

# **Maine Competitiveness: Moving to a New Economic Development Model**

Professor Michael E. Porter  
Harvard Business School

December 18, 2006

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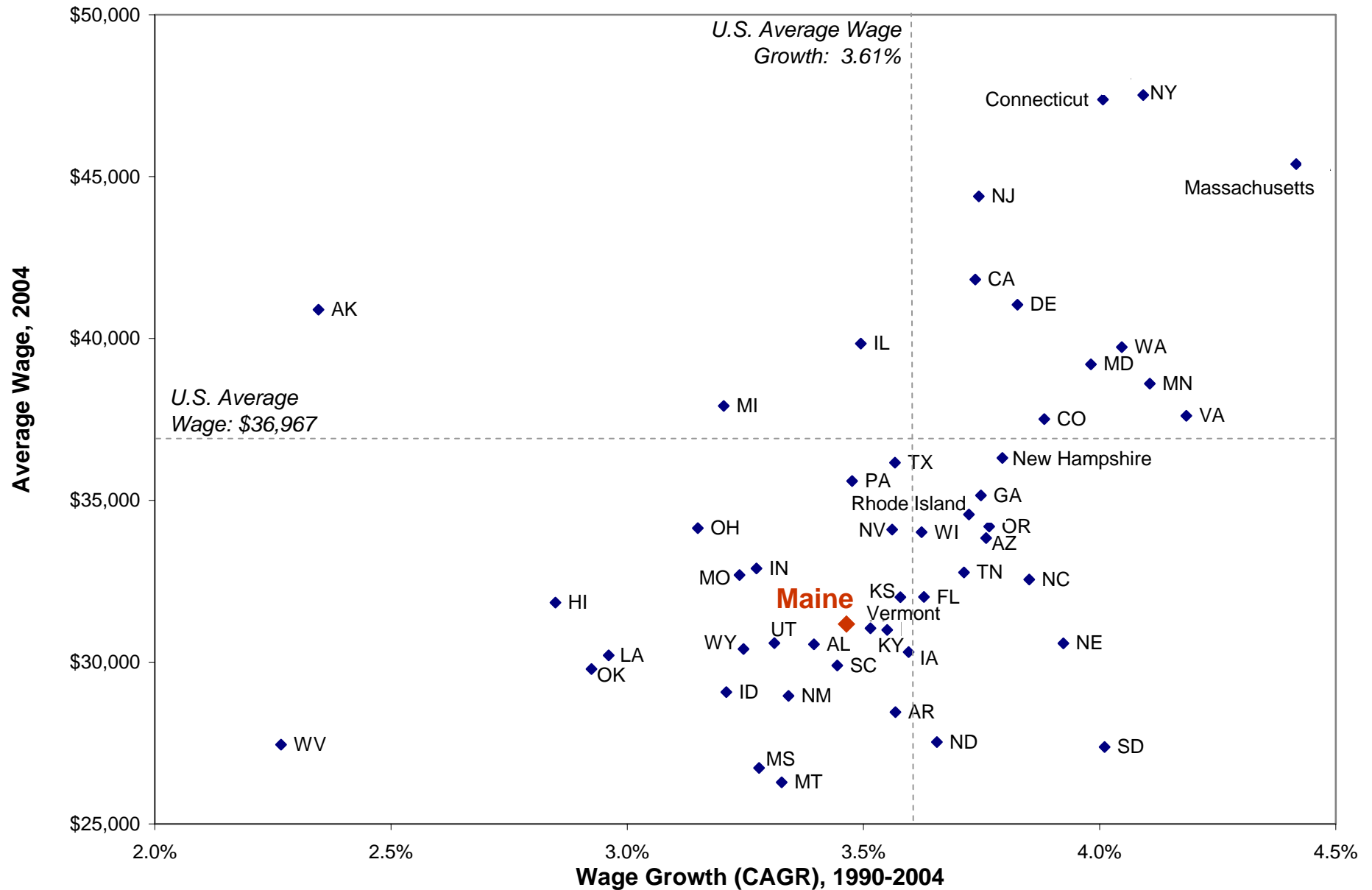
This presentation draws on ideas from Professor Porter's articles and books, in particular, The Competitive Advantage of Nations (The Free Press, 1990), "Clusters and the New Competitive Agenda for Companies and Governments" in On Competition (Harvard Business School Press, 1998), and the *Clusters of Innovation Initiative* ([www.compete.org](http://www.compete.org)), a joint effort of the Council on Competitiveness, Monitor Group, Professor Porter, and the Cluster Mapping Project at Harvard Business School.

Additional information may be found at the website of the Institute for Strategy and Competitiveness, [www.isc.hbs.edu](http://www.isc.hbs.edu)

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# U.S. States

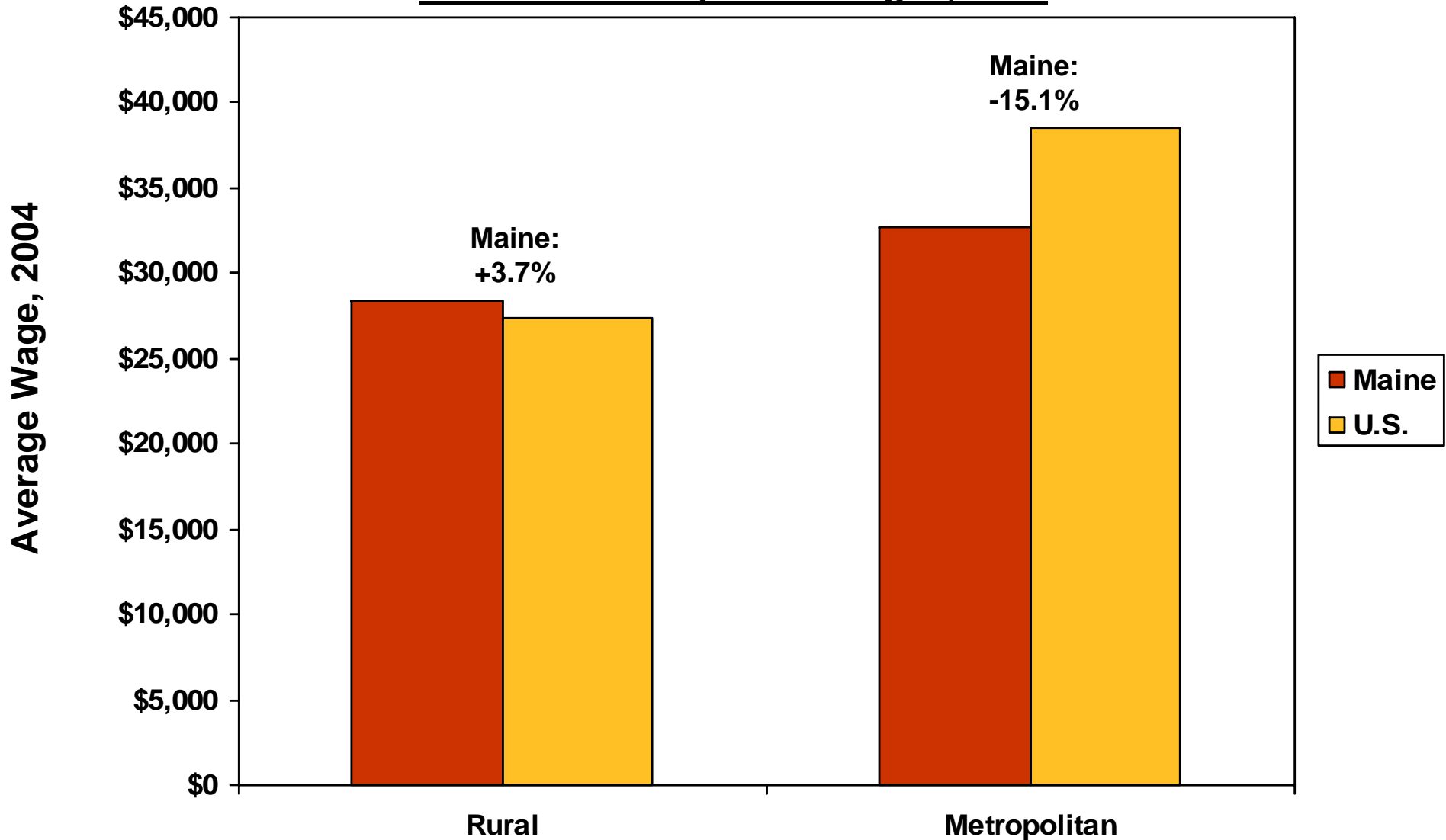
## Comparative Private Wage Performance, 1990-2004



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.  
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# Maine

## Rural and Metropolitan Wages, 2004



- Rural employment is 34.3 percent of the total in Maine, versus 16.0 percent nationwide
- The average wage in Maine rural counties is **higher** than the national average for rural counties

Metropolitan Maine = the Portland, Lewiston-Auburn, and Bangor Metro Area counties.

