2010

Sources: BEA, BLS. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.
Comparative State Innovation Performance 2000 - 2010

U.S. average Growth Rate of Patenting: +2.25%

High and improving innovation rate versus U.S.

High and declining innovation

Low and declining innovation

Low and improving innovation

U.S. average Patents per 10,000 Employees: 7.77

Growth Rate of Patents per 10,000 Workers, 2000 to 2010


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Why?
What Drives State Productivity?

1. Quality of the Overall Business Environment
2. Cluster Development
3. Policy Coordination among Multiple Levels of Geography/Government
Why?
What Drives State Productivity?

1. Quality of the Overall Business Environment
2. Cluster Development
3. Policy Coordination among Multiple Levels of Geography/Government
Quality of the Overall Business Environment

Context for Firm Strategy and Rivalry

Rules and incentives that encourage local competition, investment and productivity
- e.g., tax policy that encourages investment and R&D
- Flexible labor policies
- Intellectual property protection
- Antitrust enforcement

Factor (Input) Conditions

Access to high quality business inputs
- Human resources
- Capital access
- Physical infrastructure
- Administrative processes (e.g., permitting, regulatory efficiency)
- Scientific and technological infrastructure

Demand Conditions

Sophisticated and demanding local needs and customers
- e.g., Strict quality, safety, and environmental standards
- Consumer protection laws
- Government procurement of advanced technology
- Early demand for products and services

Related and Supporting Industries

Local availability of suppliers and supporting industries

- Many things matter for competitiveness
- Economic development is the process of improving the business environment to enable companies to compete in increasingly sophisticated ways
Improving the Business Environment
Common Action Items

1. Simplify and speed up regulation and permitting

2. Reduce unnecessary costs of doing business

3. Establish training programs that are aligned with the needs of the state’s businesses

4. Focus infrastructure investments on the most leveraged areas for productivity and economic growth

5. Design all policies to support emerging growth companies

6. Protect and enhance the state’s higher education and research institutions

7. Relentlessly improve the public education system, the essential foundation for productivity in the long run
Why?
What Drives State Productivity?

1. Quality of the Overall Business Environment
2. Cluster Development
3. Policy Coordination among Multiple Levels of Geography/Government
What is a Cluster?

A geographically concentrated group of interconnected companies and associated institutions in a particular field

**Traded Clusters**
- Compete to serve **national** and **international** markets
- Can locate anywhere
- 30% of employment

**Local Clusters**
- Serve almost exclusively the **local** market
- Not directly exposed to cross-regional competition
- 70% of employment
Example: Massachusetts Life Sciences Cluster

Cluster Organizations
MassMedic, MassBio, others

Specialized Business Services
Banking, Accounting, Legal

Specialized Risk Capital
VC Firms, Angel Networks

Specialized Research Service Providers
Laboratory, Clinical Testing

Health and Beauty Products

Teaching and Specialized Hospitals

Biological Products

Biopharmaceutical Products

Research Organizations

Analytical Instruments Cluster

Medical Equipment

Dental Instruments and Suppliers

Ophthalmic Goods

Diagnostic Substances

Containers

Surgical Instruments and Suppliers

Educational Institutions
Harvard, MIT, Tufts, Boston University, UMass

Example: Massachusetts Life Sciences Cluster
Example: Houston Oil and Gas Cluster

Upstream

Oil & Natural Gas Exploration & Development

Oil field Services/Engineering & Contracting Firms

Equipment Suppliers
(e.g., Oil Field Chemicals, Drilling Rigs, Drill Tools)

Specialized Technology Services
(e.g., Drilling Consultants, Reservoir Services, Laboratory Analysis)

Subcontractors
(e.g., Surveying, Mud Logging, Maintenance Services)

Specialized Institutions
(e.g., Academic Institutions, Training Centers, Industry Associations)

Downstream

Oil Transportation

Oil Trading

Oil Refining

Oil Distribution

Oil Wholesale Marketing

Oil Retail Marketing

Gas Gathering

Gas Processing

Gas Trading

Gas Transmission

Gas Distribution

Gas Marketing

Oilfield Services/Engineering & Contracting Firms

Business Services
(e.g., MIS Services, Technology Licenses, Risk Management)
Strong Clusters Drive Regional Performance

- Specialization in **strong clusters**
- **Breadth** of industries within each cluster
- Strength in **related clusters**
- Presence of a region’s clusters in **neighboring regions**

- **Job** growth
- Higher **wages**
- Higher **patenting** rates
- Greater **new business** formation, growth and survival

*On average, cluster strength is much more important (78.1%) than cluster mix (21.9%) in driving regional performance in the U.S.*

Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions.
Traded Cluster Composition of the Indiana Economy

Overall change in the Indiana Share of US Traded Employment: -0.45%

Indiana Overall Share of US Traded Employment: 2.34%

Employment 1998-2009
- Added Jobs
- Lost Jobs


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Traded Cluster Composition of the Indiana Economy

Overall change in the Indiana Share of US Traded Employment: -0.45%

Indiana Overall Share of US Traded Employment: 2.34%

Employment 1998-2009

Added Jobs

Lost Jobs

Indiana Job Creation in Traded Clusters
1998 to 2009

Net traded job creation, 1998 to 2009:
-167,377

Indicates expected job creation given national cluster growth.*

* Percent change in national benchmark times starting regional employment. Overall traded job creation in the state, if it matched national benchmarks, would be -140,985.

