

17. Southeast Alaska Industry Clusters

Cluster Development Overview

An “economic cluster” is a set of businesses, in the same or related field and located near one another, which are linked by service or supplier relationships, common customers and supporting institutions or other relationships. They compete with one another but also complement one another. Overall, however, they draw productive advantage from their mutual proximity and connections, as concluded by a review of the academic literature on industry clusters conducted by the Brookings Institution (2006).¹ Cluster firms may use similar technologies and/or serve similar markets. They share reliance on regional knowledge and on the regional labor market. In regions where cluster strategies have been employed for economic development, groups of businesses have collaborated through a regional trade association or other network to address common problems, or to lobby or market for the cluster as a whole.

In a geographic region where cooperative relationships have not been identified or established, cluster development promotes economic integration and cohesion for an industry through cooperative efforts by business, state and local government, educational institutions, and non-profit sectors for the economic benefit of the entire cluster and the region as a whole. Engaging an industry through active clustering creates 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.

Methodology

The process of identifying Southeast Alaska's clusters began with the analysis of the asset mapping data to calculate an economic concentration ratio for clusters of activity in the region. In general, an economic concentration ratio is a ratio that compares the concentration of a resource or activity, such as employment, in a defined area to that of a larger area or base. The economic concentration ratio is a measure that is used by regional labor economists as a way to compare the industrial activity levels among different areas of the country. JEDC gathered data on employment and wages at the NAICS industrial classification level in Southeast and then compared the concentration of employment to the national concentration for the same NAICS classification to generate the economic concentration ratio. The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data

¹ Joseph Cortright, *Making Sense of Clusters: Regional Competitiveness and Economic Development*, (The Brookings Institution, 2006)

related to the U.S. business economy. In order to identify established and emerging regional industry clusters, we next grouped NAICS codes together into similar industries and then compared employment concentration with growth prospects. The following chart shows each cluster of economic activity, its respective NAICS composition, and its employment, wages, economic concentration ratio and compound annual growth rate (based on U.S. national trends).

The employment concentration is the most important aspect of this analysis. A concentration ratio of larger than 1 suggests that the cluster is more concentrated in the region than it is nationally. Further, a ratio of greater than 1 implies that the industry produces more goods and services than required to meet the demands of the local market. More than likely, the industry is exporting the good or service out of the region due to a strong competitive position in national and/or international markets.

Southeast Alaska Annual Private Sector Employment: Select Clusters

Cluster/Industry Name	NAICS Industry Code	Annual Average Monthly Employment 2003	Annual Average Monthly Employment 2009	SE Businesses 2009	SE Wages 2009	Avg. SE wage 2009	Economic Concentration Ratio	US Compound Annual Growth Rate 2009-2019
Seafood		3,680	3,845	2,396	199,896,080	\$51,989	85.2	0.4%
Animal aquaculture	1125	136	131	16	4,827,371	\$36,968	79.6	-0.4%
Seafood product preparation and packaging	3117	1,413	1,390	44	43,763,787	\$31,487	133.7	1.0%
Fish and seafood merchant wholesalers	424460	52	43	20	2,246,922	\$52,052	6.8	0.3%
Fishing	na	2,079	2,281	2,316	149,058,000	\$65,338	na	0.0%
Boating/Ship Building		140	254	24	12,090,194	\$47,662	4.7	-1.1%
Ship and boat building	3366	60	195	8	9,996,085	\$51,262	5.4	-1.1%
Boat dealers	441222	60	39	12	1,487,906	\$38,647	4.2	1.3%
Marinas	713930	20	20	4	606,203	\$30,060	2.4	1.0%
Transportation and Tourism		3,175	3,225	312	109,505,610	\$33,953	2.8	0.9%
Air transportation	481	702	716	39	26,690,965	\$37,295	5.5	0.7%
Water transportation	483	262	268	19	15,859,978	\$59,124	15.2	0.3%
Truck transportation	484	189	214	21	8,497,920	\$39,787	0.6	1.0%
Scenic and sightseeing transportation	487	488	727	100	25,185,358	\$34,639	98.0	1.6%
Support activities for transportation	488	321	207	26	10,300,807	\$49,762	1.4	0.0%
Accommodation	721	1,213	1,094	107	22,970,582	\$21,005	2.2	0.5%
Mining	21	291	413	14	37,980,160	\$91,962	2.3	-1.6%
Social Assistance	624	1,155	1,344	85	34,797,825	\$25,896	2.0	2.8%

