

Employment Scene

Seasonal adjustment and how it works

An economist is waiting at a bus stop and notices a dejected young man sitting on a bench. She asks him what's wrong, and he replies that summer is over, the place where he worked has closed for the winter, and he's depressed to be out of work. The economist replies, "Don't worry, then. Seasonally adjusted, you still have a job!"

It's an old joke, but useful for pointing out that seasonally adjusted job numbers and unemployment rates are a little more complicated than data that haven't been adjusted.

Last month's Employment Scene outlined the dramatically changing employment and wage levels in Alaska due to jobs that only happen at certain times of the year. Seasonal adjustment is a statistical method that attempts to eliminate the influence those fluctuations have on the employment and unemployment rates, making the underlying trends easier to see.

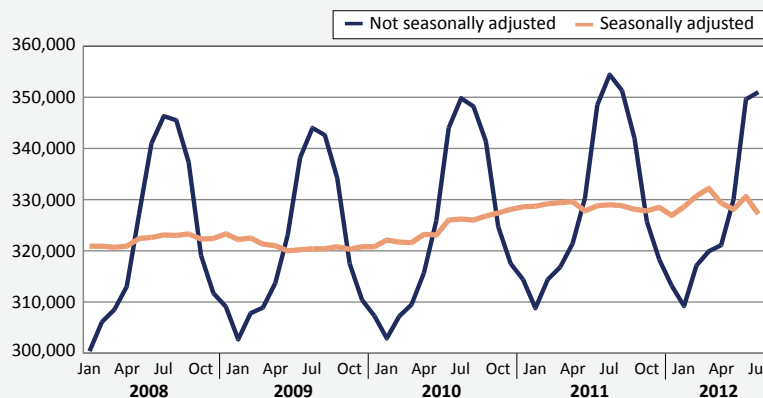
Seasonal adjustment works because seasonal swings in employment and unemployment rates follow a predictable pattern. Over the course of the year, Alaska schools open and close, seasonal tourism workers arrive and leave, and fisheries follow mostly regular seasons.

Which numbers are changed

The number of people employed is much larger in the summer in Alaska, and the number unemployed is larger in the winter. Using historical and current seasonal factors, seasonal adjustment smoothes each of these components to create the seasonally adjusted rate, which is the rate reported each month for the nation as well as the state.

Similarly, Alaska's employers have more work

Seasonal Adjustment Reveals Trends Alaska, 2008 to 2012



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

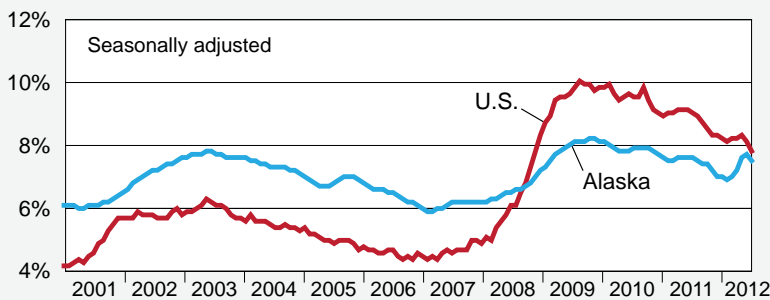
in the summer, so seasonally adjusted monthly employment adjusts the number of jobs up in the winter and adjusts them down in the summer. (See Exhibit 1.)

The reasons for adjusting

Seasonally adjusted rates are useful for comparing market conditions at different times of the year; for instance, January employment is always lower than July, but seasonal adjustment allows comparison of those two months despite the disparity in actual job levels.

The seasonally adjusted unemployment rates and employment levels are also the most current and most cited nationwide statistics that are released monthly, so adjustment allows comparison of Alaska's labor market conditions to other states and the nation.

2 Unemployment Rates January 2001 to September 2012



Source: Alaska Department of Labor and Workforce Development, Research and Analysis; and U.S. Bureau of Labor Statistics

