North Carolina Competitiveness: Creating a State Economic Strategy

March 28, 2012

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
<table>
<thead>
<tr>
<th>Category</th>
<th>Start Position</th>
<th>Trend</th>
<th>Current Position</th>
</tr>
</thead>
</table>
| **Prosperity**
  GDP per Capita, 2000-2010      | 20             | 44    | 27               |
| **Wages**
  Average Private Wage, 1998-2009 | 29             | 30    | 29               |
| **Job Creation**
| **Labor Mobilization**
  Proportion of Working Age Population in the Workforce, 2000-2010 | 31             | 45    | 36               |
| **Labor Productivity**
  GDP per Workforce Participant, 2000-2010 | 18             | 22    | 18               |
| **New Business Formation**
| **Innovation**
  Patents per Employee, 2000-2010 | 25             | 12    | 18               |
| **Cluster Strength**
  Employment in Strong Clusters, 1998-2009 | 39             | 33    | 42               |

**Leading Clusters**
by employment size, 2009
(national rank)
- Automotive (9)
- Furniture (1)
- Textiles (2)
- Plastics (8)
- Building Fixtures, Equipment and Services (5)
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 Mobilization Performance
1999-2010

High but declining versus U.S.

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

Low and declining versus U.S.

Change in Labor Force Participation Rate: -2.4%

Notes: Source BLS.

50%
-7%
-6%
-5%
-4%
-3%
-2%
-1%
0%
1%
2%
75%
70%
65%
60%
55%
50%
Comparative State Labor Force Productivity Performance
2000-2010

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

Highly productive and productivity rising versus U.S.

High but declining 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 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

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

High and declining innovation

High and improving innovation rate versus U.S.

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


= 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

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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

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

Analytical Instruments Cluster

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

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Example: Houston Oil and Gas Cluster

**Upstream**

- **Oil & Natural Gas Exploration & Development**
- **Oil & Natural Gas Completion & Production**

**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**

- **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)
- **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.

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
- Climate and Geography
- U.S. Military

1930
- Aerospace Vehicles and Defense

1950
- Power Generation

1970
- Transportation and Logistics
- Communications Equipment
- Information Technology

1990
- Hospitality and Tourism
- Sporting Equipment
- Analytical Instruments
- Education and Knowledge Creation
- Medical Devices
- Biotech / Pharmaceuticals
- Bioscience Research Centers

1910 to 1990:
- U.S. Military
- Climate and Geography
Traded Cluster Composition of the North Carolina Economy

Overall change in the North Carolina Share of US Traded Employment: -0.55%

North Carolina Overall Share of US Traded Employment: 2.87%

Change in North Carolina share of National Employment, 1998 to 2009


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Traded Cluster Composition of the North Carolina Economy (continued)

Overall change in the North Carolina Share of US Traded Employment: -0.55%

North Carolina Overall Share of US Traded Employment: 2.87%

Change in North Carolina share of National Employment, 1998 to 2009

North Carolina Job Creation in Traded Clusters
1998 to 2009

Net traded job creation, 1998 to 2009: -204,532


* Percent change in national benchmark times starting regional employment. Overall traded job creation in the state, if it matched national benchmarks, would be -216,968.
North Carolina Wages in Traded Clusters vs. National Benchmarks

North Carolina average traded wage: $48,093

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>
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</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.
# North Carolina Performance Scorecard

## Prosperity
*GDP per Capita, 1999-2009*
- Position in 1998-1999: 20
- Trend: 43
- Current Position: 29 (-9)

## Wages
*Average Private Wage, 1998-2009*
- Position in 1998-1999: 29
- Trend: 30
- Current Position: 29 (+0)

## Job Creation
- Position in 1998-1999: 33
- Trend: 35
- Current Position: 37 (-4)

## Labor Mobilization
*Proportion of Working Age Population in the Workforce, 1999-2010*
- Position in 1998-1999: 33
- Trend: 41
- Current Position: 36 (-3)

## Labor Productivity
*GDP per Worker, 1999-2009*
- Position in 1998-1999: 19
- Trend: 35
- Current Position: 20 (-1)

## New Business Formation
- Position in 1998-1999: 12
- Trend: 41
- Current Position: 33 (-21)

## Innovation
*Patents per Employee, 1999-2009*
- Position in 1998-1999: 27
- Trend: 6
- Current Position: 22 (+5)

## Cluster Strength
*Employment in Strong Clusters, 1998-2009*
- Position in 1998-1999: 39
- Trend: 33
- Current Position: 42 (-3)

## Leading Clusters
*by employment size, 2009 (national rank)*
- Automotive (9)
- Furniture (1)
- Textiles (2)
- Plastics (8)
- Building Fixtures, Equipment and Services (5)
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
- Metropolitan Areas
- Rural Regions
- Neighboring State

Diagram showing the relationships between geographic and governmental influences and productivity.
The economies of states are often an aggregation of distinct economic areas with differing circumstances.
Wage Performance in North Carolina Metropolitan Areas

Growth Rate of Private Wages, 1998-2009

North Carolina Growth Rate of Wages: 2.95%
U.S. Growth Rate of Wages: 3.01%

Average Private Wage, 2009

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

North Carolina Growth Rate of Employment: 0.36%
U.S. Growth Rate of Employment: 0.52%

U.S. Average Private Wage: $42,403
North Carolina Average Private Wage: $37,068
Virginia Beach MSA*

Growth Rate of Private Employment, 1998-2009

Average Private Wage, 2009

-3.0% -2.0% -1.0% 0.0% 1.0% 2.0% 3.0% 4.0% 5.0%

*North Carolina 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

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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?

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

- 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

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

Clustering Committees

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

Task Forces

- Cluster Activation
- Research / Investment
- Distressed / Disadvanted 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.