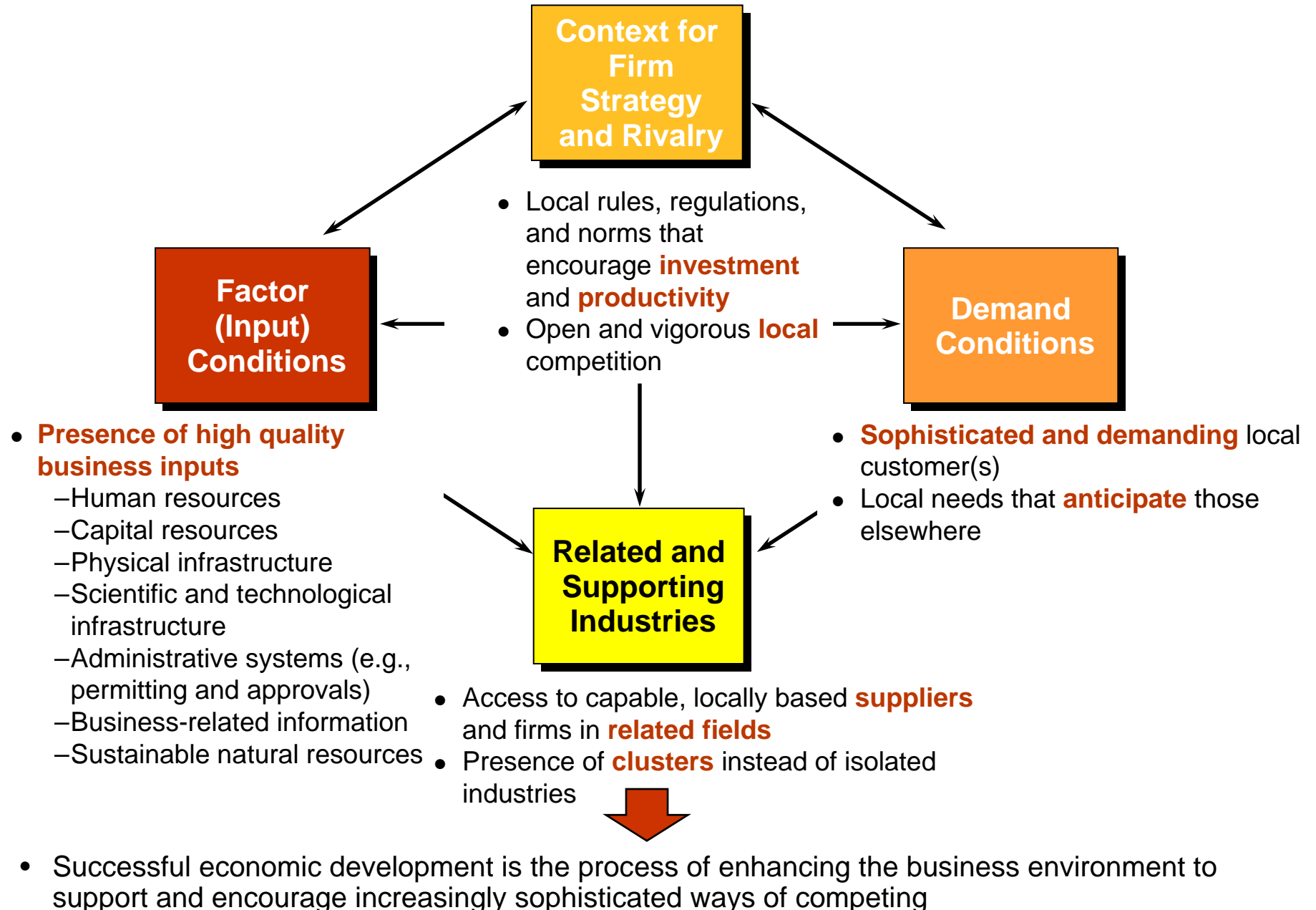
# What is Competitiveness?

- Competitiveness is the **productivity (value per unit of input)** with which a region or cluster utilizes its human, capital, and natural resources. Productivity sets a nation's or region's standard of living (wages, returns on capital, returns on natural resources)
  - It is not **what** industries a region competes in that matters for prosperity, but **how** firms compete in those industries



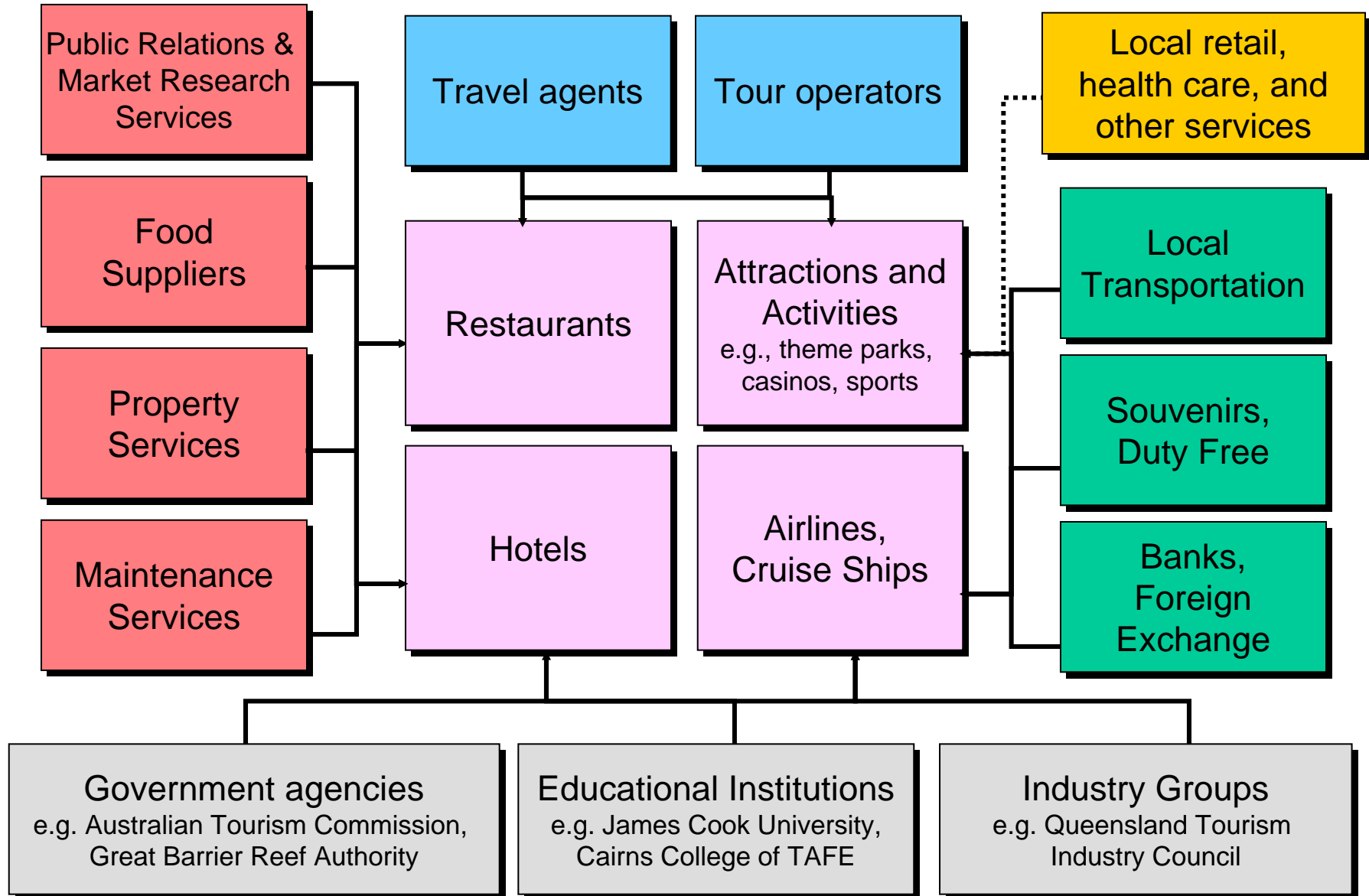
- Nations or regions compete in offering the **most productive environment** for business

