



ALASKA ECONOMIC **TRENDS**

APRIL 2017

WHEN RECESSIONS LINGER

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Unemployment claims in 2016

All net job gain came from younger firms

ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

ALASKA ECONOMIC TRENDS

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ON THE COVER: Boardwalk through the marsh near Fairbanks, photo by Jason Ahrns

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Strengthening post-high school options for Alaskans



Heidi Drygas
Commissioner

This month's *Trends* examines educational and economic outcomes for students who graduated high school in Alaska in 2005. This is a timely subject. Across the country, states are strengthening post-high school training and education programs. Here in Alaska, we're working to build a better system with improved graduation, employment, and economic outcomes for students and workers.

For too long, the United States has had insufficient post-high school education and training programs for those who aren't going to earn a bachelor's degree. The result? Low college graduation rates and a lack of skilled workers for many technical jobs.

The United States has higher youth unemployment and much higher economic stratification than countries with more comprehensive training programs. We can do better. Germany and Switzerland have a robust suite of college and apprenticeship programs, and their youth unemployment rates are half that of United States. Whether students in those countries continue on to academic or on-the-job training, they can earn a job with a middle-class wage.

Historically, Alaska has had much stronger apprenticeship programs and more apprenticeship job opportunities than other states. We are expanding apprenticeships in health care, maritime, aviation, and other industries. The U.S. Department of Labor and Congress have supported this effort.

We are also coordinating with higher education providers and partner state agencies. Educating and training young Alaskans to enter the workforce can and should include multiple pathways. College is just one of the options for obtain-

ing postsecondary credentials.

We must offer viable alternatives for students who prefer on-the-job learning and those who can't afford to attend college full-time. We must also build apprenticeship programs that create opportunities for students to complete college programs on a realistic schedule and budget.

My department is part of the state's Completion and Access Network, a consortium of education and training providers working to increase the percentage of Alaskans who complete post-high school training. We're working with the Department of Education and Early Development, the Alaska Association of School Boards, and other partners to expand Career and Technical Education. We are coordinating with individual school districts to strengthen school-to-apprenticeship programs. We are partnering with employers to start and expand apprenticeships that have concurrent college credit. Universities such as the University of Alaska Anchorage and Ilisagvik College are expanding their connections to apprenticeship.

The education system is complex, with many institutions and strong local control. That complexity is not an obstacle, but an opportunity to expand post-high school training options in a way that strengthens our college system while expanding school-to-apprenticeship programs.

I appreciate the hard work of our partners, including employers and educational providers, in this effort. Collectively, we are building a much more effective education and training system that will contribute to lower unemployment, higher wages, and higher socioeconomic mobility.



Follow the Alaska Department of Labor and Workforce Development on Facebook ([facebook.com/alaskalabor](https://www.facebook.com/alaskalabor)) and Twitter (twitter.com/alaskalabor) for the latest news about jobs, workplace safety, and workforce development.

WHEN RECESSIONS LINGER

What we can learn from other states' downturns and recoveries

By **DAN ROBINSON**

Alaska has been losing jobs for roughly a year and a half, precipitated by a drop in oil prices and a host of downstream effects. Job losses are already the worst since Alaska's deep recession of the late 1980s, and show no signs of ending soon.

The state has had three distinct recessions since 1961, with the longest period of job loss a little more than two years. Over that same period, the U.S. sustained six recessions, all of them lasting less than two years. (See the February 2016 issue of *Alaska Economic Trends* for more information on U.S. and Alaska recessions and how they're defined.)

With only that information, a casual observer might conclude recessions don't last much longer than two years and that the state will probably resume adding jobs in the next year or so. But Alaska is a young state

with limited experience in the types of recessions that are considered a normal part of the business cycle of expansion, contraction, and recovery.

The U.S. economy is much more diverse than most states' economies and can weather shocks better and recover faster, making it a less useful guide on the likely duration of a state recession. Looking at other states' experiences may be more telling.

There have been 259 state recessions since 1961, defined here as at least nine consecutive months of job loss. What can they teach us?

Expansion is the default mode for state economies

It's much more common for states to be adding jobs than losing them. States added jobs 82 percent of the time between 1961 and 2016.

The Exxon Valdez spill didn't bring Alaska out of the 1980s recession

One of the enduring myths about Alaska's deep and painful 1980s recession is that it took the Exxon Valdez oil spill and the estimated \$2 billion spent on cleanup to bring the state out of its quagmire.

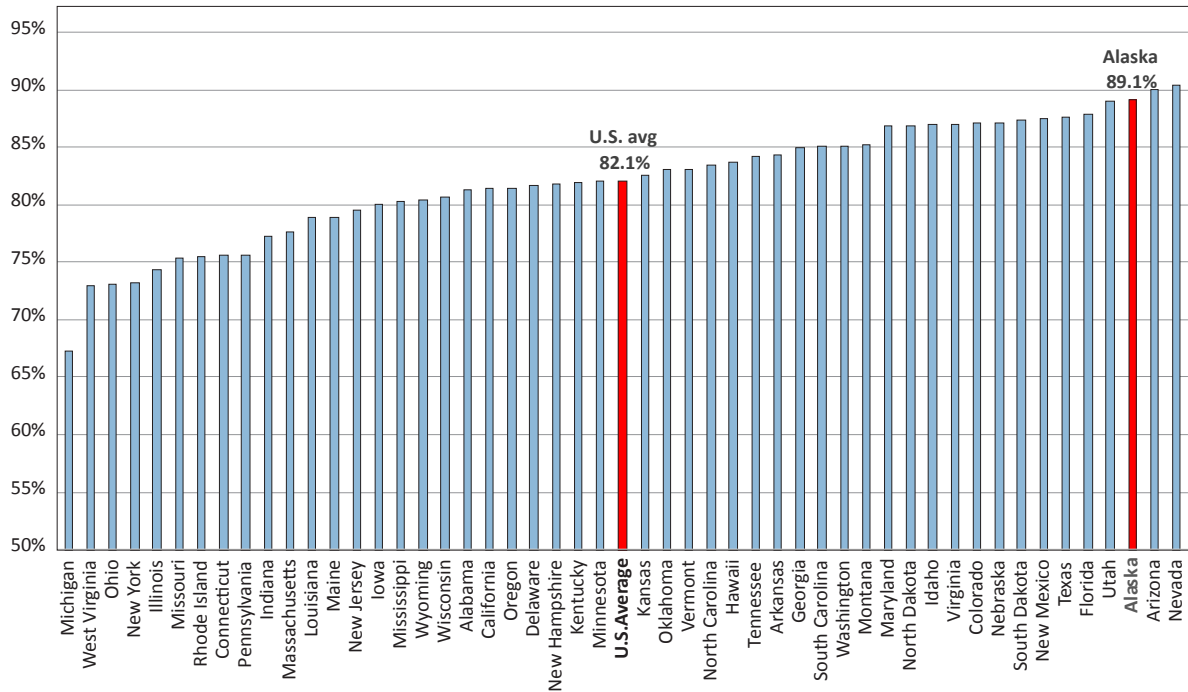
But the March 1989 spill came about a year after Alaska's job growth had already resumed. A month before the spill, the state's employment was growing by a robust 4.1 percent and job counts had been up by 2 to 3 percent since the summer of 1988.

