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BEST-PERFORMING CITIES

WHERE AMERICA'S JOBS
ARE CREATED AND SUSTAINED

2018

JESSICA JACKSON, JOE LEE, MICHAEL C.Y. LIN, AND MINOLI RATNATUNGA



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EXECUTIVE SUMMARY

America's metropolitan areas have driven growth through the economic expansion, creating jobs and prosperity with their policy choices and their industrial, workforce, and innovation assets. The Milken Institute's Best-Performing Cities (BPC) index provides an objective benchmark for examining underlying factors for and identifying unique characteristics of economic growth in successful regions. Our index uses an outcomes-based set of metrics such as job creation, wage gains, and technological developments to evaluate the relative growth of metropolitan areas. While national and international political and economic forces beyond a region's control can affect near-term performance, the top-performing metros have cohesive strategies that allow them to leverage their assets more effectively. They offer important lessons that may be helpful to peer regions.

Here are the highlights of the 2018 rankings:

- » **No. 1 Provo-Orem, UT**, held steady at the top of our index, thanks to a dynamic high-tech sector, educated workforce, and business-friendly tax and regulatory climate.
- » Bay Area metros surged back with **No. 2 San Jose-Sunnyvale-Santa Clara, CA**, just missing out on the top spot, and **San Francisco-Redwood City-South San Francisco, CA**, holding firm in fourth place. These elite performers were joined by **No. 14 Oakland-Hayward-Berkeley, CA**, and **No. 18 Santa Rosa, CA**, in the Top 25 as the Silicon Valley high-tech engine continues firing on all cylinders.
- » Tech hubs outside California also prospered, with **No. 3 Austin-Round Rock, TX**, **No. 5 Dallas-Plano-Irving, TX**, and **No. 6 Raleigh, NC**, all leveraging their educated workforces and competitive business climates to generate growth.
- » Stronger consumer spending helped lift tourism-oriented metros, including **No. 7 Orlando-Kissimmee-Sanford, FL**, **No. 22 North Port-Sarasota-Bradenton, FL**, and **No. 23 Las Vegas-Henderson-Paradise, NV**.
- » Rising back up the rankings is **No. 8 Seattle-Bellevue-Everett, WA**, where the second strongest high-tech sector in the country raised wages, rents, and employment in the metro. Neighboring **No. 19 Olympia-Tumwater, WA**, benefitted as the rising cost of housing shifted residents and businesses beyond the Seattle metro.
- » University towns like **No. 9 Fort Collins, CO**, did well, with many represented on our list of the biggest gainers, including **No. 38 Merced, CA**.
- » States with attractive business climates and economic development strategies contributed to the strong showings on the index for **No. 10 Salt Lake City, UT**, **No. 12 Boise City, ID**, **No. 13 Charlotte-Concord-Gastonia, NC-SC**, **No. 20 Phoenix-Mesa-Scottsdale, AZ**, **No. 21 Ogden-Clearfield, UT**, and **No. 25 Nashville-Davidson-Murfreesboro-Franklin, TN**.
- » Auto-related manufacturing investments in **No. 11 Reno, NV**, and **No. 16 Charleston-North Charleston, SC**, created new opportunities for residents.
- » **Bend-Redmond, OR**, was the No. 1 best-performing small city for the third year in a row, still riding unrivaled job growth that began in the five years ending in 2017.

High-tech industries continue to fuel growth in many of the best-performing cities, creating opportunities for highly-skilled workers. Low unemployment rates and a shortage of skilled labor are spurring more competition for knowledge-workers, putting upward pressure on wages in the tech sector and widening the income gap. The top metros are enjoying impressive job and wage growth in aggregate, but many are also seeing housing prices rise sharply. As a result, lower-wage residents are being forced to commute from neighboring metros, reducing their quality of life and limiting access to the opportunities being created in these vibrant tech hubs.

The national economy provided a strong base for regional growth with soaring stock markets, low inflation, and high employment supporting consumer confidence. The leisure, hospitality, and retail sectors benefited from higher disposable incomes. Skilled service workers were much in demand; the health-care, education, professional, and business services created just under a million jobs in 2017 across the U.S.

Best-Performing Large City: Provo-Orem, UT

Provo-Orem, UT, ranks first again this year, demonstrating remarkably consistent growth despite their continued expansion and tight labor market. Brigham Young University helps train graduates for the high-skill opportunities being created in the metro, but in-migration is necessary to keep the economy moving at its fast pace. Firms like Adobe and Podium contributed to the metro's fast pace of high-tech GDP growth between 2012 and 2017. Exceptional regional rates of job creation helped Provo-Orem best more established high-tech hubs on the BPC index in 2018.

TABLE 1 Top 25 Best-Performing Large Cities
Rank according to 2018 index

Metropolitan Statistical Area (MSA)/Metropolitan Division (MD)	2018 Rank	2017 Rank	Change
Provo-Orem, UT MSA	1	1	Steady
San Jose-Sunnyvale-Santa Clara, CA MSA	2	11	+9
Austin-Round Rock, TX MSA	3	9	+6
San Francisco-Redwood City-South San Francisco, CA MD	4	4	Steady
Dallas-Plano-Irving, TX MD	5	3	-2
Raleigh, NC MSA	6	2	-4
Orlando-Kissimmee-Sanford, FL MSA	7	7	Steady
Seattle-Bellevue-Everett, WA MD	8	17	+9
Fort Collins, CO MSA	9	5	-4
Salt Lake City, UT MSA	10	10	Steady
Reno, NV MSA	11	37	+26
Boise City, ID MSA	12	26	+14
Charlotte-Concord-Gastonia, NC-SC MSA	13	13	Steady
Oakland-Hayward-Berkeley, CA MD	14	16	+2
Riverside-San Bernardino-Ontario, CA MSA	15	20	+5
Charleston-North Charleston, SC MSA	16	22	+6
Atlanta-Sandy Springs-Roswell, GA MSA	17	14	-3
Santa Rosa, CA MSA	18	43	+25
Olympia-Tumwater, WA MSA	19	39	+20
Phoenix-Mesa-Scottsdale, AZ MSA	20	40	+20
Ogden-Clearfield, UT MSA	21	28	+7
North Port-Sarasota-Bradenton, FL MSA	22	6	-16
Las Vegas-Henderson-Paradise, NV MSA	23	41	+18
Denver-Aurora-Lakewood, CO MSA	24	23	-1
Nashville-Davidson-Murfreesboro-Franklin, TN MSA	25	8	-17

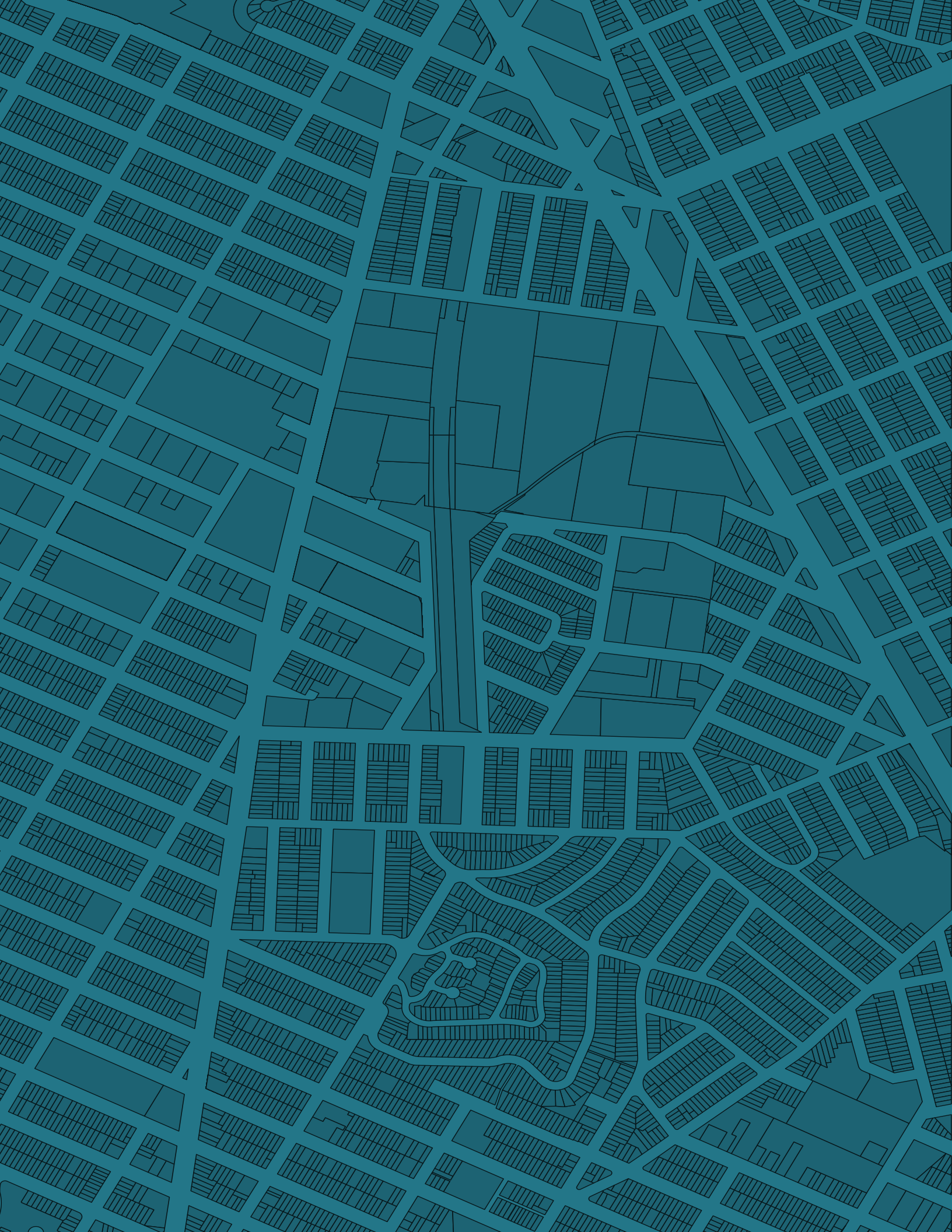
Source: Milken Institute.

Biggest Gains

University and college towns improved their standing on our index this year, with **Merced, CA**, leaping 56 places to 38th thanks to expansion at the University of California, Merced campus. Other regions combined their universities with high-tech clusters to generate growth that built on their highly-skilled workforce. Some strong manufacturing and defense-based economies also advanced up the index.

Best-Performing Small City: Bend-Redmond, OR

The **Bend-Redmond, OR**, metro is the best-performing small city for the third year running, thanks to unmatched five-year job and wage growth. The entrepreneurial community in Bend-Redmond is contributing to the metro's strong high-tech performance. The region has invested in its knowledge-economy with the Oregon State University-Cascades Innovation Co-Lab, an incubator and educational resource for entrepreneurs. Bend-Redmond's scenic location and quality of life are attractive to new residents and tourists, drawing people to the area.



INTRODUCTION

America's metropolitan areas have driven growth through the economic expansion, creating jobs and prosperity through their policy choices and their industrial, workforce, and innovation assets. But while some parts of the country are thriving, others are failing to keep up. The Milken Institute's Best-Performing Cities index provides an objective benchmark for examining underlying factors for and identifying unique characteristics of economic growth in U.S. regions.

Our index uses an outcomes-based set of metrics—such as job creation, wage gains, and technological developments—to evaluate the relative growth of metropolitan areas. While national and international political and economic forces beyond a region's control can affect near-term performance, the top-performing metros have cohesive strategies that allow them to leverage their assets more effectively. They offer important lessons that may be helpful to peer regions.

The goal of our Best-Performing Cities index is to help businesses, investors, industry associations, development agencies, government officials, academics, and public-policy groups monitor and evaluate how well their metro is promoting economic vitality relative to the rest of the country. The index also provides benchmarking data that can inform approaches to improving a region's performance over time. The index can serve as a tool for understanding real estate, consumer, and business opportunities by indicating where employment is stable and expanding, wages and salaries are increasing, and economies and businesses are thriving.¹

A shared understanding of their region's competitiveness will help communities create a strategic economic vision focused on industries with the capacity to stimulate sustained growth and prosperity. By targeting local sectors with a robust competitive advantage, communities can seek to reduce the impact future dips in the business cycle have on local employment and economic activity. Regions that better link education and training programs to the workforce needs of employers will attract businesses and create more opportunities for residents. Developing new industries and companies will require fostering entrepreneurship and innovation through research institutions, incubators, and funding programs.

Knowledge-based economies—those with innovation industries and skilled labor at their core—have done well on the Best-Performing Cities index in recent years by adapting to economic and political changes. They take different forms, with some innovation hubs excelling despite high housing costs and a heavy regulatory burden, while others have attracted workers and firms away from the coasts with lower costs of living and doing business. High-profile corporate site searches, like Amazon's recently concluded HQ2 competition, increasingly highlight the importance of a strong knowledge-economy. Access to a large pool of highly-skilled workers is crucial, and increased competition for talent may push some firms to relocate out of the HQ2 winning New York and Washington, D.C. metros to other tech hubs.

This 2018 edition of the index applies the same methodology used previously. We employ the geographic terms and definitions used by the Office of Management and Budget (OMB), most recently updated after the 2010 U.S. census. The OMB defines a metropolitan statistical area (MSA) as a region generally consisting of a large population nucleus and adjacent territory with a high degree of economic and social integration, as measured by community ties. With these parameters, the agency identifies 381 metropolitan statistical areas. County population growth accounts for the creation of new MSAs. If specific criteria are met, an MSA with a single nucleus and a population of 2.5 million or more is further divided into geographic areas called metropolitan divisions (MDs), of which there are currently 31 in the country. For example, the MSA of Philadelphia-Camden-Wilmington, PA-NJ-DE, comprises three MDs (Philadelphia, PA, Camden, NJ, and Wilmington, DE). We include the smaller MDs in the index to reflect more detailed geographic growth patterns.

An Emphasis on Outcomes

Table 2 shows the components used to calculate the Best-Performing Cities rankings. The index measures growth in jobs, wages, salaries, and technology output over five years (2012-2017 for jobs and technology output, and 2011-2016 for wages and salaries) to adjust for extreme variations in business cycles. It also incorporates the latest available year's performance in these areas (2016-2017 for jobs and technology output and 2015-2016 for wages and salaries). In addition, it includes a measure of 12-month job growth (August 2017-August 2018), to capture recent momentum among metropolitan economies.²

TABLE 2 Components of the Best-Performing Cities Index

Component	Weight
Job growth (I=2012)	0.143
Job growth (I=2016)	0.143
Wage and salary growth (I=2011)	0.143
Wage and salary growth (I=2015)	0.143
Short-term job growth (Aug 17-Aug 18)	0.143
High-tech GDP growth (I=2012)	0.071
High-tech GDP growth (I=2016)	0.071
High-tech GDP location quotient (2017)	0.071
Number of high-tech industries with GDP LQ>1 (2017)	0.071

Note: I refers to the beginning year of the index. Weights do not add up to 1, due to rounding.

Source: Milken Institute.

Employment growth is heavily weighted because of its critical importance to community vitality, as is growth in wages and salaries. These metrics signal the quality of the jobs being created and retained. Other measures reflect the concentration and diversity of technology industries within the MSAs and MDs. High-tech location quotients (LQs), which measure the industry's concentration in a particular metro relative to the national average, are included to gauge an area's participation in the knowledge-based economy. We also measure the number of specific high-tech fields (out of a possible 19) whose concentrations in an MSA or MD are higher than the national average. BPC is solely an outcomes-based index. It does not incorporate input measures (business costs, cost-of-living components, and quality-of-life conditions such as commute times or crime rates). These measures, although important, are prone to wide variations and can be highly subjective.

National Economic Conditions

It is important to understand the general trends affecting regional economies when judging how well they responded to shifts in national economic conditions. These conditions set the context in which regions, firms, and individuals make choices, and may limit the options available to them.

The U.S. economy continued to perform well through 2017, benefiting from momentum in the growth of high-tech industries. Regions with a concentration of those sectors continued to score highly on our index, with many that had dropped slightly on our 2017 index recovering ground in this edition. Interest rates were raised three times over the course of 2017, and inflation remained low. Unemployment was 4.4 percent nationally, lower than in the previous year, and the labor force grew by 0.5 percent. Despite increased employment, wage growth experienced a significant slowdown, dropping from 5.1 percent in both 2014 and 2015 to 2.9 percent in 2016. Productivity growth was low, at 1.1 percent, but up slightly from 2016. Stock market averages rose dramatically in 2017, with the S&P 500 index rising by 20 percent and the Dow Jones Industrial Average rising 25 percent.

Demand for skilled services continued as a major source of employment growth. Overall, the professional and business services sectors added approximately 418,000 jobs in 2017, up 2.1 percent and making up 18.8 percent of all jobs added across the U.S. economy that year. Health-care and education employment made up 24 percent of new jobs nationally, adding almost 550,000 new positions, mostly in health care.