# Upgrading the Business Environment



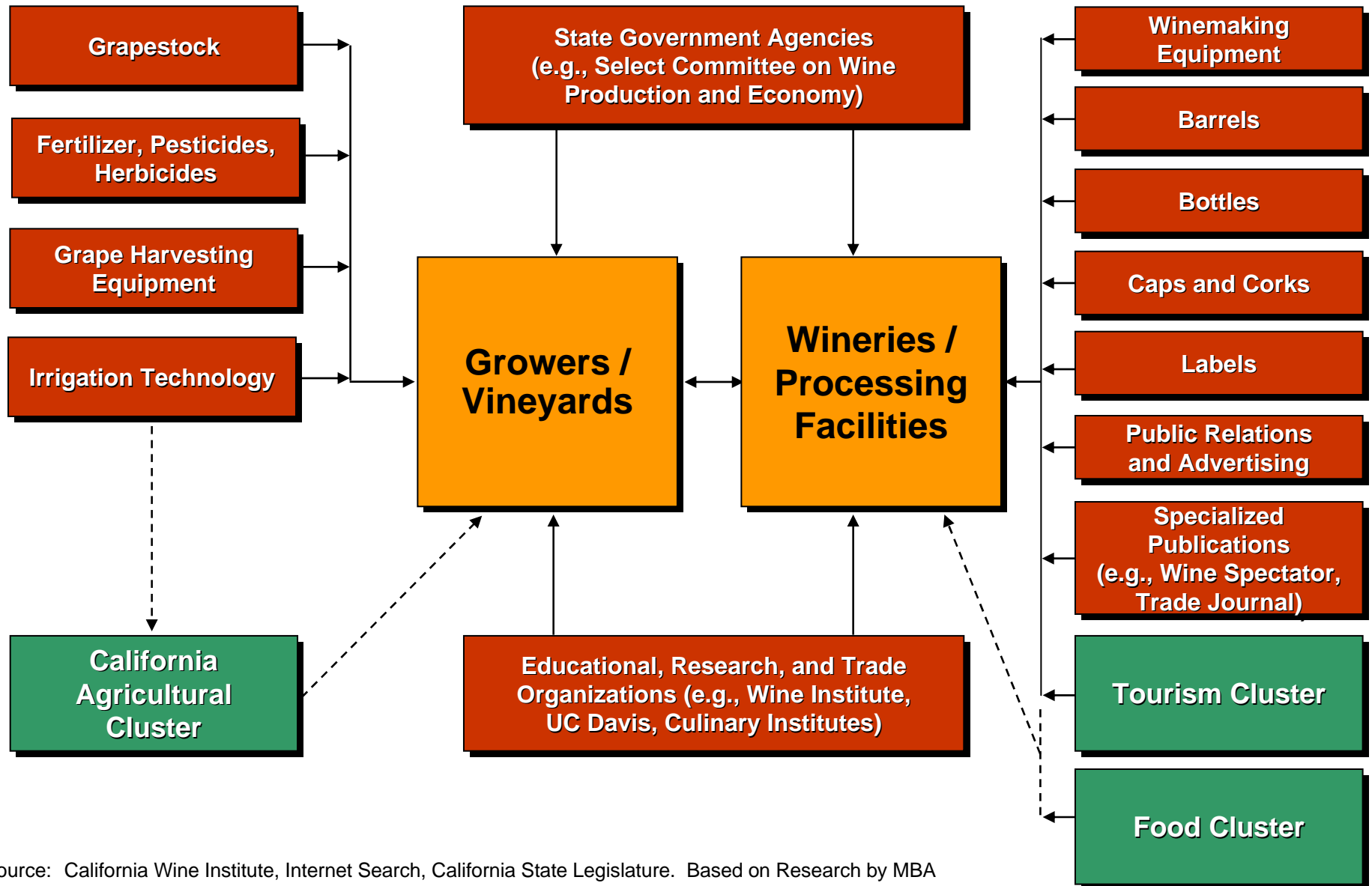
# Cluster Development

## Hospitality and Tourism in Cairns (Australia)



# Competitiveness and Clusters

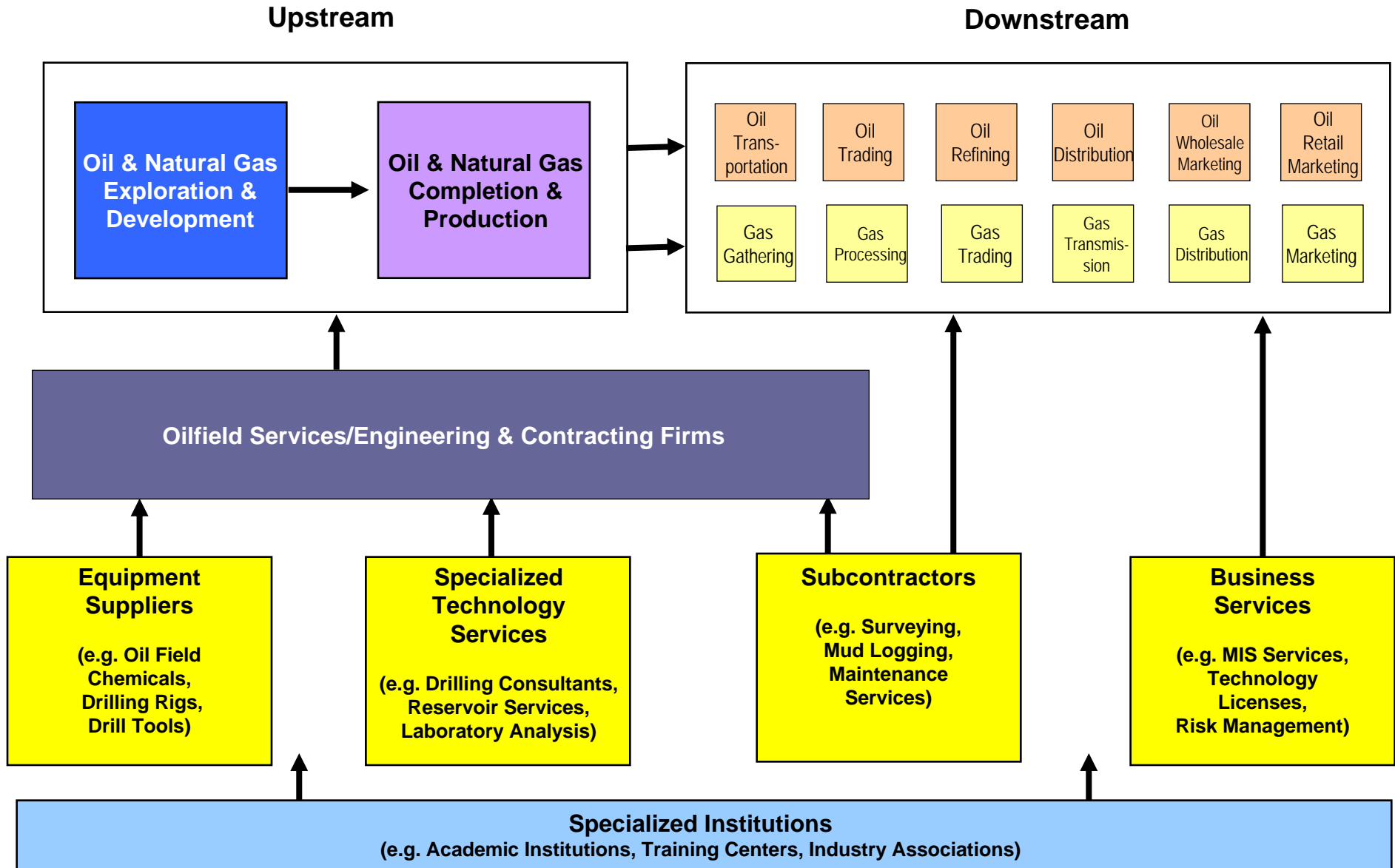
## California Wine



Source: California Wine Institute, Internet Search, California State Legislature. Based on Research by MBA 1997 Students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda

# Competitiveness and Clusters

## Houston Oil and Gas





# The Composition of Regional Economies

## United States, 2004

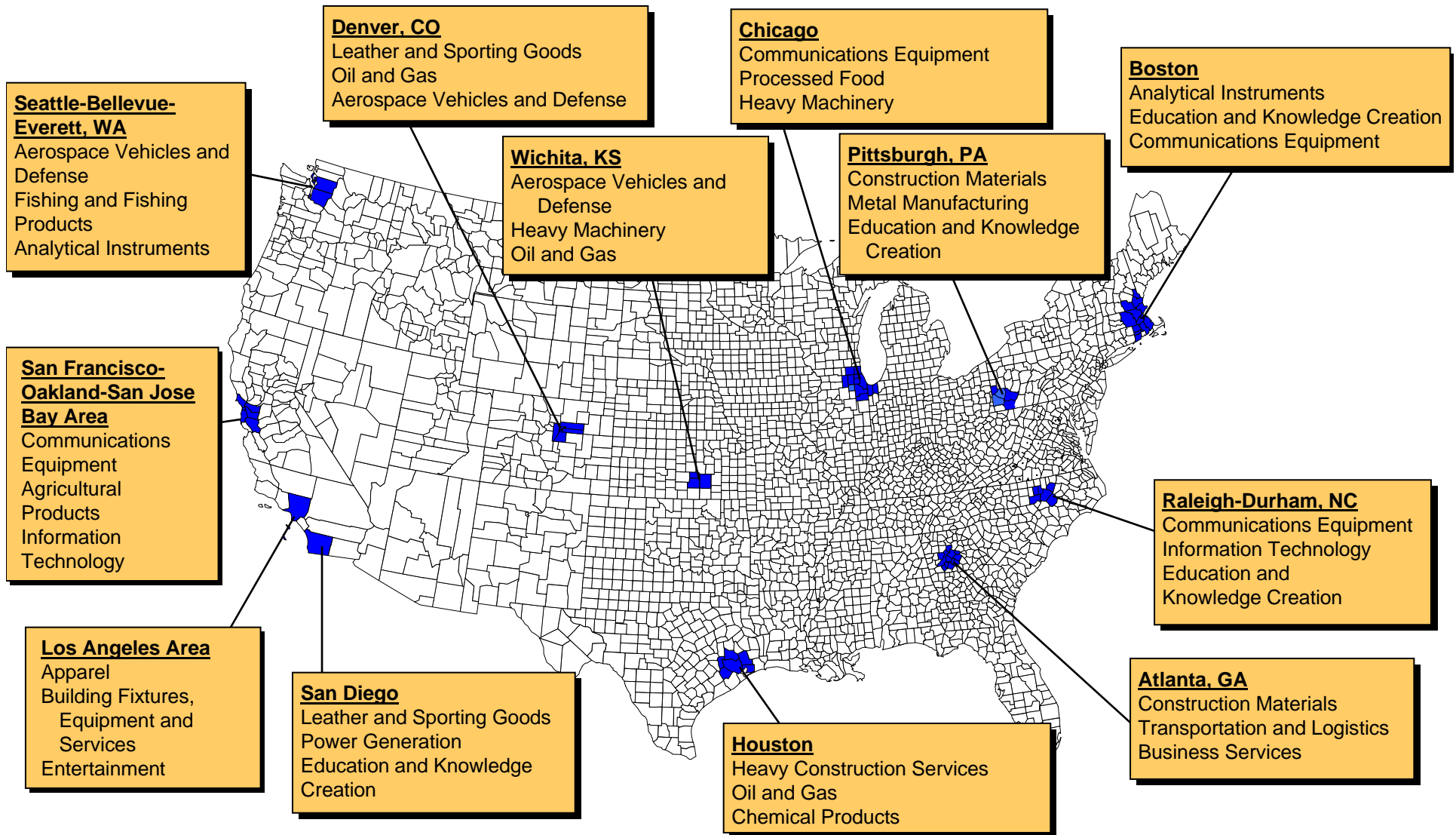
|   | Traded          | Local           | Natural Resource-Driven |
|---|-----------------|-----------------|-------------------------|
| <b>Share of Employment</b>                  | <b>29.3%</b>    | <b>70.0%</b>    | <b>0.7%</b>             |
| <b>Employment Growth Rate, 1990 to 2004</b> | <b>0.7%</b>     | <b>2.4%</b>     | <b>-1.2%</b>            |
| <b>Average Wage</b>                         | <b>\$49,367</b> | <b>\$30,416</b> | <b>\$35,815</b>         |
| <b>Relative Wage</b>                        | <b>137.2%</b>   | <b>84.5</b>     | <b>99.5</b>             |
| <b>Wage Growth</b>                          | <b>4.2%</b>     | <b>3.4%</b>     | <b>2.1%</b>             |
| <b>Relative Productivity</b>                | <b>144.1</b>    | <b>79.3</b>     | <b>140.1</b>            |
| <b>Patents per 10,000 Employees</b>         | <b>20.4</b>     | <b>0.4</b>      | <b>3.0</b>              |
| <b>Number of SIC Industries</b>             | <b>590</b>      | <b>241</b>      | <b>48</b>               |

Note: 2004 data, except relative productivity which uses 1997 data.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Specialization of Regional Economies