The cleanup clearly stimulated the state's economy, as

job growth rose as high as 8 percent that summer when cleanup would have been at its most urgent and intense, but growth returned quickly to pre-spill levels in 1990.

It's important to understand that the spill didn't pull the state out of its recession because believing something big needs to happen to spur an economic recovery can be counterproductive if it shifts focus from the basic tasks that serve an economy well over the long term, including public safety; well-maintained roads, airports, docks, and other infrastructure; good schools, and other strong public institutions that make a state a place where people want to live.

1 Percentage of Time States Were Adding Jobs 1961 to 2016



Source: U.S. Department of Labor, Bureau of Labor Statistics

At the high end, Nevada and Arizona added jobs 90 percent of that time, and Alaska was next-highest at 89 percent. At the low end, Michigan's employment grew 67 percent of the time and West Virginia was second-lowest at 72 percent. (See Exhibit 1.)

Unless there's a specific reason for a state's economy not to grow, it grows.

precipitating economic shock hits just a few industries while others continue to grow, or 2) the shock is not large enough or the affected industries central enough to spread throughout the economy or cause a broad crisis of confidence.

When a state isn't growing, that's almost always attributable to a specific economic weakness or shock. Alaska and other states losing jobs right now, for example, are all heavily dependent on oil and gas and have been hit hard by a drop in oil prices. States that suffered most from 2007 to 2009 were those most afflicted by risky subprime mortgage lending and overheated housing markets (Nevada, Florida, and Arizona).

What lifts a state out of a recession, however, is seldom a specific event or development. (See the sidebar on the previous page on how the Exxon Valdez oil spill is often mistakenly credited for bringing Alaska out of its mid-'80s recession.) Rather, economies typically absorb the precipitating shock over a period of time and then resume growing.

Most last less than two years

Most state recessions tend not to linger because: 1) the

Out of the 259 state recessions, job loss lasted two years or less 75 percent of the time, and the most common duration was one to two years. (See Exhibit 2.)

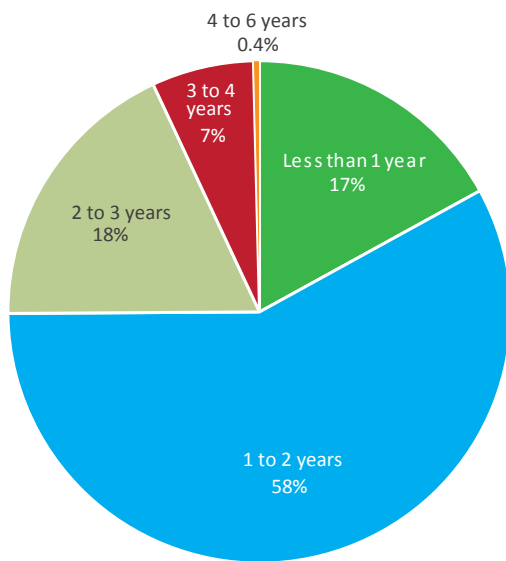
Alaska's 2009 recession, which lasted less than a year, is an example of this type of recession. Alaskans sustained significant losses in retirement and other stock market-based accounts, and weakened national and international economies hurt the state's tourism industry, but it was a mild and short recession for the state because high oil prices and a stable housing market partially compensated for the losses.

Washington's dot-com bubble burst

Another example of a short-lived recession is that of neighboring Washington during the "dot-com bubble" national recession in the early 2000s. Like most states, Washington's economy shed manufacturing and other jobs when the bubble popped, but after about a year and a half, its economy had absorbed the shock and

2 How Long Job Loss Lasted

AVERAGE FOR ALL STATES, 1961 TO 2016



Source: U.S. Department of Labor, Bureau of Labor Statistics

resumed adding jobs.

Many states had similarly short-term losses during the early 1990s national recession, when about one in three savings and loan associations failed, hurting the banking industry, stock markets, and ultimately federal taxpayers.

One-fourth lasted two to four years

About a fourth of state recessions lasted more than two years but less than four. That may not sound like a long time unless you're in the middle of it and don't know when it will end. For example, if Alaska were to lose jobs for four years, we'd now be less than halfway through the current downturn and wouldn't resume adding jobs until late 2019.

Examples of this type of recession include Oregon in the early 1980s, Connecticut in the late 1980s and early 1990s, and Florida during the most recent national recession, known as the Great Recession.

Oregon's timber jobs nearly disappeared

Oregon shed jobs steadily for three-plus years in the early 1980s, eventually losing more than 100,000 jobs, or 10 percent of its pre-recession total. This wasn't due to an especially vicious business cycle but rather to the near-disappearance of Oregon's timber and wood products industry, which had long been one of its biggest economic drivers. Lumber and wood prod-

Most recessions haven't lingered because the shock was limited to a few industries or wasn't large enough to spread through the larger economy or cause a crisis of confidence.

ucts fell from a high of nearly 13 percent of Oregon's GDP to less than 2 percent.

In Alaska, Sitka and Ketchikan experienced something similar when their pulp mills closed in 1993 and 1997 respectively, hurting Southeast's economy for years and, to a lesser degree, the state's economy.

In Oregon, mills closed and the unemployment rate soared, especially in coastal towns. Job losses rippled through the housing and retail markets. Ultimately, the Pacific Northwest lumber industry shed nearly 50,000 jobs, most never to return.

Connecticut manufacturing took similar hit

Connecticut sustained three-plus years of similar loss from the late 1980s to the early 1990s. A University of Connecticut economist described the reasons in a *Hartford Courant* article: "We were old-line manufacturing, old-line financial services, and old-line defense, and all three of them went south at the same time."

Connecticut's financial services eventually rebounded strongly, but "old-line manufacturing," characterized largely by its high-wage and labor-intensive jobs, were mostly gone for good.

Florida's real estate bubble was huge

Florida is a final example of the quarter of all state recessions characterized by two to four years of loss. Florida surrendered nearly 900,000 jobs from its 2007 high of 8.1 million, or 11 percent of its pre-recession total, over three years.

Unlike Oregon and Connecticut, which both lost historically important industry sectors for good, Florida followed a story line that's typical when an unusually large economic bubble pops — a "bubble" being when prices for something rise well above its intrinsic value, usually the result of speculative bidding-up of prices.

From a high of 690,000 construction jobs in 2006, Florida shed more than half of that amount over the next several years, finally bottoming out at about 330,000 construction jobs in 2011.

While the problems with subprime mortgage lend-

ing, speculative buying, and a flawed financial sector cost Florida hundreds of thousands of jobs when the bubble popped and staggered the broad economy, the underlying need for more residential and commercial construction didn't go away. Though still well below pre-recession highs, Florida has added about 170,000 construction jobs over the last few years and growth rates are once again strong.

... And then there's Michigan

The granddaddy of all state recessions was Michigan, which lost more than 800,000 jobs from 2000 to 2010 — an astonishing 17 percent of its total. (For comparison, Alaska has lost less than 3 percent of its pre-recession job count so far.)

