



Job openings and labor turnover trends for Western States in 2018

By Skyla Skopovi and Jonathan Krause

The West is known for its scenic views, open space, and cultural diversity, but what are some of the labor market trends that set this geographical region apart? The Bureau of Labor Statistics [Job Openings and Labor Turnover Survey](#) (JOLTS) program publishes estimates on job openings, hires, and separations. JOLTS estimates can provide insights into labor market dynamics, such as labor demand and labor turnover that other employment measures cannot. In 2019, the JOLTS program published [JOLTS experimental state estimates](#) for the first time.¹ The JOLTS experimental state estimates offer valuable information that can help us better understand state-level economies and allow for comparisons between states, the West region, and the nation. This **Beyond the Numbers** article features experimental JOLTS estimates on states in the West region. This article is the second in

a series of four.² In this article, we explore trends in a number of measures—job openings, hires, separations (including quits, layoffs, and discharges), labor churn, fill rates, and unemployment—that can give us a deeper understanding of business cycles and labor demand in the West and help businesses and workers make better informed decisions. This article reveals ways that data users can use these estimates to evaluate labor demand and labor turnover at regional and state levels.

Unique labor patterns in the West region

Labor force dynamics in each state can vary widely. Each state in the United States exhibits its own unique labor patterns because of variations in geography; climate; major industries; labor force demographics, such as education and age; and other factors. Although neighboring states may have different labor patterns, there are often traits shared by states in the same geographic region. For this discussion, we will focus on states in the West region, as classified by the U.S. Census Bureau: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.³

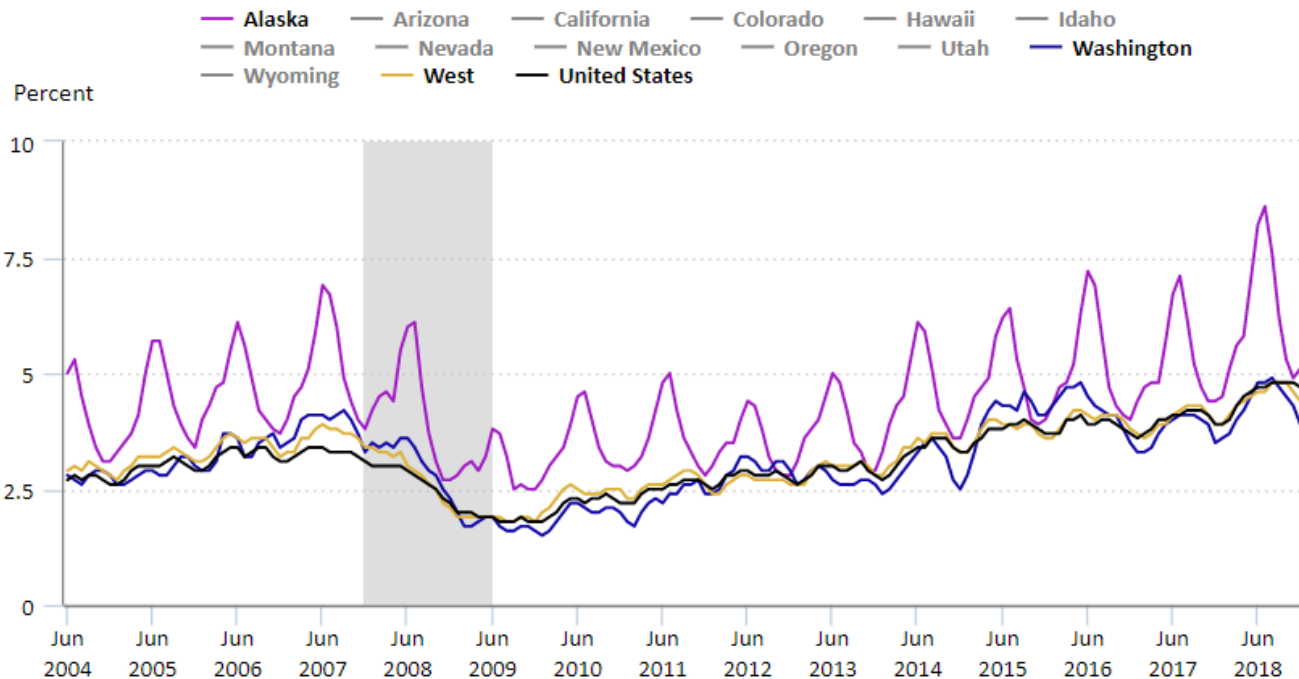
Of the four census regions, the West has the lowest population density—the least number of people living per square mile.⁴ As a result, this region has the smallest labor force per square mile.⁵ For 8 of the 13 Western States, Trade, Transportation, and Utilities was the major industry with the largest number of employees at the end of 2018.⁶ The second and third largest industries at the end of 2018 were Government and Leisure and Hospitality respectively.