Consumer spending was strong—4.3 percent higher in 2017 than in 2016—thanks to a robust job market, relatively low inflation, and disposable income 2.6 percent higher than in 2016. This fueled growth in the leisure and hospitality sectors, which added more than 400,000 jobs in 2017. These labor-intensive sectors created 17.6 percent of total new jobs, but only 4 percent of new GDP. Retail sales were also higher—4.7 percent above 2016 spending—and e-commerce retail sales continued to grow, putting pressure on brick and mortar stores.

The affordability of housing remains a cause for concern in major metros across the nation, especially in the coastal high-tech cities. House prices increased by 6.8 percent nationally, and by much more in some high-tech metros. Nationally, the market tried to respond, with housing starts up 2.6 percent and construction employment up 3.4 percent, adding just under 229,000 jobs in 2017 (10 percent of total new jobs).

Energy prices rose in 2017, with the spot price for Brent Crude up from \$44 to \$55 and natural gas prices up 19 percent in the U.S. This shift affects both producers of oil and gas and the manufacturers who use the commodities as inputs. Manufacturing GDP grew by 1.9 percent in 2017, contributing 9.6 percent of national GDP growth. Employment growth in the sector was more modest, up less than 0.75 percent.

Hurricanes Harvey, Irma, and Maria had massive economic impact on the regions they hit in 2017. However, where infrastructure held, as it did in Houston, the effects on economic momentum were temporary and activity picked up later in the year, highlighting the importance of resilient infrastructure.

The effects of the Tax Cuts and Jobs Act, signed in December 2017, will become more apparent in next year's report, when consumer and investor choices affected by the change in tax structure manifest in the economy. Similarly, the data used in this report predates major 2018 changes in trade agreements and tariffs.

Biggest Gains

The industrial makeup of the biggest gainers is fairly mixed. Many are college towns with some other industrial sectors (e.g., **Albuquerque, NM; Durham-Chapel Hill, NC; Lansing-East Lansing, MI; Merced, CA; Tallahassee, FL; Tucson, AZ**). Others have big defense and manufacturing sectors (e.g., **Norwich-New London, CT**) or defense and high-tech sectors (e.g., **Colorado Springs, CO; Huntsville, AL; Manchester-Nashua, NH**). The industrial combinations of the remaining metros vary considerably. Except for **Santa Rosa, CA**, with agriculture and tourism sectors as its industrial pillars, the rest of the metros have some high-paying jobs in their industrial makeup. Although Santa Rosa is also among the Top-25 gainers, the Tubbs Fire in October 2017 may impact the region's agriculture and tourism sectors in the short run.

Merced, CA, is the biggest gainer in our index. Its main industries are agriculture and college-related services. The metro has strong performance in its recent job growth. Its one-year (2016-2017) and the recent 12-month job growth rank No. 10 and No. 4, respectively. A key driver of employment expansion is the growth of the University of California, Merced. The university has presented the Merced 2020 program, which could add new classrooms, labs, and student housing.³ This program is expected to add 10,000 jobs to the region by 2020.⁴

TABLE 3 Biggest Gains Among Large Cities
(Based on Change in Rankings)

Metropolitan Statistical Area (MSA)/Metropolitan Division (MD)	2018 Rank	2017 Rank	Change
Merced, CA MSA	38	94	+56
Norwich-New London, CT MSA	123	177	+54
Tucson, AZ MSA	102	154	+52
Lansing-East Lansing, MI MSA	89	138	+49
Myrtle Beach-Conway-North Myrtle Beach, SC-NC MSA	51	99	+48
Kennewick-Richland, WA MSA	85	121	+36
Scranton-Wilkes-Barre-Hazleton, PA MSA	148	184	+36
Trenton, NJ MSA	66	101	+35
Tallahassee, FL MSA	82	117	+35
Albuquerque, NM MSA	125	160	+35
Stockton-Lodi, CA MSA	34	68	+34
York-Hanover, PA MSA	117	150	+33
Salem, OR MSA	40	72	+32
Ocala, FL MSA	43	75	+32
Colorado Springs, CO MSA	58	90	+32
Greeley, CO MSA	42	73	+31
Fresno, CA MSA	37	66	+29
Durham-Chapel Hill, NC MSA	77	106	+29
Camden, NJ MD	106	135	+29
Huntsville, AL MSA	59	86	+27
Manchester-Nashua, NH MSA	73	100	+27
Pensacola-Ferry Pass-Brent, FL MSA	80	107	+27
Buffalo-Cheektowaga-Niagara Falls, NY MSA	143	170	+27
Reno, NV MSA	11	37	+26
Santa Rosa, CA MSA	18	43	+25

Source: Milken Institute.

Biggest Drops

The construction boom many Florida metros experienced during the mid-2010s is coming to an end in some parts of southern Florida. **Naples-Immokalee-Marco Island, FL**, and **Port St. Lucie, FL** saw a major slowdown in construction hiring in the short-term. Those two metros and **West Palm Beach-Boca Raton-Delray Beach, FL** had a contraction of 2017 employment in tourism-related industries like food and beverage stores, accommodation, and general merchandise stores following the effects of a devastating hurricane season.

Many of the metros that dropped the most significantly in our ranking had experienced such significant growth in the years leading up to 2017, it would have required extraordinary increases in jobs, wages, and high-tech GDP to continue ranking well on our index. For example, both **Savannah, GA**, and **Santa Maria-Santa Barbara, CA**, had been in the Top 50 since 2014, but were unable to maintain their high growth rate this year.

Other metros fell far on our ranking due to a lack of high-tech industry presence. Many on the biggest drops list, such as **Killeen-Temple, TX**, and **Roanoke, VA**, ranked very poorly over multiple high-tech GDP indicators, impacting their placement in this index. The majority of our top-ranking metros are driven by their high-tech industries and, more broadly, their knowledge-based economies, and have generated a substantial number of professional, scientific, and technical service jobs. Several metros, like **Toledo, OH**; **Baton Rouge, LA**; and **Omaha-Council Bluffs, NE-IA**, have been leaking jobs in that sector in recent years.

TABLE 4 Biggest Declines Among Large Cities
(Based on Change in Rankings)

Metropolitan Statistical Area (MSA)/Metropolitan Division (MD)	2018 Rank	2017 Rank	Change
Naples-Immokalee-Marco Island, FL MSA	93	18	-75
Savannah, GA MSA	108	48	-60
Santa Maria-Santa Barbara, CA MSA	104	45	-59
Warren-Troy-Farmington Hills, MI MD	84	38	-46
Lake County-Kenosha County, IL-WI MD	135	89	-46
Corpus Christi, TX MSA	188	144	-44
Lincoln, NE MSA	126	85	-41
Richmond, VA MSA	128	87	-41
Roanoke, VA MSA	185	145	-40
Port St. Lucie, FL MSA	71	32	-39
Winston-Salem, NC MSA	160	121	-39
Louisville-Jefferson County, KY-IN MSA	91	53	-38
West Palm Beach-Boca Raton-Delray Beach, FL MD	49	12	-37
Columbus, OH MSA	99	62	-37
Killeen-Temple, TX MSA	159	123	-36
Ann Arbor, MI MSA	87	52	-35
Baton Rouge, LA MSA	145	110	-35
Toledo, OH MSA	179	146	-33
Duluth, MN-WI MSA	172	141	-31
Oxnard-Thousand Oaks-Ventura, CA MSA	110	81	-29
Detroit-Dearborn-Livonia, MI MD	121	92	-29
Lexington-Fayette, KY MSA	112	84	-28
Cincinnati, OH-KY-IN MSA	131	104	-27
Harrisburg-Carlisle, PA MSA	151	124	-27
Omaha-Council Bluffs, NE-IA MSA	134	108	-26

Source: Milken Institute.



TOP 25 BEST-PERFORMING LARGE CITIES

#1 PROVO-OREM, UT

Held steady

JOB GROWTH (2012-17)	1ST
JOB GROWTH (2016-17)	3RD
WAGE GROWTH (2011-16)	3RD
WAGE GROWTH (2015-16)	2ND
SHORT-TERM JOB GROWTH (8/2017-8/2018)	5TH
HIGH-TECH GDP GROWTH (2012-17)	3RD
HIGH-TECH GDP GROWTH (2016-17)	80TH
HIGH-TECH GDP CONCENTRATION (2017)	13TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	22ND

Provo-Orem, UT, holds on to the top spot on the 2018 Best-Performing Cities index. While the size of its lead has shrunk substantially since last year, exceptional job growth between 2012 and 2017 helped the region best the much larger and more established tech metros in the Top 5. Investments by firms like Adobe and Wavetronix continue to create opportunity in the region, but the tight labor market is beginning to slow growth slightly.

Brigham Young University (BYU), based in Provo, is a major asset for the region and serves as an anchor for its knowledge-based economy. More than 25,000 people provide educational services in the Provo-Orem metro, up 1,000 in 2017 alone. While the 33,500 enrolled students help support consumer spending and employment in the hospitality sector, the connections made and the research being done at the university also help create new firms.⁵ Cloud-based business analytics firm Domo was founded in 2010 by a BYU grad and went public in 2018.⁶ Based in American Fork, UT, Domo has clients around the country, including MasterCard and DHL. In November 2018, it was announced that Qualtrics International Inc., a customer survey software firm co-headquartered in Provo, UT, and Seattle, WA, and one of Utah's star startups, would be sold to SAP for \$8 billion.⁷

More recently formed startups are also doing well. Podium, a Lehi-based software firm that helps small businesses manage their reputations online, moved into their new headquarters in August 2018.⁸ The firm, founded in 2014, plans to add 400 employees by 2020, more than doubling their headcount. Podium was ranked 13th on the Inc. 500 list of America's fastest-growing firms and was joined on the list by 14 other Utah firms, many also located in Lehi, Orem, and Provo.⁹

Wage growth in the five years ending in 2016 was 19 percent ahead of the U.S. economy, and job growth over the past five years was 17.5 percent faster than the nation. Momentum remains strong, with the one-year measures of job and wage growth also in the Top 3. However, the metro is smaller than the others in the Top 5 best-performing cities, and has the smallest proportion of high-wage jobs, indicating these impressive growth rates are more easily attained in smaller cities than in larger metros. While the region is much more affordable than the coastal high-tech metros it competes with for talent and company locations, the cost of living has risen above the U.S. average in recent years.¹⁰

Still, in the most recent 12 months, the Provo-Orem economy has added jobs at a rate faster than all but four other metros, an impressive feat this many years into its expansion. The high-tech sector has played a major part in this development, and between

ASSETS

- Dynamic economy consistently creating jobs, including in a vibrant high-tech sector.
- Brigham Young University attracts and educates students, supporting the local economy and a highly-skilled local workforce.

LIABILITIES

- Tight labor market creating a shortage of skilled labor to staff continued growth.

2012 and 2017, GDP in the sector grew 31 percent faster than the national high-tech sector. However, this pace has slowed in the past year, and the national high-tech economy grew faster in 2017.

People continue to move to the region, with close to 6,000 net new residents coming to the Provo-Orem metro in 2017. Over the past five years, the region added more than 18,000 new residents through in-migration.¹¹ This is creating competition for housing and driving up rents. The Provo municipal council recognized affordable housing as a key priority for the next two years.¹² As part of their planning, they are exploring a variety of housing options, including tiny homes. Not everyone is on board with increasing density, and zoning concerns remain. In Provo, a new disclosure law highlighted the occupancy restrictions already in place with the intention of raising awareness and increasing enforcement. The tone of the discussion surrounding this new law may have made young professionals moving to the region feel less welcome.¹³ Given the large Millennial workforce in the Provo-Orem metro, which at 29.5 percent represents a larger share of the population than in the rest of the Top 5, a preference against multiple roommates sharing an apartment in a tight housing market may discourage workers in other tech hubs from relocating to the region. However, the high quality of life and community connection is helpful in retaining local talent, despite the higher wages paid elsewhere. The region has a deep well of high-skill workers; 41 percent of residents over 25 have at least a bachelor's degree.

The construction industry in Provo and neighboring metros reports difficulty hiring workers. In Utah, four in five contractors reported finding it challenging to fill "some or all of their positions," and firms are collaborating with career technical education providers to broaden the labor pipeline.¹⁴ An additional 1,000 jobs for specialty trade contractors were created in 2017, contributing to the 8,400 added between 2012 and 2017, the largest gain for any single industry within the Provo-Orem metro area.

While the commercial real estate pinch is being felt in Provo, nearby cities have more space to accommodate continuing growth. Firms continue to move from Provo to Lehi in search of more office space as they mature. In 2015, family history website Ancestry.com moved from Provo to Lehi, and property management software provider Entrata did the same in 2017.¹⁵ Entrata, also started by BYU students, has grown without significant venture funding.¹⁶ However, Provo is also attracting firms. Infrastructure investments funded by a \$2.5 million loan from the federal Housing and Urban Development Department led jet refurbishment firm Duncan Aviation to choose a Provo airport site for their Western hub.¹⁷ The firm will invest \$70 million in the project.

#2 SAN JOSE-SUNNYVALE-SANTA CLARA, CA

Gained 9 spots

JOB GROWTH (2012-17)	16TH
JOB GROWTH (2016-17)	30TH
WAGE GROWTH (2011-16)	2ND
WAGE GROWTH (2015-16)	6TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	11TH
HIGH-TECH GDP GROWTH (2012-17)	4TH
HIGH-TECH GDP GROWTH (2016-17)	14TH
HIGH-TECH GDP CONCENTRATION (2017)	1ST
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	2ND

San Jose-Sunnyvale-Santa Clara, CA, rises nine spots to claim second place. At the heart of Silicon Valley, the region is home to the highest concentration of high-tech industry GDP in the U.S. This cluster has generated dramatic growth throughout the recovery and expansion, and has earned the San Jose-Sunnyvale-Santa Clara metro the top spot three times since 2012. This year, it scored only slightly behind the Provo-Orem, UT, metro, which outperformed the California tech hub on all our job growth indicators. Led by firms like Apple, Google, and Intel that continue to invest in the region, short-term job growth indicates momentum in the San Jose-Sunnyvale-Santa Clara economy remains strong.

Typically, a large established industry would have trouble generating impressive rates of GDP growth this many years into an expansion, since each percent change represents more economic activity than in a metro with a smaller base. However, in 2017, the San Jose-Sunnyvale-Santa Clara high-tech industry grew more than 4 percent faster than the national average, ranking 14th on this measure. The diversity and dynamism of the regional knowledge-economy (with 15 of 19 possible high-tech sectors concentrated in the metro) has made this possible. The presence of Stanford University, an elite research university and educator of highly skilled graduates, adds to the attractive labor pool and produces innovative research that helps seed new sectors.

Other information services, which include cloud computing services, added 21,600 jobs in the five years ending in 2017, more than in any other metro. Momentum in this developing sector remains strong, with 5,800 of the new positions added in 2017 alone. Traditional Silicon Valley firms are investing in this sector, too. In October 2017, San Jose-based technology conglomerate Cisco bought BroadSoft, a communications software firm, for \$1.9 billion.¹⁸

Known for its advanced manufacturing, the region still hosts significant production activity, although many firms have chosen to build additional plants elsewhere. The computer and electronic product manufacturing sector employed 113,500 people in 2017, more than in any other metro, but employment

ASSETS

- Large and diversified high-tech industry cluster continues to generate new opportunities through innovation and investment.
- Entrepreneurial culture and mobile workforce disseminate new knowledge through the cluster more quickly than in more restrictive environments.

LIABILITIES

- High cost of living is creating a shortage of affordable housing, pushing non-tech workers out of the region.

dipped slightly, down less than 1 percent from the 2016 total. Thinfilm, a Norwegian manufacturer of low-cost printed chips, opened in a former Qualcomm site in North San Jose in 2017.¹⁹

The high-skill employment base has contributed to impressive wage growth in the region, with professional, scientific, and technical services creating 32,600 jobs between 2012 and 2017. The sector, which is the top employer in the region, includes a large number of tech jobs in fields like artificial intelligence, autonomous driving, and mobile app development. In December 2017, approximately 68 percent of the metro population—or 760,000 people—were employed in high-wage positions.²⁰

Despite the high wages, domestic net migration has been negative for several years as people leave the San Jose metro in search of lower cost housing. International migration has sometimes been enough to offset the population loss, but in 2017 approximately 5,000 more people left than moved into the region.²¹ This places a limit on future growth and has serious implications for congestion and quality of life in the region if unaddressed.

Availability of affordable workforce housing is a growing problem for the region. Housing prices have continued to rise dramatically in the San Jose-Sunnyvale-Santa Clara metro, and even high-tech firms are dedicating funds to addressing the price of housing.²² In the summer of 2018, the median price of a single-family home in the City of San Jose was \$1.23 million. The real estate market is responding, with the number of residential construction permits issued up by close to 20 percent over the previous year.²³

Cash-rich tech firms such as Facebook, Google, Amazon, and Apple have invested in commercial real estate around the San Jose-Sunnyvale-Santa Clara metro, building and leasing enormous office spaces. Adobe, for example, has proposed to add a fourth tower to their San Jose campus. It would accommodate up to 3,000 new employees onsite.²⁴ Construction will continue into the coming years, creating employment in the building trades.