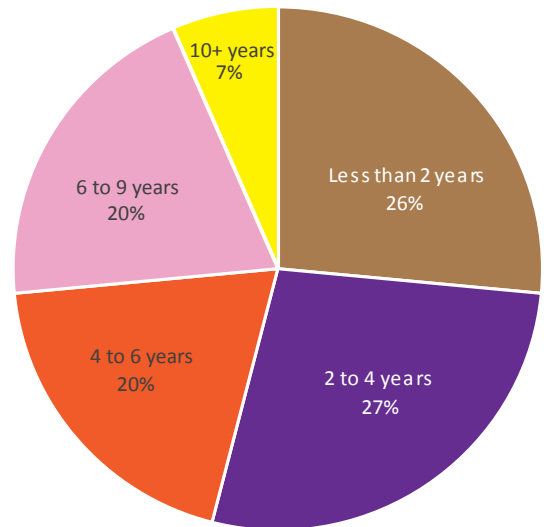
As with Connecticut and Oregon, the term “recession” in Michigan's case is misleading if it suggests temporary losses resulting from an overheated segment of the economy, followed by a market correction and resumed growth. Rather, what Michigan sustained was an economic-level shift.

Michigan lost nearly 900,000 manufacturing jobs from 2000 to 2009 and was the state hardest hit by the national and international forces that cost the nation more than 5 million manufacturing jobs over that period.

In the years since, manufacturing jobs have rebounded only modestly despite strong resumed growth in manufacturing output. Although it's inaccurate to say the United States and Michigan in particular “don't make anything anymore,” it is fair to say that what we make

3 Time to Recover Lost Jobs

AVERAGE FOR ALL STATES, 1961 TO 2016



Source: U.S. Department of Labor, Bureau of Labor Statistics

requires a lot fewer jobs than it once did, largely due to automation.

How long to recover lost ground?

The duration of job loss is particularly relevant (see the sidebar on the next page on the hard-to-measure costs of uncertainty), but another way to measure the

Alaska's economy differs from all other states in a number of key ways

No analogy or historical comparison is a perfect fit — in the words of one sage, “History doesn't repeat itself, but it rhymes” — so it's worth keeping in mind the differences between Alaska's economy and other states as we try to extract historical lessons from their recessions.

First, no other state depends so heavily on “natural resources and mining,” a category that is mostly oil in Alaska. In 2014, 30 percent of Alaska's GDP — the value of all our goods and services — came from natural resources and mining. That percentage would have been noticeably higher when oil prices were at their peak.

Wyoming and North Dakota came closest at 29 and 24 percent respectively in 2014, but other oil-rich states such as Texas (15 percent) and Louisiana (9 percent) depend on natural resources and mining far less than Alaska. At the opposite extreme, states like New York, New Jersey, Massachusetts, and Maryland have less than half a percentage point of their GDP attributable to natural resources and mining.

Alaska's dependence on natural resources rises to a new level when funding for state government is considered. In 2013, before oil prices fell, 78 percent of Alaska's total tax revenue came from “severance taxes,” a category that comprises most of Alaska's oil taxes. By comparison, severance taxes made up just 2 percent of tax revenue for all states combined.

Where Alaska has relied mostly on oil taxes to pay for state government since abolishing its individual income tax in 1980, the 49 other states rely mainly on individual income taxes, general sales taxes, or both. In the most recent year available, 73 percent of states' tax revenue came from a combination of income and sales taxes. Alaska is the only state doesn't have either one, and it's also the only state that distributes money to residents simply for being residents.

Finally, Alaska's Permanent Fund is a far larger rainy day account relative to the size of our economy than any other state's savings.

length and severity of a state recession is how long it took to fully recover the lost jobs.

About one-quarter of the time, states regained their lost jobs in less than two years. (See Exhibit 3.) Alaska's 2009 recession fit that category, as the state recovered all its losses in less than a year and a half.

Another quarter of state recessions needed two to four years for full recovery and an additional fifth took four to six years. Alaska's other two recessions fell into the latter category. After the massive job losses that followed completion of the Trans-Alaska Pipeline System, it took the state four and a half years to surpass its peak 1976 employment level. And after the deep recession of the 1980s, it took a little over four years to fully recover.

A fifth of all state recoveries took from six to nine years. Examples include the early-1980s Oregon recession and Florida's recent housing/financial sector meltdown discussed previously.

Seven percent of recoveries take more than 10 years. Not surprisingly, Michigan is an example. Michigan is still well below its 2001 peak of 4.7 million jobs more than 15 years later, despite steady growth for the last six years.

Wyoming recovery took 16 years

Another example of a lengthy recovery is Wyoming, which took 16 years to reach a new employment high after being hit hard by an oil bust in the 1980s.

Incidentally, Wyoming is more than eight years into another recovery period after the most recent national recession, as it hasn't yet recovered its 2009 employment peak.

Alaskans are familiar with oil's downturn, which also hit Wyoming's economy — but coal mining jobs in Wyoming have also taken a hit, falling to 10-year lows. After only partially recovering from job losses during the Great Recession, Wyoming is again losing overall jobs due to a combination of oil and gas losses and the ongoing coal decline.

Mississippi's curious long-term slump

Mississippi represents another type of recovery that extended beyond 10 years, as the state remains below its 2000 employment level more than 16 years later. Mississippi was hit hard by long-term declines in agriculture jobs and big losses in manufacturing

The importance of confidence and stability to an economy

Though hard to quantify, one characteristic of recessions is they shake the confidence of economic decision-makers and make them reluctant to invest and spend. People unsure about their job security are less likely to buy a house or make other large purchases, and businesses unsure about their state's economic future are less likely to expand and hire more workers, which can create a downward spiral.

Normally, confidence in an economy is restored as it becomes clear the economic shock from whatever source has been absorbed. For example, it will be encouraging in Alaska's current recession when oil and gas jobs stop falling and the related industries stabilize or resume growing.

But this recession is unusual in that the initial shock created the near-certainty of a secondary shock. Alaskans will have to absorb another economic deduction in the form of new taxes or more state government job and spending cuts, and until we know how that will play out, individuals and businesses may be more likely to put financial decisions on hold.

between 2000 and 2016.

Mississippi, which hit a manufacturing employment high of about 225,000 in 2000, lost more than 90,000 of those jobs over the decade that followed and has only regained about 7,000 in the six years since.

Mississippi's job growth has been steady since about 2010, though, as the state is transitioning to a less manufacturing-dependent economy. Noticeable gains have come primarily from health care, professional and business services, and the

leisure and hospitality sectors.

Mississippi's struggles raise a question we can't answer here, though, which is why its nearest neighbors fared considerably better despite also suffering major manufacturing losses.

Alabama's manufacturing jobs dipped from 350,000 to below 250,000 over the same period, but its overall 2016 job counts were well above 2000 levels. Arkansas also lost nearly 90,000 manufacturing jobs, but its total employment was up by 80,000 from 2000 to 2016.

Tennessee manufacturing dropped from above 500,000 jobs in 2000 to below 300,000 in 2010 before

Some recessions result from an overheated segment of the economy and are followed by a market correction. Others are an economic-level shift.

recovering about 50,000 of those lost jobs over the next six years. Despite the net loss of 150,000 manufacturing jobs, Tennessee's total job count rose from 2.7 million in 2000 to 3 million in 2016.

The takeaways for Alaska

The point of looking at other states' recessions and Alaska's previous experiences is not to chart our current recession's course or predict its specific end. Similar to economic models, which are simplifications of the real world and best used as broad guides, comparisons like these are useful mainly for the patterns they reveal.

