

The Economics of Clusters

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IMPRESA

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Clusters

- Ideas
- Relationships
- Place

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Outline

- Defining Clusters
- Different Kinds of Clusters
- Why Cluster?
- Your Clusters

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What Kind of Economy?

- While most jobs and businesses in every state area are the same
- Restaurants, grocery stores, hospitals, beauty salons
- About a third differs: Traded sector

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Traded Sector Drives Growth

Most jobs are here: schools, hospitals, grocery stores, restaurants



But firms in this sector drive the economy

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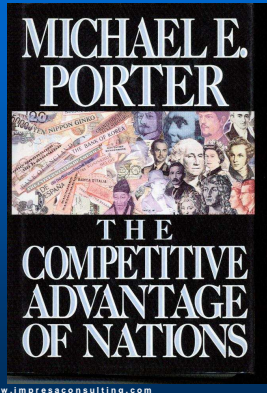
I. Cluster History & Definitions

What are they? Who defines them?



Porter: Clusters

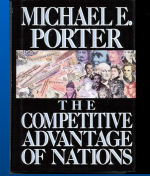
- Starts from the business strategy standpoint
- Rediscovered A. Marshall ca. 1890
- Popularizes clusters



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Essential Observations

- Economic success isn't random
- Similar and related businesses draw advantages from proximity
- Clustering holds for most "traded" goods: autos, carpets, RVs, others



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Many Schools of Thought

- Neoclassical economics
- Regional Science
- Urbanism
- Industrial Organization
- Business Strategy
- Geography and Urban & Regional Planning
- New Economic Geography
- Urban Economics
- Economic Development Practitioners

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Clusters: A Framework

- An organizing principle for engaging a region in a discussion of its economic strengths and weaknesses
- A flexible tool at the intersection of analysis and policy-making

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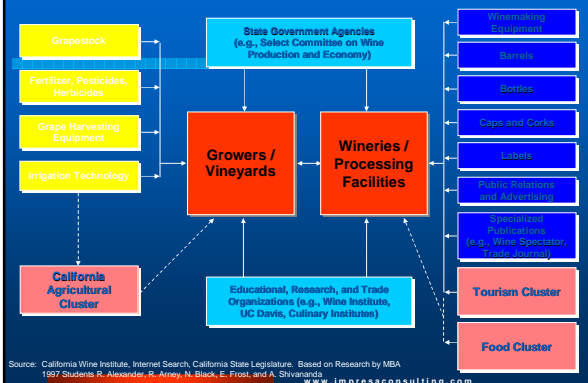
Definition

Clusters are geographic concentrations of interconnected companies and institutions in a particular field, including:

- suppliers of specialized inputs, machinery, services
- distribution channels and customers
- manufacturers of complementary products
- companies related by skills, technologies or common inputs
- related institutions such as research organizations, universities, standard-setting organizations, training entities, and others

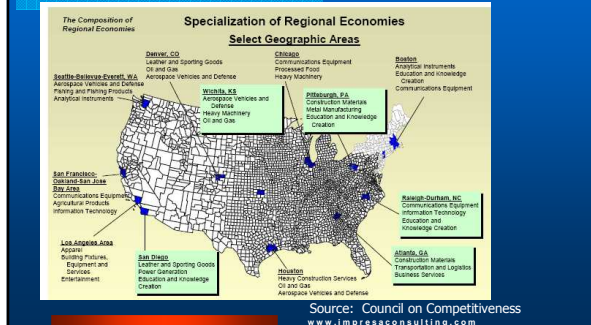
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California Wine Cluster



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.
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Specialization of Clusters



Cluster Characteristics

- Firms
- Related & supporting Industries
- Institutions
- Workers
- Customers
- “Upgrading” advantage, dynamism

Typologies of Clusters

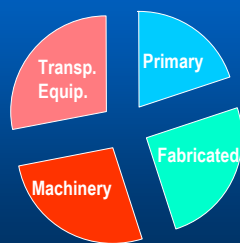
- Buyer-supplier and value chain
- Inter-firm relationships
- Geographic extent
- Cluster life cycle
- Other issues (Awareness)

Types of Clusters

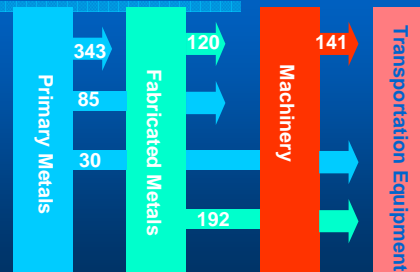
- Buyer-supplier/value chain
- Cultural network
- Customer driven
- Knowledge spillover

Metals Industry

- Core sectors: primary & fabricated metals, machinery & transportation equipment
- 1,700 firms with payroll
- 55,000 employees
- \$2 billion payroll
- Average salary: \$35,000



Metals Industry Value Chain



Estimated Inter-Industry Purchases, \$ Millions

Labor Market Pooling

- Broadly characterizes all clusters
- Hollywood—Silicon Valley—Garment District
- Three components
 - Attract skills
 - Develop skills
 - Lower risk

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Cultural Networks

- Italian Industrial Districts
- Lots of small firms collaborating, strong ethic of inter-industrial cooperation, often very local
- Hollywood as a network model
- Oregon nursery industry

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Customer Driven

- Oregon Nursery Industry
- Economies of Scope for Buyers
- 1,000 + producers;
- Comparison shopping advantages

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Knowledge Spillovers

- Firms learn from one another
- Silicon Valley
- Biotech

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Stages of Clustering

- Concentrations of firms and workers
- Awareness, conscious action & communication
- Formal organization

A Cluster Continuum



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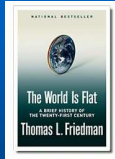
Cluster Life Cycle