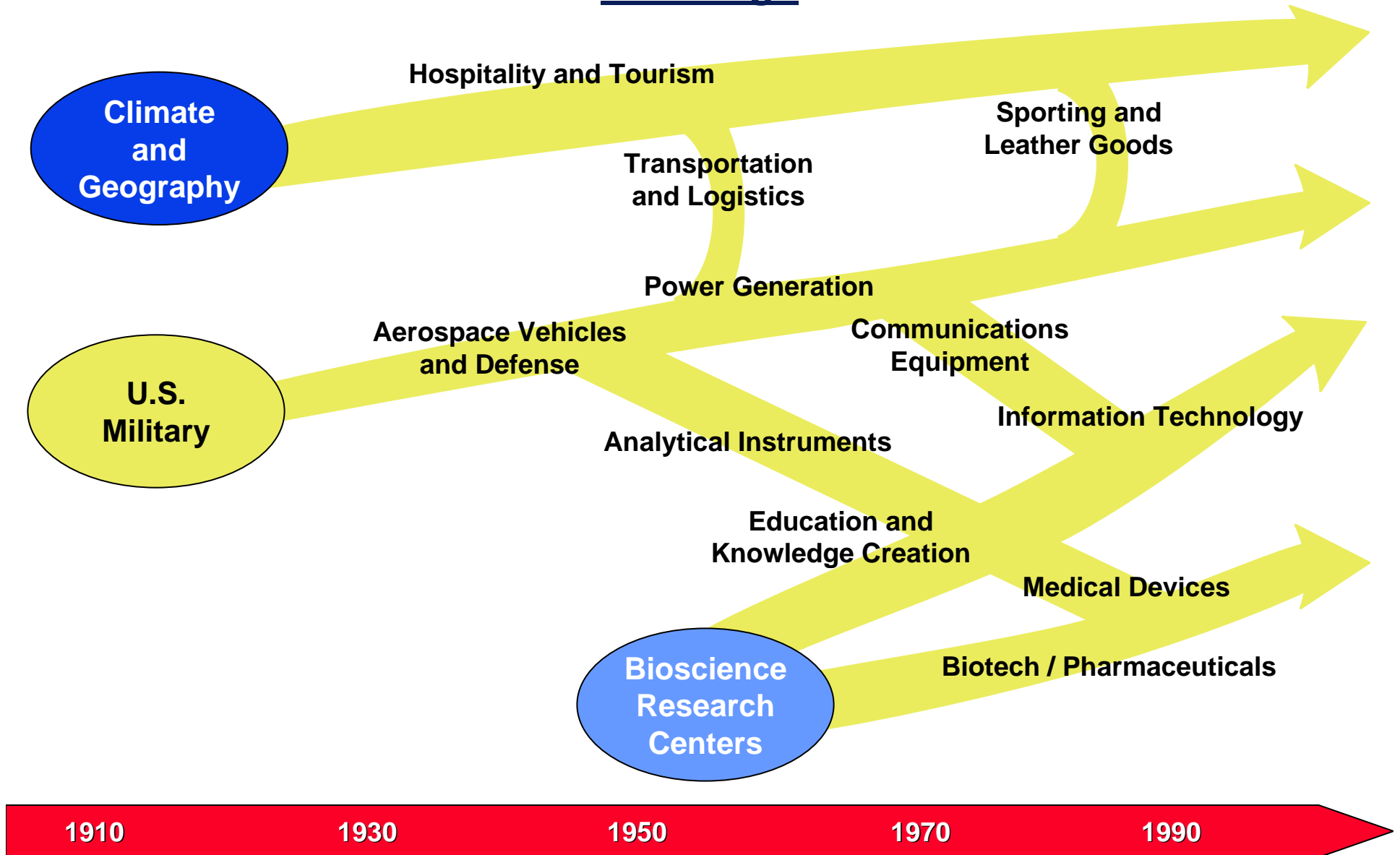
## Selected U.S. Metropolitan Areas



Note: Clusters listed are the three highest ranking clusters in terms of share of national employment

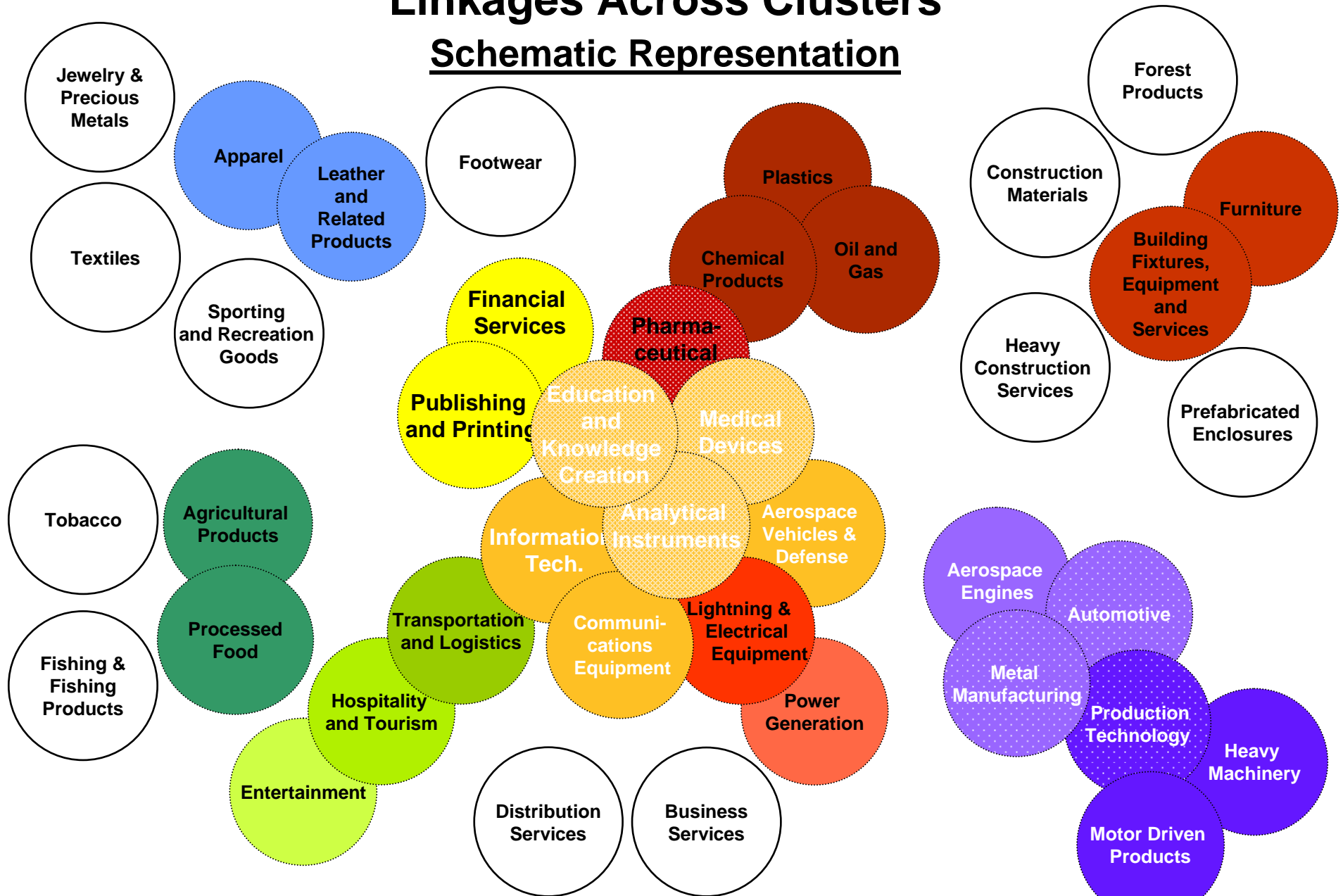
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# The Evolution of Regional Economies San Diego