#3 AUSTIN-ROUND ROCK, TX

Gained 6 spots

JOB GROWTH (2012-17)	4TH
JOB GROWTH (2016-17)	13TH
WAGE GROWTH (2011-16)	5TH
WAGE GROWTH (2015-16)	12TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	24TH
HIGH-TECH GDP GROWTH (2012-17)	14TH
HIGH-TECH GDP GROWTH (2016-17)	40TH
HIGH-TECH GDP CONCENTRATION (2017)	11TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	29TH

Austin-Round Rock, TX, rises six places to rank third. A remarkably consistent high performer, the Austin-Round Rock region has now claimed a spot in the Top 5 for nine of the last ten Best-Performing Cities indexes, earning the top honors in 2009 and 2013. Texas' state capital is home to a vibrant cultural scene and a large university population. Its strength in a diverse set of industries has helped the region generate growth at different points of the business cycle. The five-year metrics, which track performance in the medium-term, are stronger than the one-year metrics, but momentum is still strong. More than 38,300 net new residents moved to the Austin-Round Rock metro in 2017, adding to upward pressure on housing costs.

More than 103,000 people are employed providing professional, scientific, and technical services, and the sector continues to grow—adding close to 5,000 jobs in 2017 alone. Since 2007, the field has expanded steadily, almost doubling between 2007 and 2017. These high-wage jobs contribute to the broader economy through consumer spending, for example in restaurants and bars, which added 3,200 positions in 2017. California-based tech firm Oracle Corp. is a major presence in Austin and plans to expand its footprint in coming years. In March 2018, it opened its new 560,000 square foot corporate campus in Southeast Austin, and reports suggest a second similarly-sized extension is in development.²⁵ The firm is tied into the high-tech ecosystem in the Austin metro, and in October 2018 Oracle announced they had selected six local startups to work within their first U.S. accelerator.²⁶

As the Texas state capital, Austin has significant government employment. The region hosted more than 166,000 state and local government workers in 2017. This figure includes state administrators along with teachers and state university employees, as well as a slight reduction in government employees that year, caused by restrictions on state hiring.

With the 11th largest high-tech concentration in the country, the Austin-Round Rock region has built a robust high-tech cluster. Graduates from The University of Texas at Austin

ASSETS

- Competitive business climate combined with an established high-tech hub supports employment and wage growth.
- The University of Texas at Austin attracts and trains a highly-skilled and entrepreneurial workforce.

LIABILITIES

- Economic growth has created upward pressure on the cost of living, making the region less attractive than other Texas metros.

(UT Austin), contribute to a highly educated workforce that attracts tech firms to the region. Almost 45 percent of residents aged 25 and older hold at least a bachelor's degree.

In the 2017-18 academic year, 51,500 students were enrolled at UT Austin.²⁷ The total teaching faculty at the university, including the medical school, is around 3,100. This cluster of researchers has yielded new ideas and new firms that benefit the local economy. In fiscal year 2016, ten new Texas companies were founded based on UT Austin patents, and the university received \$17.6 million in licensing revenue.²⁸ Not all startups originating at the university generate licensing income for the university, though the success of the namesake computer firm Michael Dell founded out of his UT Austin dorm room has benefited the university by elevating the high-tech sector in the city and enabling the gift that helped establish the Dell Medical School.²⁹

Samsung Austin Semiconductor is a major U.S. manufacturing plant, producing chips that are included in the company's televisions and mobile phones. The factory has attracted \$16 billion in investment since 1997, and 3,000 people are employed onsite.³⁰ Samsung is one of many major firms attracted to the city of Austin as a result of an economic development strategy focused on outside business recruitment. In 2018, Austin changed the policies governing the incentives program to broaden its use by small and local businesses.³¹ The decade-long presence of the Austin-Round Rock metro among the top tier of the best-performing cities is a testament to the success of a previous economic development strategy in creating jobs and attracting investment throughout the business cycle. The region has prospered as a whole and strengthened its high-tech and high-skills clusters. However, the new policies aim to address concerns over the distribution of the opportunities created and leverage existing economic strength. The success of the new approach will be seen in future editions of this index.



SAN FRANCISCO-REDWOOD CITY-SOUTH SAN FRANCISCO, CA

Held steady

JOB GROWTH (2012-17)	11TH
JOB GROWTH (2016-17)	40TH
WAGE GROWTH (2011-16)	1ST
WAGE GROWTH (2015-16)	1ST
SHORT-TERM JOB GROWTH (8/2017-8/2018)	59TH
HIGH-TECH GDP GROWTH (2012-17)	1ST
HIGH-TECH GDP GROWTH (2016-17)	11TH
HIGH-TECH GDP CONCENTRATION (2017)	5TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	15TH

San Francisco-Redwood City-South San Francisco, CA, holds steady for the third year in fourth place. The phenomenal growth in the high-tech sector over the past five years has created high-paying jobs and dramatic wage growth within the metro, more than anywhere else in the country on both our one- and five-year measures. Given the geographic and regulatory constraints within the metro area, this has created scarcity on several fronts. Competition for housing, office space, and workers have continued to drive up rents, wages, and commute times as firms and families move further out to the edges of the metro and beyond.

High-tech industries are core to the San Francisco-Redwood City-South San Francisco economy. They represent a large share of economic activity—the fifth highest share in the nation—and provide employment to thousands of people. In 2017, more than 180,000 people worked in the professional, scientific, and technical services sector for example, up by almost 45,000 from five years earlier.

Investments in insurance technology firms suggest entrepreneurs and venture capitalists see opportunities for big wins in a well-regulated but staid market. Metromile, a car insurance provider offering coverage per mile for occasional drivers, raised an additional \$90 million in Series E funding in 2018.³² The data processing, hosting, and related services industry, which captures activity in the cloud computing sector, added 2,000 jobs in 2017 and 9,500 over the 2012-2017 five-year period. These figures put San Francisco-Redwood City-South San Francisco ahead of all other U.S. metros for the number of jobs added, and it is second only to the New York-Jersey City-White Plains metropolitan division for total employment in the sector.

The rising cost of housing is contributing to homelessness and creating hardship visible to residents and visitors to the region. In November 2018, voters in San Francisco approved a new gross receipts tax on businesses with revenues over \$50 million.³³ Revenue from the new tax would be used to fund programs for the city's homeless population. Business and civic leaders were divided over the new tax, with some firms like Salesforce supporting the measure and the Mayor

ASSETS

- Dynamic high-tech sector is creating new technologies and industries, sustaining the economic expansion.
- Educated and mobile workforce is attractive to employers seeking to hire skilled and experienced employees.

LIABILITIES

- Lack of affordable workforce housing and the resulting high cost of living is contributing to homelessness and migration out of the region.

and other firms, including Twitter, opposing it. If the tax survives court challenges, it would roughly double funding for homelessness services while adding to the tax obligations of large companies in the city of San Francisco. This may affect expansion and location decisions in the future.

The San Francisco-Redwood City-South San Francisco metro has a highly educated population, with 55 percent of residents aged 25 and older holding at least a bachelor's degree. This is higher than in the neighboring San Jose metro, where just under 51 percent hold an advanced degree. Rich amenities and a more urban lifestyle make the city attractive to young professionals, and the San Francisco region is home to a larger share of millennials than the San Jose metro area (three percentage points higher in 2017).

The geographic spread of the Silicon Valley cluster and the lifestyle preferences and spending power of the tech workforce have created demand for both public and private transportation. In 2017, almost 2,000 new jobs were created in the transit and ground transportation sector, which, like the 5,200 jobs created between 2012 and 2017, was more than any other region in the U.S. These jobs include controversial private bus services run by tech firms, including Google and Facebook, to take their workers from San Francisco to San Jose locations.³⁴

South San Francisco remains a major bioscience hub and is home to Genentech, a biotech firm founded in 1976. The firm was an early partner of 23andMe, a genetic testing company also based in South San Francisco that has assembled a wealth of genetic information from customers interested in understanding their ancestry.³⁵ The University of California San Francisco has continued to invest in medical centers and research hospitals, building on its expertise in life sciences research. The university is well poised to continue this legacy and plans to put a \$500 million pledge from the Helen Diller Foundation toward building a patient-centered hospital at their Parnassus Heights campus.³⁶



#5 DALLAS-PLANO-IRVING, TX

Dropped 2 spots

JOB GROWTH (2012-17)	14TH
JOB GROWTH (2016-17)	20TH
WAGE GROWTH (2011-16)	14TH
WAGE GROWTH (2015-16)	37TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	15TH
HIGH-TECH GDP GROWTH (2012-17)	13TH
HIGH-TECH GDP GROWTH (2016-17)	27TH
HIGH-TECH GDP CONCENTRATION (2017)	24TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	8TH

Dallas-Plano-Irving, TX, ranks fifth, down two spots on this year's index. Although the metro did not place in the Top 10 for any of our growth metrics, the combination of a robust and diverse high-tech industry and solid growth in jobs and wages across all the one-year, five-year, and short-term job growth measures reveals the broad-based vitality of the Dallas-Plano-Irving regional economy. The metro gained 14,000 positions responsible for the management of companies and enterprises between 2012 and 2017, more than any other region in the U.S. and underscoring how attractive the location is for global and regional headquarters. Dallas-Plano-Irving also added 37,800 administrative and support service jobs over the same five-year period, and 5,200 in 2017 alone. McKesson Corporation, a California based pharmaceutical firm, moved its U.S. Pharmaceutical Group to Irving in 2017, bringing 1,200 employees to regional offices.³⁷ Leadership cited the business climate as a crucial draw to the region. These headquarter jobs create demand for services and contribute to job creation across the high-, mid-, and low-wage categories.

The opportunities for high-skill workers are expanding in the Dallas-Plano-Irving region. The metro ranked second among U.S. metros in the number of professional, scientific, and technical service jobs added between 2012 and 2017. Only the much larger New York City metro division was able to best the Dallas-Plano-Irving total of 47,200 new positions in five years. Firms like Charles Schwab and Nokia have been adding to their payroll in the city.

Southwest Airlines Co. is headquartered in Dallas and uses Dallas Love Field airport as its primary hub. In April 2018, after investing \$250 million, the airline opened two new buildings at its Dallas campus—one is a pilot training facility and the other provides office and employee training space.³⁸ Southwest employs 10,400 people in Dallas and contributes to growth in airline transportation employment, which increased by 3,600 jobs between 2012 and 2017.

ASSETS

- A competitive business climate supports broad-based economic growth.
- High-profile corporate headquarters create demand for professional services.

LIABILITIES

- Rising construction costs make housing less affordable, eroding a key competitive advantage.

The telecommunications sector, anchored by AT&T, employs more than 33,000 in the Dallas-Plano-Irving region. Although the industry is shedding jobs in other regions, in 2017 it added 500 positions in the Dallas region, more than anywhere else in the country. In 2018, AT&T announced they would be investing \$100 million to refurbish their downtown Dallas offices, aiming to modernize and better integrate it into the fabric of the city.³⁹

Liberty Mutual Insurance opened their new Plano campus in late 2017. The firm is consolidating employees from around the region in their new towers and had 2,300 staff moved in by mid-2018.⁴⁰ State Farm, another insurance firm, has its regional headquarters in Richardson, with more than 7,200 employees on site.⁴¹ Insurance carriers and related activities added 3,700 jobs in 2017; 19,000 between 2012 and 2017.

The Dallas-Plano-Irving metro economy is not only creating office-based job opportunities. Warehousing and storage added 4,800 jobs in 2017 thanks to firms like Amazon and Wayfair building distribution centers in the region. Employment in this sector has more than doubled since 2012. The L'Oreal Group, a cosmetics firm, invested \$17 million to build a regional distribution center.⁴² Almost 40,000 people were employed in the computer and electronic product manufacturing sector in the Dallas-Plano-Irving metro in 2017. Employment in the sector is shrinking in the majority of metros, but is growing slowly and steadily in the Dallas area—although numbers are not yet at pre-recession levels. Texas Instruments, a semiconductor firm, has its headquarters in Dallas and is considering a major new investment in a wafer fabrication plant in Richardson.⁴³



#6 RALEIGH, NC

Dropped 4 spots

JOB GROWTH (2012-17)	23RD
JOB GROWTH (2016-17)	25TH
WAGE GROWTH (2011-16)	13TH
WAGE GROWTH (2015-16)	11TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	29TH
HIGH-TECH GDP GROWTH (2012-17)	8TH
HIGH-TECH GDP GROWTH (2016-17)	63RD
HIGH-TECH GDP CONCENTRATION (2017)	9TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	8TH

Raleigh, NC, stays strong this year, coming in sixth after a shining performance in last year's index at second place. High-tech industries continue to anchor Raleigh's economy by contributing to job and wage growth in the metro, as Raleigh comes in eighth for five-year (2012-17) high-tech GDP growth. Overall job and wage growth remain strong in both the five- and one-year time periods ending 2017.

Wage growth is being propelled by an overall tightening of the labor market, while high-skilled labor demand steadily increases. Professional and technical services provide most of the metro's employment and offer high wages. Many companies, especially tech companies, have come to take advantage of the regional high-tech cluster (currently anchored by IBM and SAS) and relatively low business costs. For example, Infosys recently chose Raleigh as a new technology and innovation hub and has committed to creating 2,000 high-skill, high-wage jobs in the area.⁴⁴ However, North Carolina state legislature's "bathroom bill" and overall anti-LGBT political sentiment may prove damaging to Raleigh's business attraction. Deutsche Bank and Voxpro canceled plans that would have created hundreds of jobs in the Raleigh area in response to the bill.⁴⁵

ASSETS

- Proximity to research triangle spurs innovation and draws in talent and new tech companies.
- Most new jobs are high-skill and high-wage, increasing activity throughout the metro's economy.

LIABILITIES

- Political decisions at the state level regarding the LGBT community are causing some companies to cancel investment plans or select sites outside of North Carolina altogether.

One of the reasons employers creating high-skill, high-wage jobs gravitate toward Raleigh is because of its educated workforce. Of the metro's residents aged 25 and older, about 47 percent have a bachelor's degree or higher, roughly 16 percent higher than the average for both the state of North Carolina and the U.S.⁴⁶ North Carolina State University (NCSU) continues to produce highly educated workers and be a strong source of research and development with its Centennial Campus. Not only does this feed the larger well-known high-tech companies in the area, but the innovation and skilled workforce from NCSU also draws in tech startups. According to the City of Raleigh's economic development department, there are currently 328 tech startups in the area.⁴⁷

As the high-tech sector draws employers and subsequently high-income in-migrants to Raleigh, demand for services continues to increase. Construction of buildings increased employment by 48 percent in the five years ending in 2017. Recreation and retail also ramped up in those five years as overall wages and subsequent consumer spending in the area increased.

#7 ORLANDO-KISSIMMEE-SANFORD, FL

Held steady

JOB GROWTH (2012-17)	10TH
JOB GROWTH (2016-17)	12TH
WAGE GROWTH (2011-16)	11TH
WAGE GROWTH (2015-16)	17TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	6TH
HIGH-TECH GDP GROWTH (2012-17)	51ST
HIGH-TECH GDP GROWTH (2016-17)	38TH
HIGH-TECH GDP CONCENTRATION (2017)	76TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	39TH

Orlando-Kissimmee-Sanford, FL, held its No. 7 spot this year by continuing to add jobs and increase wages. The booming economy continues to support the metro's tourism industry while the metro continues to diversify its industries overall.

Orlando attracts a significant number of in-migrants not only from other parts of Florida, but also from finance and tech hubs such as New York, NY, and Austin, TX.⁴⁸ Contributing to in-migration is the professional, scientific, and technical services industry, which added 18,400 jobs in the five years ending in 2017. Population growth and wage growth continue to increase Orlando's construction, and specialty trade contractor industries added 24,100 jobs over the five years ending in 2017.

The University of Central Florida (UCF) provides educated labor and a significant amount of research and development. Recently, Siemens teamed up with UCF to create a research lab for the development of smart technologies to improve

ASSETS

- The University of Central Florida produces an educated labor force and R&D.
- An increase in high-tech industry activity is bolstering the metro's knowledge-based economy.

LIABILITIES

- Tourism is a large part of the metro's economy that will be sensitive to future economic downturns.

the energy efficiency of buildings.⁴⁹ Siemens is set to install \$1 million worth of technology in UCF's Smart Infrastructure Data Analytics Lab and give the lab access to Siemens' Digital Grid Lab data. The idea is to create energy efficient smart buildings while also training students to meet the growing demand for data scientists in the Orlando area.

As jobs and wages across the U.S. improve, the metro's tourism industry has been booming. Orlando saw two major attractions open their doors in 2017—Disney's Pandora: The World of Avatar and Universal's Volcano Bay. The Orlando area is home to five of the Top 10 most attended global amusement/theme parks, which together had 66,070,000 attendees in 2017.⁵⁰ Amusement, gambling, and recreation industries account for a large portion of the metro's employment, and added 11,000 jobs in the five years ending in 2017. In conjunction with recreation related industries, the food services and drinking places sector added 24,800 jobs in those five years.

