Southeast Alaska Economic Asset Map: Executive Summary

Introduction

Project Background

In 2009, the USDA Forest Service and Rural Development held a series of "listening sessions" to hear how Department of Agriculture agencies could help improve the Southeast Alaska regional economy. In the fall of 2010, the US Forest Service put out a Request for Proposals for a Southeast Alaska Asset Map and a Regional Strategic Plan. In October 2010, the Juneau Economic Development Council (JEDC) led partnership—including JEDC, Southeast Conference, Sheinberg Associates, and the Alaska Map Company, among others—was awarded the contract to complete this work, and in December 2010, the JEDC partnership delivered the Asset Map (phase I of the Southeast Alaska Cluster Initiative). An asset map is a dynamic database that compiles tangible and intangible regional assets including: employment and demographics, education and workforce readiness, physical infrastructure, private industry, natural resources, local tax and regulatory environments, the regional business climate, quality of life, research and development, and financial metrics. The database was then translated into a 250-page document entitled "Southeast Alaska Economic Asset Map." This is a summary of that work.

Overview of the Southeast Alaska Economy

Southeast Alaska is a resource dependent economy, and this is reflected in the types of industries that have grown and flourished here. The Southeast economy has traditionally stood upon four legs representing four industries in the private sector: the fishing industry, the visitor industry, the mining industry, and the timber industry. The economy of the region has also long been dependent on government employment and spending, which are vital to the Southeast economy.

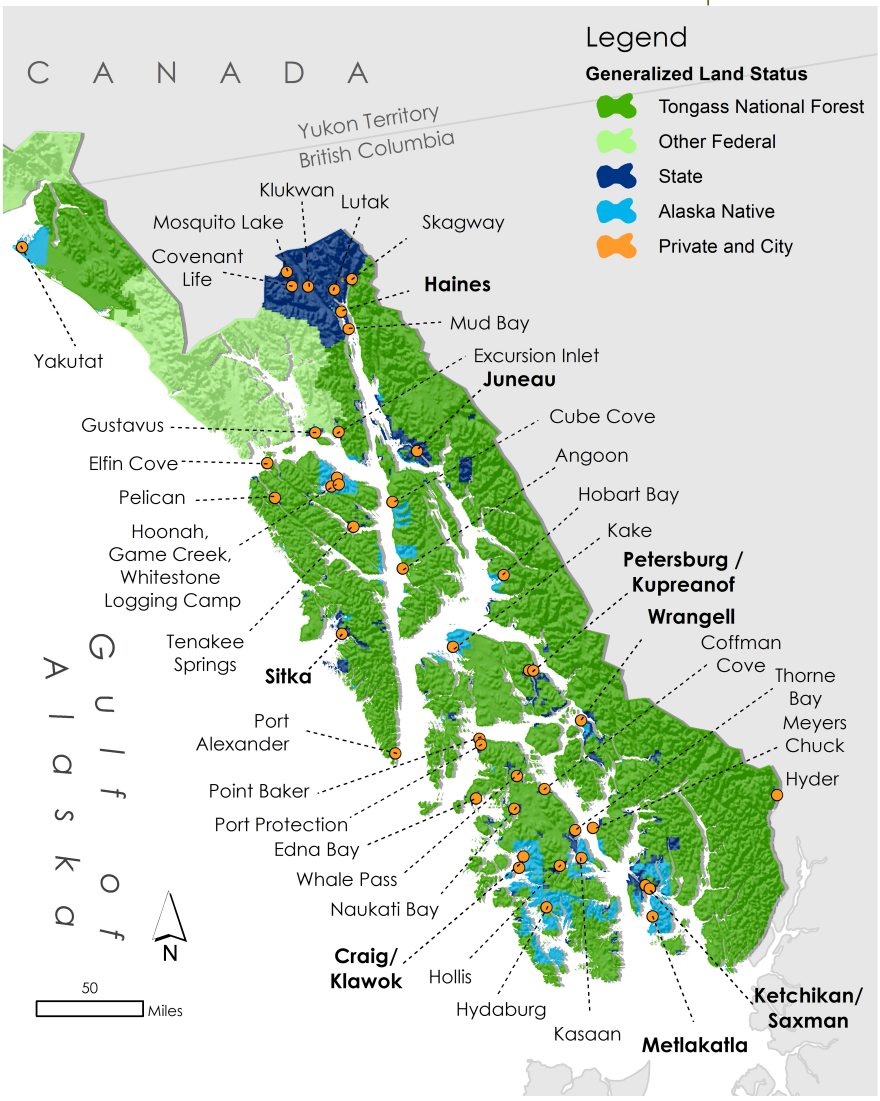
However, while each of these five sectors played a key role in the region's historic prosperity, not all have performed well in recent times. Southeast Alaska is often referred to as having two economies: Juneau, and the rest of Southeast Alaska. While population and employment levels in the rest of the State expanded in the last decade, the Juneau economy has remained flat, and the Southeast Alaska economy outside of Juneau has been in decline. Future projections fail to show growth.

The lack of private lands and lands available for development is unique in Southeast Alaska, and impedes the ability of the region to nurture the private sector. The federal government owns 95 percent of the region's land-base. This compares to 60 percent federal ownership for all Alaska

lands, and 26 percent for the US as a whole. Land ownership in Southeast can be categorized as follows:

- 94.6 percent federal
  - 80 percent is the Tongass National Forest (16,800,000)
  - 15 percent Glacier Bay National Park and Preserve (3,283,000 acres)
- 2.7 percent Native corporations (280,000 acres village/urban; 290,000 Sealaska)
- 2.4 percent State & Mental Health Trust (296,000 State, 196,000 MHT)[1]
- Less than 1 percent = private and municipal land holdings

Southeast Alaska Land Ownership



Source: Alaska Department of Natural Resources and US Dept. of the Interior, Bureau of Land Management

The future success of the region depends on businesses within industry sectors working collaboratively, the ability to reinvent the region's traditional industries into relevant competitive

[1] This figure includes Mental Health Trust land and mineral rights

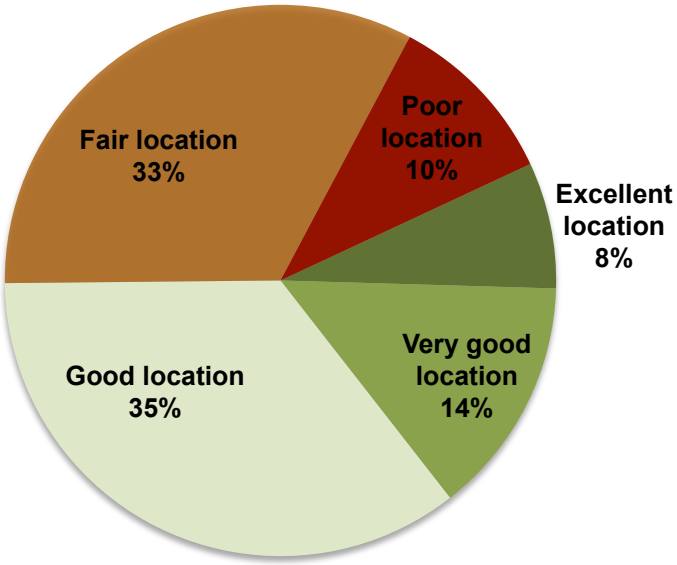
forces in ever changing world markets, and upon the ability to innovate. In order to begin this process, it is important to first have an understanding of the business climate in Southeast Alaska, and barriers businesses agree impede success.