# Linkages Across Clusters

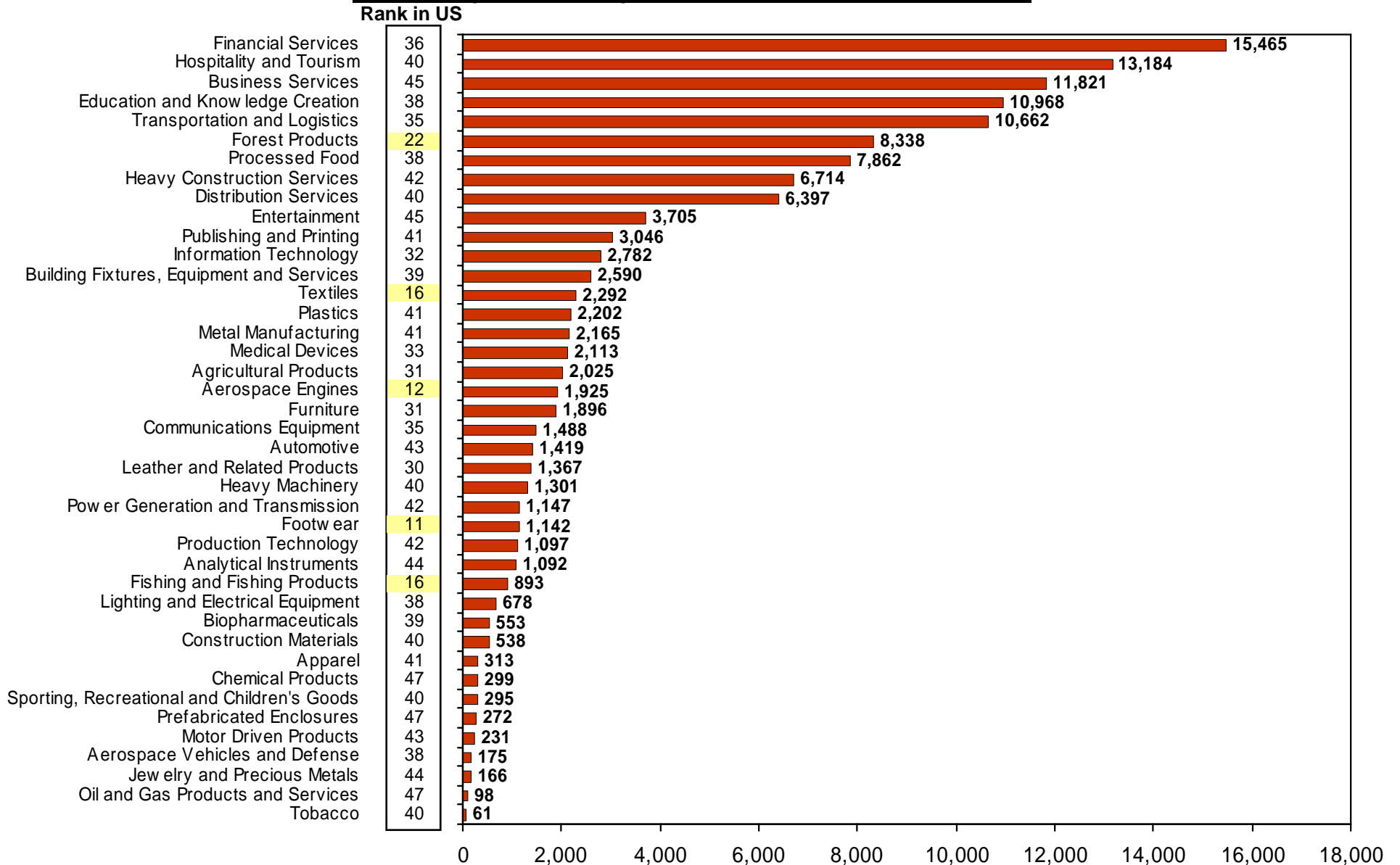
## Schematic Representation



Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions

# Maine

## Employment by Traded Cluster, 2004



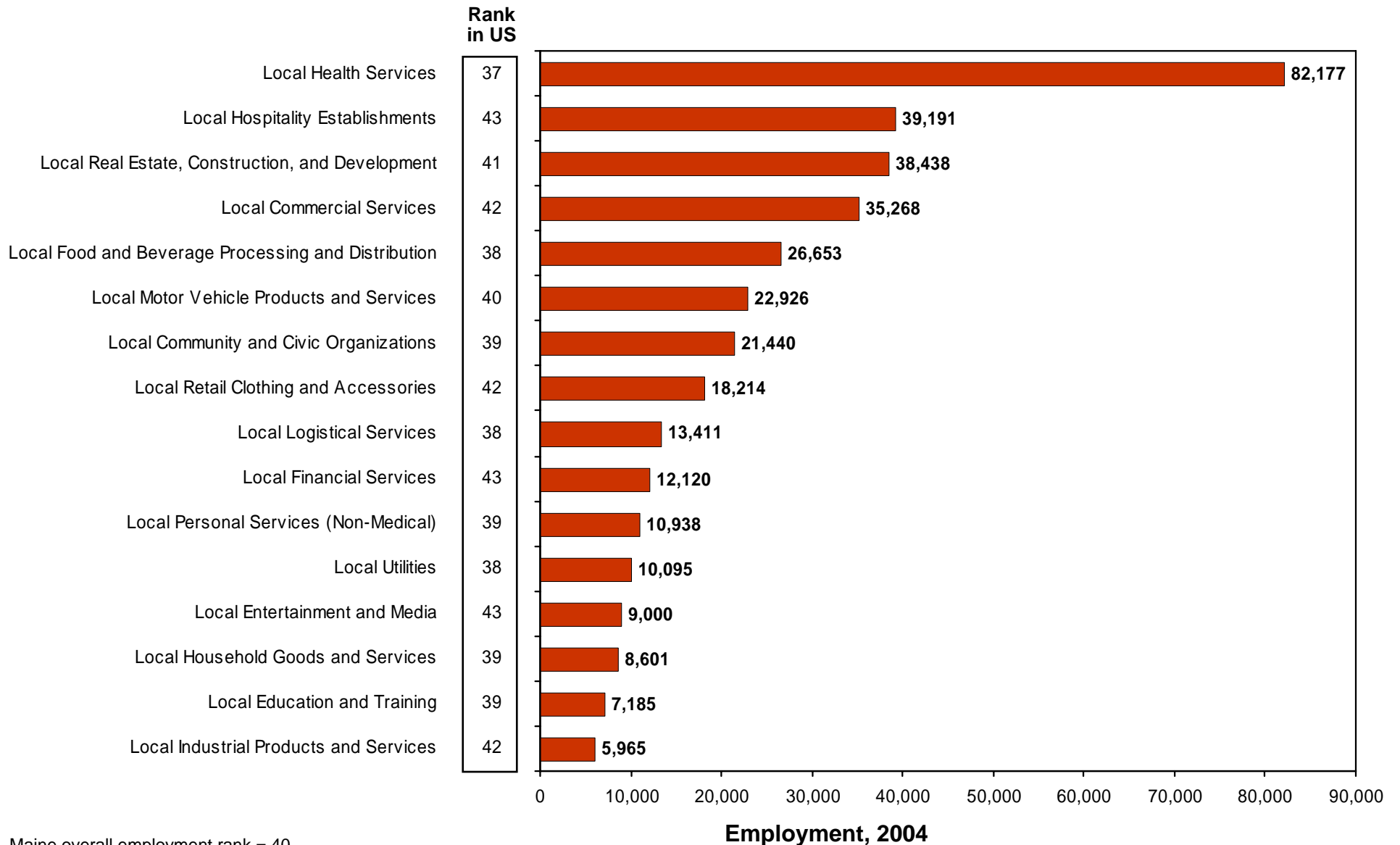
Note: Ranks are among the 50 US states plus the District of Columbia.

Maine overall employment rank = 40.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

# Maine

## Employment by Local Cluster, 2004

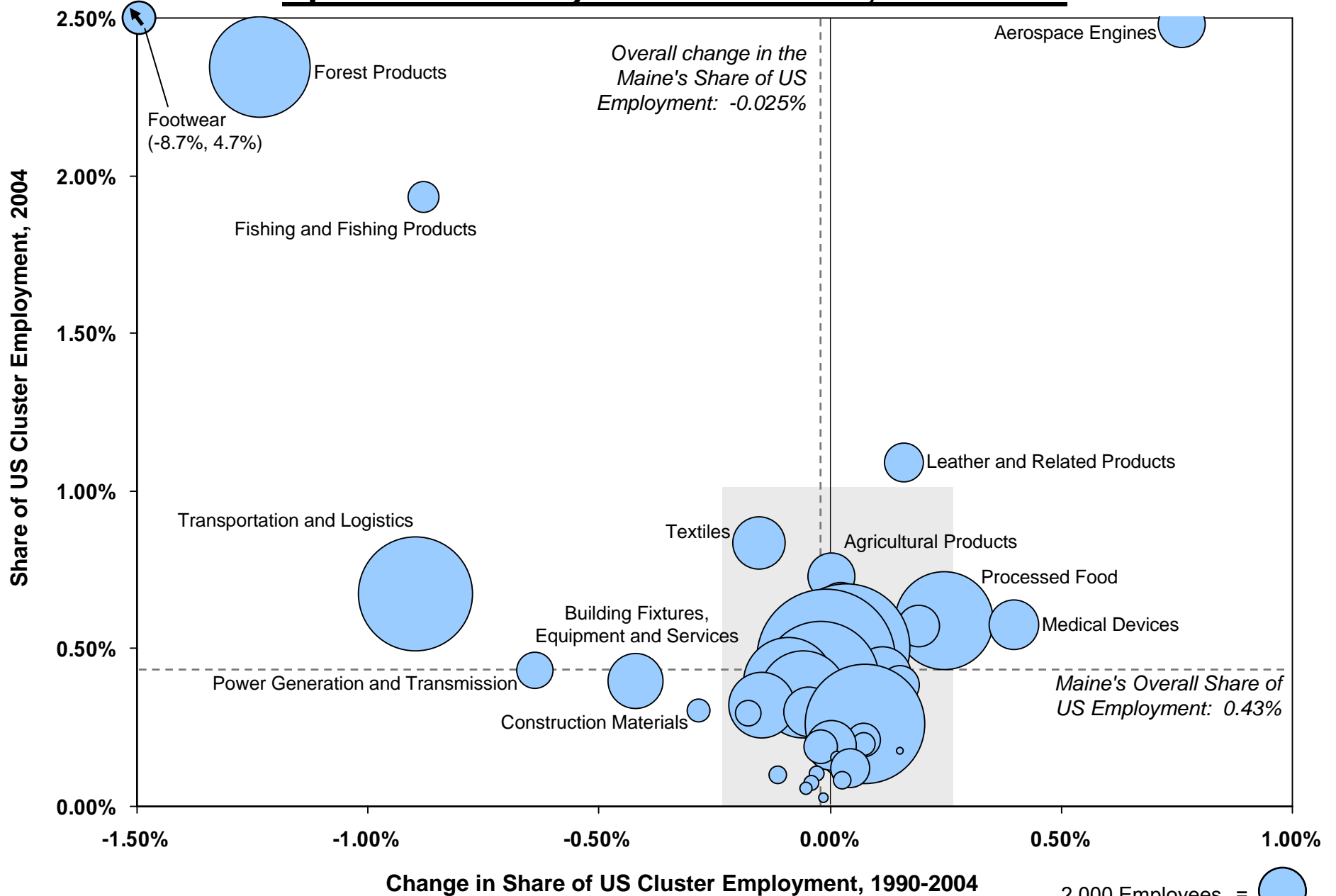


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Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

# Maine

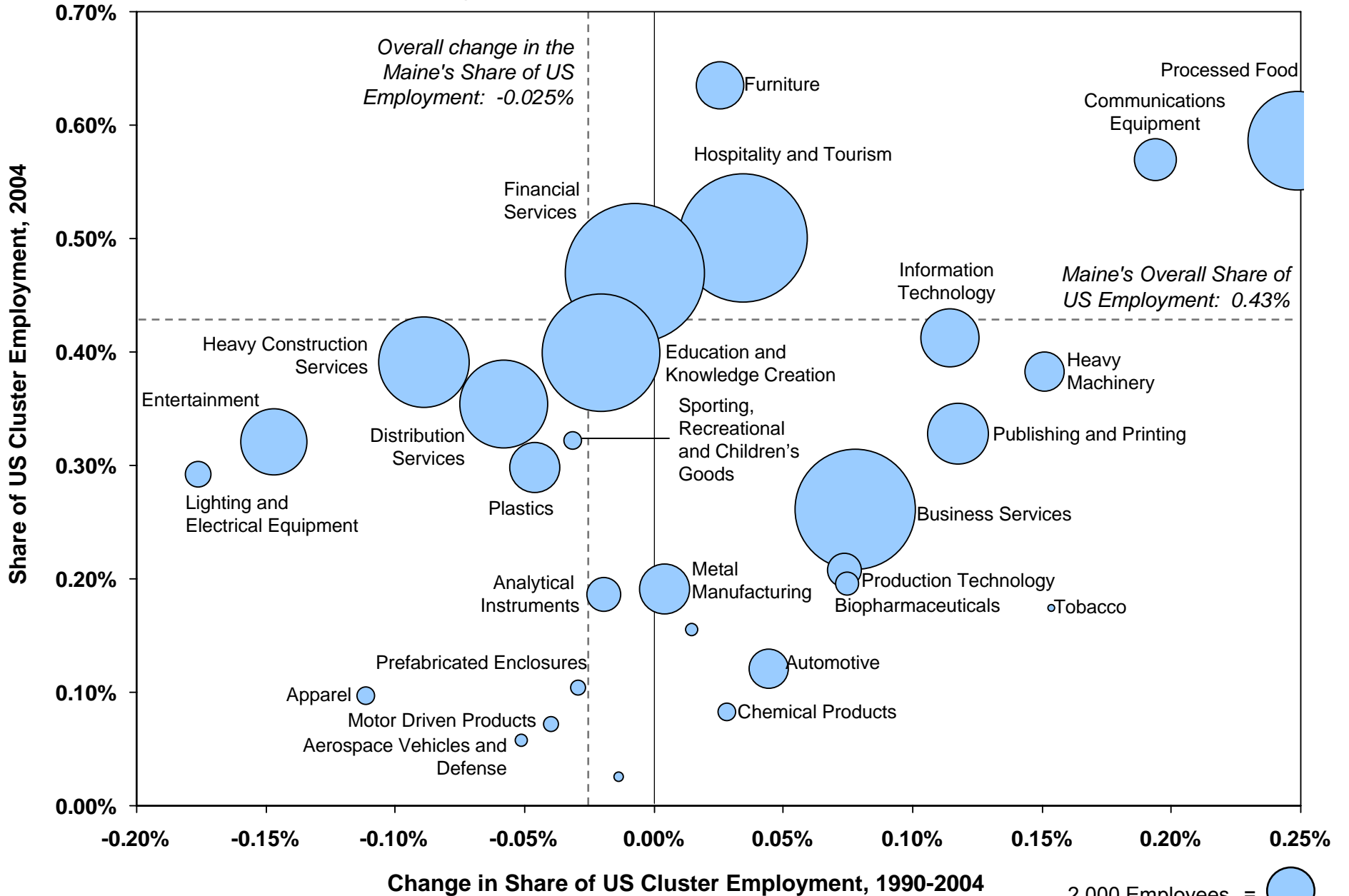
## Specialization by Traded Cluster, 1990-2004



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.  
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# Maine