Indiana Wages in Traded Clusters vs. National Benchmarks

Productivity Depends on How a State Competes, Not What Industries It Competes In

On average, cluster strength is much more important (78.1%) than cluster mix (21.9%) in driving regional performance in the U.S.

<table>
<thead>
<tr>
<th>State</th>
<th>State Traded Wage versus National Average</th>
<th>Cluster Mix Effect</th>
<th>Relative Cluster Wage Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>+27,171</td>
<td>7,028</td>
<td>20,142</td>
</tr>
<tr>
<td>New York</td>
<td>+24,102</td>
<td>3,628</td>
<td>20,474</td>
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<td>Massachusetts</td>
<td>+16,169</td>
<td>4,391</td>
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<td>New Jersey</td>
<td>+13,535</td>
<td>3,761</td>
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<td>California</td>
<td>+9,573</td>
<td>349</td>
<td>9,224</td>
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<td>Maryland</td>
<td>+6,651</td>
<td>2,496</td>
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<td>Virginia</td>
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<td>Louisiana</td>
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<td>Kansas</td>
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<td>Wyoming</td>
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<td>Michigan</td>
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<td>North Carolina</td>
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<td>Ohio</td>
<td>-9,284</td>
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<tr>
<td>Rhode Island</td>
<td>-9,791</td>
<td>-2,290</td>
<td>-7,501</td>
</tr>
</tbody>
</table>

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<th>Relative Cluster Wage Effect</th>
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<tr>
<td>Oregon</td>
<td>-10,359</td>
<td>-1,304</td>
<td>-9,056</td>
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<td>Missouri</td>
<td>-10,427</td>
<td>-1,425</td>
<td>-9,002</td>
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<tr>
<td>Alabama</td>
<td>-10,934</td>
<td>-3,563</td>
<td>-7,371</td>
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<tr>
<td>Florida</td>
<td>-11,007</td>
<td>-1,559</td>
<td>-9,448</td>
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<td>Wisconsin</td>
<td>-11,722</td>
<td>-3,516</td>
<td>-8,206</td>
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<tr>
<td>Nebraska</td>
<td>-11,777</td>
<td>241</td>
<td>-12,018</td>
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<td>Utah</td>
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<td>Tennessee</td>
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<td>Indiana</td>
<td>-12,554</td>
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<td>Vermont</td>
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<td>Oklahoma</td>
<td>-13,572</td>
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<td>Nevada</td>
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<td>North Dakota</td>
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<tr>
<td>South Carolina</td>
<td>-15,276</td>
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<td>Arkansas</td>
<td>-15,378</td>
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<td>Hawaii</td>
<td>-16,043</td>
<td>-12,555</td>
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<td>New Mexico</td>
<td>-16,123</td>
<td>-288</td>
<td>-15,835</td>
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<td>Kentucky</td>
<td>-16,215</td>
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<td>Maine</td>
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<td>-15,412</td>
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<td>Iowa</td>
<td>-16,606</td>
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<td>-13,885</td>
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<td>West Virginia</td>
<td>-16,645</td>
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<td>Idaho</td>
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<tr>
<td>Mississippi</td>
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<td>-14,651</td>
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<tr>
<td>Montana</td>
<td>-20,073</td>
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<tr>
<td>South Dakota</td>
<td>-20,968</td>
<td>289</td>
<td>-21,257</td>
</tr>
</tbody>
</table>
LQ, or Location Quotient, measures the state’s share in cluster employment relative to its overall share of U.S. employment. An LQ > 1 indicates an above average employment share in a cluster.
## Indiana Performance Scorecard

<table>
<thead>
<tr>
<th>Category</th>
<th>Start Position</th>
<th>Trend</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prosperity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per Capita, 2000-2010</td>
<td>29</td>
<td>39</td>
<td>30, -1</td>
</tr>
<tr>
<td><strong>Wages</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Private Wage, 1998-2009</td>
<td>21</td>
<td>49</td>
<td>33, -12</td>
</tr>
<tr>
<td><strong>Job Creation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labor Mobilization</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of Working Age Population in the Workforce, 2000-2010</td>
<td>23</td>
<td>44</td>
<td>31, -8</td>
</tr>
<tr>
<td><strong>Labor Productivity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per Workforce Participant, 2000-2010</td>
<td>26</td>
<td>21</td>
<td>25, +1</td>
</tr>
<tr>
<td><strong>New Business Formation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patents per Employee, 2000-2010</td>
<td>24</td>
<td>26</td>
<td>25, -1</td>
</tr>
<tr>
<td><strong>Cluster Strength</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Leading Clusters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by employment size, 2009 (national rank)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Automotive (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Metal Manufacturing (5)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Prefabricated Enclosures (1)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Plastics (7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medical Devices (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