Southeast Alaska Business Climate Survey

In order to do this, JEDC conducted a Southeast Alaska Business Climate Survey in November of 2010 to gain better insight into elements Southeast Alaska business leaders believe benefit and hinder business success in the region. The survey was completed by 243 business leaders, representing every community in Southeast Alaska. (Non-business leaders were invited to take a shorter version of the survey).

Overall, 22% of business leaders feel that Southeast Alaska is a very good or excellent place for their business to succeed, while 43% called Southeast Alaska a fair or poor location.

Considering all the factors presented so far, how would you currently rate your region overall as a place for your business to succeed? N=243

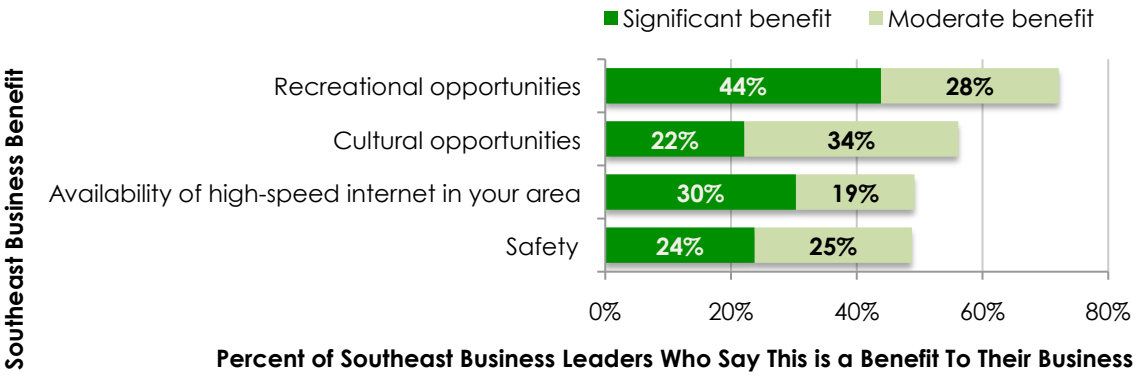


One section of the survey presented business leaders with 29 elements that are considered traditional barriers or benefits to business operations, and they were asked to ascribe the following ratings: Significant benefit, Moderate benefit, Not a barrier or benefit, Don't Know, Not Applicable, Moderate barrier, or Significant barrier.

Regional Business Benefits

Only four factors were rated as providing a higher net benefit than net barrier; three of these were related to quality of life: **the region's recreational opportunities, cultural opportunities**, and **safety**. The fourth was **access to high speed internet**. Mostly highly rated was recreational opportunities—72% of business leaders feel recreation is a moderate or significant benefit to their business.

How significant are each of the elements listed below to operating your business in Southeast Alaska? Top Benefits N=243

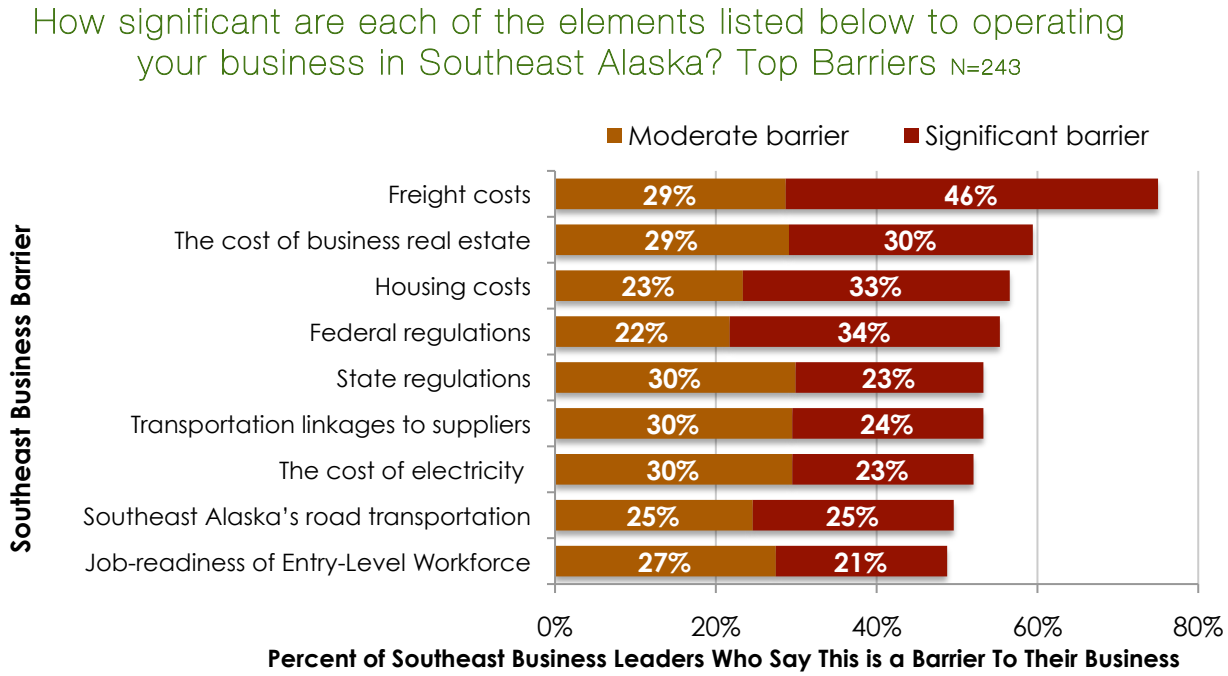


Source: "Southeast Alaska Business Climate Survey" December 2010, JEDC

Regional Business Barriers

According to the region's business owners and top managers, some of the top barriers to business include the following:

- **Freight Costs**—75% of all business leaders surveyed call freight costs a moderate or significant barrier.
- **The High Price of Real Estate**—both in terms of business real estate, deemed a barrier by 59% of respondents, and the high cost of housing for employees, which 56% say is a moderate or significant barrier.
- **Government Regulations**—A third of the region's business leaders call Federal regulations a "significant" barrier to operating their business, while one quarter say the same about State regulations.
- **The High Price of Electricity**—When the region was analyzed for non-Juneau respondents only, the cost of electricity emerged as second major barrier to business, with 61% of those outside Juneau called the cost of electricity a moderate or significant barrier.