## Specialization by Traded Cluster, 1990-2004 (continued)



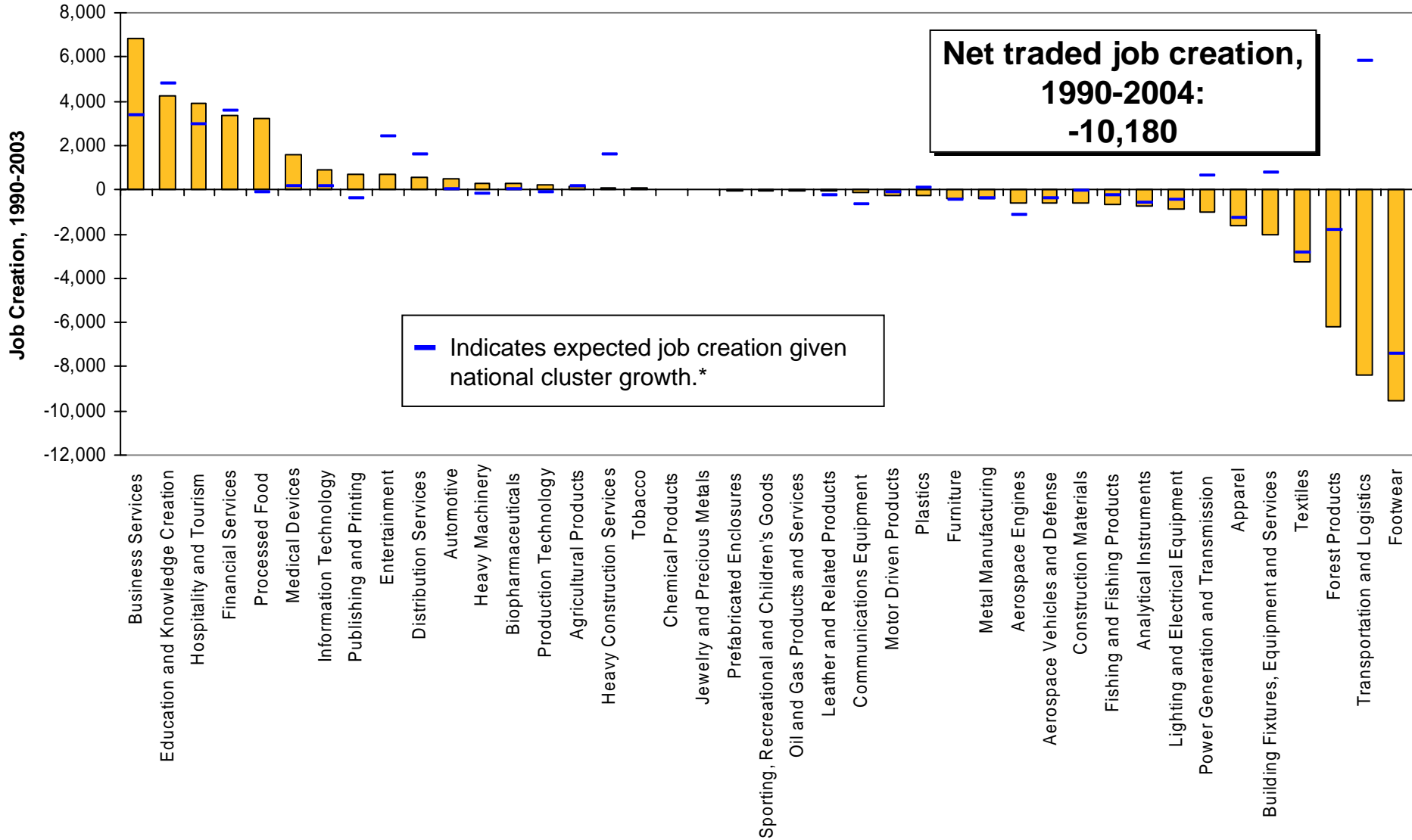
Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.  
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# Maine

## Job Creation by Traded Cluster, 1990-2004

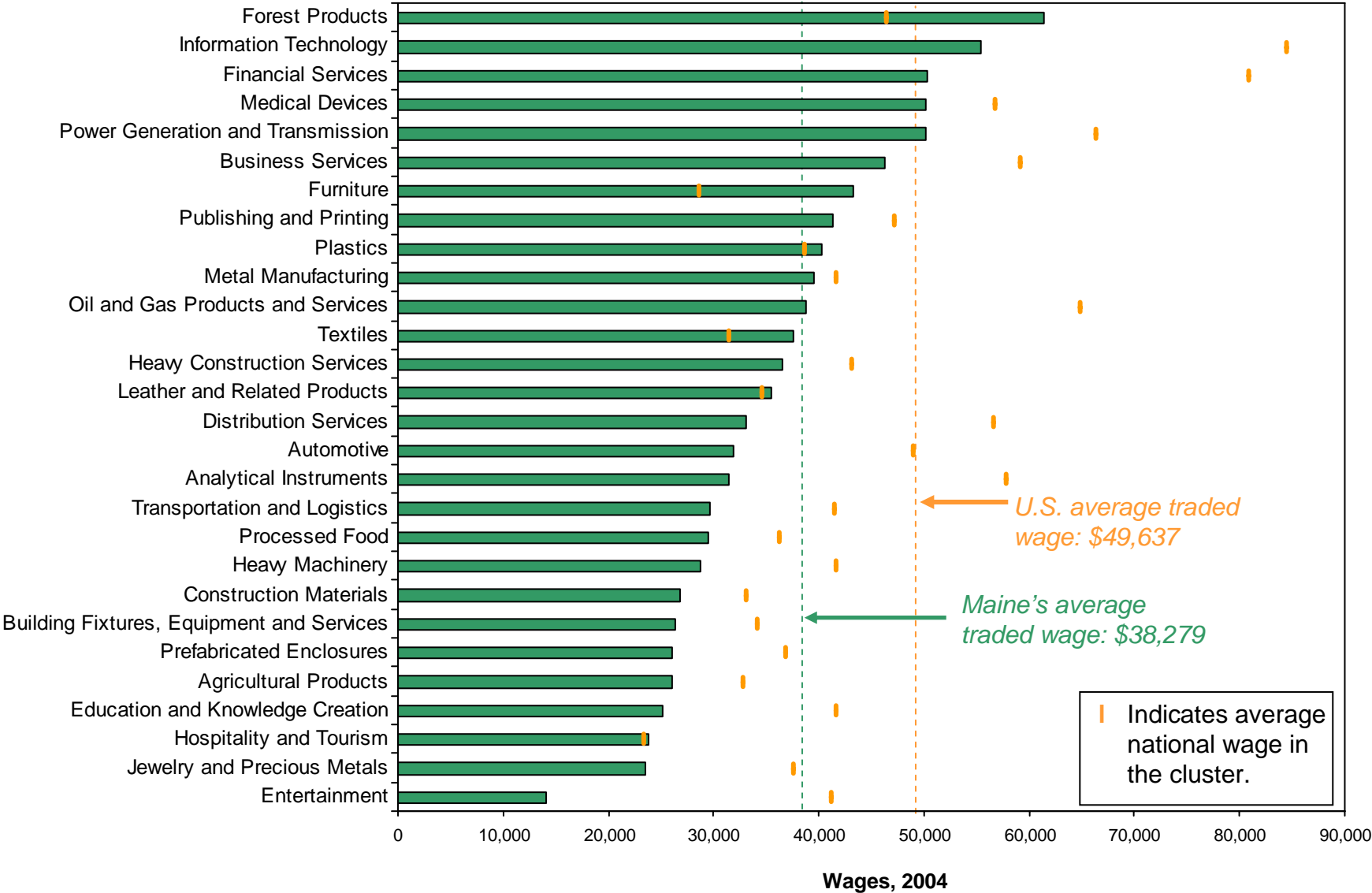


\* Percent change in national benchmark times starting regional employment. Overall traded job creation in Maine, if it matched national benchmarks, would be +8,683.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

# Maine

## Wages by Traded Cluster vs. National Benchmarks



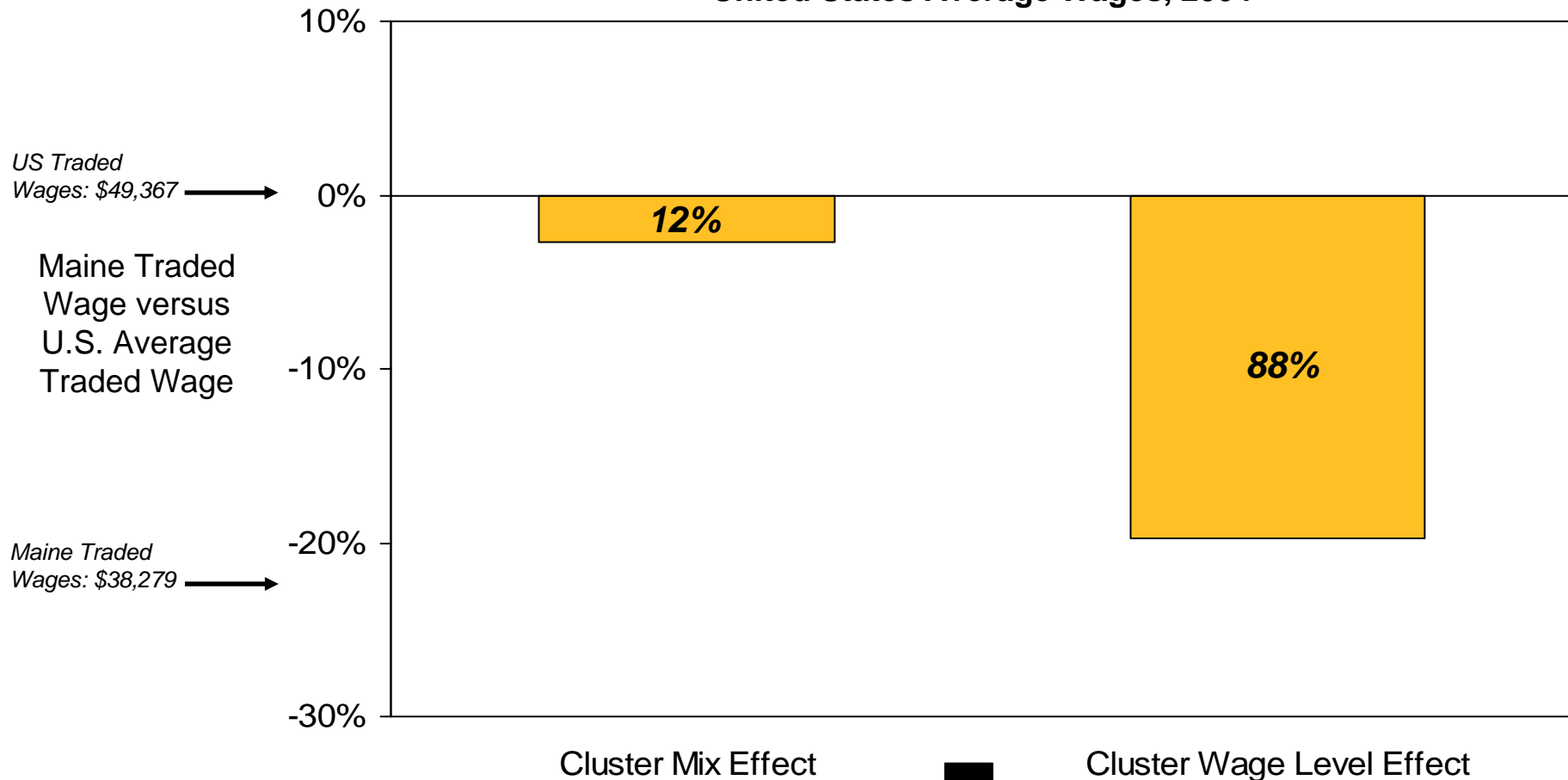
Note: Wage data not available in all cluster due to suppression in data sources.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