#8 SEATTLE-BELLEVUE-EVERETT, WA

Gained 9 spots

JOB GROWTH (2012-17)	34TH
JOB GROWTH (2016-17)	23RD
WAGE GROWTH (2011-16)	7TH
WAGE GROWTH (2015-16)	4TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	12TH
HIGH-TECH GDP GROWTH (2012-17)	81ST
HIGH-TECH GDP GROWTH (2016-17)	76TH
HIGH-TECH GDP CONCENTRATION (2017)	2ND
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	29TH

Seattle-Bellevue-Everett, WA, climbed nine spots to No. 8. The metro's strong wage growth is what propelled it in this year's ranking as it came in seventh and fourth in five-year and one-year wage growth, respectively. Per capita income in the metro was \$72,574 in comparison to the national per capita income of \$50,392 in 2017.⁵¹

Much of the wage growth in Seattle-Bellevue-Everett can be attributed to the area's tech boom. Amazon and Microsoft continue to expand and provide high-paying jobs; however, Amazon chose to tap into East Coast talent pools for HQ2. Seattle startup trucking app Convoy recently received \$185 million in Series C funding from Google's VC operations.⁵² Non-store retailers added 25,700 jobs in the five years ending in 2017, while the professional, scientific, and technical industries added 23,800 jobs. However, the metro's cost of

ASSETS

- The University of Washington is a high-quality research university drawing in significant R&D funding.
- Tech giants continue to propel employment of high-wage, high-skill jobs.

LIABILITIES

- Shortage of residential and commercial real estate makes it difficult for new companies to move in and for existing companies to expand.

living continues to increase and there is a shortage of housing, causing tech companies to look elsewhere for expansion. Housing is a major issue for Seattle specifically as vacancy rates and housing inventories are very low relative to state and national numbers.⁵³ New construction is increasing, but not keeping pace with demand. Construction of buildings and specialty trade contractors together added 31,600 jobs in the metro from 2012 to 2017.

The University of Washington (UW), Seattle Pacific University, and Seattle University contribute to the educated labor force. UW in particular is well known for its research and innovation and is widely regarded as one of the best public universities in the country. The university received \$1.62 billion in research funding in 2017 and receives the most federal research funding in the country.⁵⁴

#9 FORT COLLINS, CO

Dropped 4 spots

JOB GROWTH (2012-17)	19TH
JOB GROWTH (2016-17)	19TH
WAGE GROWTH (2011-16)	15TH
WAGE GROWTH (2015-16)	29TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	22ND
HIGH-TECH GDP GROWTH (2012-17)	87TH
HIGH-TECH GDP GROWTH (2016-17)	64TH
HIGH-TECH GDP CONCENTRATION (2017)	27TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	15TH

Fort Collins, CO, dropped four spots to come in ninth place this year. The metro had a strong performance across most indicators and came in 19th in both one-year and five-year job growth. The metro is growing with steady in-migration and an expanding college population. Fort Collins also benefits from its proximity to Denver, CO.

Colorado State University (CSU) is growing rapidly and since 2015 has planned for \$244 million in expansions.⁵⁵ The university attracts young talent that can stay in the area and feed the growing high-tech sector in Fort Collins after graduation. CSU is also the largest employer in the metro with 7,525 employees.⁵⁶ The educational services industry increased employment by 79 percent in the five years ending in 2017 and will likely continue to grow.

ASSETS

- Colorado State University attracts young talent to feed the high-tech sector.
- Healthy startup scene spurs innovation.

LIABILITIES

- Housing is scarce and overvalued, hindering in-migration.

The high-tech sector in Fort Collins has attracted a fair number of startups. Tech startup incubator Innosphere announced in 2017 a plan that included a \$3 million expansion of its Fort Collins location.⁵⁷ The investment is part of a larger plan to draw 351 new companies to northern Colorado over 10 years and create an innovative tech startup cluster.⁵⁸

A growing population contributes to an overall increase in demand for services. For instance, ambulatory health-care services added 3,290 jobs in the five years ending in 2017. Construction related industries have also been growing to keep up with demand as housing has become scarce and overvalued.⁵⁹ Construction of buildings and specialty trade contractors together added 2,930 jobs from 2012 to 2017. Rental vacancy rates are also very low relative to the national level.⁶⁰

#10 SALT LAKE CITY, UT

Held steady

JOB GROWTH (2012-17)	36TH
JOB GROWTH (2016-17)	34TH
WAGE GROWTH (2011-16)	22ND
WAGE GROWTH (2015-16)	23RD
SHORT-TERM JOB GROWTH (8/2017-8/2018)	34TH
HIGH-TECH GDP GROWTH (2012-17)	52ND
HIGH-TECH GDP GROWTH (2016-17)	34TH
HIGH-TECH GDP CONCENTRATION (2017)	40TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	15TH

Salt Lake City, UT, comes in 10th for the second year in a row. The metro scored well in all of our ranking indicators as the expansion of its financial service industry and high-tech sector continues to fuel the metro's growth. Salt Lake City's tight labor market also puts upward pressure on wages.

Low business costs and cost of living compared with East and West Coast tech and finance hubs continue to encourage companies to expand in Salt Lake City. The metro dubbed "Silicon Slopes" is now the home of Adobe, Twitter, and Electronic Arts offices.⁶¹ However, thousands of jobs are unfilled, impeding expansion.⁶²

If the metro's labor market were less tight, the expansion would likely be more rapid. The University of Utah (U of U)

ASSETS

- The University of Utah contributes to both the talent pool and research for the high-tech sector.
- Low business costs and cost of living draw in tech companies.

LIABILITIES

- The tight labor market is not meeting growing demand for high-skilled labor.

is a great local source of talent, but is not enough to meet the needs of the expanding regional economy. Utah lawmakers recognize this and continue to increase funds for programs meant to increase U of U graduates in high-tech fields of study.

As more businesses arrive and tourism remains a significant part of the metro's economy, the local airport grows in importance. A \$3.6 billion project is currently underway to replace Salt Lake City International Airport, which, according to the airport's director, is the largest construction project in the state's history.⁶³ The airport project employed 1,750 construction workers at the halfway point to its completion.⁶⁴ Delta Airlines, which now employs more than 4,400 in its operations at Salt Lake City Airport, is funding much of the new airport project.⁶⁵

#11 RENO, NV

Gained 26 spots

JOB GROWTH (2012-17)	9TH
JOB GROWTH (2016-17)	1ST
WAGE GROWTH (2011-16)	52ND
WAGE GROWTH (2015-16)	10TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	9TH
HIGH-TECH GDP GROWTH (2012-17)	31ST
HIGH-TECH GDP GROWTH (2016-17)	19TH
HIGH-TECH GDP CONCENTRATION (2017)	136TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	112TH

Reno, NV, climbed 26 spots to 11th in this edition of BPC U.S. Job growth from 2016 to 2017 exceeded that of every metro in our large cities ranking, giving it the first spot in that category. The metro's manufacturing industry accounts for most of the growth in the area, as it drew in new workers who increased demand for services and housing.

Though there is debate over whether it is worth such a large allocation of tax breaks, the arrival of Tesla's Gigafactory 1 in the Reno area has got the region's economy moving.⁶⁶ The site employs about 7,000 people and is expected to nearly triple the current number of workers once the site reaches full potential.⁶⁷ The factory is dedicated to Tesla battery production, helping to fill backlogged Model 3 orders.⁶⁸ Elon Musk has

ASSETS

- Manufacturing jobs are expected to keep growing and bolster employment and wages.
- Construction jobs are ample as a housing shortage increases demand for new buildings.

LIABILITIES

- A housing shortage is stifling in-migration while the metro lacks homegrown manufacturing talent.

stated the factory can only hit its target employment level if the Reno area can offer more infrastructure (e.g., schools, buildings, roads, affordable housing, etc.).⁶⁹ The housing shortage has put upward pressure on rental and home prices, as construction tries to keep up with demand. Construction of buildings and specialty trade contractors together added 7,850 jobs in the five years ending in 2017.

Tesla isn't the only manufacturing company to call the Reno area home. More than 20,000 manufacturing jobs existed in the Reno-Sparks area as of July of 2018.⁷⁰ But the industry is struggling to fill jobs as young adults choose more traditional college paths over trade careers.⁷¹

#12 BOISE CITY, ID

Gained 14 spots

JOB GROWTH (2012-17)	13TH
JOB GROWTH (2016-17)	4TH
WAGE GROWTH (2011-16)	25TH
WAGE GROWTH (2015-16)	13TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	16TH
HIGH-TECH GDP GROWTH (2012-17)	116TH
HIGH-TECH GDP GROWTH (2016-17)	51ST
HIGH-TECH GDP CONCENTRATION (2017)	53RD
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	112TH

Boise City, ID, gained 14 spots to come in 12th place in this edition of BPC U.S. The metro's performance was anchored by job growth, coming in fourth for one-year job growth. Wages have also enjoyed healthy growth in both the one-year (2015-2016) and five-year (2011-2016) wage growth categories.

The population of Boise has been steadily increasing as a tight labor market draws in-migrants. The rising population has also caused a housing shortage. In Ada County alone, which is part of Boise City's MSA, the median price of existing homes increased by 22 percent in 2017.⁷² New construction has unsuccessfully tried to keep up with housing and commercial development demand and added 8,060 jobs in construction of buildings and specialty trade contractors from 2012 to 2017. The overall tight labor market in the metro is hindering construction firms' ability to complete a sufficient number of

ASSETS

- Low business costs draw in tech startups.
- Affordable cost of living facilitates in-migration.

LIABILITIES

- Insufficient skilled labor to meet high-tech labor demand.

houses. The growth of the commercial real estate market is being spurred on by outside investors,⁷³ but interest in doing business in the metro is outpacing the availability of workspace.

Professional, scientific, and technical services have been increasing employment; the industry grew 38 percent in the five years ending in 2017. Though Micron is a major employer in the field, Boise's low business costs have also been drawing in startups. Tech startups like Black Box VR, Wevorce, and TSheets have all selected Boise as their home.⁷⁴ While Boise State University provides educated labor for Boise's burgeoning tech scene, it is not enough to fill demand for skilled labor and keep the fire burning the high-tech sector. Boise City's educational attainment is relatively low, with only about 32 percent of its population holding a bachelor's degree or higher.⁷⁵

#13 CHARLOTTE-CONCORD-GASTONIA, NC-SC

Held steady

JOB GROWTH (2012-17)	21ST
JOB GROWTH (2016-17)	17TH
WAGE GROWTH (2011-16)	12TH
WAGE GROWTH (2015-16)	38TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	41ST
HIGH-TECH GDP GROWTH (2012-17)	22ND
HIGH-TECH GDP GROWTH (2016-17)	126TH
HIGH-TECH GDP CONCENTRATION (2017)	85TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	51ST

Charlotte-Concord-Gastonia, NC-SC, remained in the 13th spot for another year. The metro has been enjoying consistent growth in jobs and wages, keeping it high in our large city ranking. The region continues to be propelled by a financial services sector that provides many high-wage jobs.

Low business and living costs continue to usher in expansions of large banking titans, which helps to bring in financial technology (FinTech) activity. For example, Bank of America announced in 2017 that they would invest \$1.5 million in Charlotte, NC to develop a FinTech hub.⁷⁶ Professional, scientific, and technical services added 20,400 jobs for a 40 percent increase in sector employment from 2012 to 2017. The increase in population, including a significant number of in-migrants, and wages led to an increase in demand for many services and housing.

ASSETS

- Low business and living costs make it easier for startup companies to come into the metro.
- The existing financial cluster bolsters the new financial technology industry.

LIABILITIES

- The metro's relatively low educational attainment requires reliance on in-migration.
- State-level political decisions on social issues are causing some companies to stay away.

Charlotte does have the University of North Carolina at Charlotte to provide an educated workforce, but the metro is almost a three-hour drive from North Carolina's research triangle and only marginally benefits from that cluster's universities and research. Only about 34 percent of the Charlotte-Concord-Gastonia MSA has a bachelor's degree or higher compared to 47 percent in Raleigh, NC.^{77, 78}

Despite low business costs and a financial cluster, the metro suffered a hit regarding attracting new FinTech companies when the state of North Carolina created a law banning transgender people from using bathrooms marked for their identified gender.⁷⁹ The law led FinTech giant PayPal to cancel plans for a new global operations center in Charlotte.⁸⁰ CoStar also backed out of negotiations to bring more than 700 jobs to the area.⁸¹

#14 OAKLAND-HAYWARD-BERKELEY, CA

Gained 2 spots

JOB GROWTH (2012-17)	40TH
JOB GROWTH (2016-17)	37TH
WAGE GROWTH (2011-16)	20TH
WAGE GROWTH (2015-16)	26TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	80TH
HIGH-TECH GDP GROWTH (2012-17)	59TH
HIGH-TECH GDP GROWTH (2016-17)	62ND
HIGH-TECH GDP CONCENTRATION (2017)	17TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	1ST

Oakland-Hayward-Berkeley, CA, crept up two spots to No. 14 in this year's ranking. One-year (2015-2016) and five-year (2011-2016) wage growth pulled the metro forward, as well as a significant increase in high-tech activity. Oakland-Hayward-Berkeley came in first place for high-tech diversity, with the highest number of high-tech industries with a location quotient of one or better in 2017.

The high-tech sector growth in the metro continues as San Jose and San Francisco run out of space. Oakland-Hayward-Berkeley benefits from having slightly lower costs of business and living relative to the previously mentioned cities while still benefiting from the metro's proximity to the Bay Area. Professional, scientific, and technical services added 9,900 jobs from 2012 to 2017, while data processing, hosting, and related services jobs also grew by 110 percent. Workday Inc. has its headquarters in the metro and is a major employer, with over 3,100 employees.⁸² The cloud-based financial

ASSETS

- Slightly lower costs of living and of business draw Bay Area expansion to the metro.
- Location of UC Berkeley fosters innovation and provides high-skill labor.

LIABILITIES

- As wages grow to draw talent, cost of living and housing may rise and remove a current advantage over other Bay Area metros.

software vendor is expanding in the area with a new six-story corporate headquarter building to open in 2019 and is expected to accommodate 2,000 employees.

Oakland County alone is expected to add 42,000 jobs in the next three years, and wages are expected to increase as well.⁸³ Transportation equipment manufacturing employment increased by 281 percent in the five years ending in 2017. Much of this is related to Tesla's Fremont, CA, operations, with more than 10,000 workers at that particular plant.⁸⁴

The University of California, Berkeley (UC Berkeley) is the metro's largest employer with 23,962 employees.⁸⁵ UC Berkeley is a major source of talent for Oakland-Hayward-Berkeley and the Bay Area as a whole. The university is also ranked among the Top 5 research universities in the world and has one of the best electrical and electronic engineering programs according to ShanghaiRanking's Global Ranking of Academic Subjects 2017.⁸⁶

#15 RIVERSIDE-SAN BERNARDINO-ONTARIO, CA

Gained 5 spots

JOB GROWTH (2012-17)	3RD
JOB GROWTH (2016-17)	7TH
WAGE GROWTH (2011-16)	19TH
WAGE GROWTH (2015-16)	48TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	18TH
HIGH-TECH GDP GROWTH (2012-17)	95TH
HIGH-TECH GDP GROWTH (2016-17)	28TH
HIGH-TECH GDP CONCENTRATION (2017)	131ST
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	112TH

Riverside-San Bernardino-Ontario, CA, jumped up five spots this year to No. 15. The metro's employment growth is especially strong as it comes in third and seventh in one-year (2016-2017) and five-year (2012-2017) job growth. The metro is buoyed by its logistics and defense sectors, with some of its major employers being the U.S. Marine Corps Air Ground Combat Center and the Fort Irwin National Training Center.

The economy of this metro, known as the Inland Empire, is propelled by massive job gains in warehousing and storage, to the tune of 34,800 jobs from 2012 to 2017 (a 140 percent increase). Also significant, specialty trade contractors added 28,200 jobs for a 68 percent increase over the same period. Riverside-San Bernardino-Ontario, CA, is known as a logistics hub and drew Amazon to invest \$4.7 billion in the area from 2012 to 2016, firmly planting the e-commerce sector here.⁸⁷ The company has 10 facilities in the Inland Empire with over 20,000 full-time fulfillment employees.⁸⁸ As the Riverside-

ASSETS

- The logistics hub is drawing investment from large employers like Amazon.
- Proximity to large markets like Los Angeles and San Diego aids its major industries.

LIABILITIES

- As more Los Angelinos and San Diegans use the area as a bedroom community, housing prices will increase.
- Low educational attainment does not allow for much industrial diversity.

San Bernardino-Ontario MSA's employment moves full steam ahead, more people have enough disposable income to spend at restaurants and bars, leading the food services and drinking places industry to add 28,700 jobs in the five years ending in 2017 as well. Overall demand for services has increased in the metro.

Though the heavy employment growth has increased total wages, the jobs added tend not to be high-wage or high-skilled. Educational attainment in the metro is extremely low, with only about 21 percent of its population over the age of 25 having a bachelor's degree or better compared with 31 percent nationally. The University of California, Riverside does produce educated labor, but students tend to look elsewhere for employment after graduation. As in-migration and the overall population increases, so have housing prices, posing a problem for middle- and low-income workers.