4 Unemployment Rates Boroughs and census areas

	Prelim.	Revised	
	9/12	8/12	9/11
SEASONALLY ADJUSTED			
United States	7.8	8.1	9.0
Alaska Statewide	7.5	7.7	7.6
NOT SEASONALLY ADJUSTED			
United States	7.6	8.2	8.8
Alaska Statewide	6.4	6.5	6.9
Anchorage/Mat-Su Region	5.7	6.0	6.3
Municipality of Anchorage	5.3	5.6	6.0
Matanuska-Susitna Borough	7.1	7.4	7.7
Gulf Coast Region	7.1	6.8	7.5
Kenai Peninsula Borough	7.6	7.4	8.2
Kodiak Island Borough	5.0	5.3	5.4
Valdez-Cordova Census Area	7.1	6.1	6.9
Interior Region	6.1	6.3	6.7
Denali Borough	5.3	4.2	5.0
Fairbanks North Star Borough	5.4	5.8	6.0
Southeast Fairbanks Census Area	9.6	9.2	9.7
Yukon-Koyukuk Census Area	13.3	13.4	14.2
Northern Region	9.8	10.3	10.1
Nome Census Area	11.3	12.2	11.7
North Slope Borough	5.6	5.8	5.8
Northwest Arctic Borough	14.9	15.5	15.2
Southeast Region	5.6	5.4	6.0
Haines Borough	4.8	4.2	5.3
Hoonah-Angoon Census Area	12.0	10.5	11.1
Juneau, City and Borough of	4.4	4.6	4.8
Ketchikan Gateway Borough	5.3	5.1	5.5
Petersburg Census Area ¹	6.8	7.7	7.7
Prince of Wales-Hyder Census Area	12.7	11.4	13.2
Sitka, City and Borough of	4.9	4.4	5.6
Skagway, Municipality of	2.4	2.7	5.1
Wrangell, City and Borough of	6.9	6.1	6.9
Yakutat, City and Borough of	5.7	7.0	7.1
Southwest Region	12.8	12.2	11.8
Aleutians East Borough	11.3	9.2	10.0
Aleutians West Census Area	7.9	7.0	6.6
Bethel Census Area	15.7	16.4	14.9
Bristol Bay Borough	3.0	2.2	2.9
Dillingham Census Area	9.2	8.1	9.4
Lake and Peninsula Borough	5.6	5.9	6.1
Wade Hampton Census Area	21.0	22.7	18.9

3 Statewide Employment Nonfarm wage and salary

Alaska	Preliminary		Revised		Year-Over-Year Change	
	9/12	8/12	9/11	9/11	90% Confidence Interval	
Total Nonfarm Wage and Salary¹	342,900	351,800	342,000	900	-5,177	6,977
Goods-Producing ²	46,500	53,200	48,000	-1,500	-4,466	1,466
Service-Providing ³	296,400	298,600	294,000	2,400	-	-
Mining and Logging	17,300	17,400	16,500	800	-435	2,035
Mining	17,000	17,000	16,300	700	-	-
Oil and Gas	13,500	13,500	13,400	100	-	-
Construction	15,300	16,000	17,700	-2,400	-3,913	-887
Manufacturing	13,900	19,800	13,800	100	-2,259	2,459
Wholesale Trade	6,900	7,000	6,200	700	361	1,039
Retail Trade	35,900	37,200	36,400	-500	-1,284	284
Food and Beverage Stores	6,300	6,400	6,300	0	-	-
General Merchandise Stores	9,900	10,400	10,000	-100	-	-
Transportation, Warehousing, Utilities	23,700	25,100	23,400	300	-534	1,134
Air Transportation	6,200	6,400	6,000	200	-	-
Information	6,400	6,500	6,400	0	-275	275
Telecommunications	4,000	4,100	4,200	-200	*	*
Financial Activities	15,200	15,400	14,900	300	-567	1,167
Professional and Business Services	28,900	29,100	29,000	-100	-1,456	1,256
Educational⁴ and Health Services	46,000	46,100	44,700	1,300	165	2,435
Health Care	32,300	32,600	31,700	600	-	-
Leisure and Hospitality	36,200	40,300	36,200	0	-2,669	2,669
Other Services	11,000	11,100	10,600	400	-421	1,221
Government	86,200	80,800	86,200	0	-	-
Federal Government ⁵	16,400	16,800	17,400	-1,000	-	-
State Government ⁶	26,700	25,200	26,700	0	-	-
State Government Education ⁷	8,400	6,600	8,400	0	-	-
Local Government	43,100	38,800	42,100	1,000	-	-
Local Government Education ⁸	25,200	20,500	24,200	1,000	-	-
Tribal Government	4,300	4,300	4,000	300	-	-

A dash means confidence intervals aren't available at this level.

¹Excludes the self-employed, fishermen and other agricultural workers, and private household workers. For estimates of fish harvesting employment and other fisheries data, go to labor.alaska.gov/research/seafood/seafood.htm.

²Goods-producing sectors include natural resources and mining, construction, and manufacturing.

³Service-providing sectors include all others not listed as goods-producing sectors.

⁴Private education only

⁵Excludes uniformed military

⁶This number is not a count of state government positions, but the number of people who worked during any part of the pay period that included the 12th of the month (the same measure used for all employment numbers in this table). The numbers can vary significantly from month to month; when attempting to identify trends, annual averages are more useful.

⁷Includes the University of Alaska. Variations in academic calendars from year to year occasionally create temporarily large over-the-year changes.

⁸Includes public school systems. Variations in academic calendars from year to year occasionally create temporarily large over-the-year changes.

Sources for Exhibits 2, 3, and 4: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and U.S. Department of Labor, Bureau of Labor Statistics

SEAFOOD PROCESSORS

Continued from page 11

included. Room and board is a necessity at remote locations and on larger floating processors.

The median hourly wage for seafood processors was \$9.03 per hour in 2011, but those working in Southeast made a higher median wage by nearly \$3 per hour.

Most processors are men

Age and gender are only available for the 23.6 percent of processors who are Alaska residents. Their average age was 40.7, and 68.1 percent were male. Most of their processing jobs were short-lived, with 22.7 percent having worked in the occupation for more than five years. Just 48.9 percent worked for a processor the previous year.

Economist Josh Warren contributed to this article.