# Impact of Cluster Mix on Average Wages

## Maine's Traded Clusters

Impact of Cluster Mix and Wage Level on the Gap between Maine and United States Average Wages, 2004

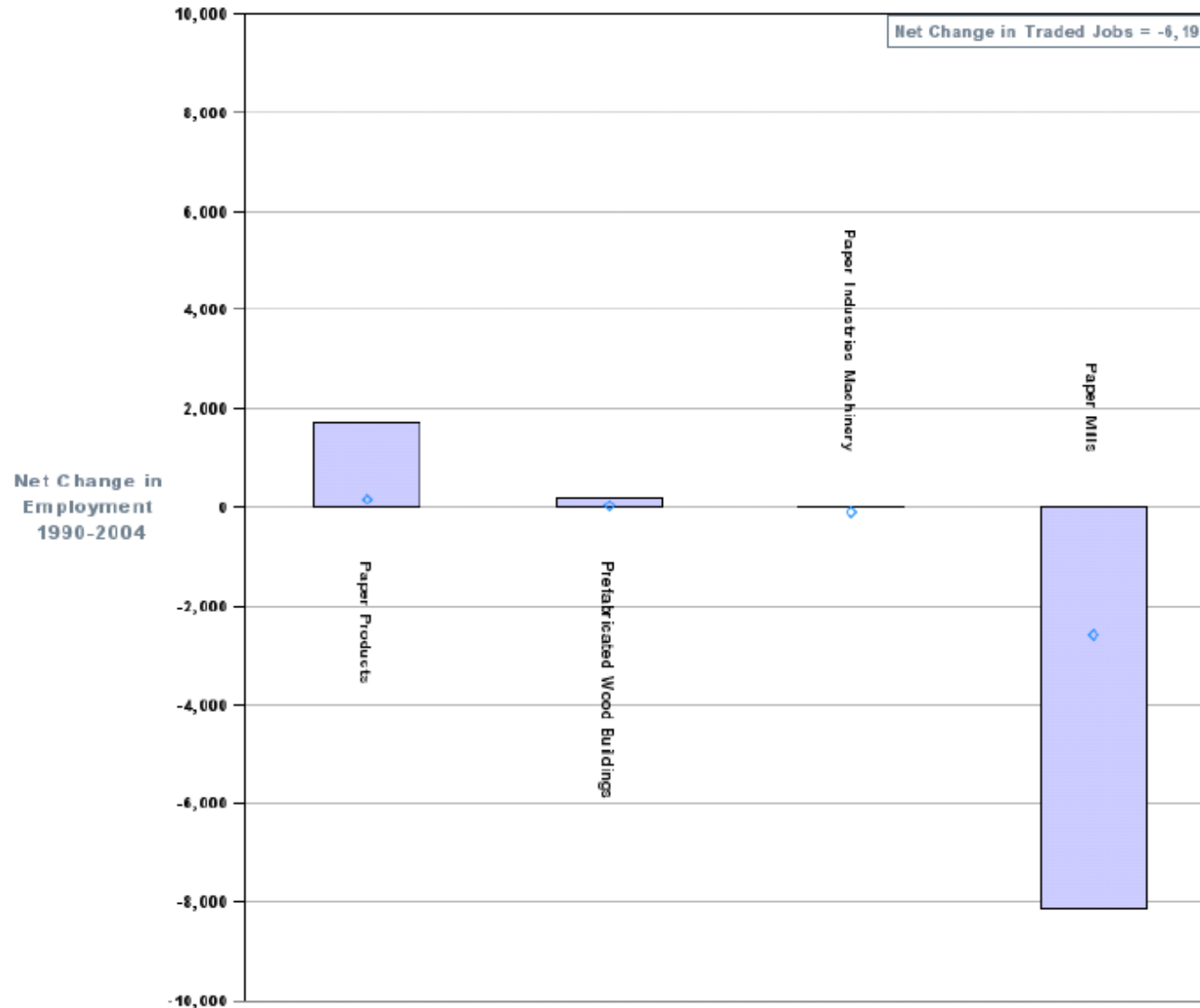


**Employment in clusters with low average wages accounts for only 12% of the difference**

Note: Assumes average wages of reported employment are representative of average wages for all employment in a cluster  
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Maine Forest Products Cluster

## Job Creation by Subcluster, 1990-2004



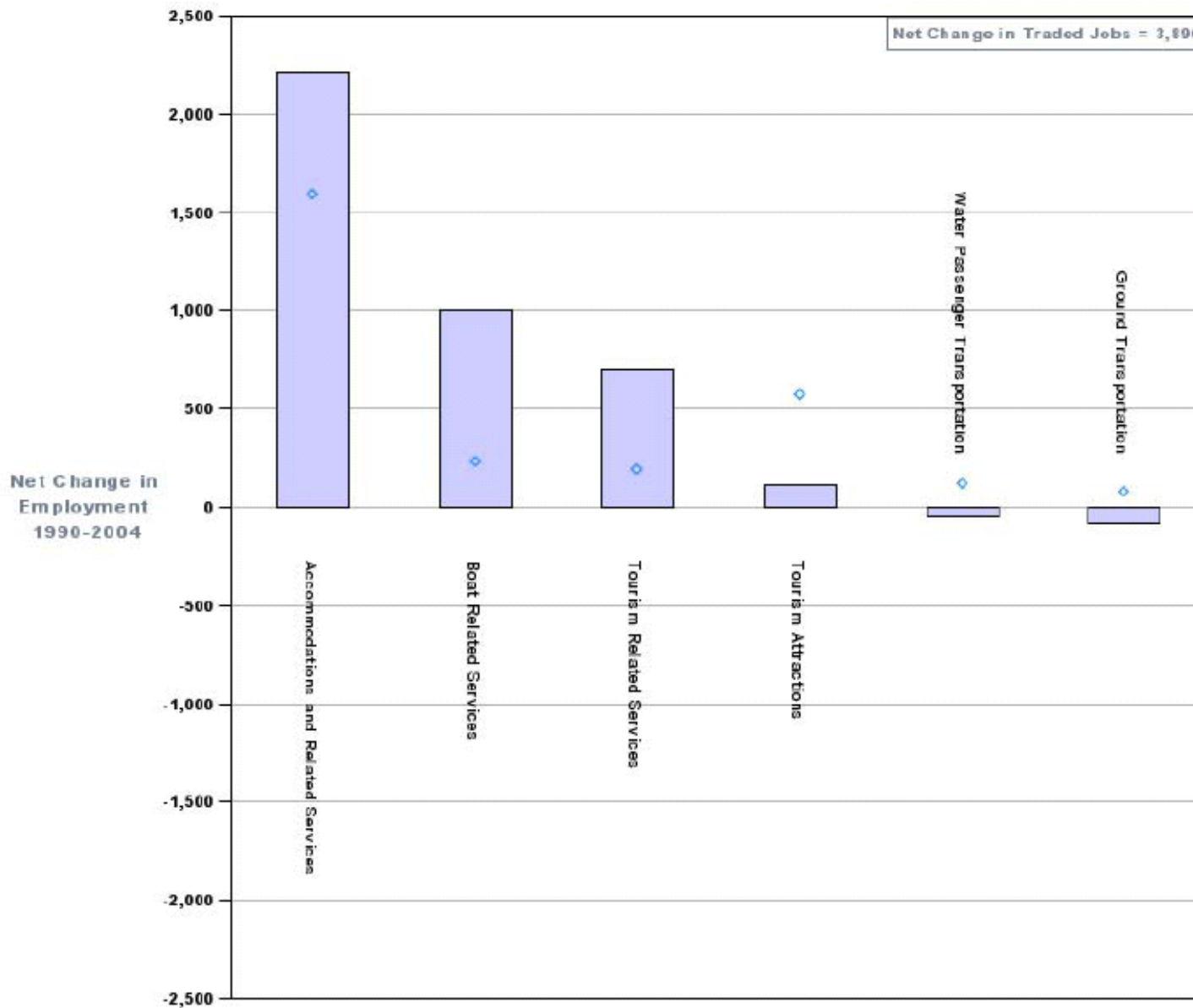
◇ - Indicates expected job creation given national subcluster performance

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

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# Maine Hospitality and Tourism Cluster