#16 CHARLESTON-NORTH CHARLESTON, SC

Gained 6 spots

JOB GROWTH (2012-17)	32ND
JOB GROWTH (2016-17)	33RD
WAGE GROWTH (2011-16)	27TH
WAGE GROWTH (2015-16)	18TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	104TH
HIGH-TECH GDP GROWTH (2012-17)	12TH
HIGH-TECH GDP GROWTH (2016-17)	5TH
HIGH-TECH GDP CONCENTRATION (2017)	60TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	88TH

Charleston-North Charleston, SC, inches up by six spots to stand at No. 16 this year. The region has strong performance in our five- and one-year high-tech GDP growth, ranked No. 12 and No. 5, respectively. However, short-term job growth indicates momentum is slowing.

Its coastal location makes the region a tourist destination and a retiree haven. The retail trade, education and health services, and leisure and hospitality services together made up 36 percent of the region's total employment in 2017.⁸⁹ Moreover, the metro's well-established infrastructure, including railways and the Port of Charleston, makes it a destination for export-oriented industries. For instance, Volvo started the construction of its plant there in 2015.⁹⁰ In March 2015, Daimler announced a \$500 million expansion plan at the North Charleston plant where it assembles its Sprinter vans.⁹¹ The region is also known for aerospace products and parts manufacturing. Boeing has a 787 Dreamliner final assembly and delivery plant here.

ASSETS

- Economic diversity makes it less vulnerable to external shocks.
- Population and income growth will support the region's future economic growth.

LIABILITIES

- The U.S.-China trade war may be detrimental to the export-oriented manufacturing sectors.

From 2011 through 2016, the population growth rate was around 2 percent to 2.5 percent. Although the growth rate dropped to 1.8 percent in 2017 and has been declining, its growth rate well surpassed the national average (0.7 percent) in 2017.⁹² The median family income has risen in recent years. From 2012 to 2017, it jumped from \$59,757 to \$76,236, an increase of 27.6 percent.⁹³ Population and income growth drive up housing demand and prices. New construction will provide more temporary jobs for the region.

#17 ATLANTA-SANDY SPRINGS-ROSWELL, GA

Dropped 3 spots

JOB GROWTH (2012-17)	33RD
JOB GROWTH (2016-17)	39TH
WAGE GROWTH (2011-16)	32ND
WAGE GROWTH (2015-16)	22ND
SHORT-TERM JOB GROWTH (8/2017-8/2018)	70TH
HIGH-TECH GDP GROWTH (2012-17)	37TH
HIGH-TECH GDP GROWTH (2016-17)	88TH
HIGH-TECH GDP CONCENTRATION (2017)	30TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	51ST

Atlanta-Sandy Springs-Roswell, GA, slips three spots to No. 17. The job and wage growth of the region have been healthy in recent years. In particular, the metro's one-year wage growth ranks 22nd. In addition, it has a budding high-tech sector with the high-tech GDP concentration ranked No. 30.

The region has a relatively diverse economy. The share of total employment ranges from 10 to 20 percent in each of the following sectors: retail trade, professional and business services, education and health services, leisure and hospitality services, and government.⁹⁴ The region is a transportation and logistics hub within a two-hour flight for 80 percent of the U.S. population. Atlanta's Hartsfield-Jackson International Airport, home of the Delta Air Lines headquarters, has been recognized as the world's busiest airport for the last two decades, handling approximately 2,500 flights and 275,000 passengers per day.⁹⁵ In addition to business travel, the region has tourist destinations such as the CNN Center and the World of Coca-Cola museum.

ASSETS

- Economic diversity helps maintain its economic health.
- High-educated population supplies high-skill employees to the local workforce.

LIABILITIES

- Core logistics and transportation sectors may be susceptible to business cycles.

A relatively large proportion of the region's population is highly-educated; 38 percent of its population has a bachelor's or a master's degree, surpassing the state (31 percent) and the U.S. (31 percent) averages.⁹⁶ The region is home to Emory University, Georgia Institute of Technology, and Georgia State University, which provide a skilled talent pool to the local labor market. Being a transportation hub with a high-quality workforce, the region has recently become a rising star for the FinTech community. The region also has a favorable ecosystem for entrepreneurs, and the region's high-tech scene is expanding.⁹⁷

#18 SANTA ROSA, CA

Gained 25 spots

JOB GROWTH (2012-17)	17TH
JOB GROWTH (2016-17)	46TH
WAGE GROWTH (2011-16)	38TH
WAGE GROWTH (2015-16)	68TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	40TH
HIGH-TECH GDP GROWTH (2012-17)	55TH
HIGH-TECH GDP GROWTH (2016-17)	56TH
HIGH-TECH GDP CONCENTRATION (2017)	59TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	22ND

Santa Rosa, CA, jumps 25 spots to secure No. 18 this year. The region had strong job growth from 2012 to 2017, placing it at No. 17 among its counterparts. It performs well in five-year job growth and the number of high-tech industries with strong location quotients.

The region is known for its beverage manufacturing thanks to the concentration of breweries, wineries, and vineyards in the region. With the growing health consciousness of consumers, the metro's organic food production sector has been developing.⁹⁸ Its world-class beverage industry and the scenic views in the region have been magnets for tourists. In addition to wine-making and tourism, the professional and business services and government sectors provided one quarter of total employment in 2017.⁹⁹ Despite its strength in agriculture and tourism, the Tubbs Fire occurring in October 2017 may impact the two industrial pillars of the region. The fire destroyed 5,636 homes and buildings in the Santa Rosa-Calistoga region.¹⁰⁰

ASSETS

- World-class beverage industry helps to support local economy.
- The rise of organic and artisanal food industry adds new fuel to the local economy.

LIABILITIES

- Declining housing affordability may limit growth.

and the ongoing rebuilding efforts will propel construction activities in the metro.

Its proximity to San Francisco and the local constraint on housing supply heated up housing prices in the region. Although the issuance of total residential housing permits grew by 48 percent and 28 percent in 2016 and 2017 respectively,¹⁰¹ the housing supply remains limited, reducing housing affordability in the region. This may limit the further growth of the metro's economy.

#19 OLYMPIA-TUMWATER, WA

Gained 20 spots

JOB GROWTH (2012-17)	29TH
JOB GROWTH (2016-17)	9TH
WAGE GROWTH (2011-16)	37TH
WAGE GROWTH (2015-16)	9TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	45TH
HIGH-TECH GDP GROWTH (2012-17)	6TH
HIGH-TECH GDP GROWTH (2016-17)	9TH
HIGH-TECH GDP CONCENTRATION (2017)	147TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	191ST

Olympia-Tumwater, WA, was the second biggest gainer in our 2017 ranking. This year, it leaps 20 spots to stand at No. 19. Its strong performance in one-year job and wage growth and the five- and one-year high-tech GDP growth measures all contribute to its improvement in rank.

As the state capital, the government sector provided about one-third of total employment in 2017 for the region. Education and health services and retail trade accounted for one-fourth of total employment in 2017.¹⁰² In 2016 and 2017, the metro had population growth rates of 2.2 percent and 2.4 percent, respectively.¹⁰³ The population gains helped support the growth of the two aforementioned sectors—education and health services and retail trade.

There are three small-scale, higher-education institutions in the region—Evergreen State College, San Martin's University, and South Puget Sound Community College. Residents with a college or a graduate degree accounted for 35 percent of the

ASSETS

- The government sector serves as a stable employment source for the region.
- Recent population growth helps support its education and health services, retail trade, and construction sectors.

LIABILITIES

- Overreliance on government jobs casts risk on the region's economic health.

total population in 2016.¹⁰⁴ These institutions and educated population provide the region with a skilled workforce. The region's low cost of living compared with Seattle and Tacoma also plays a role in drawing in new residents. In 2016, about one-fourth of all in-migrants to the metro moved from Seattle and Tacoma.¹⁰⁵ This demographic trend has driven up housing prices in the region and increased new housing construction. The construction and real estate sectors will ramp up in the next few years. Despite this, the region has relatively low industrial diversity and thus may be more vulnerable to future economic shocks. Diversifying its economy would benefit the region's long-run economic development.

#20 PHOENIX-MESA-SCOTTSDALE, AZ

Gained 20 spots

JOB GROWTH (2012-17)	35TH
JOB GROWTH (2016-17)	21ST
WAGE GROWTH (2011-16)	55th
WAGE GROWTH (2015-16)	54TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	14TH
HIGH-TECH GDP GROWTH (2012-17)	102ND
HIGH-TECH GDP GROWTH (2016-17)	72ND
HIGH-TECH GDP CONCENTRATION (2017)	54TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	51ST

Phoenix-Mesa-Scottsdale, AZ, jumps 20 spots to 20th place this year. Its improvement can be largely attributed to recent job growth. The region stands at No. 21 and No. 14 in our one-year and short-term job growth measures, respectively.

Favorable business conditions in the region attract many back-office finance and business services. Major players such as Bank of America, JP Morgan Chase, and Wells Fargo have a large local presence. In fall 2017, the Bank of the West unveiled its second-largest U.S. office in the Phoenix-Mesa-Scottsdale region and expected to hire about 1,000 employees by the end of 2018.¹⁰⁶ The region also has some high-tech sector companies, such as Intel. In February 2017, the semiconductor manufacturing giant announced it will invest \$7 billion in its Chandler, Arizona factory and add more than 10,000 jobs.¹⁰⁷ On August 2018, Cognizant, a tech-service company, added a new facility that will create about 500 jobs for highly skilled technology and business professionals in Mesa.¹⁰⁸

ASSETS

- Diversified industries help to strengthen the region's economy.
- A favorable business environment attracts companies to set up their offices.

LIABILITIES

- Despite some high-tech sector presence, the industry is still relatively small compared with many burgeoning tech hubs.

The region has long attracted retirees and has experienced high population growth recently. This demographic profile serves as a strong support for the retail, health-care, and hospitality industries. These three sectors accounted for roughly 38 percent of the region's total employment in 2017.¹⁰⁹ Arizona State University is another major employer. It recently announced its partnership with the city to expand its campus in downtown Phoenix. This expansion is expected to bring more than 300 students and more than 100 staff and faculty members to the urban campus.¹¹⁰ The growing talent pool and these diversified industries will contribute to the region's long-term economic health.

#21 OGDEN-CLEARFIELD, UT

Gained 7 spots

JOB GROWTH (2012-17)	26TH
JOB GROWTH (2016-17)	16TH
WAGE GROWTH (2011-16)	43RD
WAGE GROWTH (2015-16)	25TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	89TH
HIGH-TECH GDP GROWTH (2012-17)	64TH
HIGH-TECH GDP GROWTH (2016-17)	4TH
HIGH-TECH GDP CONCENTRATION (2017)	90TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	88TH

Ogden-Clearfield, UT, claims 21st place, moving up seven spots from last year. Its performance in our one- and five-year job growth measures indicates its labor market is on firm footing. What makes the region shine is its strong performance in one-year high-tech GDP growth.

Thanks to the Hill Air Force Base, the metro's economy is deeply rooted in the defense sector. In 2017, the base had a total employment of 25,500 personnel and generated an annual federal payroll of \$1.38 billion.¹¹¹ The huge military presence makes the government the largest employer in the region, accounting for 20.5 percent of total employment in 2017.¹¹² Transportation equipment manufacturing also contributes significantly to the region's economy. In early 2018, aerospace manufacturer Parker Hannifin announced it will relocate its facility from California to the metro, a move expected to add 77 jobs in the next six years.¹¹³ In addition to the government and manufacturing sectors, retail trade,

ASSETS

- Low business costs attract manufacturers to the region.
- A growing high-tech GDP provides the region with a stronger economic base.

LIABILITIES

- The concentration of jobs in the government/national defense sector may be susceptible to future federal spending changes.

professional and business services, and education and health services accounted for one-third of total employment in the region in 2017.¹¹⁴

The region has recently been identified as one of the fastest growing places in the U.S. Many companies view low business costs as one of the key factors attracting them to the metro. In Wallet Hub's 2018's Best & Worst Small Cities to Start a Business report, Clearfield and Ogden ranked as the 6th and 7th best cities for starting a business, respectively.¹¹⁵ Despite all these upsides, the recent U.S. - China trade war may impact the transportation equipment manufacturing industry in the region, but the long-term effects remain to be seen.

#22 NORTH PORT-SARASOTA-BRADENTON, FL

Dropped 16 spots

JOB GROWTH (2012-17)	5TH
JOB GROWTH (2016-17)	36TH
WAGE GROWTH (2011-16)	17TH
WAGE GROWTH (2015-16)	34TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	82ND
HIGH-TECH GDP GROWTH (2012-17)	32ND
HIGH-TECH GDP GROWTH (2016-17)	78TH
HIGH-TECH GDP CONCENTRATION (2017)	126TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	88TH

North Port-Sarasota-Bradenton, FL, falls 16 spots to 22nd in this year's index. A key factor leading to its overall ranking backslide is a short-term job growth drop from first place last year to 82nd place this year. Despite the decline in its overall ranking, the metro maintains strong momentum in our five-year job and wage growth measures.

Due to its nice weather and scenic views, the region is widely known as a tourist destination and a retiree haven. The leisure and hospitality services and the education and health services sectors accounted for approximately one-third of the region's total employment in 2017, surpassing the national average of 27 percent.¹¹⁶ The inflow of tourists and retirees has also fueled construction activities. In October 2017, the Atlanta Braves broke ground on a new spring training facility in Sarasota County; this new site is set to open in spring of 2019, bringing new jobs and tourists to the metro.¹¹⁷

ASSETS

- Nice weather and scenic views make the region attractive to tourists and retirees.
- Continuing population growth will support construction activities.

LIABILITIES

- A heavy reliance on highly-cyclical industries like tourism puts the metro's economic health at risk.

Its natural surroundings and amenities have attracted many senior residents to the metro. According to the latest statistics, the region's median age was 52, making it No. 2 among all U.S. metros.¹¹⁸ The concentration of older adults supports a robust health-care sector. Hospitals and medical centers anchored by the Sarasota Memorial Health Care System are among the top employers in the region.

Advanced manufacturing activities provide some high-tech jobs with high pay to North Port-Sarasota-Bradenton. PGT Custom Windows + Doors is one of the largest manufacturing companies in the region, employing approximately 2,000 workers.¹¹⁹ According to the Institute for Spatial Economic Analysis (ISEA), automation may hit low-wage metros hard in years to come, including North Port-Sarasota-Bradenton, FL.¹²⁰ The growing advanced manufacturing sector and the continuing diversification of industry presence may be vital to the region's economic future.

#23 LAS VEGAS-HENDERSON-PARADISE, NV

Gained 18 spots

JOB GROWTH (2012-17)	18TH
JOB GROWTH (2016-17)	18TH
WAGE GROWTH (2011-16)	45TH
WAGE GROWTH (2015-16)	19TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	20TH
HIGH-TECH GDP GROWTH (2012-17)	33RD
HIGH-TECH GDP GROWTH (2016-17)	108TH
HIGH-TECH GDP CONCENTRATION (2017)	163RD
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	136TH

Las Vegas-Henderson-Paradise, NV, has appeared several times as one of the biggest gainers in our recent rankings. Its momentum pushes the metro up 18 spots to 23rd place this year. In addition to experiencing strong job gains over all three periods evaluated, the region has solid performance in our one-year wage growth measure.

The metro has long been known for its tourist-related industry and most local employers are concentrated in this sector. The industry in the region has recently benefited from a healthy national economy. In 2017, McCarran International Airport set a record high by serving 48.5 million passengers, surpassing the previous peak of 47.7 million visitors in 2007.¹²¹ In addition to its hospitality sector, the region's low-cost business environment has lured logistics companies to its territory. For instance, in spring 2018, tech giant Amazon revealed plans to establish a fulfillment center in North Las Vegas that will add 1,000 jobs to the local job market.¹²² On July 2018, beauty retailer Sephora announced a plan to build a distribution center in North Las Vegas; this initiative is expected to create 400 jobs.¹²³

ASSETS

- World-renowned tourist-related sectors drive the region's growth.
- Zero personal income taxes and low business costs help lure people and businesses to the metro.

LIABILITIES

- The region's economy is still concentrated in the tourism/gaming industry, which is sensitive to economic downturns.

Las Vegas-Henderson-Paradise, NV, has no personal income tax and relatively low housing prices, which has attracted many people to the region in recent years. From 2010 to 2017, migration has brought 166,153 new residents to the region.¹²⁴ The population growth will keep the construction sector busy in the short-run. Despite its recent strong performance in tourist- and construction-related industries, these two sectors are more vulnerable to economic downturns. In addition, only about one-fourth of the region's population has a college or graduate degree, lower than the national average of 31 percent.¹²⁵ The region needs to further diversify its industries and cultivate its talent pool in order to build a healthier economy.

