Pennsylvania 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

March 28, 2012
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
## Pennsylvania Performance Scorecard

### Prosperity
*GDP per Capita, 2000-2010*

- **Start Position**: 26
- **Trend**: 25
- **Current Position**: 28

### Wages
*Average Private Wage, 1998-2009*

- **Start Position**: 16
- **Trend**: 19
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### Job Creation

- **Start Position**: 32
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### Labor Mobilization
*Proportion of Working Age Population in the Workforce, 2000-2010*

- **Start Position**: 41
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### Labor Productivity
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### New Business Formation

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### Innovation
*Patents per Employee, 2000-2010*

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### Cluster Strength
*Employment in Strong Clusters, 1998-2009*

- **Start Position**: 44
- **Trend**: 17
- **Current Position**: 41

### Leading Clusters
*by employment size, 2009 (national rank)*

- Education Knowledge and Creation (3)
- Metal Manufacturing (3)
- Lighting and Electrical Equipment (2)
- Biopharmaceuticals (6)
- Apparel (4)
Comparative State Prosperity Performance
2000 - 2010

U.S. GDP per Capita: $42,346

High and rising prosperity versus U.S.
High but declining versus U.S.
Low and declining versus U.S.
Low but rising versus U.S.

Gross Domestic Product per Capita, 2010

Real Growth in Gross Domestic Product per Capita, 2000 to 2010

Source: BEA. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.
Comparative State Labor Mobilization Performance
1999-2010

Change in Labor Force Participation Rate:

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

High but declining versus U.S.

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

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

High but declining versus U.S.
Low and declining versus U.S.
Low but rising versus U.S.
Highly productive and productivity rising versus U.S.

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

Gross Domestic Product per Employed Worker, 2010

Highly productive and productivity rising versus U.S.

High but declining versus U.S.

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

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

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
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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

- 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

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

- Analytical Instruments Cluster

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Example: Houston Oil and Gas Cluster

**Upstream**
- Oil & Natural Gas Exploration & Development
  - Equipment Suppliers (e.g., Oil Field Chemicals, Drilling Rigs, Drill Tools)
  - Specialized Technology Services (e.g., Drilling Consultants, Reservoir Services, Laboratory Analysis)

**Downstream**
- Oil & Natural Gas Completion & Production
  - Subcontractors (e.g., Surveying, Mud Logging, Maintenance Services)
  - Business Services (e.g., MIS Services, Technology Licenses, Risk Management)

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

Hospitality and Tourism

Transportation and Logistics

Power Generation

Communications Equipment

Information Technology

Aerospace Vehicles and Defense

Analytical Instruments

Education and Knowledge Creation

Medical Devices

Biotech / Pharmaceuticals

Bioscience Research Centers

U.S. Military

Traded Cluster Composition of the Pennsylvania Economy

Overall change in the Pennsylvania Share of US Traded Employment: -0.04%

Pennsylvania Overall Share of US Traded Employment: 4.60%

Change in Pennsylvania share of National Employment, 1998 to 2009

Overall change in the Pennsylvania Share of US Traded Employment: -0.04%

Pennsylvania Overall Share of US Traded Employment: 4.60%

Change in Pennsylvania share of National Employment, 1998 to 2009

Employment 1998-2009

Added Jobs
Lost Jobs

Employees 34,000 =
Pennsylvania Job Creation in Traded Clusters
1998 to 2009

Net traded job creation, 1998 to 2009: -61,976

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 -45,713.

Pennsylvania Wages in Traded Clusters vs. National Benchmarks

Wages, 2009

Pennsylvania average traded wage: $52,982
U.S. average traded wage: $56,906

Indicates average national wage in the traded cluster

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>
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<td>Kentucky</td>
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<td>South Dakota</td>
<td>-20,968</td>
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<td>-21,257</td>
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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.
### Pennsylvania Performance Scorecard

**Prosperity**  
**GDP per Capita, 2000-2010**  
- **Start Position**: 26  
- **Trend**: 25  
- **Current Position**: 28 (-2)

**Wages**  
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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

Neighboring State <-> State <-> Neighboring State

Metropolitan Areas

Rural Regions
The economies of states are often an aggregation of distinct economic areas with differing circumstances.

Pennsylvania Metropolitan Areas

- Allentown MSA
- Altoona MSA
- Erie MSA
- Harrisburg MSA
- Johnstown MSA
- Lebanon MSA
- Lancaster MSA
- Leeds MSA
- New York MSA
- Philadelphia MSA
- Pittsburgh MSA
- Reading MSA
- Scranton MSA
- State College MSA
- Youngstown MSA

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Wage Performance in Pennsylvania Metropolitan Areas

Average Private Wage, 2009

Growth Rate of Private Wages, 1998-2009

U.S. Average Private Wage: $42,403
Pennsylvania Average Private Wage: $41,584

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

Average Private Wage, 2009

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

Growth Rate of Private Employment, 1998-2009

Philadelphia MSA*

Pittsburgh MSA

Reading MSA

Harrisburg MSA

Allentown MSA*

Altoona MSA

Erie MSA

State College MSA

Williamsport MSA

Youngstown MSA*

York MSA

Lancaster MSA

Rest of State

Lebanon MSA

Scranton MSA

Johnstown MSA

Pennsylvania Growth Rate of Employment: 0.25%

U.S. Growth Rate of Employment: 0.52%

*Pennsylvania portion only

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

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3. Where to go from here?  Action Steps
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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?

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?

Tactical (Zero Sum Competition)
- Focus on attracting **new** investments
- Compete for **every** plant
- Offer **generalized** tax breaks
- Provide **subsidies** 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
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.