## Job Creation by Subcluster, 1990-2004



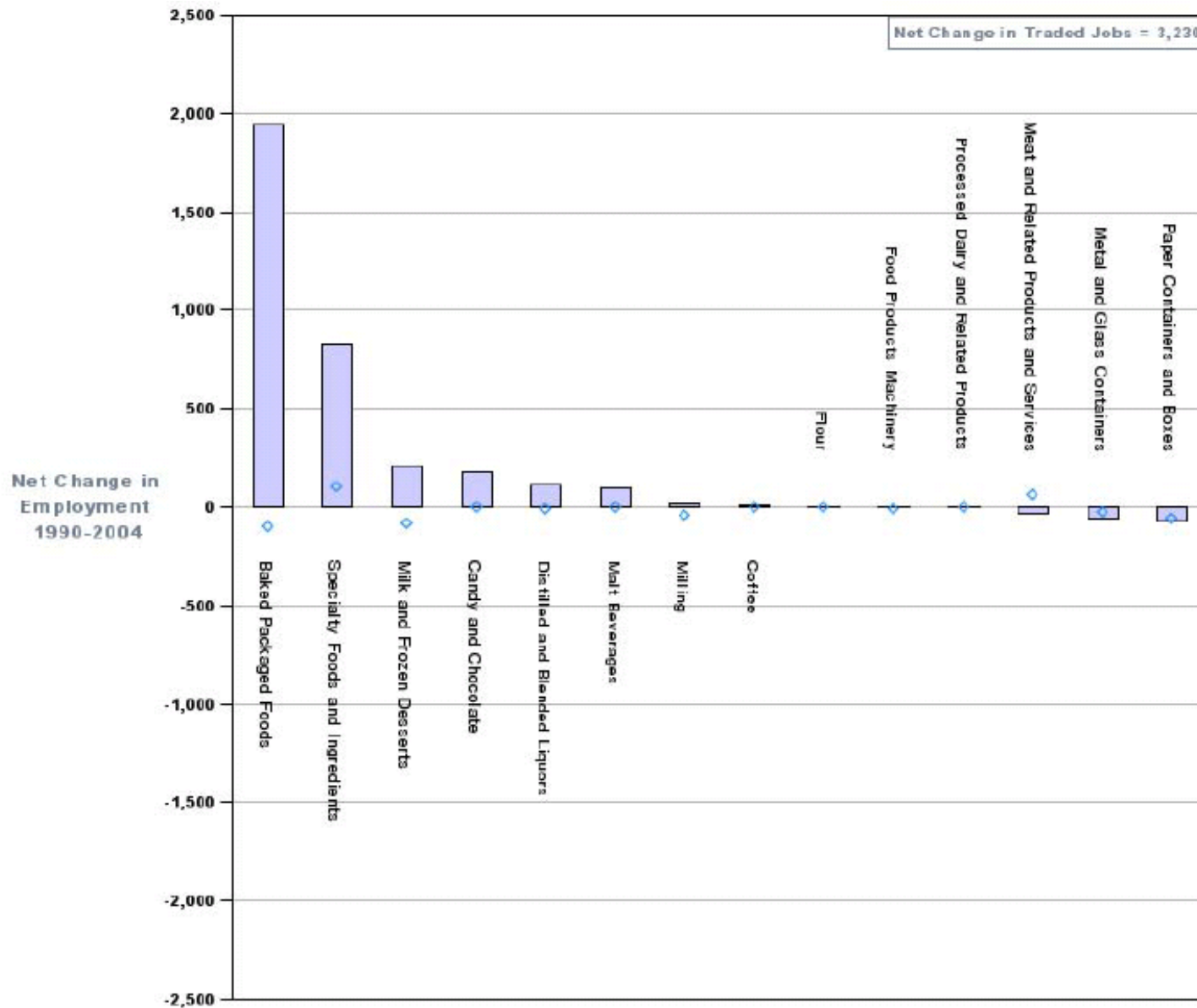
◆ - Indicates expected job creation given national subcluster performance

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

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# Maine Processed Food Cluster

## Job Creation by Subcluster, 1990-2004



◆ - Indicates expected job creation given national subcluster performance

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

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# The Process of Economic Development

## Shifting Roles and Responsibilities

### Old Model

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



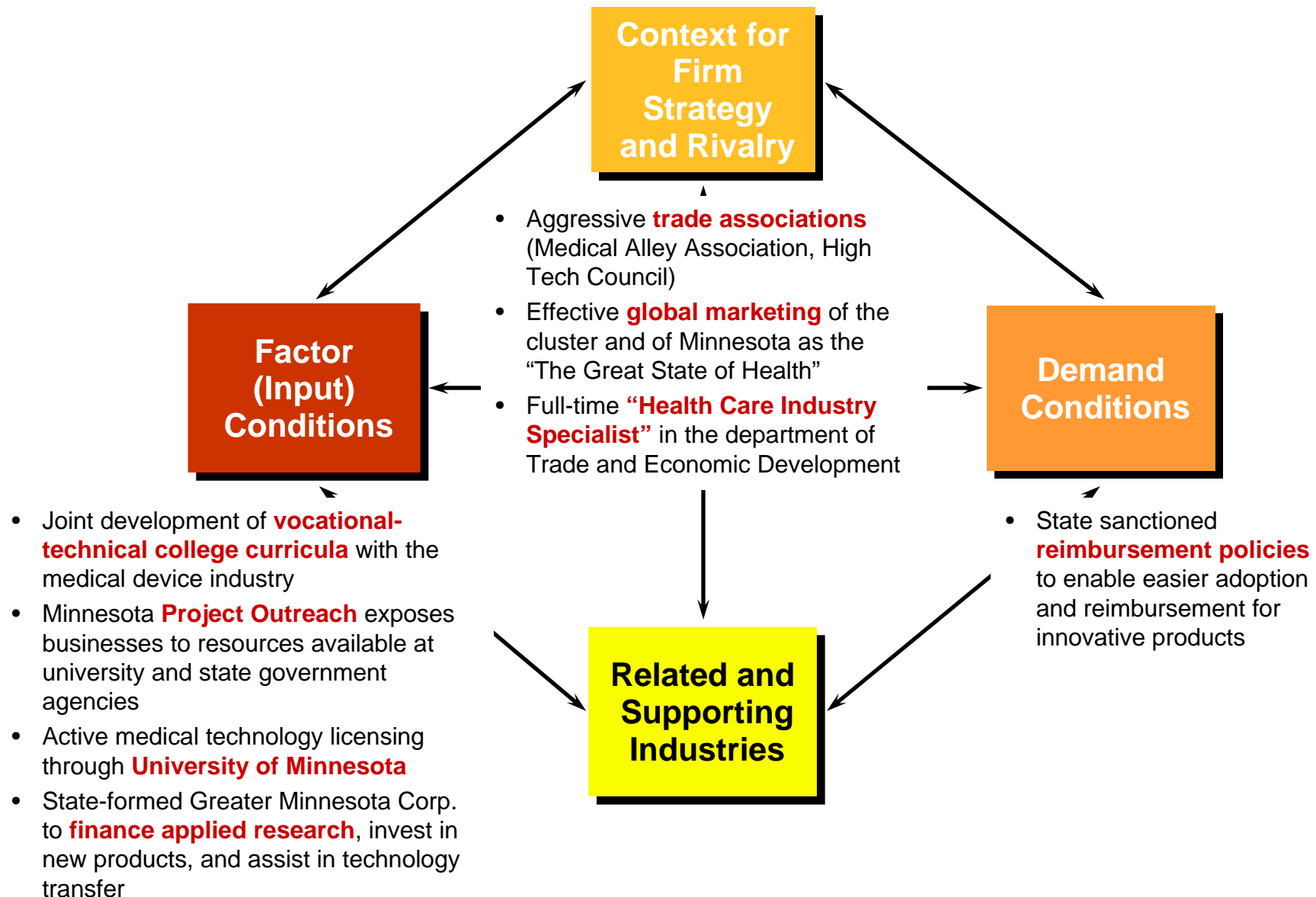
### New Model

- Economic development is a **collaborative process** involving **government at multiple levels**, companies, teaching and research institutions, and institutions for collaboration

- Competitiveness must become a **bottoms-up process** in which many individuals, companies, and institutions take responsibility
- **Every** community and cluster can take steps to enhance competitiveness

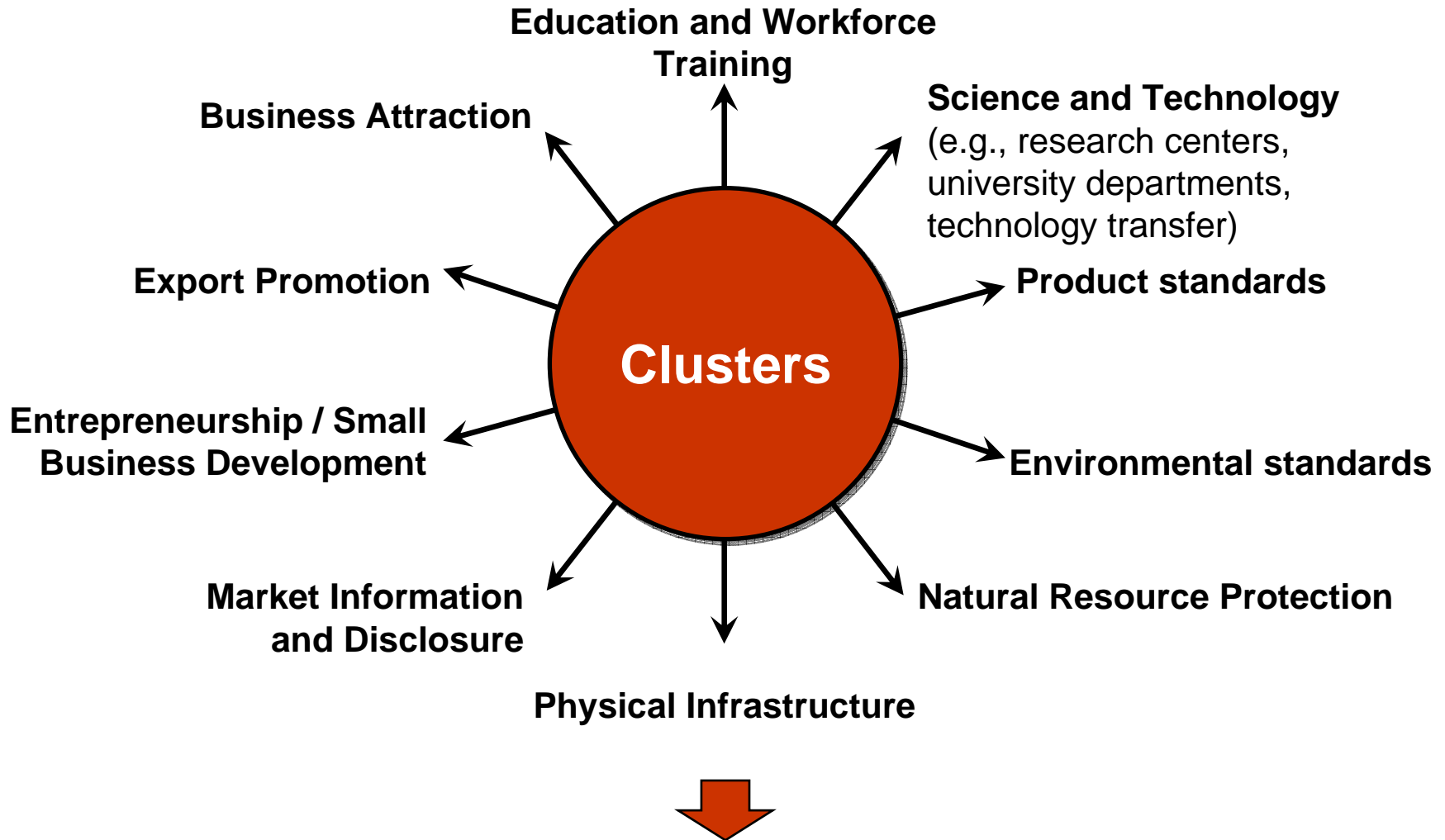
# Public / Private Cooperation in Cluster Upgrading

## Minnesota's Medical Device Cluster





# Clusters and Public Policy



- Clusters provide a framework for **organizing the implementation** of public policy and public investments towards economic development