While the West has a distinct industrial composition, states within the region have large variations in population and employment, resulting in differing labor market patterns between states. For instance, in 2018, California's annual average employment level was over 60 times that of Wyoming.⁷ The thirteen states in the West also vary in climate and geography, so some states exhibit more seasonal employment patterns than others. These differences are reflected in the JOLTS experimental state estimates presented in this article.

Trends in job openings

JOLTS defines job openings as all positions that are open on the last business day of the month. Job openings measure unmet labor demand in the labor market. Chart 1 shows job openings rates in the United States, West region, and Western States. All states in the West region experienced series-high job openings rates in 2018, but a difference in trends can be seen between Alaska and Washington.⁸ At the end of 2018, Washington had the lowest job openings rate in the West, while Alaska had the highest. In 2015 and 2016, Washington had an increase in job openings rates that was unparalleled by any other state in the region.

Chart 1. Job openings rates in the United States, West region, and Western States, June 2004–December 2018, not seasonally adjusted



Click legend items to change data display. Hover over chart to view data.

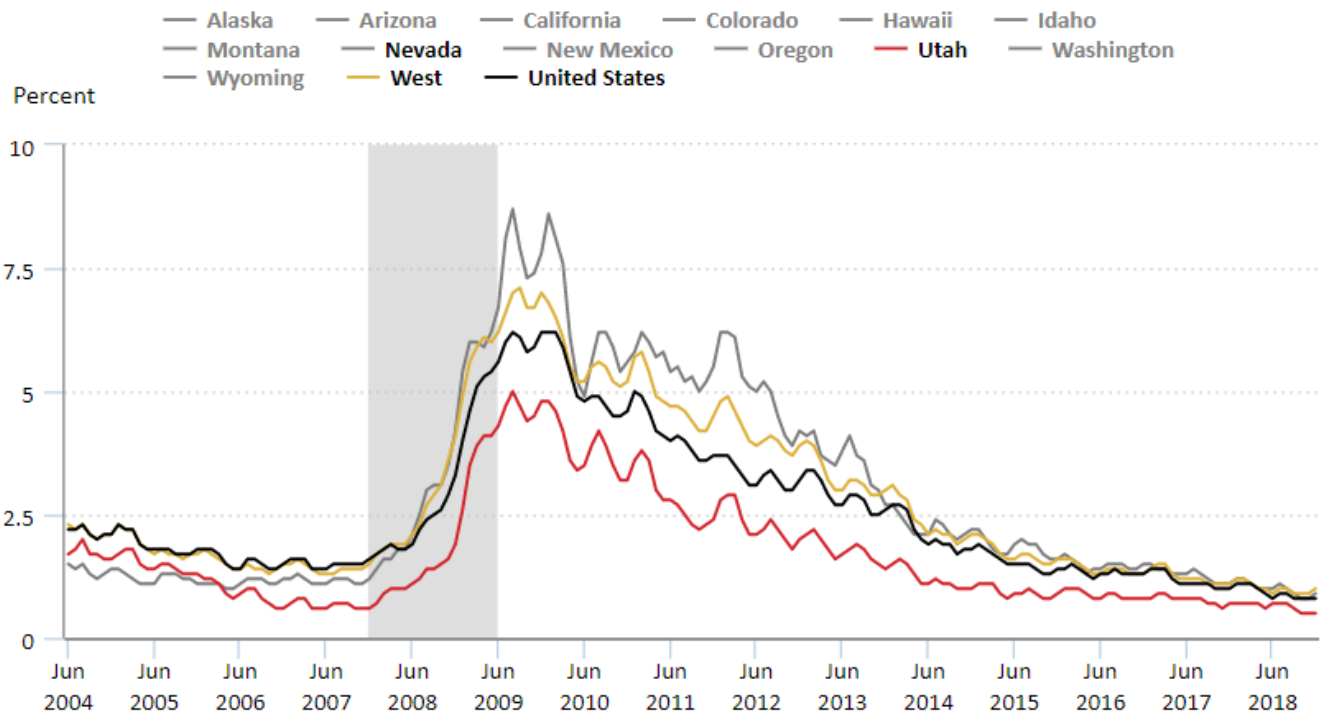
Shaded area represents a recession as determined by the National Bureau of Economic Research.