Source: "Southeast Alaska Business Climate Survey" December 2010, JEDC

Key Issues to be Resolved

As a follow up regarding barriers, Southeast's business leaders were then asked to describe the most important issue that needs to be addressed to improve their business's prospects for success. While many of the top answers had to do with decreasing specific business costs (transportation, real estate, electricity, internet, freight) top three changes that the region's business leaders want to improve the success of their business included the following:

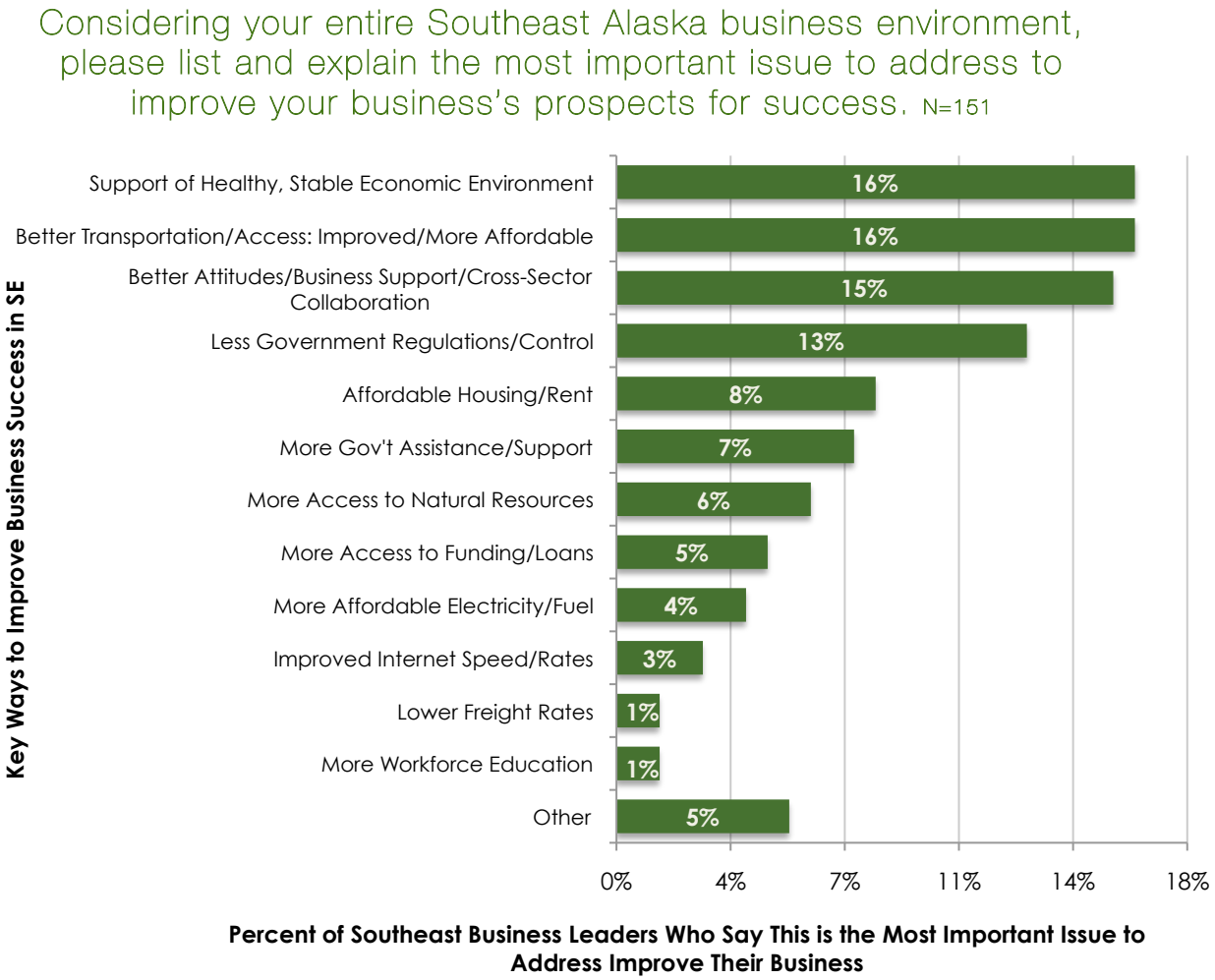
- **A More Stable and Healthy Regional Economic Climate**—Business leaders wrote of the need to increase jobs and economic development across the region to improve their individual business. One respondent put it this way: "The success of my business relies directly upon the economic health of the region as a whole."

- **Improved Transportation**—Increased access to affordable, reliable transportation continues to be a top priority of Southeast Alaska's business community.

- **Improved Attitudes Towards Industry and Increased Collaboration Between Industries**—Many business leaders said that the top way to improve business in the region is through a better understanding and appreciation of their industry (be it timber, tourism, mining, or fishing). There is also an interest in increased opportunities for different industries and

government to work together, instead of at cross-purposes. One frustrated business leader wrote: "we are doomed to fail as long as there is intent on destroying our industry by creating a negative environment."

The following chart shows how the region's business leaders responded to the question how the business climate could be improved.