One important takeaway from comparing states' recessions is that economies are less fragile than many people think. Unless there's a specific reason for a state's economy not to grow, it grows. But economies are also more complicated than many people think, and the most knowledgeable and credible economists typically answer questions about the future with "it depends."

With that caveat, one modest conclusion is that periods of job loss don't tend to linger beyond a few years unless the state is undergoing a structural change: the timber industry shrinking for good in Oregon, for example, or manufacturing jobs drying up in Michigan.

The next logical question might be whether Alaska is in the midst of a structural change or simply absorbing the shock from a temporary downturn in oil prices and related activity.

Oil and gas likely isn't on its way out as one of the pillars of the state's economy, although it will prob-

ably play a diminished role. The Alaska Department of Revenue forecasts oil production will fall from about 500,000 barrels a day in 2017 to 340,000 in 2026, but total unrestricted petroleum revenue will rise from about \$970 million in 2017 to an unadjusted value of \$1.6 billion in 2026 (well below 2008's high of nearly \$10 billion).

The U.S. Energy Information Administration anticipates world demand for oil to rise moderately over the next 25 years, and large discoveries have been announced recently in Alaska. Much could change over that period, as it has in just the last 10 years, but Alaska's oil industry doesn't appear to be on the same path as Oregon's timber industry in the 1980s or Michigan's manufacturing industry in the 2000s.

One structural change that appears necessary, though, is the way we fund state government. The days of relying mostly on oil-related revenue to pay the state's bills are likely gone. The options going forward include some combination of using investment earnings from the state's Permanent Fund, continuing to reduce the size of state government, implementing new taxes, or reducing the size of Permanent Fund Dividends.

Each option has its own set of pros and cons, but the more important point is that the state's economy must absorb a permanent change over the next few years. All other things being equal — and of course, they never are — that means our current recession could linger for a while.

Dan Robinson is an economist for the Department of Labor and Workforce Development in Juneau. Reach him at (907) 465-6040 or dan.robinson@alaska.gov.

ALASKA GRADS ten years later

78 percent of 2005 high school graduates went to college

By **YUANCIE LEE**

In a research partnership with the Alaska Department of Education and Early Development, the Alaska Department of Labor and Workforce Development studies high school students — starting with the nearly 7,000 who graduated in 2005 — to see where they attend college, whether they remain Alaska residents, and where they show up in the working world.

For this update, we were able to match data for about

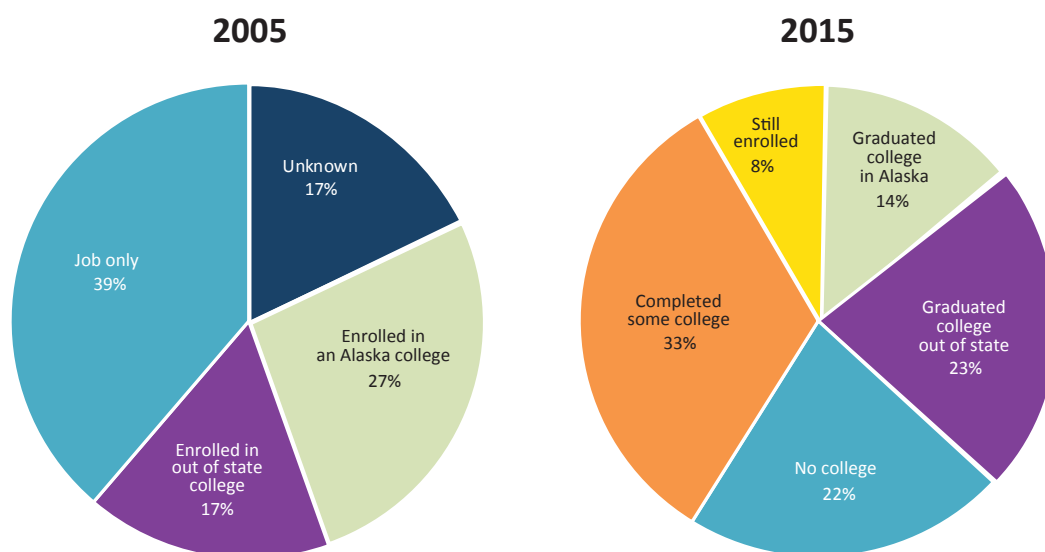
6,000 of the original students, who by 2015 had been out of high school long enough to have graduated college and spent several years developing careers, which allowed a more comprehensive look at their education and career paths. Our prior update, which looked at their progress in 2010, is available in the June 2012 issue of *Trends*.

Majority attended college

About 44 percent of the 2005 high school graduates enrolled in college immediately, and the majority at-

1 Where 2005 Graduates Started Out and Where They Are Now

ALL ALASKA 2005 HIGH SCHOOL GRADUATES



Note: "Graduated college" includes associate degrees.

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

tended in Alaska.

By 2015, over 78 percent had attended college at some point, and 37 percent of all the students had an associate degree or higher. (See Exhibit 1.)

Of the 2,250 who had a degree in 2015, 59.5 percent had attended an Alaska college at some point: 38 percent received their degree in Alaska and 21.5 percent attended an Alaska college but graduated elsewhere.

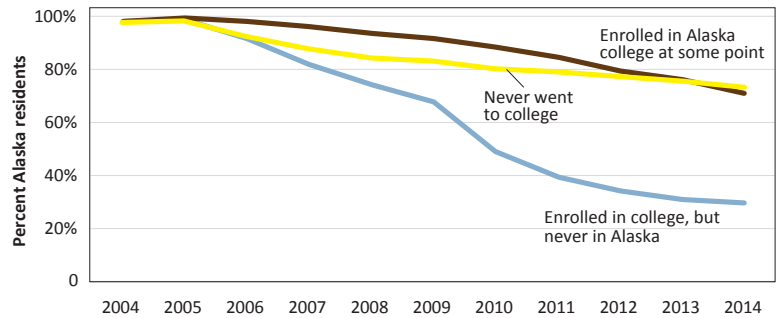
Alaska college grads more likely to stay

While most of the college graduates who only attended outside the state are no longer residents, the majority of the Alaska college attendees were still Alaska residents in 2014, whether they got their degrees here or not.

Originally, those who had gone to college in Alaska at some point were more likely than those who never went to college to remain Alaska residents. By 2013, though, those who went to college in the state and those who didn't go to college at all were about equally likely to have remained residents. (See Exhibit 2.)