Cluster/Industry Name	NAICS Industry Code	Annual Average Monthly Employment 2003	Annual Average Monthly Employment 2009	SE Businesses 2009	SE Wages 2009	Avg. SE wage 2009	Economic Concentration Ratio	US Compound Annual Growth Rate 2009-2019
Forestry and Logging		510	238	32	11,759,446	\$49,375	2.0	1.3%
Logging	1133	371	158	17	8,261,299	\$52,149	11.6	2.0%
Support activities for forestry	1153	20	24	6	1,374,076	\$56,858	6.0	0.6%
Wood product manufacturing	321	119	56	9	2,124,071	\$38,214	0.6	-0.8%
Arts, Entertainment, and Recreation	71	653	849	102	16,392,498	\$19,310	1.6	1.4%
Real Estate and Rental and Leasing	53	419	553	93	20,967,669	\$37,933	1.0	1.1%
Construction	1012	1,748	1,436	304	87,105,638	\$60,648	0.9	1.7%
Energy		338	329	38	11,447,202	\$34,768	0.9	0.7%
Petroleum merchant wholesalers	4247	101	87	7	2,739,930	\$31,554	3.2	-0.2%
Gasoline stations	4471	143	154	23	3,358,353	\$21,796	0.7	1.2%
Power generation and supply	2211	94	88	8	5,348,919	\$60,554	0.8	0.6%
Advanced Business Services		2,582	2,856	442	120,487,309	42,195	0.4	1.4%
Electronic markets and agents and brokers	425	18	24	10	892,796	\$37,991	0.1	0.5%
Information	1022	503	561	59	23,819,421	\$42,453	0.7	0.4%
Telecommunications	517	156	224	29	13,997,986	\$62,468	0.8	-0.9%
Professional, Scientific and Tech Services	54	585	632	148	26,423,899	\$41,810	0.1	3.8%
Management of Companies and Enterprises	55	84	50	5	5,453,783	\$109,076	0.3	6.2%
Financial Activities	1023	1,211	1,319	190	56,811,801	\$43,088	0.8	0.5%
Administrative and support services	561	614	589	116	18,562,435	\$31,529	0.3	1.6%
Health Care		2,080	2,232	134	103,951,255	\$46,570	0.6	2.2%
Ambulatory health care services	621	1,024	1,035	114	41,275,275	\$39,889	0.6	3.1%
Hospitals	622	762	857	4	50,757,427	\$59,227	0.7	1.1%
Nursing and residential care facilities	623	294	340	16	11,918,553	\$35,012	0.4	1.9%

Sources: Alaska Department of Labor, U.S. Bureau of Labor Statistics, JEDC Analysis



Cluster Identification

The table above shows that there are 12 identified clusters of economic activity in Southeast Alaska, representing 74% of total private sector jobs. Each of these has a unique combination of employment concentration and industry growth. One useful means of differentiation is to chart clusters according to market growth potential for the next decade and competitive market position, as measured by employment concentration. In the chart below, the compound annual growth rate for U.S. industries is found along the horizontal axis. Growth rates for each cluster are calculated as the weighted average of the individual NAICS components. Growth rates range from a high of 2.8% for social assistance, to a negative rate of growth of -1.6% for mining. Economic Concentration Ratio (a.k.a Location Quotient) is measured on the vertical axis. Here seafood takes top position with a concentration of 85.2, while advanced business services is the most under-represented in employment in the region with a concentration of only 0.4. The chart also shows relative employment in each cluster by the size of the individual "bubbles." The industry with the greatest average monthly employment is seafood with 3845 while the industry that employs the fewest Southeast residents is forestry and logging at 238 (smaller private industries are not included in this analysis). The chart identifies the region's strengths relative to the growth prospects for each industry cluster. Using terminology pioneered by the consulting firm IHS Global Insights, as presented in the *Alaska Forward: Phase 1 Situation Analysis* prepared for the State of Alaska, the region's clusters can be identified as "Star," "Opportunity," "Mature" and "Challenge." As explained by IHS Global Insights:

