West Virginia Competitiveness: Creating a State Economic Strategy

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
## West Virginia 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>
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<tr>
<td>GDP per Capita, 2000-2010</td>
<td>49</td>
<td>17</td>
<td>49</td>
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<tr>
<td><strong>Wages</strong></td>
<td></td>
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<tr>
<td>Average Private Wage, 1998-2009</td>
<td>45</td>
<td>39</td>
<td>46</td>
</tr>
<tr>
<td><strong>Job Creation</strong></td>
<td></td>
<td></td>
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<td><strong>Labor Mobilization</strong></td>
<td></td>
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<tr>
<td>Proportion of Working Age Population in the Workforce, 2000-2010</td>
<td>50</td>
<td>28</td>
<td>50</td>
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<tr>
<td><strong>Labor Productivity</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>GDP per Workforce Participant, 2000-2010</td>
<td>46</td>
<td>10</td>
<td>42</td>
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<tr>
<td><strong>New Business Formation</strong></td>
<td></td>
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<tr>
<td><strong>Innovation</strong></td>
<td></td>
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<tr>
<td>Patents per Employee, 2000-2010</td>
<td>45</td>
<td>44</td>
<td>45</td>
</tr>
<tr>
<td><strong>Cluster Strength</strong></td>
<td></td>
<td></td>
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<tr>
<td>Employment in Strong Clusters, 1998-2009</td>
<td>31</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td><strong>Leading Clusters</strong></td>
<td></td>
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<td>by employment size, 2009 (national rank)</td>
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<td>- Plastics (32)</td>
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</tbody>
</table>
Source: BEA. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.
Comparative State Labor Mobilization Performance
1999-2010

High but declining versus U.S.

High Labor Force Participation and Participation rising versus U.S.

U.S. Labor Force Participation Rate: 64.7%

Low and declining versus U.S.

Low but rising versus U.S.

Notes: Source BLS.

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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.

$60,000  $70,000  $80,000  $90,000  $100,000  $110,000  $120,000  $130,000  $140,000

-0.5%  0.0%  0.5%  1.0%  1.5%  2.0%  2.5%  3.0%  3.5%

Highly productive and productivity rising versus U.S.
U.S. GDP per Labor Force Participant: $85,229

High but declining versus U.S.

Low and declining versus U.S.

Low but rising versus U.S.

U.S. GDP per Labor Force Participant: 0.803%


Highly productive and productivity rising versus U.S.

New York  Massachusetts  California  Louisiana  Hawaii  Delaware  Alaska  Wyoming

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

High but declining versus U.S.

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

Highly productive and productivity rising versus U.S.

Low and declining versus U.S.

Low but rising versus U.S.

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

High and declining innovation

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

High and improving innovation rate versus U.S.

Low and declining innovation

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

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

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

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

• 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

- Health and Beauty Products
- Surgical Instruments and Suppliers
- Medical Equipment
- Dental Instruments and Suppliers
- Ophthalmic Goods
- Diagnostic Substances
- Containers

- Teaching and Specialized Hospitals
  - Biological Products
  - Biopharmaceutical Products
  - Research Organizations
    - 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

- Analytical Instruments Cluster
- Educational Institutions: Harvard, MIT, Tufts, Boston University, UMass
Example: Houston Oil and Gas Cluster

Upstream

- Oil & Natural Gas Exploration & Development
  (e.g., Oil Field Chemicals, Drilling Rigs, Drill Tools)

- Oil & Natural Gas Completion & Production

- 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.