State Rank:  
- 1-10: Green  
- 11-20: Yellow  
- 31-40: Orange  
- 41-50: Red
Cluster Development
Common Action Items

1. Build on the state’s **existing and emerging clusters** rather than chase “hot” fields

2. Pursue economic diversification **within clusters** and **across related clusters**

3. Create a private sector-led **cluster upgrading program** with matching support for participating private sector cluster organizations
   - Government should **listen** and **remove obstacles** to cluster improvement

4. **Align** other state economic policies and programs with clusters
Clusters provide a framework for organizing the implementation of many public policies and public investments to achieve greater effectiveness.
Why?
What Drives State Productivity?

1. Quality of the Overall Business Environment
2. Cluster Development
3. Policy Coordination among Multiple Levels of Geography/Government
Geographic and Governmental Influences on Productivity

Nation

State

Neighboring State

Metropolitan Areas

Rural Regions

Neighboring State

Rural Regions

Metropolitan Areas
The economies of states are often an aggregation of distinct economic areas with differing circumstances.

Wage Performance in Indiana Metropolitan Areas

Source: Census CBP, authors' analysis. Note: “Bubble” size in chart is proportional to employment in 2009.
Employment Performance in Indiana Metropolitan Areas

Indiana Growth Rate of Employment: -0.33%
U.S. Growth Rate of Employment: 0.52%

Indiana Average Private Wage: $36,080
U.S. Average Private Wage: $42,403

Average Private Wage, 2009

Growth Rate of Private Employment, 1998-2009

*Indiana portion only
Source: Census CBP, authors' analysis. Note: “Bubble” size in chart is proportional to employment in 2009.
Geographic and Governmental Influences on Productivity

1. Influence and access federal policies and programs

2. Work with each metro area to develop a prioritized strategic agenda

3. Connect rural regions with proximate urban areas

4. Integrate policies and infrastructure planning with neighbors
Agenda

1. How is your state doing?  
   State Performance Scorecard

2. Why?  
   Explaining your state’s performance, strengths, and weaknesses

3. Where to go from here?  
   Action Steps
Agenda

1. How is your state doing? State Performance Scorecard

2. Why? Explaining your state’s performance, strengths, and weaknesses

3. Where to go from here? Action Steps

Biggest Action Item of All
Create an Economic Strategy

- What is the **distinctive competitive position** of the state or region given its location, legacy, existing strengths, and potential strengths?
  - What unique value as a business location?
  - For what types of activities and clusters?

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Define the Value Proposition

Develop Unique Strengths

- What **elements of the business environment** can be unique strengths relative to peers/neighbors?
- What **existing and emerging clusters** represent local strengths?

Achieve and Maintain Parity with Peers

- What **weaknesses** must be addressed to remove key constraints and achieve parity with peer locations?

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- Economic strategy requires **setting priorities** and **moving beyond** long lists of separate recommendations.
How Should States Compete for Investment?

**Tactical (Zero Sum Competition)**

- Focus on attracting *new* investments
- Compete for *every* plant
- Offer *generalized* tax breaks
- Provide *subsidiess* to lower / offset business costs
- Every city and sub-region *for itself*
- Government drives investment attraction

**Strategic (Positive Sum Competition)**

- Also support greater local investment by *existing* companies
- Reinforce areas of *specialization* and emerging cluster strength
- Provide state support for training, infrastructure, and institutions with *enduring benefits*
- Improve the *efficiency of doing business*
- Harness efficiencies and coordination *across jurisdictions*, especially with neighbors
- Government and the private sector *collaborate* to build cluster strength
Harnessing the New Process of Economic Development

Competitiveness is the result of both top-down and bottom-up processes in which many companies and institutions take responsibility.

Old Model
- **Government** drives economic development through policy decisions and incentives

New Model
- Economic development is a collaborative process involving government at multiple levels, companies, teaching and research institutions, and private sector organizations
Effective economic policy also requires **coordination within government**

- Chaired by a business leader and reporting to the governor
- Convenes working groups, provides direction and strength, holds working groups accountable
Summary

• The goal of economic strategy is to enhance productivity. This is the only way to create jobs, high income, and wealth in the long run

• Improving productivity and innovation must be the guiding principles for every state policy choice

• Improving productivity does not require new public resources, but using existing resources better

• Improving productivity demands that governors mobilize the private sector, not rely on government alone

• Economic strategy is non-partisan and about getting results
Next Steps

1. Reach out to your team

2. Reach out to the business community


The prosperity of the **U.S. economy** will depend more on the success of states in improving competitiveness than what happens in Washington.