Note: JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages. Figures in this article display data back to June 2004. However, JOLTS experimental state estimates are available starting in February 2001.

Source: U.S. Bureau of Labor Statistics.

JOLTS experimental state estimates allow for the comparison of job openings (labor demand) to unemployment (labor supply) at the state level. The number of unemployed persons per job opening factors in both the supply of unemployed persons and the demand from employers.⁹ The number of unemployed persons per job opening is a ratio of the level of unemployed persons, as published by the Current Population Survey (CPS), and the level of job openings. A ratio of 1.0 means there is a job for every unemployed person. Lower ratios signal tighter labor markets with firms having more job openings than there are people available to work. Higher ratios indicate there are more unemployed people competing for each job opening. Although states in the West had similar ratios in recent years, differences emerged during and after the Great Recession.¹⁰ Among the Western States, Nevada had the highest ratio of unemployed persons per job opening, at 8.7 in August 2009. Hawaii and Utah had the lowest average unemployed persons per job opening ratio in the region for 2018, at 0.6 unemployed persons per job opening. (See chart 2). Alaska, Arizona, California, New Mexico, and Washington had an unemployed persons per job openings ratio greater than 1.0 in December 2018, indicating there were more unemployed people than available jobs.

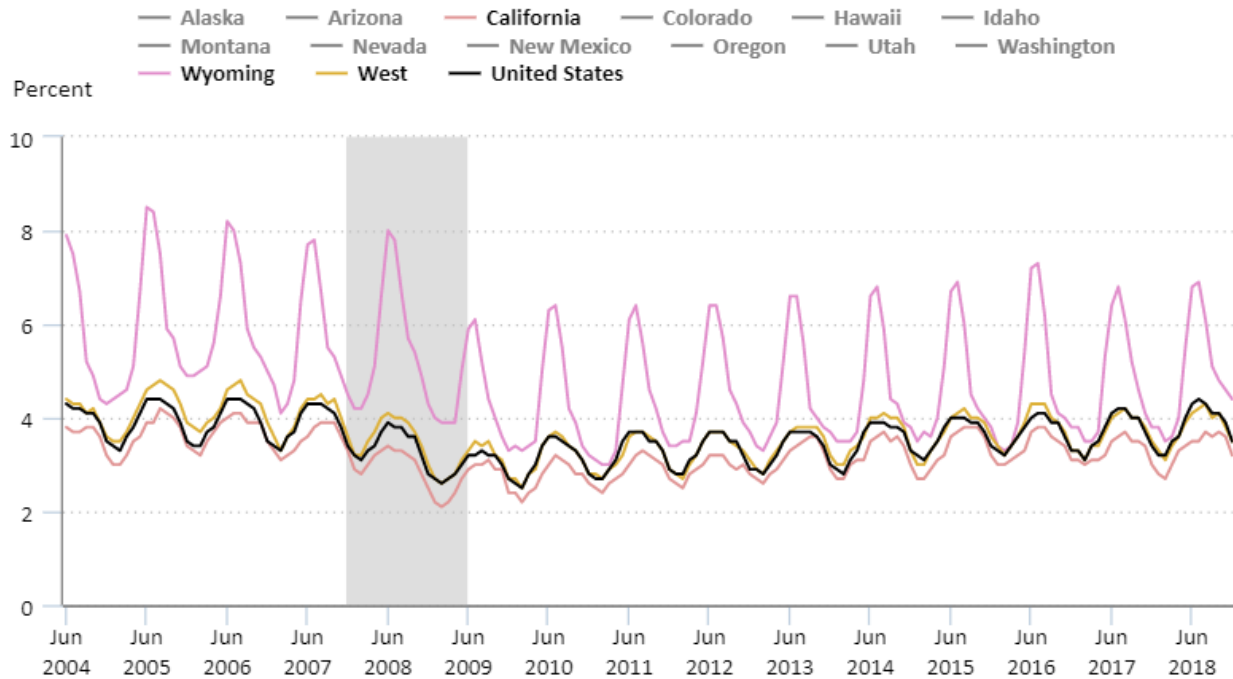
Chart 2. Unemployed persons per job openings in the United States, West region, and Western States, June 2004–December 2018, not seasonally adjusted