2 Residency Low Among Those Who Left

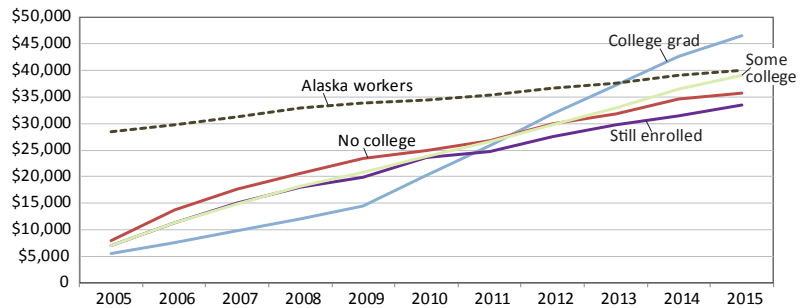
2005 GRADUATES' RESIDENCY STATUS THROUGH 2014



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

3 College Grads' Earnings Turned a Corner

ALASKA 2005 HIGH SCHOOL GRADS' WAGES, 2005 TO 2015



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

4 Most Common Jobs After Graduation and Now

ALL ALASKA 2005 HIGH SCHOOL GRADUATES

Top Occupations in 2005 After Graduation	Workers	Avg wage in 2005	Top Occupations in 2015	Workers	Avg wage in 2015
Retail Sales Workers	976	\$6,545	Construction Trades Workers	247	\$57,540
Food and Beverage Serving Workers	486	\$5,480	Retail Sales Workers	187	\$21,885
Construction Trades Workers	284	\$11,006	Other Office and Admin Support Workers	182	\$35,651
Information and Record Clerks	275	\$6,475	Information and Record Clerks	165	\$32,800
Material Moving Workers	275	\$7,147	Food and Beverage Serving Workers	117	\$16,729
Other Food Preparation and Serving Related Workers	231	\$5,822	Financial Clerks	111	\$31,348
Other Office and Administrative Support Workers	205	\$6,340	Secretaries and Administrative Assistants	110	\$34,527
Other Personal Care and Service Workers	148	\$5,500	Health Diagnosing and Treating Practitioners	98	\$54,321
Building Cleaning and Pest Control Workers	147	\$5,503	Other Health Care Support Occupations	86	\$31,912
Cooks and Food Preparation Workers	146	\$6,220	Other Personal Care and Service Workers	75	\$23,115

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

Earnings increased faster for those with a degree

The group who had a college degree by 2015 earned less on average while in school than their classmates who started working right out of high school, likely because they weren't working or were part-time while continuing their education.

In 2006, for example, the students who were on the college track made just \$7,666 on average — considerably less than the \$13,848 earned by those who didn't enroll. The earnings gap reached its widest point four years after high school graduation, in 2009, when many in college were close to finishing or had just graduated. That year, they earned an average of \$14,444, compared to \$23,405 for the group who had been out of school and presumably in the workforce for four years. (See Exhibit 3.)

That changed between 2009 and 2010, at about the time the group started finishing college. The average earnings for college graduates began increasing faster, and by 2011 they were earning more on average than those without any college experience. Three years later, their earnings surpassed the average wage for all Alaska workers, and by 2015, they were making 16 percent more.

Wages for those who didn't go to college or had some college experience also continued to rise, but as of 2015 these groups were still making less on average than Alaska workers overall.

Typical occupations varied by educational level

In 2005, most of the recent high school graduates worked in a narrow range of jobs, mostly in retail sales, food services, and construction. Sixty-six percent worked in just 10 occupations right after high school.

By 2015, their career options had broadened with years of experience or education, although 43 percent were still working in the original top 10 occupations they'd held right after high school. Exhibit 4 shows the 10 most common jobs and earnings for these students right after high school and 10 years later.

Those who had some college experience by 2015 worked in many of the same top occupations as those who never went, and for both those groups, the top two categories were construction trades and retail sales. (See Exhibit 5.)

For those who held a college degree in 2015, the most

About the data

Since 2009, the departments of Labor and Workforce Development and Education and Early Development have collaborated to study what Alaska's students do after high school and whether they join Alaska's workforce, beginning with those who graduated in 2005.

The Department of Labor combines various data sources with the Department of Education's student data, including Alaska Permanent Fund Dividend records, information on employment and wages, and national postsecondary education information.

For this article, a college graduate is someone who received a degree at a college recognized by the National Student Clearinghouse, and includes those with an associate degree. "Some college" includes those who enrolled at some point but didn't receive a degree, and "no college" includes those who participated in career and technical training programs or obtained other nondegree certifications.

Only rough estimates are available on the percentage of high school graduates who pursue most noncollege training programs. About 900 people begin registered apprenticeships each year, and that number is growing as Alaska expands the number and types of apprenticeships available. Other graduates pursue postsecondary training in everything from learning to fly float planes to becoming a chef.

common occupational category was health diagnosing or treating practitioners, primarily nurses. Other top occupations for college graduates included work in health care, education, and engineering.

One noteworthy occupation is oil extraction, which was one of the highest-paying occupations for all educational levels in 2015, including for those who didn't go to college. However, many of those students had completed training programs that focused on skills necessary for construction and oil-related jobs.

While more college graduates held the higher-paying occupations, we found former students with every level of education in a variety of high-paying jobs. We found college graduates earning more than the state average in 29 occupational groups. For comparison, those who had some college were earning more than the statewide average in 26 occupational groups and those with no college experience earned more in eight.

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5

Most Common Occupations in 2015 by Education Level

ALL ALASKA 2005 HIGH SCHOOL GRADUATES

Top 10 occupation group	Education status	Workers	Avg wage
Health Diagnosing and Treating Practitioners	College grad ¹	71	\$61,524
Other Office and Administrative Support Workers	College grad	48	\$47,162
Preschool, Primary, Secondary, and Special Education School Teachers	College grad	45	\$49,057
Engineers	College grad	42	\$79,054
Information and Record Clerks	College grad	37	\$38,452
Counselors, Social Workers, and Other Community and Social Service Specialists	College grad	36	\$42,781
Drafters, Engineering Technicians, and Mapping Technicians	College grad	30	\$71,525
Financial Specialists	College grad	28	\$67,377
Other Health Care Support Occupations	College grad	28	\$36,348
Secretaries and Administrative Assistants	College grad	28	\$41,376

Top 10 occupation group	Education status	Workers	Avg wage
Construction Trades Workers	Some college	106	\$58,158
Retail Sales Workers	Some college	58	\$26,663
Information and Record Clerks	Some college	58	\$36,983
Other Office and Administrative Support Workers	Some college	48	\$32,104
Secretaries and Administrative Assistants	Some college	43	\$35,322
Food and Beverage Serving Workers	Some college	34	\$19,832
Financial Clerks	Some college	33	\$37,658
Other Health Care Support Occupations	Some college	29	\$33,582
Material Recording, Scheduling, Dispatching, and Distributing Workers	Some college	29	\$45,801
Other Personal Care and Service Workers	Some college	28	\$25,869

Top 10 occupation group	Education status	Workers	Avg wage
Construction Trades Workers	No college ²	73	\$62,177
Retail Sales Workers	No college	44	\$21,009
Other Office and Administrative Support Workers	No college	30	\$30,115
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	No college	26	\$66,326
Information and Record Clerks	No college	25	\$30,861
Material Recording, Scheduling, Dispatching, and Distributing Workers	No college	24	\$25,742
Food and Beverage Serving Workers	No college	23	\$14,959
Financial Clerks	No college	22	\$25,870
Other Installation, Maintenance, and Repair Occupations	No college	21	\$62,600
Extraction Workers	No college	19	\$105,555

¹Includes associate degrees

²Includes career and technical training programs and other nondegree certifications

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

UNEMPLOYMENT CLAIMS IN 2016

Who applied and how the oil downturn has affected industries

By **LENNON WELLER**

The number of people who collected Alaska unemployment insurance benefits rose 2.1 percent in 2016, with most of the increase in the first half of the year.

Claimants were up in all regions except Southeast and Anchorage/Mat-Su. (See exhibits 1 and 2.) The largest increases in the state were in Southwest, especially in Bethel.

Interstate claimants, or those who worked in Alaska but filed from outside the state, were up by 24 percent. They represented just over a quarter of all claimants in 2016, up from 21 percent the previous year.