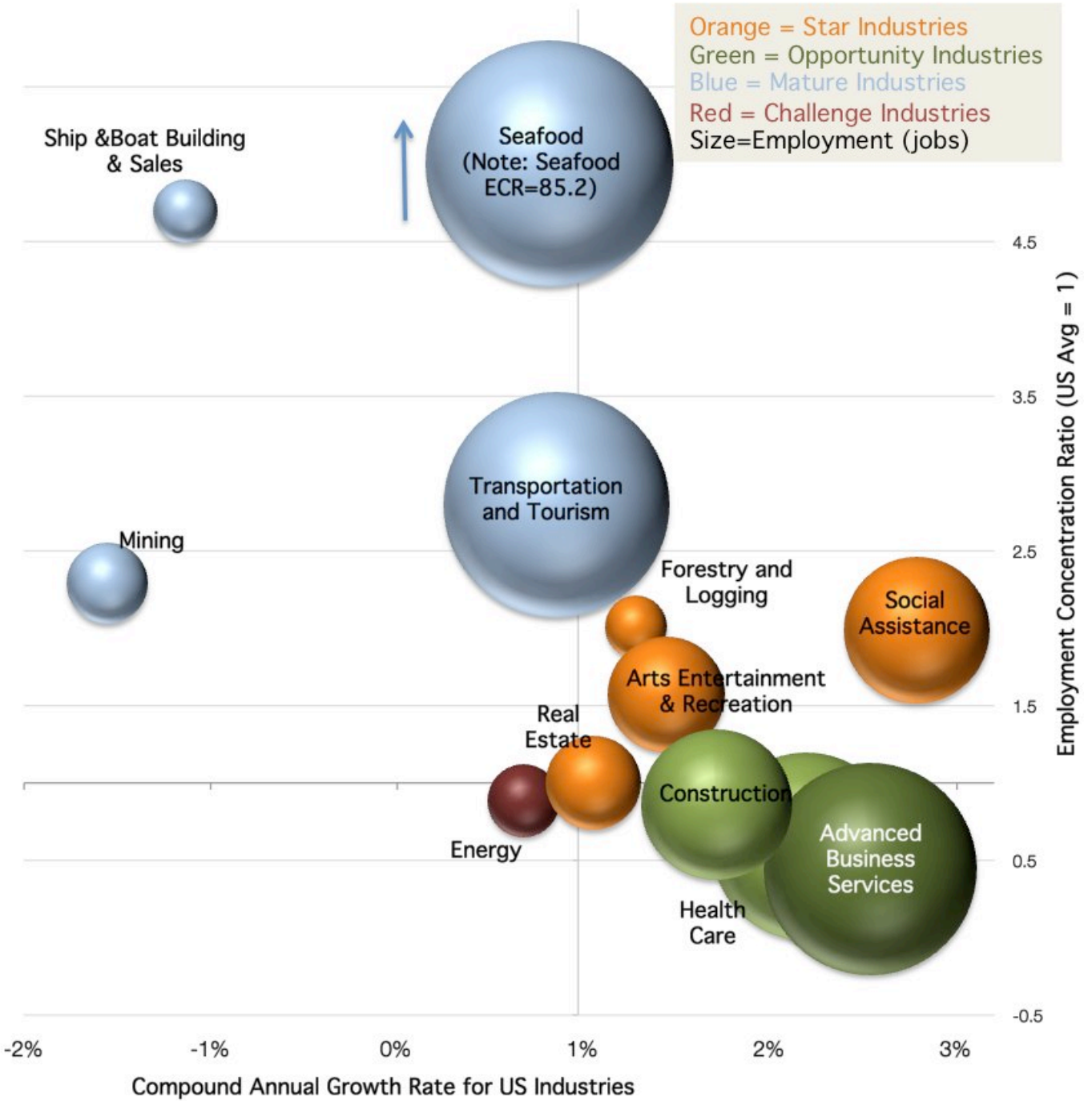
Star Clusters represent the key areas of focus. These clusters represent businesses in which a region has some capability, but also ones that will experience above-average growth over the next decade. Clusters in this quadrant have been competitive in markets that continue to hold good future prospects. A region should continue to emphasize these clusters as key sectors for development.

Opportunity Clusters tend to face above-average national demand growth, but have not yet achieved significant mass in a region. Clusters in this quadrant would benefit from a recruitment and enterprise formation process that would harness existing demand, leading to the creation of new jobs in a region.

Mature Clusters are the basis of a region's historical strengths, but they are facing slow-growing markets. Although these clusters have strong capabilities in a region, the low market attractiveness means that they can maintain the status-quo, downsize, or transform their focus into new markets. These clusters are assets in a region's portfolio and require a great deal of investment to achieve a desired level of growth. There has long been extensive employment and specialization in these clusters, but they have had difficulties in competing with other regions and face uncertain global markets. These clusters probably have the greatest need for undertaking collaborative cluster initiatives that will help them understand market requirements, improve production capabilities, enhance worker productivity, and innovate in marketing and distribution.