#24 DENVER-AURORA-LAKEWOOD, CO

Dropped 1 spot

JOB GROWTH (2012-17)	25TH
JOB GROWTH (2016-17)	59TH
WAGE GROWTH (2011-16)	24TH
WAGE GROWTH (2015-16)	84TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	36TH
HIGH-TECH GDP GROWTH (2012-17)	99TH
HIGH-TECH GDP GROWTH (2016-17)	75TH
HIGH-TECH GDP CONCENTRATION (2017)	36TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	22ND

Denver-Aurora-Lakewood, CO, is down one spot from last year to 24th place. Jobs and wages in the metro have been growing in recent years. This fact, coupled with population growth, has driven up housing costs in the region. Nonetheless, a slowdown in one-year job and wage growth and short-term job growth measures suggests momentum recently waned a bit.

Despite decelerating job growth, there is a flourishing tech sector in this region. It ranks No. 22 in our indicator of the number of high-tech industries with a location quotient greater than one. Several tech companies have recently announced expansion plans in the metro. In May 2017, Vertaforce, an insurance tech company based in the state of Washington, announced plans to move its headquarters to Denver and expects to hire at least 300 employees over four years.¹²⁶ The California-based marketing tech company Marketo also plans to grow its Denver office from one employee in 2017

ASSETS

- High-quality talent has attracted many companies to the metro.
- A thriving tech sector serves as a strong pillar of the regional economy.

LIABILITIES

- Population growth is driving up housing prices.

to 500 employees by the end of 2019.¹²⁷ In March 2018, social network company Facebook confirmed its expansion plan in downtown Denver.¹²⁸ After receiving \$10.6 million in tax incentive credits from the state of Colorado, Slack, a Canadian communication platform company, will open an office in Denver at the end of 2018; this move is expected to add 550 high-paying, full-time jobs to the metro.¹²⁹

One key feature attracting tech companies to the region is the talent pool. The University of Colorado, University of Denver, and the Metropolitan State University of Denver together provide the metro with a high-quality workforce. In addition to the pool of skilled potential employees, the entrepreneurial ecosystem has also spawned many new startups. Denver is among the Top 5 U.S. cities for young entrepreneurs according to Forbes, Inc. Magazine, and NerdWallet.¹³⁰

#25 NASHVILLE-DAVIDSON-MURFREESBORO-FRANKLIN, TN

Dropped 17 spots

JOB GROWTH (2012-17)	12TH
JOB GROWTH (2016-17)	11TH
WAGE GROWTH (2011-16)	9TH
WAGE GROWTH (2015-16)	46TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	120TH
HIGH-TECH GDP GROWTH (2012-17)	20TH
HIGH-TECH GDP GROWTH (2016-17)	70TH
HIGH-TECH GDP CONCENTRATION (2017)	132ND
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	73RD

Nashville-Davidson-Murfreesboro-Franklin, TN, rounds off our Top 25 large-cities list after slipping from No. 8 last year. The metro has experienced strong job growth in recent years. Its 2.89 percent unemployment rate was the lowest since 1999 (2.8 percent).¹³¹ The region has grown a vibrant economy largely based on professional and business services. From 2011 to mid-2017, job growth in this sector was 42.6 percent, which stood above all other U.S. metros.¹³² The tight job market has also driven up wages, making it No. 9 in our five-year wage growth measure.

The health technology sector in the region has been growing in recent years, as evidenced by its No. 20 rank in our five-year high-tech GDP growth. In August 2017, Philips announced plans to expand its presence in the region by adding 800 high-paying jobs related to health technology by the end of 2019.¹³³ In addition to Philips, The Laboratories for Innovations in Global Health

ASSETS

- Low business costs give the metro a competitive edge over other larger metros.

LIABILITIES

- Population growth brings declining housing affordability and traffic congestion that may dampen the region's economic development.

Technologies at Vanderbilt University has further fueled the development of health tech in the region. Vanderbilt University and Vanderbilt University Medical Center together serve as the largest employer in the Nashville region, with approximately 26,500 faculty and staff.¹³⁴

According to data from the U.S. Census, the metro has logged 1.8 percent population growth from 2016 to 2017, which was faster than the rest of Tennessee's metros. Its population of 1.9 million in 2017 comprised almost one-third of the state's total population.¹³⁵ With this fast-growing population comes declining housing affordability and traffic congestion that may dampen economic development. Despite this, the region's low taxes and pro-business regulatory environment will support the metro's future economic growth.

COMPLETE RESULTS: 2018 BEST-PERFORMING LARGE CITIES

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
0	1	1	Provo-Orem, UT	3	1	2	3	5	80	3	13	22
9	11	2	San Jose-Sunnyvale-Santa Clara, CA	30	16	6	2	11	14	4	1	2
6	9	3	Austin-Round Rock, TX	13	4	12	5	24	40	14	11	29
0	4	4	San Francisco-Redwood City-South San Francisco, CA	40	11	1	1	59	11	1	5	15
-2	3	5	Dallas-Plano-Irving, TX	20	14	37	14	15	27	13	24	8
-4	2	6	Raleigh, NC	25	23	11	13	29	63	8	9	8
0	7	7	Orlando-Kissimmee-Sanford, FL	12	10	17	11	6	38	51	76	39
9	17	8	Seattle-Bellevue-Everett, WA	23	34	4	7	12	76	81	2	29
-4	5	9	Fort Collins, CO	19	19	29	15	22	64	87	27	15
0	10	10	Salt Lake City, UT	34	36	23	22	34	34	52	40	15
26	37	11	Reno, NV	1	9	10	52	9	19	31	136	112
14	26	12	Boise City, ID	4	13	13	25	16	51	116	53	112
0	13	13	Charlotte-Concord-Gastonia, NC-SC	17	21	38	12	41	126	22	85	51
2	16	14	Oakland-Hayward-Berkeley, CA	37	40	26	20	80	62	59	17	1
5	20	15	Riverside-San Bernardino-Ontario, CA	7	3	48	19	18	28	95	131	112
6	22	16	Charleston-North Charleston, SC	33	32	18	27	104	5	12	60	88
-3	14	17	Atlanta-Sandy Springs-Roswell, GA	39	33	22	32	70	88	37	30	51
25	43	18	Santa Rosa, CA	46	17	68	38	40	56	55	59	22
20	39	19	Olympia-Tumwater, WA	9	29	9	37	45	9	6	147	191
20	40	20	Phoenix-Mesa-Scottsdale, AZ	21	35	54	55	14	72	102	54	51
7	28	21	Ogden-Clearfield, UT	16	26	25	43	89	4	64	90	88
-16	6	22	North Port-Sarasota-Bradenton, FL	36	5	34	17	82	78	32	126	88
18	41	23	Las Vegas-Henderson-Paradise, NV	18	18	19	45	20	108	33	163	136
-1	23	24	Denver-Aurora-Lakewood, CO	59	25	84	24	36	75	99	36	22
-17	8	25	Nashville-Davidson-Murfreesboro-Franklin, TN	11	12	46	9	120	70	20	132	73
24	50	26	Jacksonville, FL	14	31	50	68	21	50	65	106	112
-2	25	27	Fayetteville-Springdale-Rogers, AR-MO	15	8	16	8	58	66	75	183	176
8	36	28	Spartanburg, SC	5	30	24	33	102	2	5	181	136
-2	27	29	Grand Rapids-Wyoming, MI	55	50	36	16	61	24	30	129	112
-15	15	30	Tampa-St. Petersburg-Clearwater, FL	49	38	33	39	65	128	69	72	29
3	34	31	San Luis Obispo-Paso Robles-Arroyo Grande, CA	31	27	113	48	54	41	28	89	51
-13	19	32	San Antonio-New Braunfels, TX	38	28	53	31	125	17	56	82	51
-9	24	33	Portland-Vancouver-Hillsboro, OR-WA	29	39	41	21	66	139	194	7	39
34	68	34	Stockton-Lodi, CA	6	15	28	26	28	121	73	187	191
11	46	35	Deltona-Daytona Beach-Ormond Beach, FL	64	42	14	46	33	144	91	116	39
-5	31	36	Santa Cruz-Watsonville, CA	79	56	39	60	51	82	35	55	51
29	66	37	Fresno, CA	26	22	42	44	25	93	98	175	112
56	94	38	Merced, CA	10	55	27	23	4	32	150	198	191

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
-18	21	39	Fort Lauderdale-Pompano Beach-Deerfield Beach, FL	56	47	56	36	122	37	39	79	39
32	72	40	Salem, OR	88	37	7	28	60	59	138	121	88
-12	29	41	Rockingham County-Strafford County, NH	66	88	88	53	77	46	16	45	8
31	73	42	Greeley, CO	2	6	195	6	2	16	101	186	136
32	75	43	Ocala, FL	108	65	5	64	26	58	57	128	88
13	57	44	Crestview-Fort Walton Beach-Destin, FL	32	58	52	73	3	125	126	81	112
6	51	45	San Diego-Carlsbad, CA	54	57	110	76	97	35	50	14	2
-16	30	46	Cape Coral-Fort Myers, FL	58	2	8	4	139	122	36	177	136
23	70	47	Lakeland-Winter Haven, FL	45	44	31	65	46	52	24	190	176
-4	44	48	Boston, MA	80	77	71	35	96	43	40	66	51
-37	12	=49	West Palm Beach-Boca Raton-Delray Beach, FL	60	20	67	18	171	31	15	96	112
15	64	=49	Vallejo-Fairfield, CA	82	52	20	30	160	49	27	26	136
-2	49	=51	Greenville-Anderson-Mauldin, SC	100	60	83	62	85	13	23	74	39
48	99	=51	Myrtle Beach-Conway-North Myrtle Beach, SC-NC	8	41	30	54	32	96	120	192	191
-20	33	53	Modesto, CA	76	53	45	29	62	20	25	179	176
0	54	54	Visalia-Porterville, CA	24	59	3	34	47	130	94	195	191
-20	35	55	Wilmington, NC	53	48	15	77	152	165	11	37	51
-9	47	56	Anaheim-Santa Ana-Irvine, CA	50	54	117	49	151	29	60	23	2
6	63	57	Palm Bay-Melbourne-Titusville, FL	35	84	61	163	90	23	48	10	13
32	90	58	Colorado Springs, CO	22	45	101	134	7	116	181	29	29
27	86	59	Huntsville, AL	51	92	99	151	17	22	114	8	15
5	65	60	Asheville, NC	71	62	40	61	74	194	46	122	39
19	80	61	Waco, TX	74	80	35	78	102	8	38	61	176
-20	42	62	Boulder, CO	57	61	124	57	116	47	149	3	7
16	79	63	Indianapolis-Carmel-Anderson, IN	104	81	58	74	56	86	144	28	51
-9	55	64	Sacramento-Roseville-Arden-Arcade, CA	48	43	66	56	92	186	142	75	51
12	77	65	Chattanooga, TN-GA	47	105	100	99	23	7	26	161	136
35	101	66	Trenton, NJ	107	82	87	123	8	109	84	25	51
11	78	67	Eugene, OR	84	67	55	63	19	152	183	91	88
20	88	68	McAllen-Edinburg-Mission, TX	61	66	107	93	55	6	2	193	136
-13	56	69	Des Moines-West Des Moines, IA	93	70	69	47	27	83	67	165	176
-10	60	70	Fort Worth-Arlington, TX	43	76	157	80	53	3	93	57	136
-39	32	71	Port St. Lucie, FL	62	24	32	58	164	65	105	148	112
-14	58	72	Madison, WI	142	96	49	40	121	113	17	34	51
27	100	73	Manchester-Nashua, NH	92	113	76	96	91	53	82	18	22
-15	59	74	Miami-Miami Beach-Kendall, FL	99	51	78	50	71	60	42	149	176
22	97	75	Tacoma-Lakewood, WA	44	49	64	95	31	150	115	141	176
-7	69	76	Kalamazoo-Portage, MI	133	98	44	67	119	21	70	63	73

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
29	106	77	Durham-Chapel Hill, NC	78	73	112	104	39	180	133	4	22
-7	71	78	Cambridge-Newton-Framingham, MA	83	99	133	91	79	81	109	6	2
-12	67	79	Minneapolis-St. Paul-Bloomington, MN-WI	81	97	108	79	93	127	71	49	22
27	107	80	Pensacola-Ferry Pass-Brent, FL	27	63	63	119	49	131	169	146	112
-20	61	81	Los Angeles-Long Beach-Glendale, CA	115	86	72	72	113	154	106	20	8
35	117	82	Tallahassee, FL	126	109	59	148	42	15	44	99	88
0	83	83	Springfield, MO	106	103	104	70	109	18	10	93	112
-46	38	84	Warren-Troy-Farmington Hills, MI	75	68	77	59	176	77	68	65	112
36	121	85	Kennewick-Richland, WA	41	71	47	170	30	173	182	64	112
5	91	86	Lubbock, TX	77	79	89	42	38	187	159	124	136
-35	52	87	Ann Arbor, MI	67	101	82	85	159	145	54	43	29
17	105	88	Salinas, CA	69	83	62	75	10	167	148	188	191
49	138	89	Lansing-East Lansing, MI	73	106	43	116	117	25	77	153	136
13	103	90	Hickory-Lenoir-Morganton, NC	70	122	86	120	81	193	9	108	39
-38	53	91	Louisville-Jefferson County, KY-IN	120	75	60	41	180	36	61	152	112
23	115	92	Worcester, MA-CT	127	107	111	127	69	95	90	38	8
-75	18	93	Naples-Immokalee-Marco Island, FL	139	7	21	10	200	141	85	160	176
-12	82	94	New York-Jersey City-White Plains, NY-NJ	68	74	142	100	129	143	41	68	39
7	102	95	Augusta-Richmond County, GA-SC	94	100	92	125	52	135	58	110	112
-22	74	96	Gainesville, FL	52	78	57	94	137	171	108	151	88
-21	76	97	Kansas City, MO-KS	86	95	120	89	95	114	152	69	51
-5	93	98	Lancaster, PA	97	93	74	90	134	90	43	123	136
-37	62	99	Columbus, OH	63	64	96	51	149	133	172	112	112
18	118	100	Washington-Arlington-Alexandria, DC-VA-MD-WV	72	118	97	153	78	117	143	31	73
18	119	101	Allentown-Bethlehem-Easton, PA-NJ	112	120	94	103	138	106	34	47	88
52	154	102	Tucson, AZ	91	152	139	174	63	42	103	41	15
9	112	103	Spokane-Spokane Valley, WA	95	94	73	86	156	100	135	115	88
-59	45	104	Santa Maria-Santa Barbara, CA	119	111	170	92	144	99	53	19	6
25	130	105	Portland-South Portland, ME	96	134	65	106	143	92	88	111	73
29	135	106	Camden, NJ	42	114	109	150	88	174	112	88	73
-9	98	107	Philadelphia, PA	87	128	138	124	107	45	47	58	136
-60	48	108	Savannah, GA	89	46	132	82	195	102	79	56	136
16	125	109	Baltimore-Columbia-Towson, MD	136	133	102	117	98	97	122	52	39
-29	81	110	Oxnard-Thousand Oaks-Ventura, CA	111	117	174	147	100	74	92	12	13
-17	94	111	Columbia, SC	165	69	85	66	101	149	83	158	136
-28	84	112	Lexington-Fayette, KY	110	72	80	71	148	175	186	103	73
-17	96	113	El Paso, TX	118	102	126	136	76	26	136	134	88
6	120	114	Salisbury, MD-DE	85	89	51	87	199	84	162	133	112
17	132	115	Springfield, MA	98	129	137	111	64	39	145	143	112
0	116	116	Montgomery County-Bucks County-Chester County, PA	90	131	134	121	170	91	113	16	22
33	150	117	York-Hanover, PA	143	158	81	162	111	33	62	80	51
10	128	118	Fort Wayne, IN	114	126	135	143	48	68	189	109	51