Claims up in all months but two

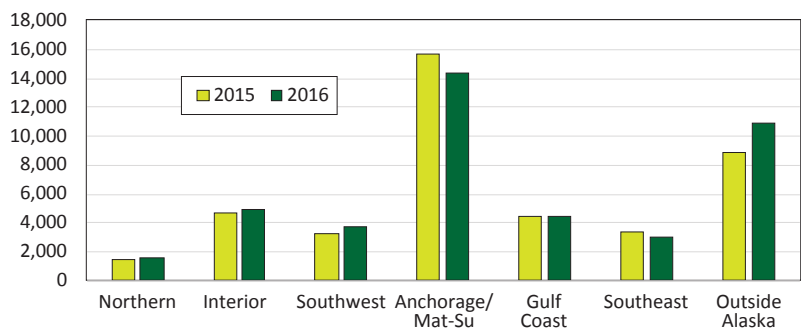
On a monthly basis, claimant counts were up in most months of 2016 compared to the year before, but May and November were lower than the same months in 2015. (See Exhibit 3.)

May's lower total was due to small drops in claims in a number of industries from the prior May, primarily food manufacturing, construction, health care, and public administration.

November's total reflects a decline in claimants from the oil and gas industry, likely because much of the job loss in that industry had already happened and its

1 Number of Claims Per Region

ALASKA, 2015 AND 2016



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

The total paid out in benefits in 2016 was \$136 million, up from \$123.5 million in 2015.

The average weekly benefit payment was \$273.40, up from \$261.70.

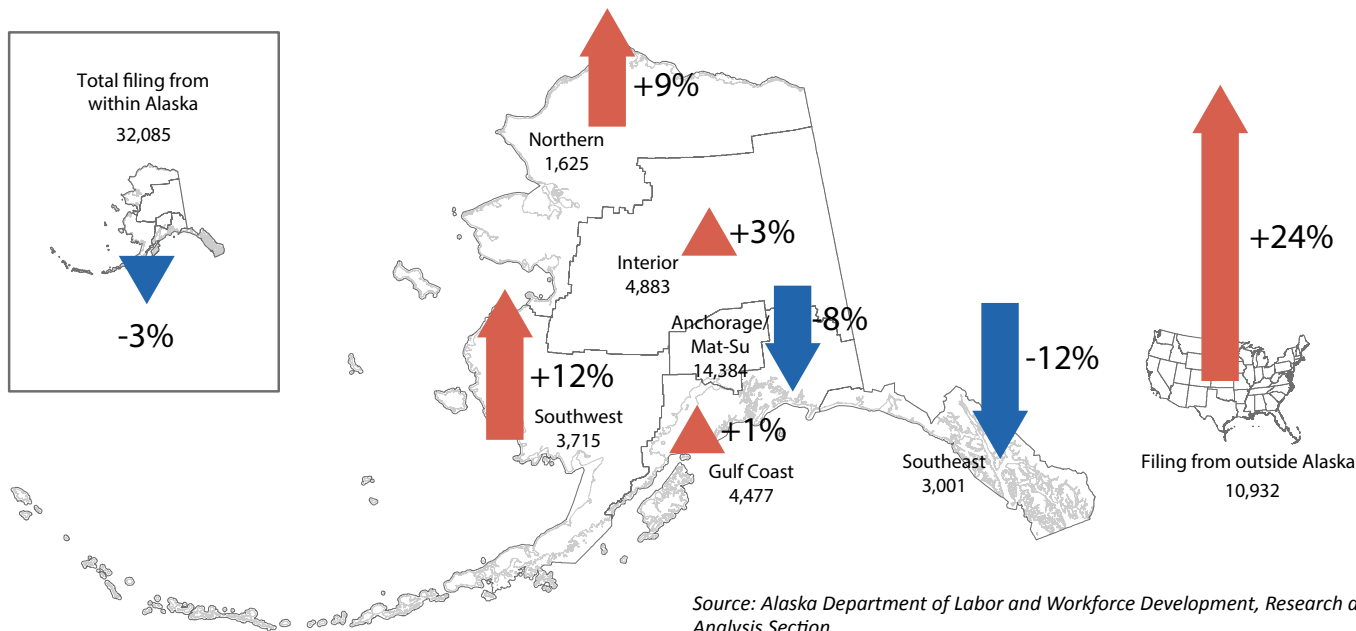
The average duration of benefits was 14 weeks, up from 13.6.

initial wave of claims had begun to subside.

The biggest monthly change from 2015 was April, when 1,849 more people filed than the April before. This was mainly due to oil industry layoffs that began in June 2015. In April 2015, before the layoffs began, 506

2 Percent Change in Total Claimants by Region

CHANGE FROM 2015 TO 2016, AND TOTAL BY ALASKA REGION



oil and gas workers collected benefits. In April of 2016, the number was two-and-a-half times higher (1,467).

Rise began in the oil industry

Oil and gas had the largest claims increase for the second year in a row, with claimants up 49 percent. (See exhibits 4 and 5.)

While the increase in claims began with the oil and gas industry in 2015, claims were up in most sectors by mid-to-late 2016 as the downturn brought on by sharply declining oil prices spread into the broader economy.

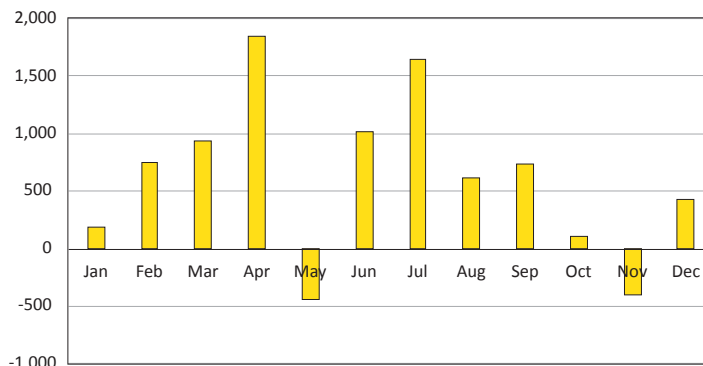
Other industries with notable increases included construction, professional and business services, restaurants and bars, and trade, all tied to the oil industry downturn. Combined, these four other sectors' claims were up 4 percent from 2015.

Construction has seasonal swings

Although the increase was less sharp for the construction industry, its claims began to rise in August of 2015 and peaked nine months later, around the

3 Monthly Change From Prior Year

ALASKA, 2016 CLAIMANTS COMPARED TO 2015



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

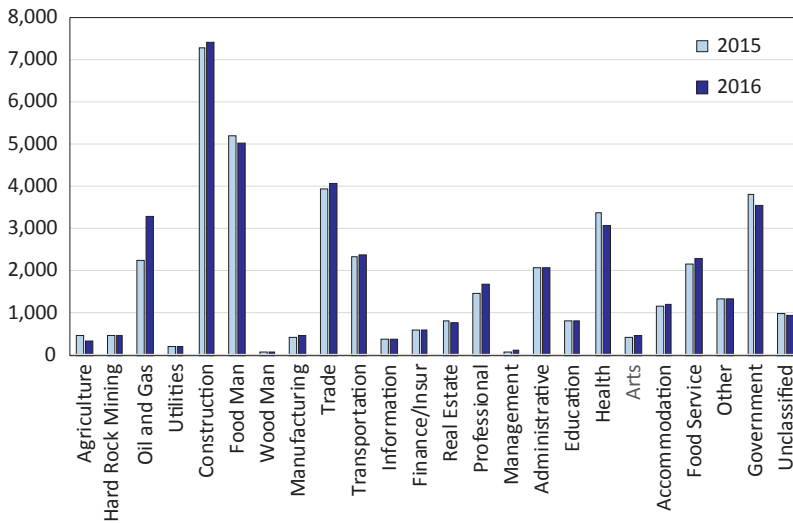
same time as oil and gas.