Challenge Clusters have some strength in the region, but they are not a dominant capability compared to other regions. In addition, the traditional markets for these clusters are growing much slower than average. Here, the strategic focus should be on catching opportunities that might emerge in the region, such as "spin-offs" from existing companies, or a special case where a firm has "discovered" the region and wants to locate here. Within these clusters, expensive marketing and recruitment programs are not likely to pay off.

Southeast Alaska Clusters



Sources: Alaska Department of Labor, U.S. Bureau of Labor Statistics, JEDC Analysis



The following are the classification for Southeast Alaska clusters:

Star clusters (higher than average employment concentration in the region, in growing markets)

- Arts and Entertainment
- Social Assistance
- Forestry and Logging
- Real Estate

Opportunity Clusters (lower employment concentration than average, but in growing markets)

- Advanced Business Services
- Health Care
- Construction

Mature Clusters (higher employment than average, but in slower growing markets)

- Fishing and Seafood Processing
- Mining
- Ship and Boat Building
- Transportation and Tourism

Challenge Clusters (low employment concentration and in slow growth markets)

- Energy

Next steps

The Juneau Economic Development Council moves to Phase Two of the contract with the intent to create a cluster networking initiative for 4 to 6 of the key cluster industries identified in Southeast Alaska's economy. It is important to note that, although all identified clusters can benefit from the formation of cluster working groups, experience with the process has shown that only a few identified clusters will have industry leadership and interest in participation, continuity of funding and the sense of urgency that contributes to success. In addition, some clusters are primarily local serving. Social assistance, health services and arts and entertainment are important industries and represent some of the largest employers in the region, but these industries are more a product of the local economic growth than a contributor that brings money into the region from outside.

JEDC has identified two clusters, seafood and transportation and tourism, which will be targeted for cluster working group selection based on their large size and mature status. In addition, forestry is of primary interest to the contractor and a cluster working group will be formed. Renewable energy, which does not have any significant private industry presence in Southeast, is a cluster that is also of primary interest to the contractor. A seed cluster working group will be convened. For the remaining sectors, leadership interest, urgency and growth prospects will be gaged before a decision on cluster working group readiness is determined.

JEDC will support up to 3 meetings to work on common problems/opportunities for each economic cluster. When established, the cluster networking groups will include representatives of the private sector involved in each cluster, including both large firms that work also outside Alaska and smaller locally owned firms. Additionally, clusters will engage representatives from such groups as trade organizations, suppliers, organized labor, local and regional economic development groups, Federal, State and local agencies, university staff and faculty, regional Native corporations and Tribal governments, and members of the public.

The expected work product of the cluster working groups is to collaboratively address industry concerns and roadblocks through initiatives in such areas as workforce development; entrepreneurship; access to capital in the rural communities; renewable energy generation as alternatives to the dependence on high cost diesel fuel in rural communities; improved access to broadband and other critical infrastructure to facilitate market opportunities for small businesses; and innovative utilization of Southeast Alaska's abundant natural resources as a strategy to expand business opportunities.

Cluster Working Group Process

The cluster working group process encompasses a series of three networking meetings, each an assemblage of leaders representing the cluster being addressed. These leaders would be drawn from business and from public sector economic infrastructure providers that are key to the success of the cluster (e.g., the tourism cluster group would include both private sector leaders from the tour guide companies as well as public sector leaders representing the sea and air ports, the state's tourism-related departments, providers of services to independent travelers, etc.).

- Meeting 1—Introduction to the Southeast Alaska Cluster Development Initiative and the findings and conclusions of the Asset Mapping Analysis. An identification of critical issues that are impeding the growth and development of the cluster and a priority ranking of critical issues will conclude the meeting.
- Meeting 2—Discussion of the critical issues and formulation of interventions in the status quo in the form of new or revised public policies, institutional reform, new partnerships or other steps that could be taken. The objective will be to identify specific interventions, perhaps 4-5, that would take advantage of opportunities or overcome obstacles to a more competitive regional economy. "Champions" will be identified to take ownership of each of these action initiatives and, with a small working group, prepare a short "business plan" that describes recommended action initiatives that will improve the cluster's economic future.

- Meeting 3—Group discussion and refinement of each business plan. Specific problems, if any, are identified. Permission to launch decisions are made and the group empowers "champions" to take the lead to move from discussion to direct action.