Trends in hiring

JOLTS defines hires as all additions to the payroll during the month. As chart 3 shows, hires rates in the West region are higher than the U.S. average for most of the JOLTS series. However, not all states in the West trend higher than the U.S. average. Alaska and Wyoming, with more extreme seasonal employment patterns, have very high hires rates in the summer months. In contrast, California is known for having many areas with year-round mild climates, and experiences less seasonal change. Chart 3 illustrates how aggregate regional JOLTS estimates do not always reveal the large seasonal patterns that some states experience.

Chart 3. Hires rates in the United States, West region, and Western States, June 2004–December 2018, not seasonally adjusted



Click legend items to change data display. Hover over chart to view data.

Shaded area represents a recession as determined by the National Bureau of Economic Research.

Note: JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages.

Source: U.S. Bureau of Labor Statistics.

Trends in separations

Trends in separations often mirror the trends in hires. States with higher seasonal hiring patterns, such as Alaska, also tend to exhibit higher seasonal separations patterns. JOLTS defines separations as the number of employees separated from the payroll during the month. Total separations are composed of quits, layoffs and discharges, and other separations. Other separations are not published with the release of experimental state estimates as they are a minor portion of total separations.

Quits, a component of total separations, are voluntary separations initiated by the employee. Quits can show employee confidence in the labor market. Employees tend to quit their jobs more frequently when they are confident they can find another one. At the U.S. level, quits increased by 6 percent from 2017 to 2018. At the regional level, quits in the West increased by the same percentage. Table 1 shows that, with the exception of Arizona, all West States had increases over the year; Arizona experienced a small decline between 2017 and 2018. The Western State with the largest percent increase from 2017 to 2018 was Utah, increasing by 17 percent.

Table 1. Quits levels in the United States, West region, and Western States in 2017 and 2018, not seasonally adjusted, levels in thousands

Area	Level by year		Over-the-year change
	2017	2018	Percent

See footnotes at end of table.

Table 1. Quits levels in the United States, West region, and Western States in 2017 and 2018, not seasonally adjusted, levels in thousands

Area	Level by year		Over-the-year change
	2017	2018	Percent
United States	37,529	39,876	6
West	8,796	9,356	6
Alaska	131	142	8
Arizona	953	949	0
California	3809	4031	6
Colorado	819	878	7
Hawaii	164	167	2
Idaho	212	237	12
Montana	167	172	3
Nevada	388	438	13
New Mexico	214	238	11
Oregon	544	591	9
Utah	507	595	17
Washington	782	812	4
Wyoming	98	106	8

Note: JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages. States within the region do not add to total due to rounding.
Source: U.S. Bureau of Labor Statistics.

Layoffs and discharges are involuntary separations initiated by the employer. At the U.S. level, layoffs and discharges increased by 1 percent from 2017 to 2018. However, during this time the West region experienced a 7-percent increase in layoffs and discharges. Within the West region, Montana, New Mexico, and Wyoming experienced decreases in layoffs and discharges from 2017 to 2018. Washington, Oregon, Colorado, and Utah experienced the largest increases in layoffs and discharges in the West from 2017 to 2018. Washington had the largest percent increase in layoffs and discharges from 2017 to 2018, at 22 percent.

Table 2. Layoffs and discharges levels in the United States, West region, and Western States in 2017 and 2018, not seasonally adjusted, levels in thousands

Area	Level by year		Over-the-year change
	2017	2018	Percent
United States	21,597	21,846	1
West	4,419	4,735	7
Alaska	71	72	1
Arizona	440	452	3
California	2026	2126	5
Colorado	380	429	13
Hawaii	71	76	7
Idaho	106	114	8
Montana	86	81	-6
Nevada	195	202	4
New Mexico	107	96	-10
Oregon	244	280	15

See footnotes at end of table.