Human Capital

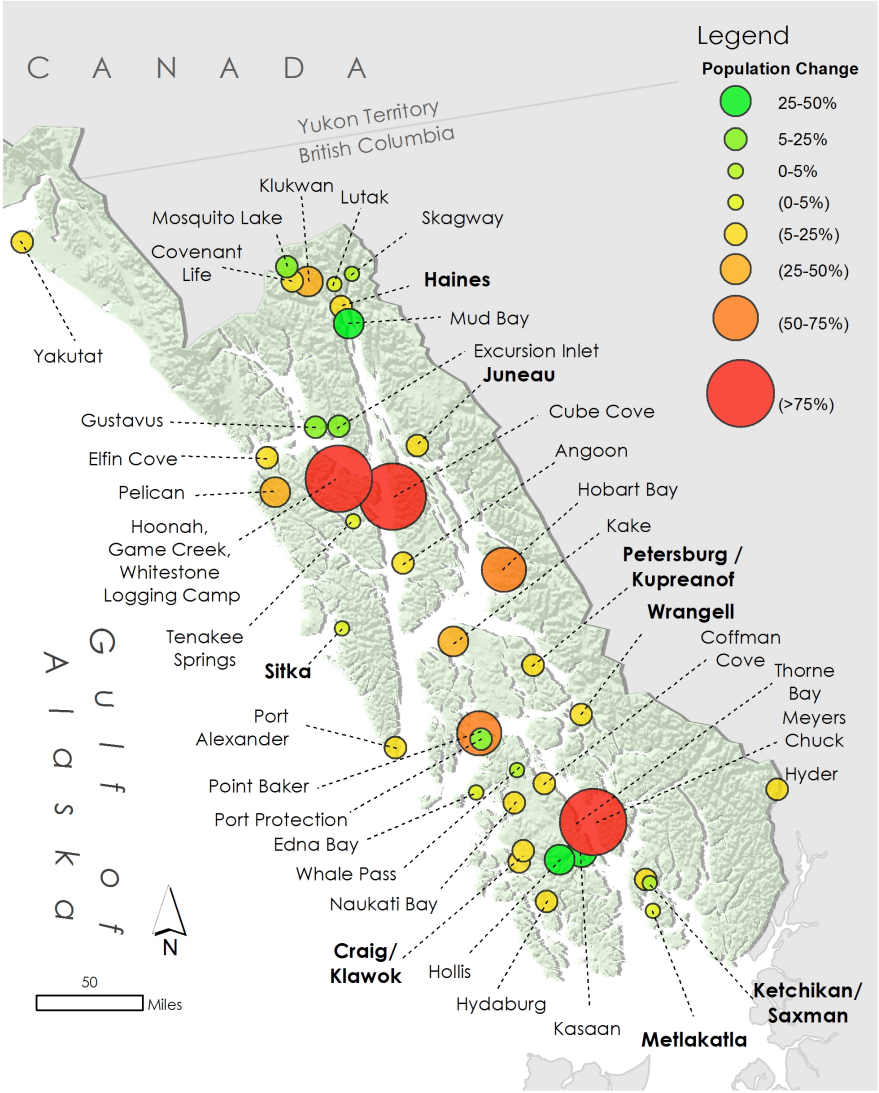
Demographics

The 2009 population of Southeast Alaska was 69,338, with the largest concentrations of population in Juneau, Ketchikan and Sitka, together these three communities comprise 75 percent of the regional population. Until the mid-1990's, the population of Southeast Alaska had enjoyed nearly a century of growth that intensified after Alaska statehood in 1959. Between 1960 and 2000,

population and employment levels in Southeast more than doubled as the workforce expanded in the areas of mining, government, fishing, tourism, and timber.

However, in 2010, population levels are declining across the Southeast region. From 2000 to 2009 while the rest of the state experienced steady growth, the population of Juneau remained flat and the regional population outside of Juneau plummeted 8.7 percent. The following map shows where the population declines occurred regionally, 2000 to 2009. Projections show that these declines are expected to continue.

Change in Southeast Alaska Population, 2000 to 2009



Source: Alaska Department of Labor and Workforce Development, Research & Analysis

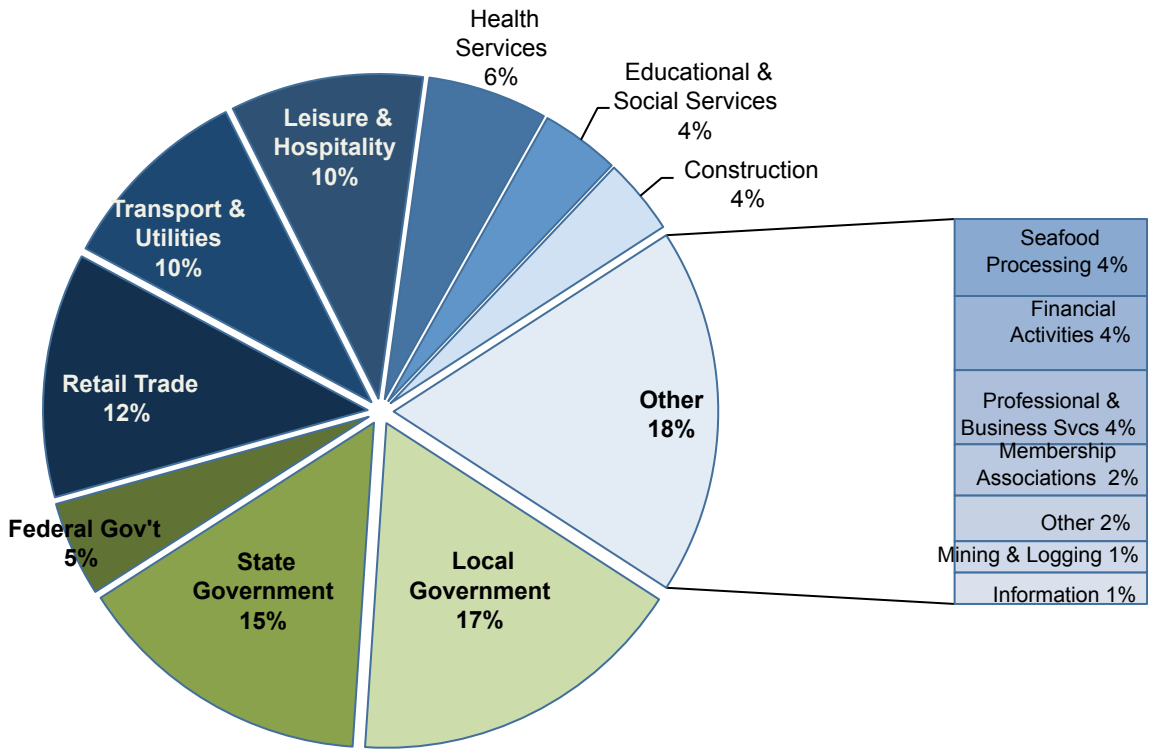
Along with population declines, the population of the region is also aging at a much higher rate than state or national averages. In 1990, just 12% of Southeast residents were 55 or older. By 2020, a third of Southeast Alaskans will be in that age range.

Employment

State, federal and local government comprise a third of the region's jobs and 45% of regional wages (these figures do not include active military and the self-employed). The ratio of government jobs is higher in Southeast than in other areas (25% of Alaska jobs and 15% of jobs nationally are with the government).

In 2010, the annual average employment in Southeast Alaska was 36,200 (not including active military and the self employed). Annual average employment between 2000 and 2010 was basically flat: There was a regional net gain of just 100 jobs in the last decade. The gain in employment is likely due to the high ratios of nonresident workers in Southeast Alaska. Regionally, non-Southeast Alaska residents held 39 percent of all jobs in 2008.

The chart below shows the distribution of employment in the region between industries.



Total Southeast Alaska Employment, 2000 & 2009

	Annual Average Employment 2009	Total 2009 Payroll (in thousands)	Avg. Annual 2009 Wage
Private Sector	**22,914**	$795,357	**$34,711**
Total Government	**13,295**	$642,082	**$48,294**
Federal Government	1,745	$120,846	**$69,269**
State Government	5,483	$268,867	**$49,039**
Local Government*	6,068	$252,370	**$41,590**
Total Employment	**36,209**	$1,437,440	**$39,698**

Note* Local government includes tribal government.
Source: Alaska Department of Labor and Workforce Development, Research & Analysis

Education and Workforce Readiness

Southeast Alaska residents have a higher level of average educational attainment than the state and national populations. In 2009, for example, 13 percent of Southeast residents over the age of 25 had a graduate degree, compared to nine percent of the state population, and ten percent of the national population.