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
-6	113	119	Houston-The Woodlands-Sugar Land, TX	140	85	197	69	13	163	124	119	136
9	129	120	Silver Spring-Frederick-Rockville, MD	125	163	123	176	44	129	111	22	29
-29	92	121	Detroit-Dearborn-Livonia, MI	103	141	91	114	112	146	76	104	136
5	127	122	Knoxville, TN	141	116	75	107	166	61	132	98	88
54	177	123	Norwich-New London, CT	28	179	121	188	50	157	190	46	88
23	147	124	Elgin, IL	109	147	118	98	123	107	140	105	73
35	160	125	Albuquerque, NM	149	151	90	169	72	101	176	32	51
-41	85	126	Lincoln, NE	175	144	95	84	106	79	154	86	112
10	137	127	Montgomery, AL	138	154	79	178	183	1	18	73	88
-41	87	128	Richmond, VA	116	91	114	108	142	104	153	139	112
-18	111	129	Albany-Schenectady-Troy, NY	131	136	145	112	187	134	21	35	39
-4	126	130	St. Louis, MO-IL	135	132	141	137	141	57	118	67	39
-27	104	131	Cincinnati, OH-KY-IN	113	104	103	97	147	166	131	97	136
-23	109	132	Chicago-Naperville-Arlington Heights, IL	151	110	128	101	157	132	86	95	73
18	151	133	Nassau County-Suffolk County, NY	130	138	93	130	133	159	147	62	73
-26	108	134	Omaha-Council Bluffs, NE-IA	163	137	119	81	86	105	141	138	136
-46	89	135	Lake County-Kenosha County, IL-WI	65	119	190	88	190	153	161	21	73
-22	114	136	Laredo, TX	101	87	164	110	178	71	7	200	191
-4	133	137	Providence-Warwick, RI-MA	134	125	144	113	136	164	134	102	51
19	157	138	Tulsa, OK	156	146	196	157	35	67	80	140	88
1	140	139	Reading, PA	161	155	127	129	108	55	137	117	88
-6	134	140	South Bend-Mishawaka, IN-MI	154	124	70	135	196	54	173	100	73
11	152	141	Urban Honolulu, HI	145	139	98	102	73	172	130	172	176
7	149	142	Dayton, OH	132	148	125	158	118	148	160	70	29
27	170	143	Buffalo-Cheektowaga-Niagara Falls, NY	150	169	122	144	110	103	96	94	88
8	152	144	Syracuse, NY	176	177	140	165	126	89	49	50	29
3	148	=145	Memphis, TN-MS-AR	153	130	106	149	67	147	139	164	136
-35	110	=145	Baton Rouge, LA	169	108	162	83	115	185	45	156	136
-16	131	147	Oklahoma City, OK	147	127	192	133	37	120	72	173	176
36	184	148	Scranton-Wilkes-Barre-Hazleton, PA	128	168	146	152	84	69	191	114	88
9	158	149	Cedar Rapids, IA	181	178	156	138	146	73	97	51	29
-7	143	150	Pittsburgh, PA	129	184	181	154	163	48	89	48	51
-27	124	151	Harrisburg-Carlisle, PA	123	143	166	139	153	112	151	84	73
10	162	=152	Newark, NJ-PA	121	162	149	131	174	168	156	44	29
4	156	=152	Green Bay, WI	117	135	130	118	173	111	100	178	136
-15	139	154	Flint, MI	160	170	152	156	188	30	19	83	88
10	165	155	Little Rock-North Little Rock-Conway, AR	122	156	129	168	145	158	177	87	51
-14	142	156	Greensboro-High Point, NC	171	150	165	142	124	192	104	78	39
7	164	157	Milwaukee-Waukesha-West Allis, WI	170	145	136	146	154	118	117	107	73
-22	136	158	Rochester, NY	173	174	168	159	140	176	63	39	15
-36	123	159	Killeen-Temple, TX	105	90	158	190	68	142	200	174	191
-39	121	160	Winston-Salem, NC	158	121	163	122	165	182	74	145	73

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
5	166	161	Wilmington, DE-MD-NJ	178	123	182	167	75	87	192	125	88
-1	161	162	Bakersfield, CA	144	157	183	105	43	195	198	176	136
0	163	163	Akron, OH	179	153	143	132	94	169	125	142	136
8	172	164	Evansville, IN-KY	124	165	167	172	83	137	199	92	136
-6	159	165	Birmingham-Hoover, AL	155	160	151	128	128	140	123	144	136
9	175	166	Dutchess County-Putnam County, NY	102	159	160	189	184	181	129	42	51
2	169	167	Cleveland-Elyria, OH	174	167	147	145	57	178	193	135	112
-12	155	167	Brownsville-Harlingen, TX	166	112	116	126	155	98	165	194	191
7	176	169	Jackson, MS	162	140	131	141	114	151	128	170	176
18	188	170	Atlantic City-Hammonton, NJ	191	198	155	196	1	155	66	168	136
-4	167	171	Hartford-West Hartford-East Hartford, CT	172	173	175	161	99	156	170	71	73
-31	141	172	Duluth, MN-WI	152	164	177	155	132	170	29	162	112
7	180	173	Virginia Beach-Norfolk-Newport News, VA-NC	137	161	159	173	162	124	157	130	88
16	190	174	Columbus, GA-AL	157	187	198	191	87	85	166	113	88
-7	168	175	Bridgeport-Stamford-Norwalk, CT	195	175	173	182	172	161	107	33	15
2	178	176	New Haven-Milford, CT	183	180	150	166	150	177	163	77	51
9	186	177	Mobile, AL	168	166	115	179	161	200	168	118	88
1	179	178	Clarksville, TN-KY	148	115	193	197	175	44	78	199	191
-33	146	179	Toledo, OH	187	142	105	109	193	188	175	169	176
2	182	180	Utica-Rome, NY	167	192	153	185	185	138	127	101	51
-8	173	181	Wichita, KS	193	176	180	177	130	162	178	15	136
-1	181	182	Gary, IN	177	185	161	183	131	94	119	189	136
11	194	183	Davenport-Moline-Rock Island, IA-IL	146	189	185	184	127	110	146	159	136
-13	171	184	Rockford, IL	197	186	172	164	168	10	174	155	136
-40	145	185	Roanoke, VA	194	183	186	171	135	179	188	137	88
9	195	186	Kingsport-Bristol-Bristol, TN-VA	180	182	171	194	105	198	184	171	136
9	196	187	Huntington-Ashland, WV-KY-OH	164	193	187	193	194	12	164	180	136
-44	144	188	Corpus Christi, TX	184	172	188	115	158	191	171	191	176
-6	183	189	New Orleans-Metairie, LA	186	149	184	175	169	183	167	157	136
-1	189	190	Canton-Massillon, OH	159	171	176	160	179	123	196	196	176
-17	174	191	Beaumont-Port Arthur, TX	192	188	178	140	177	184	121	182	176
1	193	192	Fort Smith, AR-OK	198	191	148	180	188	115	155	197	136
-6	187	193	Erie, PA	188	195	194	187	167	119	195	127	112
-9	185	194	Fayetteville, NC	182	190	169	198	181	196	110	150	136
2	197	195	Gulfport-Biloxi-Pascagoula, MS	185	181	154	192	182	197	180	154	136
2	198	196	Lafayette, LA	189	200	200	200	186	136	158	166	112
-5	192	197	Anchorage, AK	199	194	199	181	198	190	179	120	136
2	200	198	Shreveport-Bossier City, LA	196	197	189	199	192	160	185	184	136
-8	191	199	Peoria, IL	190	199	191	195	191	189	197	167	136
-1	199	200	Youngstown-Warren-Boardman, OH-PA	200	196	179	186	197	199	187	185	136



**TOP 10 BEST-PERFORMING
SMALL CITIES**

TABLE 5 | Top 10 Best-Performing Small Cities
Rank according to 2018 index

Metropolitan Statistical Area (MSA)/Metropolitan Division (MD)	2018 Rank	2017 Rank	Change
Bend-Redmond, OR MSA	1	1	Steady
St. George, UT MSA	2	2	Steady
Gainesville, GA MSA	3	3	Steady
Elkhart-Goshen, IN MSA	4	6	+2
Coeur d'Alene, ID MSA	5	29	+24
San Rafael, CA MD	6	4	-2
Medford, OR MSA	7	28	+21
Athens-Clarke County, GA MSA	8	42	+34
Albany, OR MSA	9	22	+13
Logan, UT-ID MSA	10	24	+14

Source: Milken Institute.

Small cities in the U.S. have seen economic growth in the health-care, knowledge-based, amenity focused, manufacturing, and logistics sectors. Health-care industries in smaller metros benefit from lower living costs increasing the concentration of retirees. Places offering more amenities have seen growth as well. The tourism industry can also provide a competitive advantage to cities. Lower cost areas have seen growth in high-tech industries and manufacturing. Smaller metros have overall lower costs for businesses, which can help attract labor-dependent employment. Higher cost major cities have pushed segments of their populations to smaller cities with lower living costs and a higher quality of life.

The 2018 edition of the Best-Performing Small Cities index ranks 201 U.S. metros. There have been no new additions to the set of cities from the previous release. This year, five of the metros return to the Top 10 small cities. Many of the Top 10 metros have benefited from growing populations and in-migration. In small cities, housing and construction growth is a critical part of the economic landscape this year. The next most influential industries are health-care and manufacturing. **Bend-Redmond, OR; St. George, UT; Coeur d'Alene, ID; and Medford, OR**, have health-care industries supported by an aging population. A common additional feature that has provided growth is the leisure and hospitality industry, which makes these metros more attractive to retirees. Manufacturing cities such as **Gainesville, GA; Elkhart-Goshen, IN; Albany, OR; and Logan, UT**, all heavily depend on their core manufacturers, specifically food production or vehicle manufacturing. Logistic hubs and agriculture-based economies are represented in the Top 10 this year. Albany, OR, and Elkhart-Goshen, IN, have greatly benefited from the performance of their key sectors. The renegotiations of NAFTA and the impact of tariffs will present new challenges for trade-dependent metros. College towns and the high-tech sector account for the remaining economic drivers, as exemplified by the University of Georgia and the University of Utah in **Athens-Clarke County, GA**, and **Logan, UT**, respectively, or **San Rafael, CA**, in the Bay Area.



#1 BEND-REDMOND, OR

Held steady

JOB GROWTH (2012-17)	1ST
JOB GROWTH (2016-17)	7TH
WAGE GROWTH (2011-16)	1ST
WAGE GROWTH (2015-16)	2ND
SHORT-TERM JOB GROWTH (8/2017-8/2018)	18TH
HIGH-TECH GDP GROWTH (2012-17)	15TH
HIGH-TECH GDP GROWTH (2016-17)	19TH
HIGH-TECH GDP CONCENTRATION (2017)	18TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	12TH

Bend-Redmond, OR, sees its third consecutive year ranking No. 1 on the BPC Small Cities index. All of the variables in the Bend-Redmond rank in the Top 20, securing its No. 1 rank this year. The metro's five-year job and wage growth both rank first and one-year wage growth ranks second, which continues to show the region's ability to increase high-value employment. Five-year high-tech GDP growth climbed 118 places from last year's ranking, showing the recent dramatic growth of the high-tech sector. The job, wage, and high-tech GDP five-year growth values are 19.9 percent, 25.2 percent, and 18.0 percent, respectively. Economic growth is also exemplified by a \$5.2 million expansion to meet demand at the regional Redmond airport, one of the few options to get people from outside the region to Bend-Redmond.¹³⁶

The high-tech sector has become an anchor industry for the metro, which diversifies the economy beyond health-care and tourism. The metro's high-tech GDP grew 4.1 percent from 2016-2017, continuing year-over-year rank increases. The risk capital and entrepreneurial infrastructure expanded in 2018 when Oregon State University-Cascades (OSU-Cascades) opened its Innovation Co-Lab. The Co-Lab joins various incubators and investment funds in Bend that provide support for the high-tech sector. The knowledge-based economic engine of the metro should continue to see growth as the university continues to provide new graduates. The class of 2018 graduated a total of 368 students, 90 of which earned master's degrees.¹³⁷ The presence of the Central Oregon Community College should also provide affordable higher education for the resident population. Access to post-secondary education will be important going forward to maintain high levels of educational attainment.¹³⁸

Bend-Redmond has become a place for entrepreneurship driven by tech and biotech. A recent example of Bend successfully taking advantage of new markets in the tech

ASSETS

- A diversified economy has brought high value-added industries and a large entrepreneurial community.
- Health-care is a core industry and serves an aging population.

LIABILITIES

- A large segment of the population is in low-wage employment.

sector is Dutchie, an e-commerce cannabis retailer that brought in a \$3 million investment from Casa Verde Capital as well as others like the venture capital firm The Durant Company.¹³⁹ Online pet gear retailer Ruffwear received \$250,000 from the Governors Strategic Reserve Fund as part of an expansion plan that includes co-working space for local entrepreneurs. Seven Peaks Ventures closed its second fund of \$28 million and has donated \$62,500 to the computer science program at OSU-Cascades.¹⁴⁰

Bend-Redmond saw net migration of 5,133 people for 2015-2016, which continues to fuel rising housing prices.¹⁴¹ The overall population grew 3.1 percent since the last edition of BPC. The housing market has since experienced year-over-year price increases of close to 10 percent.¹⁴² The number of single-family housing permits being issued has so far not kept up with demand, which is contributing to rising housing prices.¹⁴³ However, the housing market is relatively inexpensive compared to the U.S., which will continue to attract people from outside the metro.¹⁴⁴

Since 2008, Bend-Redmond has seen the population of 65+ residents increase significantly. The increase in retirees continues to support the health-care industry. The low cost of living has been one aspect of the appeal to retirees, along with the large leisure and hospitality capacity provided by the tourist industry, which is the metro's foundational sector. St. Charles Medical Center is still the largest employer with 3,361 staff, which is a 36.2 percent increase from 2017 data releases.¹⁴⁵ The growth in the health-care industry is exemplified by the regional hospital. The impact of retirees in the metro plays a major role in the region's composition of income, as well. Nonwage income makes up 60 percent of total personal income in Bend-Redmond.¹⁴⁶ The presence of such a large population aged 65 and over should help support the metro's foundational health-care, leisure, and hospitality industries for the foreseeable future.



#2 ST. GEORGE, UT

Held steady

JOB GROWTH (2012-17)	2ND
JOB GROWTH (2016-17)	4TH
WAGE GROWTH (2011-16)	4TH
WAGE GROWTH (2015-16)	1ST
SHORT-TERM JOB GROWTH (8/2017-8/2018)	9TH
HIGH-TECH GDP GROWTH (2012-17)	11TH
HIGH-TECH GDP GROWTH (2016-17)	44TH
HIGH-TECH GDP CONCENTRATION (2017)	68TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	82ND

St. George, UT, maintains its second-place rank for this year's BPC Small Cities index. The metro ranks No. 1 in one-year wage growth (8.2 percent) and second in five-year job growth (19.5 percent). St. George had a 53 place increase in the variable tracking the number of high-tech location quotients greater than one. Five-year wage growth and one-year job growth both rank No. 4. The metro is reliant on health care and tourism. The low cost of living and the access to amenities from the tourism industry makes St. George more attractive for retirees, who support key sectors. The region's tourism industry is maintained by its proximity to Zion National Park, which continues to set records for attendance, up 5 percent to 4.5 million visitors this year.¹⁴⁷

ASSETS

- Higher education institutions can provide local talent to a nascent high-tech sector.
- Low cost of living should continue to support the retiree community and related service sectors.

LIABILITIES

- Large segments of the population are employed in low-wage sectors.

The metro has benefited from significant construction of both residential and non-residential developments. A 300-unit retirement facility has begun construction in the metro.¹⁴⁸ A 110-unit \$40 million mixed-use apartment building is also being built.¹⁴⁹ However, the largest of such projects is the \$300 million expansion of the Dixie Regional Medical Center.¹⁵⁰

Dixie State University is one of the largest employers and provides local talent to the metro. PrinterLogic is one of the fastest growing startups in the U.S. and is co-located next to a new \$45 million facility housing the Dixie Applied Technology College.¹⁵¹ The local talent generated from the university and college should help further the development of a nascent tech sector.

#3 GAINESVILLE, GA

Held steady

JOB GROWTH (2012-17)	6TH
JOB GROWTH (2016-17)	8TH
WAGE GROWTH (2011-16)	15TH
WAGE GROWTH (2015-16)	41ST
SHORT-TERM JOB GROWTH (8/2017-8/2018)	12TH
HIGH-TECH GDP GROWTH (2012-17)	24TH
HIGH-TECH GDP GROWTH (2016-17)	27TH
HIGH-TECH GDP CONCENTRATION (2017)	109TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	82ND

Gainesville, GA, retains its third-place ranking on this edition of the BPC Small Cities index. One- and five-year job growth ranked No. 8 and No. 6, respectively. The metro still attracts manufacturers and the health-care industry continues to grow. The metro's location next to Atlanta provides a strategic advantage for manufacturers integrating into supply chains. The poultry processors have the largest economic footprint among manufacturers in Gainesville. The metro should see increased interest from outside investors in coming years thanks to three IRS-designated opportunity zones in the region.¹⁵²

Due to the metro's location near Atlanta, Gainesville has been able to attract people willing to commute in order to take advantage of the lower cost of living.¹⁵³ Gainesville's population growth has contributed to gains in consumer sectors and increased interest in its housing market. The metro had 1,184 single-family home permits issued in 2017.¹⁵⁴ A five-year, five million dollar sewer expansion should help keep up with population growth and increased demand for manufacturing space.¹⁵⁵

ASSETS

- Proximity to Atlanta will help demand for residential construction due to the lower cost of living.
- Atlanta is a transportation hub, which will help local exporters with their supply chains.

LIABILITIES

- Food producers in the metro will face changes based on new trade policies for North America and China.