Clusters and Economic Diversification

Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions.
The Evolution of Regional Economies
San Diego

Climate and Geography

U.S. Military


Hospitality and Tourism

Transportation and Logistics

Power Generation

Communications Equipment

Information Technology

Medical Devices

Biotech / Pharmaceuticals

Bioscience Research Centers

Aerospace Vehicles and Defense

Analytical Instruments

Education and Knowledge Creation

Hospitality and Tourism

Sporting Equipment

San Diego

Military

Power Generation

Information Technology

Biotech / Pharmaceuticals

Education and Knowledge Creation

Hospitality and Tourism

San Diego

Military

Aerospace Vehicles and Defense

Analytical Instruments

Education and Knowledge Creation

San Diego

Military

Aerospace Vehicles and Defense

Analytical Instruments

Education and Knowledge Creation

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Traded Cluster Composition of the West Virginia Economy

Overall change in the West Virginia Share of US Traded Employment: -0.02%

West Virginia Overall Share of US Traded Employment: 0.39%

Change in West Virginia share of National Employment, 1998 to 2009


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Traded Cluster Composition of the West Virginia Economy (continued)

Overall change in the West Virginia Share of US Traded Employment: -0.02%

West Virginia Overall Share of US Traded Employment: 0.39%

Change in West Virginia share of National Employment, 1998 to 2009

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West Virginia Job Creation in Traded Clusters
1998 to 2009

Net traded job creation, 1998 to 2009: -9,240

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 -9,779

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West Virginia Wages in Traded Clusters vs. National Benchmarks

West Virginia average traded wage: $37,178

U.S. average traded wage: $56,906

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

<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>
</tr>
<tr>
<td>Massachusetts</td>
<td>+16,169</td>
<td>4,391</td>
<td>11,778</td>
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<tr>
<td>New Jersey</td>
<td>+13,535</td>
<td>3,761</td>
<td>9,774</td>
</tr>
<tr>
<td>California</td>
<td>+9,573</td>
<td>349</td>
<td>9,224</td>
</tr>
<tr>
<td>Maryland</td>
<td>+6,651</td>
<td>2,496</td>
<td>4,155</td>
</tr>
<tr>
<td>Washington</td>
<td>+5,652</td>
<td>2,692</td>
<td>2,960</td>
</tr>
<tr>
<td>Virginia</td>
<td>+5,319</td>
<td>1,617</td>
<td>3,702</td>
</tr>
<tr>
<td>Illinois</td>
<td>+2,658</td>
<td>16</td>
<td>2,642</td>
</tr>
<tr>
<td>Colorado</td>
<td>+1,662</td>
<td>2,416</td>
<td>-754</td>
</tr>
<tr>
<td>Texas</td>
<td>+352</td>
<td>2,494</td>
<td>-2,142</td>
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<tr>
<td>Delaware</td>
<td>+164</td>
<td>11,060</td>
<td>-10,896</td>
</tr>
<tr>
<td>Alaska</td>
<td>-930</td>
<td>-2,417</td>
<td>1,487</td>
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<tr>
<td>Pennsylvania</td>
<td>-3,970</td>
<td>-995</td>
<td>-2,975</td>
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<tr>
<td>Louisiana</td>
<td>-4,280</td>
<td>95</td>
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<tr>
<td>Georgia</td>
<td>-5,322</td>
<td>-1,102</td>
<td>-4,220</td>
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<tr>
<td>Minnesota</td>
<td>-5,576</td>
<td>-425</td>
<td>-5,150</td>
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<tr>
<td>New Hampshire</td>
<td>-6,387</td>
<td>374</td>
<td>-6,761</td>
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<tr>
<td>Arizona</td>
<td>-7,021</td>
<td>1,149</td>
<td>-8,169</td>
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<td>Kansas</td>
<td>-7,705</td>
<td>2,241</td>
<td>-9,946</td>
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<td>Wyoming</td>
<td>-8,057</td>
<td>1,040</td>
<td>-9,097</td>
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<tr>
<td>Michigan</td>
<td>-8,176</td>
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<td>-5,633</td>
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<tr>
<td>North Carolina</td>
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<td>-4,330</td>
<td>-4,915</td>
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<td>Ohio</td>
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<td>-2,495</td>
<td>-6,788</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>-9,791</td>
<td>-2,290</td>
<td>-7,501</td>
</tr>
</tbody>
</table>

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

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.
### West Virginia Performance Scorecard