However, Southeast Alaska business leaders are generally not satisfied with the level of workforce readiness of the region's entry-level, semi-skilled, or professional level workers. Half of the region's employers called the readiness of entry-level workers a barrier in the 2010 Southeast Alaska Business Climate Survey. While fairing slightly better, the quality of Southeast Alaska high school graduates was considered a barrier by more than a third (37%) of the regional business leader. Nor are all high school graduates sufficiently prepared for college. According to the University of Alaska Southeast (UAS), many Juneau high school graduates entering the UAS are not college ready, and must enroll in remedial courses: 52 percent must take remedial English, and 45 percent must take remedial math.

Fortunately, the region is host to the University of Alaska Southeast, which is working to develop a regional workforce with the skills to serve the professional needs of the region.

Physical Infrastructure

Transportation

With the exception of the communities on Prince of Wales Island, most Southeast Alaska communities do not have road connections to each other. Residents rely on air, barge, and ferry (the Alaska Marine Highway System and the Inter-Island Ferry Authority) service to move goods and people between communities.

Air—Seven communities have jet service provided by Alaska Airlines, including Juneau, Sitka, Ketchikan, Petersburg, Wrangell, Yakutat, and Gustavus (summer only). Thirteen communities have airports, although 14 additional communities without an airstrip have seaplane bases.

Ferry—AMHS provides direct service to 14 Southeast Alaska communities (including Gustatuvs, added in the fall of 2010). The IFA currently provides service between Hollis, on Prince of Wales Island, and Ketchikan.

Barge—Three major barge lines serve 20 regional communities, although 8 are on a summer-only or charter-only basis.

Road—Only three Southeast communities (Hyder, Haines and Skagway) are connected to the continental road system.

Regional Ship Building and Repair Facilities

Southeast Alaska has a high employment concentration ratio of boat and ship building in the region. Allen Marine, located in Sitka, specializes in building aluminum high speed passenger vessels with waterjet propulsion systems, and has built 52 vessels since the 1980's. In Ketchikan, the Alaska Ship and Drydock is capable of building even larger ships. Its facilities include a 10,000 long-ton floating dry dock capable of lifting the largest state ferries. Other communities with haul out and repair facilities include Wrangell, Craig, Petersburg, Juneau, Hoonah, Haines, and Skagway.

Communications

Southeast Alaska's scattered, geographically isolated population is especially dependent on the region's print, broadcast, and Internet media for news and information. The region has 10 newspapers, 17 commercial and public radio stations (operating around the region on various frequencies), and four TV stations.

Internet access, in some form, is available in all communities in Southeast Alaska. Broadband internet is available in Haines, Skagway, Angoon, Juneau, Sitka, Petersburg, Wrangell, Thorne Bay, Klawock, Kasaan, Craig and Hydaburg. In communities without broadband service, satellite and dial-up are the only options.

Housing

Generally housing and the cost of housing is more expensive in Southeast Alaska than in the rest of the state or nation. The median value of an owner-occupied housing unit in 2009 was 35% higher in Southeast Alaska than the nation as a whole, and eight percent higher than the Alaska median. There are 33,530 housing units in Southeast Alaska, including 28,766 occupied units. Similar to

national rates, approximately two-thirds of Southeast homes are owner-occupied, while one-third are renter occupied. Southeast Alaska has more mobile homes, compared to the state or nation. Regionally, 9.3 percent of housing units are mobile homes, compared to 6.1 percent statewide, and 6.5 percent nationally.

Energy

Communities with Hydropower

The major population centers in Southeast Alaska (Ketchikan, Wrangell, Petersburg, Sitka and Juneau) have been well served for decades with renewable hydroelectric power. The cost of power in these communities is among the lowest in all of Alaska. Thirteen additional communities in the region have higher cost hydroelectric facilities. Southeast Alaska's hydropower resource is one of the region's great strengths. This resource is clean, "green," and lower cost.

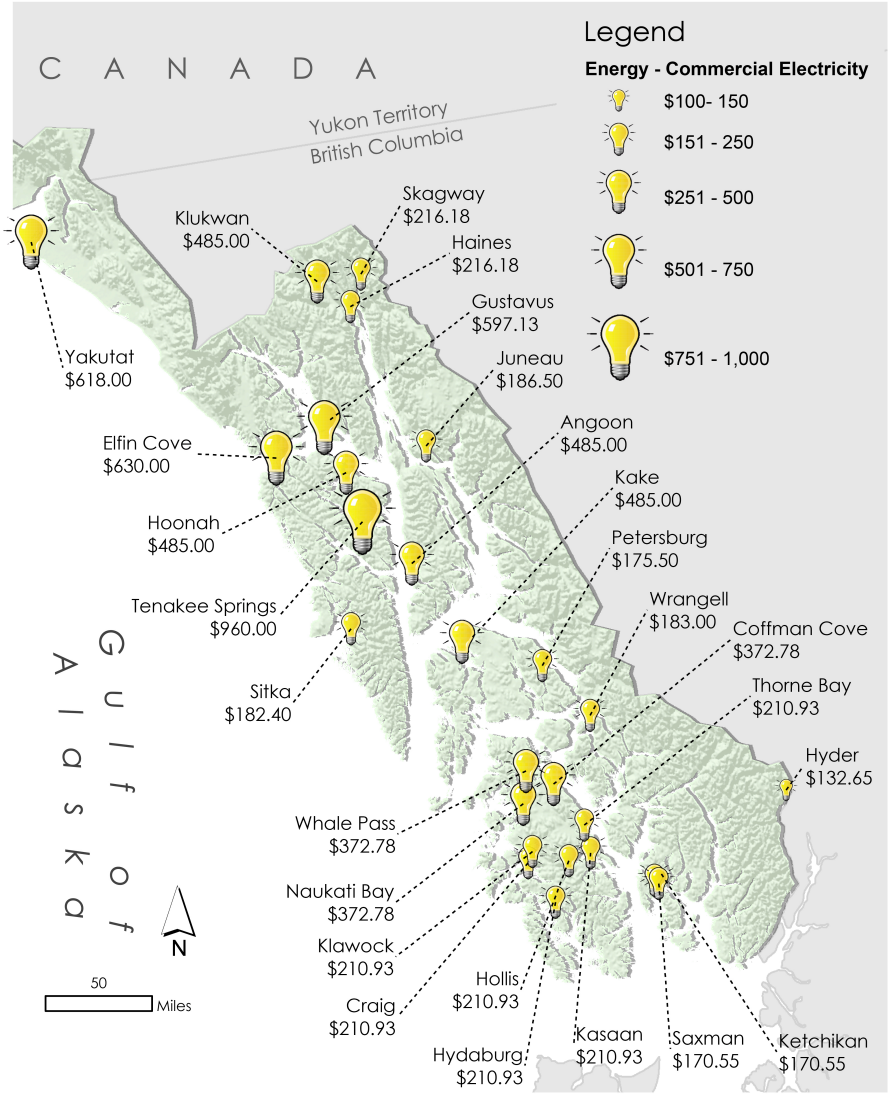
Communities with Diesel Generated Electricity

However, Southeast Alaska has a rugged and remote topography, and because of this construction costs for transmission infrastructure can be very high. This has hampered build-out of an interconnected electrical transmission system in Southeast Alaska. Southeast Alaska's remote and isolated rural communities rely on diesel generation to meet their energy needs. These electricity costs are diesel generated and high. While residential electricity costs are partially offset by the Power Cost Equalization program, commercial and industrial users face very high rates.