Table 2. Layoffs and discharges levels in the United States, West region, and Western States in 2017 and 2018, not seasonally adjusted, levels in thousands

Area	Level by year		Over-the-year change
	2017	2018	Percent
Utah	243	274	13
Washington	397	483	22
Wyoming	51	48	-6

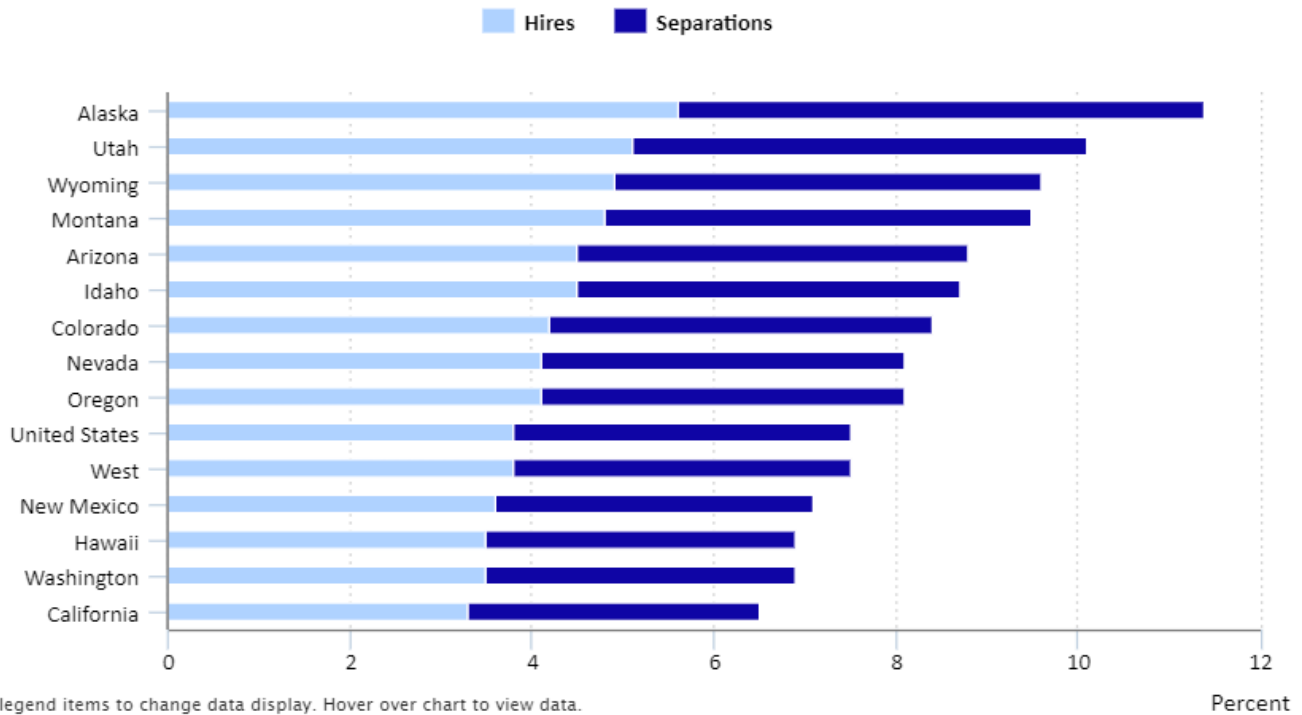
Note: JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages. States within the region do not add to the total due to rounding.

Source: U.S. Bureau of Labor Statistics.

Trends in churn rates

The churn rate is defined in this article as the sum of the hires rate and the separations rate. A high churn rate indicates a labor market with a high hires rate, a high separations rate, or both. And it can signify more frequent job-to-job movement of workers in the labor market. Conversely, a low churn rate indicates a labor market with a low hires rate, a low separations rate, or both. The only states with churn rates lower than the U.S. average in 2018 were California, Washington, Hawaii, and New Mexico. (See chart 4.) As shown by the data above, these states tend to have less seasonal employment patterns, which can lead to less frequent job-to-job movement. Alaska, Utah, and Wyoming had the highest churn rates in 2018.

Chart 4. Average monthly churn, hires, and separations rates in United States, West region, and Western States in 2018, not seasonally adjusted



Click legend items to change data display. Hover over chart to view data.