However, the construction industry is heavily seasonal, so its claims tend to be significant even in relatively strong economic years. The most recent year was no exception, with the number of construction industry claimants peaking in March and April of 2016 and bottoming out in July and August. Still, the fact that

4

Total Claimants by Industry

ALASKA, 2015 AND 2016



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

April 2016's claims were up from the prior April shows the rise wasn't entirely seasonal, reflecting a downturn in the economy.

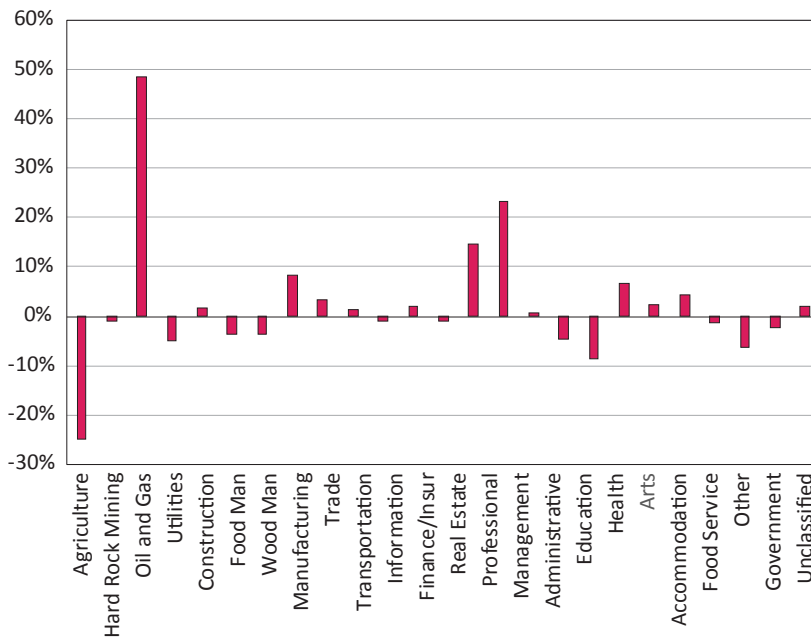
Services affected by less demand

Another industry closely tied to oil and gas is professional and business services, which provides detailed technical work to the oil extraction industry. These claimants don't typically represent more than 3 percent of the total in any given month, but they reached 5.1 percent in July 2016. Some of that increase was because certain projects wound down, but it was also due to a general lack of demand.

5

Change in Industry Claims

PERCENT CHANGE FROM 2015 TO 2016



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

Late 2016 shows shift in industries

Claims from these three industries appear to be subsiding. The increase in claims has shifted toward the trade and the leisure and hospitality industries, as these industries' claims increased the most in the latter half of 2016.

Lennon Weller is an economist for the Department of Labor and Workforce Development in Juneau. Reach him at (907) 465-4507 or lennon.weller@alaska.gov.

Who creates jobs?

Younger firms responsible for all net job gain from 2012 to 2016

By **CONOR BELL**

Whether Alaska's economy is growing or shrinking, thousands of new jobs are created each year and thousands disappear. Between 2012 and 2016, all net job growth in the state came from businesses less than five years old, and 86 percent came from businesses younger than one year.

That's because older firms, which typically generate most of the new jobs in Alaska, shed more jobs than they created over the past four years.

Some older firms shrunk

Firms older than 10 created an average of 17,200 jobs per year between 2012 and 2016. Sixteen percent of those jobs came from the opening of new establishments, such as a restaurant already operating in Alaska opening a new location. The remainder of the new jobs came from expansion of existing establishments.

At the same time, other mature firms shrunk, representing three of every four jobs lost in Alaska. On average, older businesses lost 400 more jobs each year than they created. Firms between five and nine years old were also net job losers, shedding 350 more jobs than they created each year on average.

The state recession drove most of these losses, as firms older than 10 tend to perform in concert with state and national economies. Mature businesses lost big during the U.S. recession of the past decade, swiftly recovered most of those jobs in 2011 and 2012, then lost again in 2016 as established firms in the oil industry and construction shed thousands more jobs than they created.

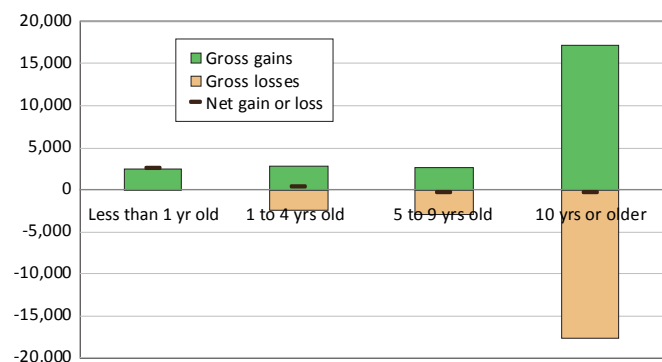
Net growth in young businesses

Because older businesses sustained so much loss, firms under a year old contributed almost all of the net job growth even though they generated only 10 percent of new jobs. The remaining net gain came from firms less than five years old.

Alaska's newcomers are spread throughout private in-

1 Job Change by Age of Firm

ALASKA, 2012 TO 2016 ANNUAL AVERAGE



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

dustries, and not all are homegrown startups — many are national corporations that expanded to Alaska.

Gains in smallest, largest firms

In terms of business *size*, newer firms also tend to be small, and those with fewer than 10 employees contributed most of the net job growth. The smallest firms — under five employees — of every age added net jobs.

Medium-sized firms with 50 to 499 employees lost more jobs than they created, but the largest firms netted almost 500 new jobs annually. Health care, which has long been Alaska's most consistent source of growth, is concentrated among a handful of large employers and is the main source of growth for firms that employ more than 500 people.

Nationally, most net growth comes from firms under a year old, but U.S. firms of every size and age added jobs from 2012 to 2016. Alaska also tends to generate growth across most categories during strong economic times.