Businesses located in diesel dependent Southeast Alaska communities pay 213 percent more on average than businesses in places where electricity is generated by hydro power. Significant economic development efforts are hampered in most of these rural communities for this reason.

The map below shows the monthly small commercial rate for 1,500 kWh of electricity across Southeast Alaska.

Small Commercial Rate for 1,500 kWh/month by Southeast Alaska Community, November 2010



Source: Inside Passage Electric Cooperative; Alaska Power Company; Personal Communication: Jane Button, Elfin Cove; Gustavus Electrical Company, Inc.; City of Ketchikan, Municipal Code, Chapter 11, Section 8, Electrical Rates; BC Hydro; Petersburg Municipal Power & Light Company; Alaska Electrical Light & Power Company; DCCED; City of Ketchikan; City and Borough of Yakutat; City and Borough of Wrangell.

Renewable Energy

Southeast Alaska also has known sources of tidal energy, evidence of surface geothermal energy release and locations where the wind is known to blow in frequency and speed to make power generation with wind turbines possible.

Southeast Alaska's Key Private Industries

Fisheries, Seafood Processing and Mariculture

Fishing has long been a key element of the Southeast Alaska economy. Southeast Alaska has several dozen fisheries conducted by a fleet of mostly small boats. Regional seafood processors dot the entire archipelago from Ketchikan to Haines. Processors range from fishermen direct operators to larger operations in Ketchikan, Petersburg, and Sitka. Juneau hosts several mid-size processors. Salmon remains the bedrock for Southeast's small boat fleet, but unlike many Alaska fishing regions, Southeast also has a diverse array of high value, low volume fisheries.

Photo Credits: Michael Penn/Juneau Empire

In 2009, 4,674 Southeast residents were involved in the commercial fishing industry. In that same year, there were an estimated 10,150 harvesters (commercial fishing permit holders and crew) who fished in the Southeast Alaska region. While fishing employment is not generally tracked along with annual average employment of the region, according to ADOL approximately 18 percent of Southeast Alaska's private sector work in 2009 was fishing-related ("Employment in the Seafood Industry". In 2009, the ex-vessel value (or money paid to fishermen) of the Southeast Alaska fisheries was $234 million. The value of salmon was up significantly in 2010. The per pound price of Sockeye salmon in Southeast jumped 32% to $1.64 from 2009 prices.

Seafood Processing

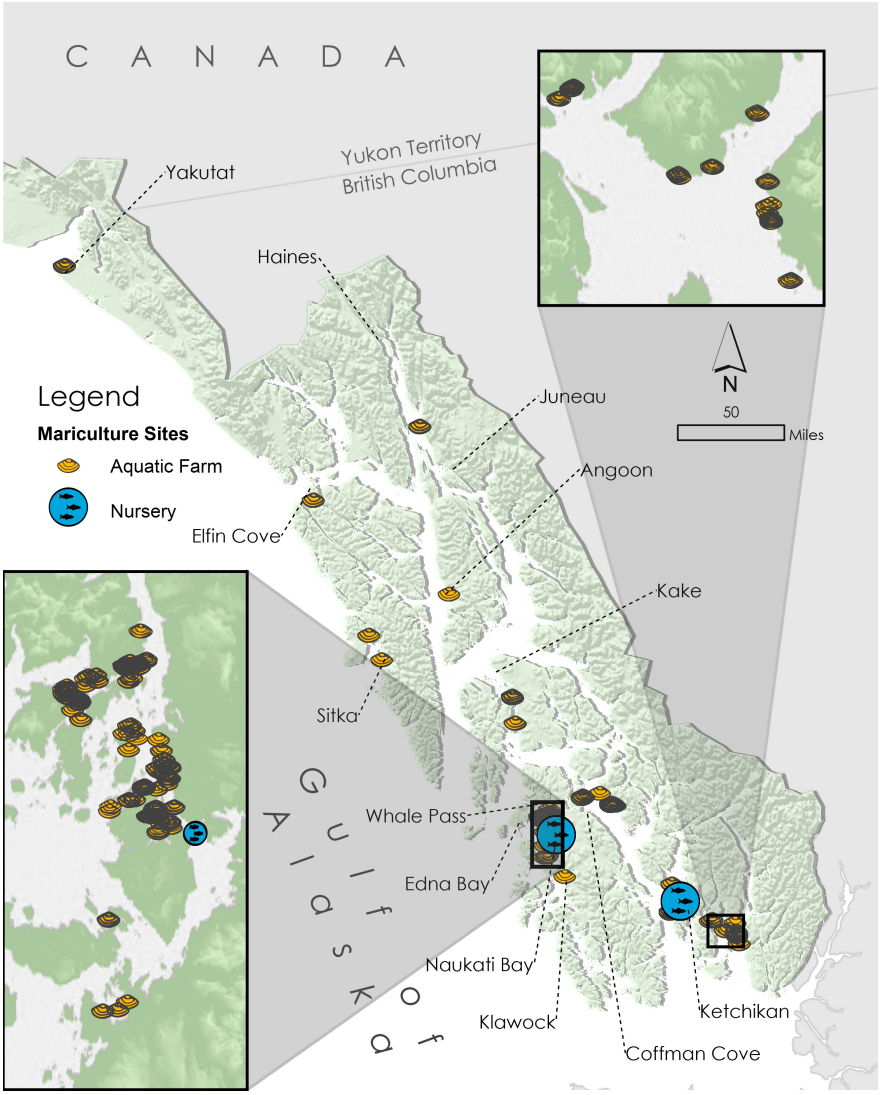
There are approximately 60 seafood processing facilities in Southeast Alaska; they are found from Yakutat south to Craig and range in size from grocery stores that process fish for their customers to large processing facilities that employ hundreds of workers and provide lodging and meals. In 2009, 178.7 million pounds of seafood were processed in Southeast by shore-based processors, with a wholesale value of $374.3 million.

Mariculture

In Southeast Alaska there are currently 10 productive mariculture farms located in clusters in Yakutat, Kake and Naukati Bay that produce primarily oysters and clams. Several facilities produce shellfish seeds, or spat, for shipment to other farms outside the region.

Due to colder water climates that slow down maturation, oysters grown in Alaskan waters are of a higher quality and available year round. Currently, individual farms are processing their own product for distribution to the market. The growth of this industry in recent years has spurred private stakeholders to seek the development of a regional shellfish-processing facility to improve efficiencies in the cost and time it takes to get the goods to the market. In 2009, total farmgate sales for the region were approximately $184,000.

