The U.S. Cluster Mapping Project:
Tools for Regional Economic Competitiveness

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What Determines Competitiveness?

Microeconomic Competitiveness
- Quality of the National Business Environment
- State of Cluster Development
- Sophistication of Company Operations and Strategy

Macroeconomic Competitiveness
- Macroeconomic Policies
- Social Infrastructure and Political Institutions

A critical mass of interconnected firms and associated institutions in particular fields, linked by commonalities and complementarities.

Endowments
The Evolution of Regional Economies
San Diego

Climate and Geography

Hospitality and Tourism

Transportation and Logistics

Power Generation

Aerospace Vehicles and Defense

Communications Equipment

Analytical Instruments

Education and Knowledge Creation

Bioscience Research Centers

Medical Devices

Information Technology

Sporting Equipment

Biotech / Pharmaceuticals

Education and Knowledge Creation

Quality of the Business Environment

Factor (Input) Conditions

- Access to high quality business inputs
  - Human resources
  - Capital availability
  - Physical infrastructure
  - Administrative and information infrastructure (e.g., registration, permitting, transparency)
  - Scientific and technological infrastructure
  - Efficient access to natural endowments

Demand Conditions

- Sophisticated and demanding local customers and needs
  - e.g., Strict quality, safety, and environmental standards
  - Consumer protection laws

Related and Supporting Industries

- Availability of suppliers and supporting industries

Context for Firm Strategy and Rivalry

- Local rules and incentives that encourage investment and productivity
  - e.g., salaries, incentives for capital investments, intellectual property protection, corporate governance standards
- Open and vigorous local competition
  - Openness to foreign competition
  - Competition laws

Many things matter for competitiveness

Successful economic development is a process of successive upgrading, in which the business environment improves to enable increasingly sophisticated ways of competing
Composition of Regional Economies, United States

Local Clusters
- Serve almost exclusively the local market
- Not exposed to cross-regional competition for employment

- 71.7% of employment
- 61.8% of income
- 3.5% of patents

Traded Clusters
- Serve markets in other regions and countries
- Free to choose location
- Exposed to competition from other regions

- 27.4% of employment
- 37.3% of income
- 96.4% of patents

Resource-based Clusters
- Location determined by resource availability
- <1% of income, employment, and patents in the U.S.

Specialization of Regional Economies
Leading Clusters by U.S. Economic Area

Composition of the Economy
Linkages Across Clusters

Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions.
Competitiveness and Composition of MSP Metro Area
Linkages Across Traded Clusters, Location Quotients, 2008

Location Quotient = MSP Industry Job Share / US Industry Job Share

Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions. Source: Michael Porter's Cluster Mapping Tool
Industry Clusters in the MSP Region: A Dynamic Ecosystem

Current strengths, emergence and change, and key selected clusters (1998-2008)

- RCM targeted clusters
- Emerging clusters of interest
- Other clusters


Location Quotient: MSP industry employment share over 1 (US Share) indicates regional specialization.

Clusters and Regional Prosperity
Recent Findings

Drivers of Regional Job Growth, Wages, Patenting, New Business Formation, and Success of Startups

- Specialization in strong clusters
- Breadth of position within each cluster
- Positions in related clusters
- Presence of a region‘s clusters in neighboring regions

Not significant
- Positions in “high-tech“ versus other clusters

Clusters as a Tool For Economic Policy

• A forum for **collaboration** between the private sector, trade associations, government, educational, and research institutions

• Brings together **firms of all sizes**, including SME’s

• Creates a **mechanism** for **constructive** business-government dialog

• A tool to identify **problems** and **action recommendations**

• A vehicle for investments that strengthen **multiple firms/institutions** simultaneously

• Fosters **greater competition** rather than distorting the market
Cluster Mapping Research and Publication
- Understand interaction of business environment quality and clusters
- Measure cluster Initiative performance

The Practice of Cluster-Based Economic Development
- Learn from the successes and struggles of cluster efforts in four regions
- Assemble a toolkit of accumulated learnings

Outreach
- Support professional development for cluster practitioners

New Website
- Engage new and experienced practitioners
- Make connections and build learning community among practitioners
- Extend data, regional coverage and analytics