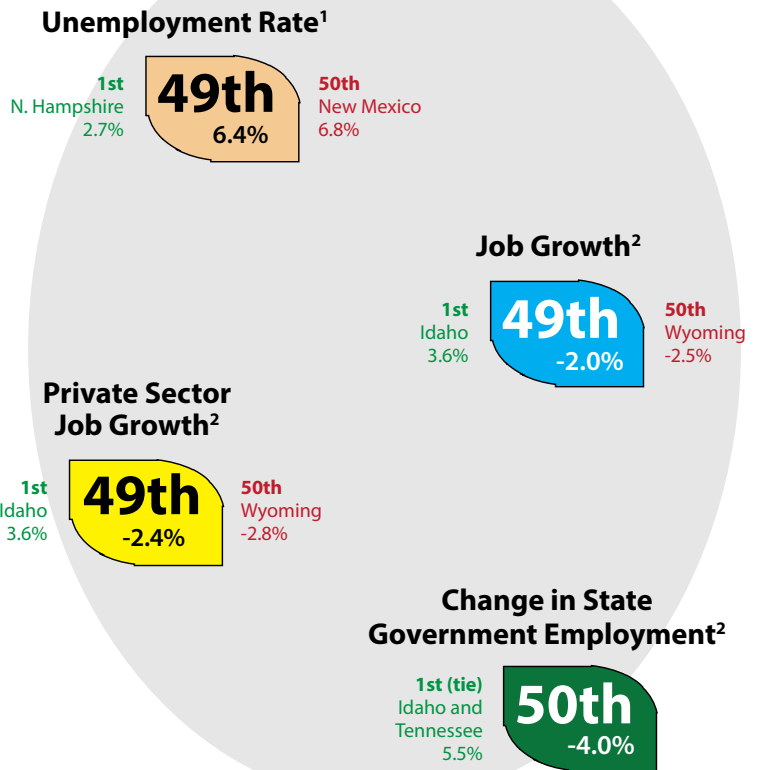
Conor Bell is an economist for the Department of Labor and Workforce Development in Juneau. Reach him at (907) 465-6037 or conor.bell@alaska.gov.

The Month in Numbers

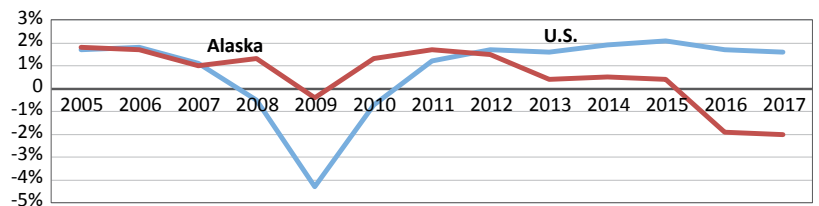
Unemployment Rates

	Prelim.	Revised	
SEASONALLY ADJUSTED	2/17	1/17	2/16
United States	4.7	4.8	4.9
Alaska Statewide	6.4	6.5	6.6
NOT SEASONALLY ADJUSTED			
United States	4.9	5.1	5.2
Alaska Statewide	7.4	7.2	7.5
Anchorage/Mat-Su Region			
Municipality of Anchorage	5.9	5.6	5.7
Matanuska-Susitna Borough	9.3	9.0	9.1
Gulf Coast Region			
Kenai Peninsula Borough	9.6	8.9	10.1
Kodiak Island Borough	4.5	5.5	4.9
Valdez-Cordova Census Area	10.9	10.0	11.6
Interior Region			
Denali Borough	21.4	20.6	20.4
Fairbanks North Star Borough	6.5	6.6	6.4
Southeast Fairbanks CA	11.9	11.8	12.8
Yukon-Koyukuk Census Area	20.9	19.1	20.8
Northern Region			
Nome Census Area	13.6	12.7	12.4
North Slope Borough	6.5	6.2	5.8
Northwest Arctic Borough	18.2	16.5	16.4
Southeast Region			
Haines Borough	12.6	13.4	16.8
Hoonah-Angoon Census Area	17.8	17.6	20.8
Juneau, City and Borough	5.1	5.0	5.2
Ketchikan Gateway Borough	7.7	7.3	8.9
Petersburg Borough	10.7	11.3	12.1
Prince of Wales-Hyder CA	13.8	14.0	15.9
Sitka, City and Borough	5.4	5.3	5.8
Skagway, Municipality	21.2	22.0	25.5
Wrangell, City and Borough	8.7	8.8	10.0
Yakutat, City and Borough	11.8	9.5	12.9
Southwest Region			
Aleutians East Borough	1.7	2.4	2.3
Aleutians West Census Area	2.1	2.7	2.4
Bethel Census Area	13.9	13.3	15.2
Bristol Bay Borough	13.8	14.2	14.3
Dillingham Census Area	9.5	9.4	10.3
Kusilvak Census Area	21.0	19.8	24.8
Lake and Peninsula Borough	15.5	15.5	15.7

How Alaska Ranks



Job Growth in Alaska and the Nation



All data sources are U.S. Bureau of Labor Statistics and Alaska Department of Labor and Workforce Development, Research and Analysis Section, unless otherwise noted.

¹February seasonally adjusted unemployment rates

²February employment, over the year change

Employer Resources

Hiring foreign labor is time-consuming and costly

In 2016, 41 Alaska employers submitted applications to employ foreign workers, and 90 percent of them were in the state's massive seafood industry. Many did so believing there weren't enough qualified, available workers in Alaska or the Lower 48 who met their recruitment needs.

Hiring Alaska workers saves employers time and money because the process to hire foreign labor is time-consuming and costly. The law requires employers to pay for round-trip transportation, food while in transit, and reimbursement of visa fees. Employers often have to hire attorneys because the foreign labor process is so highly regulated. In most situations, the costs per foreign worker can top \$5,000. By hiring Alaska residents, employers not only improve the quality of life for Alaskans and boost our state and local economies, they significantly lower their costs of doing business.

Often, the jobs filled by foreign workers are seasonal, physically demanding, and involve significant overtime. Alaska workers are ready and up to the task, as shown by the successful recruitment of Alaskans by industry leaders such as Seafood Producers Cooperative and Inlet Fish Producers.

The Alaska Department of Labor and Workforce Development's Division of Employment and Training Services works with employers to help them hire more Alaskans and U.S. workers in Alaska's industries, including seafood. We find workers with the skills, knowledge, and abilities they need to fill these jobs. To learn more about hiring Alaska and U.S. workers before considering foreign labor, contact Stephen Sowell at Stephen.Sowell@alaska.gov.

Employer Resources is written by the Employment and Training Services Division of the Alaska Department of Labor and Workforce Development.

Safety Minute

An emergency kit is essential when driving in Alaska

Any vehicle can break down in poorly lit or remote areas of Alaska or during hazardous weather, and sometimes with no available emergency assistance and poor or no cell phone reception. Do you have the tools you need to survive in your vehicle? Consider an emergency kit for your vehicle before you need one.

The more remote the area and the more inclement the weather, the more likely the contents of an emergency kit will come in handy, even if you have a roadside assistance plan and can contact help. A car emergency kit is designed to help you survive until help arrives.

A number of prepackaged car emergency kits are available ranging from about \$20 to \$100, or you can save money by assembling your own. The following should be part of every car emergency kit:

Charged cell phone
First-aid kit

Three reflective
warning triangles

Fire extinguisher
Tire gauge
Foam tire sealant
Jumper cables
Flashlight and extra batteries
Gloves
Rags

Duct tape
Tow strap or tow rope
Multipurpose utility tool
Rain poncho
Drinking water
Nonperishable snacks

Even if you purchase a prepackaged kit, consider adding some of the following items to your trunk during the winter:

Winter coat, gloves,
and warm hat
Warm blanket
Snow shovel

Cat litter (for traction)
Windshield ice scraper

Call (800) 656-4972 or visit labor.alaska.gov/lss/osh-home.htm to learn more about providing a safe workplace for Alaskans.

Safety Minute is written by the Labor Standards and Safety Division of the Alaska Department of Labor and Workforce Development.