Sites of Aquatic Farms and Nurseries, Southeast Alaska 2010



Source: Alaska Department of Fish and Game Division of Commercial, Alaska Department of Natural Resources, US Census Bureau, Geography Division, Geographic Products Branch

Tourism and Recreation

In the last decade, tourism as a whole has been the fastest-growing industry in Southeast Alaska, and is a significant private-sector employer in the region.

Cruise Visitors

The number of cruise ship visitors to the region doubled between 1997 and 2007, when more than a million passengers visited the region. However, the number of cruise passengers visiting the region has decreased by 15% over the past two years (2009 and 2010). This downward trend has been in response to the impact of the great recession globally on tourism; however, visitors numbers are expected to bounce back by 2012.

Independent Travelers

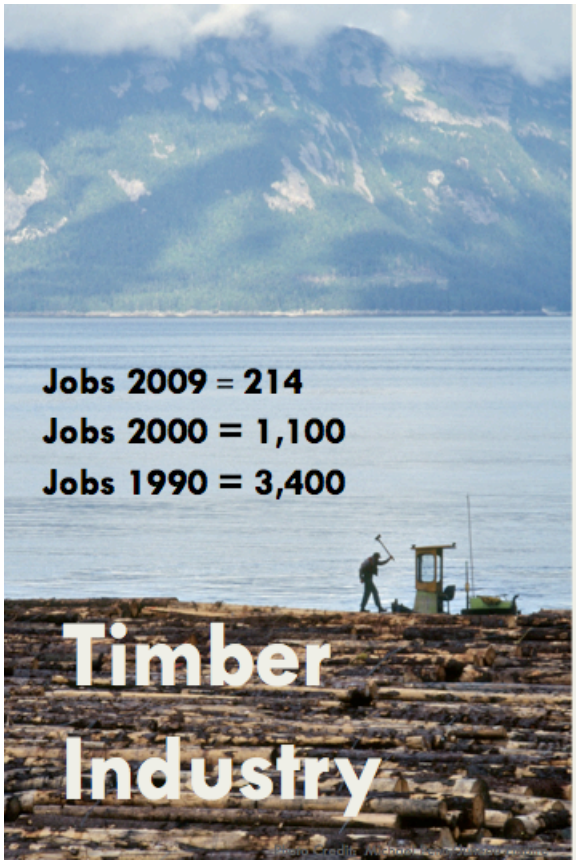
According to the Alaska Visitors Statistics Program, Southeast hosts up to 200,000 independent travelers during the summer, and 30,000 during the winter and fall in addition to the region's cruise passengers.

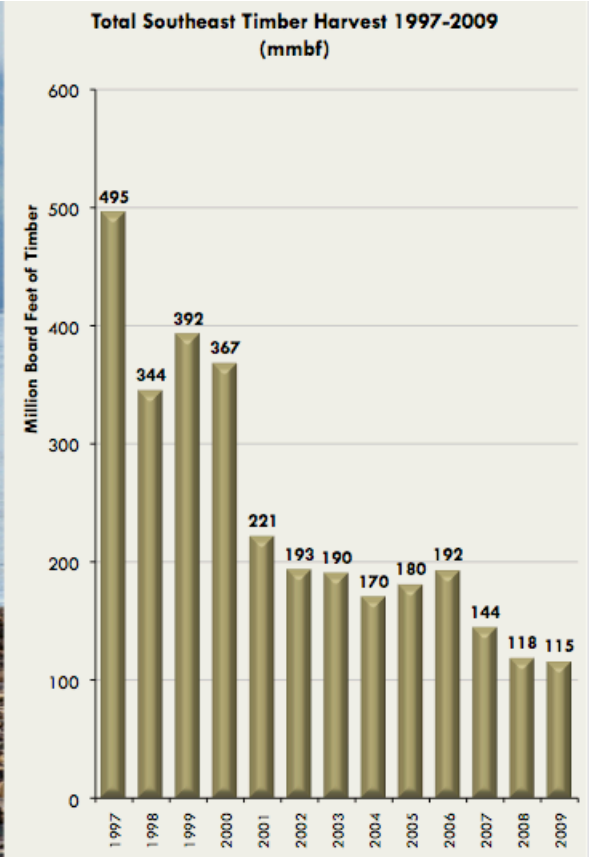
Recreation

Recreation is a key draw to Southeast Alaska for both residents and visitors alike. While residents and nonresidents use Southeast Alaska recreational resources quite differently, it is clear that recreation opportunities in Southeast play a major role in terms of why people choose to live, work, or travel here. In the Southeast Alaska Business Climate Survey 2010, businesses ranked "recreational opportunities" as the most significant benefit towards operating business in Southeast Alaska.

Forestry, Forest Products and Forest Restoration

The decline of the timber industry has been well documented. Once one of the main economic foundations of the region, the timber industry was decimated by a combination of forces, including changing federal government forest management policies and practices, declining private timber harvests, and changing market conditions. In the 1990's, significant timber mill closures in Ketchikan, Sitka, and Wrangell eliminated the major private sector source of year round employment in those communities and substantially impacted other communities that depended on the timber industry.





In 1990, there were 3,450 direct private sawmill and logging jobs in the region, in 2009 only 214 of these jobs remained. The decline of the timber industry cost Southeast Alaska 3,300 direct industry jobs and over $100 million in annual payroll. Today there is only one large sawmill operating in Southeast Alaska. While the Viking Mill in Craig is operating, timber purchased by the mill faces costly litigation, delay, and an uncertain future.

Despite the availability of timber in the Tongass and other national forests, most of the wood consumed in the United States is imported, and the majority of the wood building products used in Alaska are produced in the lower 48 States.

The USDA Forest Service intends to help the Southeast Alaskan communities within the Tongass National Forest transition to more diversified economies by stimulating economic opportunity and job creation in a variety of areas including forest restoration. In the Forest Service's FY 2009 "The State of the Tongass National Forest," forest restoration is defined to encompass a wide variety of activities, from invasive species eradication to young growth thinning. What these projects have in common is their intent to improve forest health and diversify local economies.

Mining Industry

While some Southeast Alaska industries are in decline, minerals prices in the world market have risen rapidly, and mining in the region is booming. The value of gold has quadrupled since 2003, and the value of silver has quintupled.

In 2000, there were 300 mining jobs in the region. By the end of 2011—due to the opening of the Kensington Gold Mine in Juneau in 2010—the region's mines are expected to have 600 employees and a payroll of more than $50 million annually. The region's largest mine, the Hecla Greens Creek Mine on Admiralty Island, is the second largest silver producer in North America and the sixth largest in the world.

However, the region's mining resources are not just in traditional metals. Another potential opportunity in mining comes from increased interest rare earth elements (REEs). REEs are vital components in computer hard drives, cell phones, hybrid vehicles, and other clean energy technology. As the global demand for REEs grows, the worldwide supply is starting to dwindle. The Bokan Mountain on Prince of Wales is thought to be one of the three largest sources of REEs in the U.S. Bokan Mountain deposits are currently being developed and production could occur as early as 2012.

