Vermont 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

April 10, 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
Vermont Performance Scorecard

Prosperity
*GDP per Capita, 2000-2010*
- Start Position: 39
- Trend: 13
- Current Position: 33 +6

Wages
*Average Private Wage, 1998-2009*
- Start Position: 41
- Trend: 26
- Current Position: 41 +0

Job Creation
- Start Position: 14
- Trend: 27
- Current Position: 18 -4

Labor Mobilization
*Proportion of Working Age Population in the Workforce, 2000-2010*
- Start Position: 12
- Trend: 5
- Current Position: 6 +6

Labor Productivity
*GDP per Workforce Participant, 2000-2010*
- Start Position: 47
- Trend: 32
- Current Position: 49 -2

New Business Formation
- Start Position: 42
- Trend: 44
- Current Position: 50 -8

Innovation
*Patents per Employee, 2000-2010*
- Start Position: 2
- Trend: 4
- Current Position: 1 +1

Cluster Strength
*Employment in Strong Clusters, 1998-2009*
- Start Position: 50
- Trend: 2
- Current Position: 46 +4

Leading Clusters
*by employment size, 2009 (national rank)*
- Education and Knowledge Creation (40)
- Analytical Instruments (29)
- Jewelry and Precious Metals (11)
- Furniture (28)
- Power Generation and Transmission (38)
Comparative State Prosperity Performance
2000 - 2010

Source: BEA. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.

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

High and rising prosperity versus U.S.
Low but rising versus U.S.
Low and declining versus U.S.
High but declining versus U.S.
Comparative State Labor Mobilization Performance
1999-2010

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.
Comparative State Labor Force Productivity Performance
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

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.

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

Sources: BEA, BLS. Notes: GDP in real 2005 dollars. Growth rate is calculated as compound annual growth rate.

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Comparative State Innovation Performance
2000 - 2010

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

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

High and declining innovation

Low and declining innovation

High and improving innovation rate versus U.S.

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


= 2000 patents in 2010
= 500 patents in 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
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

- 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
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)

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

Downstream

Oil & Natural Gas Completion & Production

Gas Gathering

Gas Processing

Gas Trading

Gas Transmission

Gas Distribution

Gas Marketing

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

Business Services
(e.g., MIS Services, Technology Licenses, Risk Management)

2012 State Competitiveness – Rich Bryden
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

1910
1930
1950
1970
1990

Climate and Geography

U.S. Military

Hospitality and Tourism

Transportation and Logistics

Power Generation

Analytical Instruments

Education and Knowledge Creation

Bioscience Research Centers

Sporting Equipment

Communications Equipment

Information Technology

Medical Devices

Biotech / Pharmaceuticals

Aerospace Vehicles and Defense

Information Technology

Hospitality and Tourism

Transportation and Logistics

Power Generation

Analytical Instruments

Education and Knowledge Creation

Bioscience Research Centers

Sporting Equipment

Communications Equipment

Information Technology

Medical Devices

Biotech / Pharmaceuticals
Traded Cluster Composition of the Vermont Economy

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

Vermont Overall Share of US Traded Employment: 0.32%


Employees 1,800 =
Traded Cluster Composition of the Vermont Economy (continued)

Vermont national employment share, 2009

Change in Vermont share of National Employment, 1998 to 2009

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

Vermont Overall Share of US Traded Employment: 0.32%

Employment 1998-2009
- Added Jobs
- Lost Jobs

Employees 2,600 = 0.28%

Vermont Job Creation in Traded Clusters
1998 to 2009

Net traded job creation, 1998 to 2009:
+8,908

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 -2,044


2012 State Competitiveness – Rich Bryden
Vermont Wages in Traded Clusters vs. National Benchmarks

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>
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<tr>
<td>Connecticut</td>
<td>+27,171</td>
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<td>Florida</td>
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<td>Nebraska</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.
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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

Metropolitan Areas

Rural Regions

Neighboring State

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Defining the Appropriate Economic Regions

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

Vermont Metropolitan Areas

Burlington MSA
Wage Performance in Vermont Metropolitan Areas

Average Private Wage, 2009

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

- **U.S. Average Private Wage:** $42,403
- **U.S. Growth Rate of Employment:** 0.52%
- **Vermont Average Private Wage:** $34,314
- **Vermont Growth Rate of Employment:** 0.93%
- **Burlington MSA:**
- **Rest of State:**

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

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?

---

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 *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 / Disadvantaged 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.