- Potential
- Emerging
- Mature

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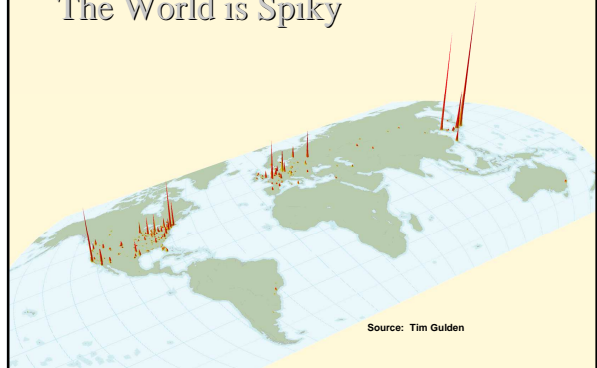
“The World is ^{not} Flat”

- It isn't so much that the US competes against China and India
- Regions compete against other similar regions
- In high tech, San Jose & Austin compete against Bangalore and Guangdong



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The World is Spiky



Source: Tim Gulden

Clusters Meet Globalization

- **Buzz and Pipelines**
... the co-existence of high levels of buzz and many pipelines may provide firms located in outward looking and lively clusters with a string of particular advantages not available to outsiders ...

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Micro-foundations of Clusters

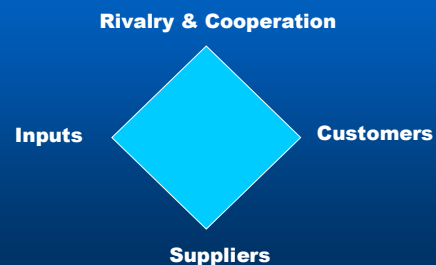
- Labor Market Pooling
- Supplier Specialization
- Knowledge Spillovers
- Entrepreneurship
- Path Dependence and Lock-In
- Culture
- Local Demand

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II. Why Cluster?

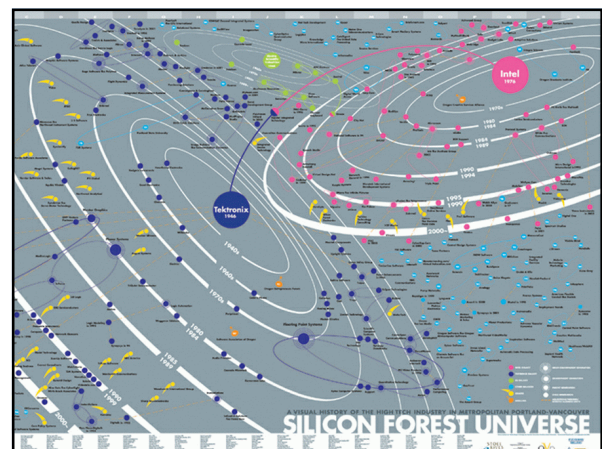
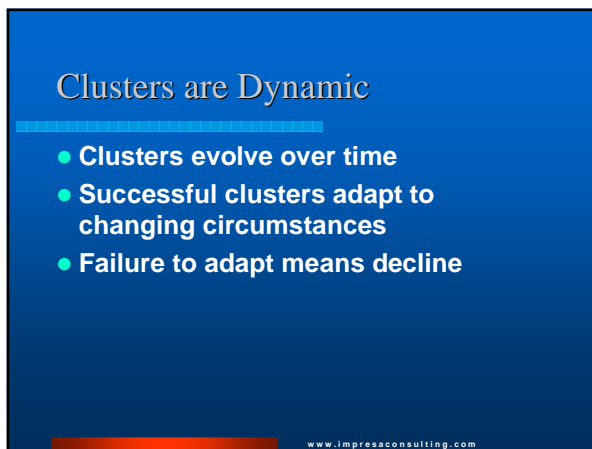
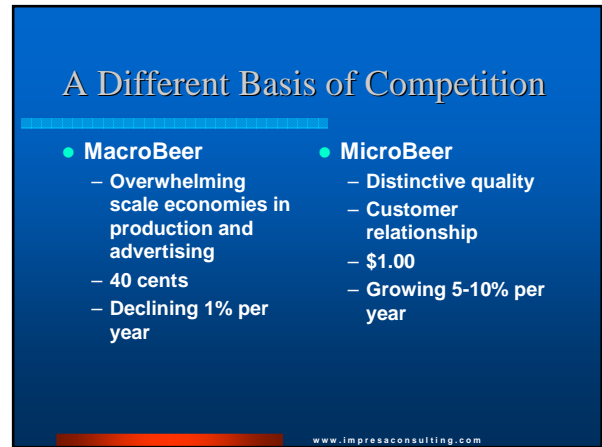
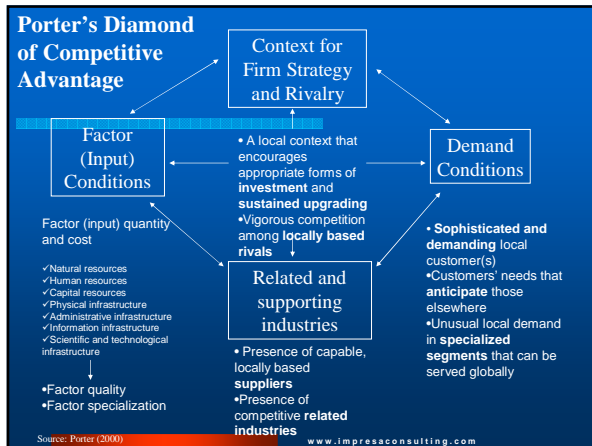
Why should businesses care?

What makes Clusters Tick?



Source: Michael Porter, Harvard Business School

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Remember

Clusters are about three things:

- Ideas
- Relationships
- Place

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