

## A Cluster-Based Economic Development Approach

Clusters are geographically concentrated cooperation networks of interdependent firms, research and development institutions, and other intermediary actors (such as universities, economic or regional development agencies, chambers, etc.), where the close contacts of the members and the continuous, fast knowledge exchange between them contribute to the competitive increase of both the members and the whole region. Industry clustering is a powerful framework for regional economic development because it captures economic relationships among specific industry sub-sectors, and it provides a set of tools to help define economic development strategies.

In a cluster, firms and others within a concentrated geographical area are cooperating toward common goals, and establishing close linkages and working alliances to improve their collective competitiveness. An active clustering agenda facilitates the integration of what would otherwise be a clump of co-located firms and organizations into a high performance system. Optimization is at a system, rather than individual organization, level. An active local cluster includes firms and support organizations working together to achieve results that would not be possible individually.

A key component of any high performance cluster is extensive informal and formal networking between firms—even competitors—across the cluster, and between firms and their supporting infrastructure. Soft networks (such as local professional and trade associations) and hard networks (strategic alliances between firms) are both important, and their development is supported by a local culture that enables both competition and cooperation to thrive. Active clustering is “co-opetition,” a combination of competition and cooperation that is more sophisticated than most notions of rivalry within an industry, and more appropriately captures the nuances of company interactions within a region. Companies in cluster working groups, as are implemented in the Prosperity Partnership, often begin to see that firms once considered direct competitors are actually in slightly different market niches, and that many opportunities for joint work effort exist, even while there will continue to be rivalry in some dimensions. Every jurisdiction whether it is a nation, state or region has a set of unique local conditions that underpin the ability of its companies to compete in an industry. The competitive advantage of a location does not normally arise in isolated companies but in clusters of companies. These firms are in the same or related field, or are linked by buyer-seller relationships, common customers, or other relationships. An industry cluster is a group of companies that rely on an active set of relationships among themselves for individual efficiency and competitiveness. These relationships have four prominent characteristics:

1. *Buyer-Supplier Relationships.* Core companies produce goods and services that are sold to final consumers, generally exported outside the region.
2. *Competitor and Collaborator Relationships.* Companies produce the same or similar goods and services at a specific level in the value chain.
3. *Shared-Resource Relationships.* These relationships exist when firms rely on the same sources of raw materials, technology, human resources and information, even though they may use these resources to produce goods and services for very different markets.
4. *Critical Mass of Competitiveness Factors.* Critical masses of information, skills, relationships, and infrastructure accrued in a particular field.

One of the central tenets of the cluster-based model of economic development is that the most economically successful regions have managed to knit together companies, teaching and research institutions, and government at multiple levels to create a uniquely competitive industry. Professor Michael Porter of Harvard Business School introduced the concept of “institutions for collaboration” to represent the myriad public, private, and quasi-public entities that are the glue that effectively binds the cluster together. Competitive advantage is not created within a single firm alone. Efficiency in internal operations is a necessary but not sufficient condition to compete globally. Factors external to the business, but internal to the regional economic foundation, are increasingly important for the creation of competitive advantage. Each firm is part of a “cluster” of interrelated firms, suppliers, customers, and service providers, as well as supporting organizations (human resources, R&D, finance, infrastructure, and regulatory environment).

According to Porter, clusters increase productivity and efficiency by providing:

- Efficient access to specialized inputs, services, employees, information, institutions and “public goods” (e.g., training programs)
- Ease of coordination and transactions across firms
- Rapid diffusion of best practices
- Ongoing, visible performance comparisons and strong incentives to improve vs. rivals

Clusters stimulate and enable innovations by:

- Enhancing ability to perceive opportunities for innovation
- Improving the presence of multiple suppliers and institutions to assist knowledge creation
- Easing experimentation given locally available resources

Clusters facilitate commercialization:

- Opportunities for new companies and new lines of established business are more apparent
- Commercialization of new products and starting new companies is easier because of available skills, suppliers, etc.

## DATA SOURCES & METHODOLOGY

The process of identifying Alaska's clusters begins with the iterative analysis of detailed sector data, including employment, wages, productivity and sales. Our Business Market Insight (BMI) database and the U.S. Census' County Business Patterns database together form the key data sources, but specialized company databases are also used. Key indicators are evaluated to select and group industries that are defined by industry classifications.

It is important to note that not all industries will be part of a cluster—nor should they be. Clusters are important for their ability to drive economic growth in a region. To that end, they all have the characteristic that they can or do export goods and services outside of the region in which they exist. In all regions, several large industries are primarily local-serving.

Education, health services, government services, and local business and personal services are important industries, and are often some of the largest employers in a region. However, their focus is usually centered around serving the local population and economy. These industries are therefore more a product of the local economic growth than a cause of it.

This is not to say that local-serving industries are not important— in fact they are some of the most vital services in an area. Nevertheless, the strategies for their development are not the same as cluster strategies. Some of these industries are important in their role as economic foundations, underpinning the basic regional infrastructures that clusters must have in order to develop vibrantly.