Other Assets Mapped

Local Tax and Regulatory Environments

The local tax burden per capita in Southeast Alaska ranges from $0 for unincorporated communities that cannot levy taxes to $9,697 per capita in the Municipality of Skagway, the 4th highest in the state. The per capita average local tax burden in Southeast Alaska is $2,148. The statewide average (excluding North Slope Borough, also anomalously high due to oil revenue) is $1,682. On a per capita basis, Southeast Alaska's local tax burden is higher than the statewide average, Anchorage, Mat-Su Borough, or Fairbanks. This is in part due to the fact that Juneau, Ketchikan and Skagway benefit from sales tax collected from summer tourists. Those communities have structured their tax revenue collection such that property taxes are lower per capita than Anchorage and Fairbanks, with sales tax providing more than half of the per capita tax revenue.

Research and Development

While Southeast Alaska is not considered a center of research and development, three world class research facilities exist in Southeast Alaska, including the Alaska Coastal Rainforest Center (ACRC), the Pacific Northwest Research Station's Forestry Sciences Laboratory, and the Ted Stevens Marine Research Institute, all in Juneau. There is also a national Department of Defense technology transfer office, SpringBoard, headquartered in Juneau at the Juneau Economic Development Council.

Finance

The condition of commercial financial institutions based in Southeast Alaska has been very stable. All borough or census areas in Southeast Alaska have at least one banking facility. Of the eleven

commercial banks that do business in Alaska, five have a significant presence in the region. Southeast Alaska has six credit unions that provide a broad range of consumer loans, mortgages and personal lines of credit. On a per capita basis, the area's residents are well served by depository lending institutions. Sixty-eight percent of the towns in the region have one or more banks or credit unions offices. While there are no formal venture capital groups such as angle investors, there is some activity within groups like Sealaska. Regulatory increases nation-wide have been tightening up credit; however, there have been few complaints to date regarding a lack of available financing in the region.

Connective Organizations

Networks in Southeast Alaska are a key strength of regional businesses. Isolation, disconnected transportation routes, high-energy costs, other costs of doing business, and cultural differences are just a few of the obstacles that bring Southeast Alaskans together. Many communities have a chamber of commerce, an economic development group of some sort and a visitor bureau. There is also an extensive arts community throughout Southeast Alaska. Regional organizations like Sealaska and Southeast Conference are able to bring many people from all different facets together for collaboration. All of these groups put together make a very strong network all wanting the same thing; a strong viable economy in Southeast Alaska.

Cluster Development

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, they draw productive advantage from their mutual proximity and connections.

Cluster Identification

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. 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. 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.

The table below 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.

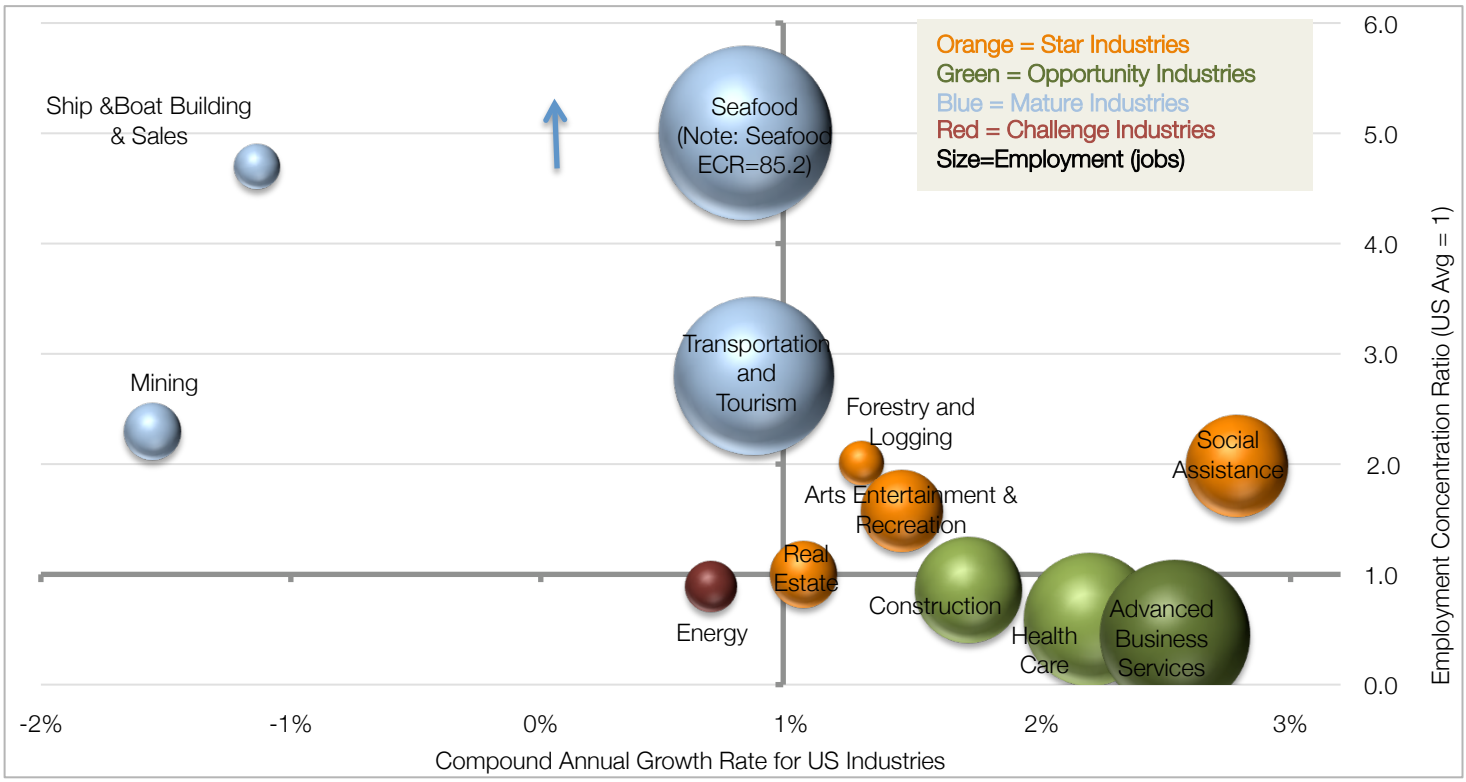
Southeast Alaska Annual Private Sector Employment: Select Clusters

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%
Boating/Ship Building		140	254	24	12,090,194	$47,662	4.7	-1.1%
Transportation and Tourism		3,175	3,225	312	109,505,610	$33,953	2.8	0.9%
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%
Forestry and Logging		510	238	32	11,759,446	$49,375	2.0	1.3%
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%
Advanced Business Services		2,582	2,856	442	120,487,309	42,195	0.4	1.4%
Health Care		2,080	2,232	134	103,951,255	$46,570	0.6	2.2%

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

In the following chart, the compound annual growth rate for U.S. industries is found along the horizontal axis. 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.

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