Note: The churn rate is the sum of the hires rate and separations rate.

JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages.

Source: U.S. Bureau of Labor Statistics.

Trends in fill rates

The fill rate is used to evaluate how employers differ in the rate that open jobs are filled. The annual fill rate is the ratio of hires to job openings over the year. An annual fill rate near or above 1.0 can indicate that employers are more efficient at filling job openings over the year. On the other hand, an annual fill rate less than 1.0 can indicate a tighter labor market, with employers having difficulties filling job openings. Table 3 shows that from 2017 to 2018, fill rates declined for the nation, West region, and all Western States. In both years, Utah had the highest annual fill rate of the Western States. Hawaii had the lowest in 2017, and New Mexico had the lowest in 2018.

Table 3. Annual average fill rates in the United States, West region, and Western States in 2017 and 2018, not seasonally adjusted

Area	Fill rate by year		Over-the-year change
	2017	2018	
United States	0.90	0.81	-0.09
West	0.89	0.81	-0.08
Alaska	0.96	0.85	-0.11
Arizona	0.98	0.86	-0.12
California	0.84	0.77	-0.07
Colorado	0.88	0.82	-0.05
Hawaii	0.83	0.78	-0.05
Idaho	0.94	0.88	-0.06
Montana	0.99	0.89	-0.11
Nevada	0.92	0.84	-0.08
New Mexico	0.85	0.71	-0.14
Oregon	0.92	0.85	-0.07
Utah	1.06	1.01	-0.05
Washington	0.88	0.77	-0.11
Wyoming	1.01	0.92	-0.08

Note: JOLTS experimental state estimates (released September 25, 2019), JOLTS United States, and JOLTS West region data are presented as not seasonally adjusted 3-month moving averages.
Source: U.S. Bureau of Labor Statistics.

Conclusion

JOLTS experimental state estimates allow for labor market comparisons among states, regionally and nationally. The analyses in this article show differing labor trends between states within the West region. Through job openings, hires, separations, and other measures (such as churn rate and fill rate), JOLTS experimental state estimates provide valuable information about labor demand, labor turnover, and business cycles. JOLTS state-level estimates allow researchers and policymakers to better understand state-level economies, and help businesses and workers make informed decisions at a finer level than national and regional estimates. State estimates also can be useful to jobseekers as this information can help them evaluate labor market opportunities across states.

The JOLTS program invites your comments on the experimental state estimates. Please visit our website at https://www.bls.gov/jlt/jlt_statedata.htm, call us at (202) 691-5870, or email us at JoltsInfo@bls.gov.

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NOTES

¹ The JOLTS program publishes monthly estimates for major industries at the national level and total nonfarm estimates at the regional level. Users expressed a desire for state-level estimates, therefore the JOLTS program developed and published the state experimental series for the first time in 2019. The experimental models enable the production of estimates at the state total nonfarm level, using a combination of the current JOLTS sample, data from the [Quarterly Census of Employment and Wages](#) (QCEW), and data from the [Current Employment Statistics](#) (CES) program. Information on the [methodology](#) can be found on the [JOLTS experimental state estimates](#) website.

² The four Census regions are the Northeast, Midwest, South, and West: www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

³ Census Regions and Divisions of the United States are available at www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

⁴ State population totals can be found at www.census.gov/data/tables/time-series/demo/popest/2010s-state-total.html. Total area of each state and area in the United States can be found at www.census.gov/geographies/reference-files/2010/geo/state-area.html.

⁵ Labor force by state can be found at www.bls.gov/lau/.

⁶ Geographic employment information by state and region can be found at www.bls.gov/regions/home.htm.

⁷ Employment by state can be found at www.bls.gov/sae/data/home.htm. Not seasonally adjusted annual averages are used in this analysis.

⁸ The series dates back to February 2001.

⁹ To calculate this ratio, divide the number of people who are unemployed by the number of job openings. Unemployment levels for the nation are published by the Current Population Survey, and unemployment levels for regions and states are published by the

Local Area Unemployment Statistics (LAUS). Persons are classified as unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work. www.bls.gov/cps/lfcharacteristics.htm#unemp.

¹⁰ Recessions are determined by the National Bureau of Economic Research (NBER).

SUGGESTED CITATION

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