#### Prosperity
**GDP per Capita, 2000-2010**
- **Start Position**: 49
- **Trend**: 17
- **Current Position**: 49 (+0)

#### Wages
**Average Private Wage, 1998-2009**
- **Start Position**: 45
- **Trend**: 39
- **Current Position**: 46 (-1)

#### Job Creation
- **Start Position**: 50
- **Trend**: 4
- **Current Position**: 7 (+43)

#### Labor Mobilization
**Proportion of Working Age Population in the Workforce, 2000-2010**
- **Start Position**: 50
- **Trend**: 28
- **Current Position**: 50 (+0)

#### Labor Productivity
**GDP per Workforce Participant, 2000-2010**
- **Start Position**: 46
- **Trend**: 10
- **Current Position**: 42 (+4)

#### New Business Formation
- **Start Position**: 47
- **Trend**: 30
- **Current Position**: 49 (-2)

#### Innovation
**Patents per Employee, 2000-2010**
- **Start Position**: 45
- **Trend**: 44
- **Current Position**: 45 (+0)

#### Cluster Strength
**Employment in Strong Clusters, 1998-2009**
- **Start Position**: 31
- **Trend**: 26
- **Current Position**: 26 (+5)

#### Leading Clusters
**by employment size, 2009 (national rank)**
- Heavy Construction Services (35)
- Oil and Gas Products and Services (11)
- Metal Manufacturing (31)
- Chemical Products (25)
- Plastics (32)

**State Rank**
- 1-10
- 11-20
- 31-40
- 41-50
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
The economies of states are often an aggregation of distinct economic areas with differing circumstances.

Wage Performance in West Virginia Metropolitan Areas

U.S. Average Private Wage: $42,403
West Virginia Average Private Wage: $32,924

West Virginia Growth Rate of Wages: 2.81%
U.S. Growth Rate of Wages: 3.01%

Growth Rate of Private Wages, 1998-2009

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

- West Virginia Average Private Wage: $32,924
- U.S. Average Private Wage: $42,403

Growth Rate of Employment, 1998-2009

- U.S. Growth Rate of Employment: 0.52%
- West Virginia Growth Rate of Employment: 0.42%

Source: Census CBP, authors’ analysis. Note: “Bubble” size in chart is proportional to employment in 2009.

*West Virginia portion only
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?  
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   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?

- **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?

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

<table>
<thead>
<tr>
<th>Tactical (Zero Sum Competition)</th>
<th>Strategic (Positive Sum Competition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Focus on attracting <strong>new</strong> investments</td>
<td>• Also support greater local investment by <strong>existing</strong> companies</td>
</tr>
<tr>
<td>• Compete for <strong>every</strong> plant</td>
<td>• Reinforce areas of <strong>specialization</strong> and emerging cluster strength</td>
</tr>
<tr>
<td>• Offer <strong>generalized</strong> tax breaks</td>
<td>• Provide state support for training, infrastructure, and institutions with <strong>enduring benefits</strong></td>
</tr>
<tr>
<td>• Provide <strong>subsidies</strong> to lower / offset business costs</td>
<td>• Improve the <strong>efficiency of doing business</strong></td>
</tr>
<tr>
<td>• Every city and sub-region <strong>for itself</strong></td>
<td>• Harness efficiencies and coordination <strong>across jurisdictions</strong>, especially with neighbors</td>
</tr>
<tr>
<td>• <strong>Government</strong> drives investment attraction</td>
<td>• <strong>Government and the private sector collaborate</strong> to build cluster strength</td>
</tr>
</tbody>
</table>

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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
Example: Organizing for Economic Development

South Carolina Council on Competitiveness

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

Executive Committee

Coordinating Staff

Cluster Committees

- Automotive
- Hydrogen / Fuel Cells
- Textiles
- Apparel
- Agriculture
- Travel and Tourism

Task Forces

- Cluster Activation
- Research / Investment
- Distressed / Disadvan. Areas
- Education / Workforce
- Start-ups / Local Firms
- Measuring Progress

Effective economic policy also requires coordination within government
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