Gainesville manufacturing industry has attracted companies to start operations in the area. Elastron, a Turkish company, has invested \$10 million into the area for operations and has plans to expand over the next several years.¹⁵⁶ Further changing the makeup of the manufacturing sector in the metro, VDL Groep is creating a \$17 million vehicle assembly plant.¹⁵⁷ In order to keep up with local labor demands, Lanier Technical College moved to a new \$130 million facility.¹⁵⁸ Japan-based manufacturing company Kubota, which has operations in the metro, donated \$1 million to job placement services at the college.¹⁵⁹

#4 ELKHART-GOSHEN, IN

Gained 2 spots

JOB GROWTH (2012-17)	5TH
JOB GROWTH (2016-17)	6TH
WAGE GROWTH (2011-16)	3RD
WAGE GROWTH (2015-16)	4TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	13TH
HIGH-TECH GDP GROWTH (2012-17)	114TH
HIGH-TECH GDP GROWTH (2016-17)	39TH
HIGH-TECH GDP CONCENTRATION (2017)	157TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	44TH

Elkhart-Goshen, IN, increases its rank from sixth to fourth in this year's index. The one- and five-year job and wage growth indicators all rank in the Top 10. Five-year wage growth reached 22 percent and ranked third. One-year high-tech GDP increased in rank by 90 places. Six of the nine variables improved this year, propelling the metro up the index.

The metro has seen wage growth because of a tight labor market with an unemployment rate of 2.6 percent.¹⁶⁰ Elkhart-Goshen's major industry is RV manufacturing. The largest RV manufacturer is Thor Industries with 13,622 employees.¹⁶¹ The company has agreed to purchase Erwin Hymer Group for \$2.5 billion to grow its international presence.¹⁶² Elkhart RV parts-maker Patrick Industries has acquired both Indiana Marine Products and Dehco for \$18.5 million and \$53 million, respectively, further consolidating the industry.¹⁶³ A \$10 million investment from the RV Association will create the RV Technical Institute to help fill the skills gaps and address labor shortages in the industry.¹⁶⁴

ASSETS

- Affordable cost of living and business, and a highly specialized workforce for RV manufacturing help to keep the metro competitive.

LIABILITIES

- Tariffs on steel and aluminum may have an impact on the overall cost of RV production.
- North American supply chains might be impacted from new trade policies.

The metro saw a 35.5 percent increase in issued single-family housing permits from 2015 to 2017. Elkhart-Goshen's growth has left construction-related employers struggling to fill labor demand.¹⁶⁵ Elkhart homebuilder Skyline merged with Champion Enterprises and will operate in the area.¹⁶⁶ The construction boom in the region should continue due to plans for a new medical center, which will cost \$175 million to build.¹⁶⁷ These are not the only development plans; a \$30 million dollar investment in public infrastructure improvements has also been proposed.¹⁶⁸

#5 COEUR D'ALENE, ID

Gained 24 spots

JOB GROWTH (2012-17)	9TH
JOB GROWTH (2016-17)	10TH
WAGE GROWTH (2011-16)	24TH
WAGE GROWTH (2015-16)	10TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	16TH
HIGH-TECH GDP GROWTH (2012-17)	120TH
HIGH-TECH GDP GROWTH (2016-17)	36TH
HIGH-TECH GDP CONCENTRATION (2017)	101ST
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	44TH

Coeur d'Alene, ID, breaks into the Top 10 for the first time, landing at No. 5. The metro was added in 2012 and briefly dropped to the high 90s only to see dramatic increases in recent years. Coeur d'Alene has both one- and five-year job growth in the Top 10, as well as one-year wage growth. The leisure and hospitality sectors in conjunction with a lower cost of living in the metro have created an additional appeal as a retiree community.¹⁶⁹

From 2014 to 2017 single-family housing permits increased 71.7 percent in Coeur d'Alene. Over the same time frame the metro saw an 11,000-person population increase. Total net migration into the metro was 3,047 in 2016. The speed of economic development in the metro has led the FCC to award \$11.5 million to Coeur d'Alene-based Intermix Networks to build broadband internet infrastructure to connect rural areas in the region.¹⁷⁰

ASSETS

- Low cost of living should help to bring people into the metro sustaining population in-flows and benefit health-care providers.

LIABILITIES

- Young talent has left for larger cities, leaving the metro with an aging population.

This metro has benefited from proximity to Spokane, WA, and has carved out space to provide professional services to the region. This has been possible because of low office rents in Coeur d'Alene.¹⁷¹ Business and professional services have seen 6.3 percent job growth in the last year; the two largest subsectors, professional, scientific, and technical services, and administrative and support services, employing 6,170 people.¹⁷² The metro has shown signs of looking to diversify their economy by taking advantage of their service sector. The Innovation Den is a new co-working space intended to support the metro's nascent tech industry.¹⁷³ The banking sector has also seen interest from outside parties. Idaho Independent Bank has been purchased for \$181.3 million by First Interstate Bank, and Idaho Credit Union is constructing an \$8.6 million building in the metro.¹⁷⁴

#6 SAN RAFAEL, CA

Dropped 2 spots

JOB GROWTH (2012-17)	45TH
JOB GROWTH (2016-17)	75TH
WAGE GROWTH (2011-16)	19TH
WAGE GROWTH (2015-16)	36TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	32ND
HIGH-TECH GDP GROWTH (2012-17)	6TH
HIGH-TECH GDP GROWTH (2016-17)	29TH
HIGH-TECH GDP CONCENTRATION (2017)	3RD
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	20TH

San Rafael, CA, drops two ranks from last year's BPC Small Cities index to land at sixth. The metro is located in the northern Bay Area and is part of the greater economic cluster that dominates the region. Five-year high-tech GDP growth ranks sixth, registering 33.8 percent growth. As part of the Bay Area, the anchor industries are biotech, computer science, and health care. The relative price difference between the North Bay and South Bay has a fifth of metro residents commuting to San Francisco for work.¹⁷⁵ However, due to low construction activity for both residential and commercial real estate, prices are increasing.¹⁷⁶ The number of single-family housing permits issued has fallen 53.2 percent and the total number of multi-family housing permits has dropped to zero from 2015 to 2017.¹⁷⁷ The demand for low-cost housing and the lack of supply has pushed people who work in the metro to commute from Santa Rosa and Oakland.¹⁷⁸

ASSETS

- As part of the Bay Area economic cluster, the metro is deeply entrenched in the innovation economy, providing long-term economic opportunity.

LIABILITIES

- Rising cost of living in the metro will reduce its appeal and take away some past advantages.

The metro has been pushing for larger-scale use of renewable energy and has put incentives in place to move from traditional fuels to electric options. Sausalito-based CleanFund has provided financing for Seagate Properties to install solar panels on their existing building.¹⁷⁹ The clean energy industry has seen interest from other Southern California counties, as well. Marin Clean Energy (MCE) is one of the largest clean energy companies in the nation and is well-positioned to take advantage of continued regional interest in renewable energy. A long-term contract with renewable energy developer BayWa r.e. has MCE providing power to its customers from BayWa r.e.'s Santa Barbara wind farm.¹⁸⁰ MCE has started operations on the Solar One farm in Richmond, CA, as well.¹⁸¹

#7 MEDFORD, OR

Gained 21 spots

JOB GROWTH (2012-17)	15TH
JOB GROWTH (2016-17)	30TH
WAGE GROWTH (2011-16)	13TH
WAGE GROWTH (2015-16)	16TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	26TH
HIGH-TECH GDP GROWTH (2012-17)	174TH
HIGH-TECH GDP GROWTH (2016-17)	60TH
HIGH-TECH GDP CONCENTRATION (2017)	42ND
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	12TH

Medford, OR, jumps into the Top 10 for the first time, landing at No. 7. The 21 rank increase is the highest the metro has reached since 2004. Short-term job growth increased 80 places from last year's edition. Medford has a long history of commodities being an integral part of the local economy. The metro's economy has evolved from timber products to wine and now, after Oregon legalized recreational use, cannabis is the new major crop in the region.¹⁸²

The metro is a major health-care provider for the region and the health-care industry accounts for 17.1 percent of employment in the area.¹⁸³ Medford has a lower cost of living than the national average.¹⁸⁴ For this reason, the metro attracts retirees, which leads to economic activity in housing and health-care sectors. A proposal currently being considered to expand the Lawrence Memorial Hospital in Medford could bring a \$16 million 17,500 square foot facility offering outpatient services to keep up with increased demand for health care.¹⁸⁵

ASSETS

- Low cost of living is helping population growth and boosting sectors like health-care.

LIABILITIES

- Local employment has few high-wage options.

Population growth and in-migration have spurred housing demand. The number of single-family home permits issued increased by 96.7 percent from 2012 to 2017. Even with the boom in housing, supply is being outstripped by demand, giving impetus to projects like the Central Point Affordable Housing Development, which has received \$2.2 million in state funding.¹⁸⁶ Vacancy rates for homes stand around one percent as of 2016.¹⁸⁷ Price increases have also hit renters, with vacancy rates less than two percent.¹⁸⁸ Residents have seen rental prices increase by large double-digit percentages.¹⁸⁹ The growth in the metro should be supported by a 2018 expansion of the urban growth boundary.¹⁹⁰

#8 ATHENS-CLARKE COUNTY, GA

Gained 34 spots

JOB GROWTH (2012-17)	31ST
JOB GROWTH (2016-17)	16TH
WAGE GROWTH (2011-16)	30TH
WAGE GROWTH (2015-16)	8TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	33RD
HIGH-TECH GDP GROWTH (2012-17)	62ND
HIGH-TECH GDP GROWTH (2016-17)	28TH
HIGH-TECH GDP CONCENTRATION (2017)	87TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	82ND

Athens-Clarke County, GA, jumps 34 places to land at No. 8. A major driver for the metro is the University of Georgia, one of the state's leading higher education institutions and the metro's largest employer with 10,655 staff.¹⁹¹ The university is well placed because of its capacity for research; a university spinout, ArunA Bio, recently received \$5.3 million to fund R&D of drugs to treat neurological disorders but an ongoing obstacle will be retaining graduates in the metro.¹⁹² Issues with retaining graduates is, in part, due to the proximity to Atlanta. To address this challenge the university has been reaching out to the community to develop workforce and work-based learning programs.¹⁹³ These programs will involve university internships and programs targeting high school students.¹⁹⁴ A growing student population is a welcome sign and will provide some growth.

ASSETS

- A highly educated population provides a foundation for future economic development.

LIABILITIES

- Lack of economic diversity leaves the metro exposed to changes to state education funding.

Manufacturing remains a key sector for the metro with companies like Accurus investing \$15 million into a local plant that builds parts for F-35 fighter planes.¹⁹⁵ On an entirely different side of the manufacturing spectrum, Creature Comfort Brewery opened a new facility in the metro and began production in 2018.¹⁹⁶ A project redeveloping a 100,000 square foot building will include some event space but the majority will house Terrapin Beer Co.'s operations.¹⁹⁷ In addition, a 100-unit apartment complex has been proposed as a multi-purpose building near the redevelopment project.¹⁹⁸

#9 ALBANY, OR

Gained 13 spots

JOB GROWTH (2012-17)	20TH
JOB GROWTH (2016-17)	32ND
WAGE GROWTH (2011-16)	28TH
WAGE GROWTH (2015-16)	7TH
SHORT-TERM JOB GROWTH (8/2017-8/2018)	8TH
HIGH-TECH GDP GROWTH (2012-17)	191ST
HIGH-TECH GDP GROWTH (2016-17)	20TH
HIGH-TECH GDP CONCENTRATION (2017)	83RD
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	12TH

Albany, OR, is the third metro in the state to make an appearance in the Top 10 this year. The region ranks No. 9, a 13-rank increase from the last release. One-year high-tech GDP growth jumped by 177 places, growing four 4 percent. The sectors fueling Albany's growth are housing and manufacturing. Single-family home permits have more than doubled since 2012 and prices continue to increase as well.¹⁹⁹ The metro's growth is also evident in infrastructure investments, such as a \$13 million sewer project.²⁰⁰ Logistics and metal manufacturing have a large presence in the metro. Albany has nearly 30 percent of its manufacturing employment in primary metal production, which is 27 percentage points higher when compared to national figures.²⁰¹ Radiator Supply House received two loans totaling \$60,000 to renovate an old lumber mill for new production space.²⁰² The logistics sector in the metro looks like it will be getting support from the local economic development agency, which is providing a \$400,000 grant to convert an old paper mill into a logistics facility.²⁰³

ASSETS

- The metro has a lower cost for businesses and is well situated on transportation routes both north-south and east-west.

LIABILITIES

- Impacts of new trade policies on the large concentration of metal manufactures is uncertain in a less diverse economic landscape.

Though the area does not have the most diverse economy, there are signs of new industries taking hold. Agility Robotics raised \$8 million to develop biped robots, AlgoteK is developing a biodegradable plastic, and Arauco acquired Panolam's Albany production facilities to continue to expand into U.S. wood products.²⁰⁴

#10 LOGAN, UT-ID

Gained 14 spots

JOB GROWTH (2012-17)	24TH
JOB GROWTH (2016-17)	39TH
WAGE GROWTH (2011-16)	46TH
WAGE GROWTH (2015-16)	21ST
SHORT-TERM JOB GROWTH (8/2017-8/2018)	43RD
HIGH-TECH GDP GROWTH (2012-17)	125TH
HIGH-TECH GDP GROWTH (2016-17)	57TH
HIGH-TECH GDP CONCENTRATION (2017)	12TH
NUMBER OF HIGH-TECH INDUSTRIES (LQ>=1) (2017)	4TH

Logan, UT-ID, rounds out the Top 10 for this edition of BPC Small Cities index. The metro has a diverse high-tech industry, and ranks fourth for the number of high-tech location quotients greater than one. Logan is home to Utah State University, which provides a stabilizing economic anchor. The school will expand program offerings with a \$1.8 million barn to increase the capacity of the veterinary medicine program.²⁰⁵ The university is looking to maximize its R&D capacity and has opened an innovation campus to draw in companies.²⁰⁶ The school had weak enrollment in 2017, which will put pressure on economic growth. Educational and health-care services make up 12 percent of employment and account for the two largest employers in the metro. The Logan Regional Hospital is investing \$1.2 million in new surgical robots to expand ability to perform less-invasive procedures.²⁰⁷

ASSETS

- Utah State University is an active research university providing the metro with a highly skilled workforce.

LIABILITIES

- Net out-migration reduces the metro's ability to maintain its workforce.

The metro depends on manufacturing, which represents 18.6 percent of employment.²⁰⁸ Food processing companies are the most prominent of manufacturing employers.²⁰⁹ There is also a sizeable number of durable goods manufacturers in the metro. Electric Power Systems is going to open operations to build batteries for the aerospace industry and estimates bringing 128 jobs to the metro with an \$11.6 million investment.²¹⁰ GE has plans to double its manufacturing footprint in Logan with its powdered cell cultures used in biopharmaceutical products.²¹¹ Two opportunity zones have been designated by the IRS in the metro.²¹² These two zones might help offset some of the risks Logan is facing in its beef and dairy industries due to increased tariffs.

COMPLETE RESULTS: 2018 BEST-PERFORMING SMALL CITIES

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
0	1	1	Bend-Redmond, OR	7	1	2	1	18	19	15	18	12
0	2	2	St. George, UT	4	2	1	4	9	44	11	68	82
0	3	3	Gainesville, GA	8	6	41	15	12	27	24	109	82
2	6	4	Elkhart-Goshen, IN	6	5	4	3	13	39	114	157	44
24	29	5	Coeur d'Alene, ID	10	9	10	24	16	36	120	101	44
-2	4	6	San Rafael, CA	75	45	36	19	32	29	6	3	20
21	28	7	Medford, OR	30	15	16	13	26	60	174	42	12
34	42	8	Athens-Clarke County, GA	16	31	8	30	33	28	62	87	82
13	22	9	Albany, OR	32	20	7	28	8	20	191	83	12
14	24	10	Logan, UT-ID	39	24	21	46	43	57	125	12	4
1	12	11	Daphne-Fairhope-Foley, AL	20	7	26	16	17	33	112	159	82
14	26	12	Prescott, AZ	26	12	14	21	77	49	63	127	20
1	14	13	Sebastian-Vero Beach, FL	36	22	31	20	68	51	57	73	82
22	36	14	Hilton Head Island-Bluffton-Beaufort, SC	13	10	37	34	45	40	19	161	126
0	15	15	Charlottesville, VA	35	30	86	38	11	125	22	34	44
-11	5	16	Wenatchee, WA	47	11	49	18	54	30	4	115	126
-9	8	17	Bellingham, WA	34	28	44	51	39	76	147	17	2
19	37	18	Mankato-North Mankato, MN	58	68	68	42	15	107	18	21	20
-9	10	19	Auburn-Opelika, AL	14	8	18	14	161	98	12	126	44
-7	13	20	The Villages, FL	11	4	9	5	145	93	9	146	126
11	32	21	Sioux Falls, SD	67	33	38	11	69	59	41	67	126
-4	18	22	College Station-Bryan, TX	25	13	114	31	44	42	61	62	126
-6	17	23	Grants Pass, OR	24	16	22	36	83	177	173	24	20
40	64	24	Idaho Falls, ID	22	19	13	94	35	112	160	6	126
-18	7	25	Yuba City, CA	12	17	63	43	156	66	47	76	4
51	77	26	Kankakee, IL	19	88	137	85	2	14	50	10	44
0	27	27	Barnstable Town, MA	52	56	70	57	58	53	97	26	20
39	66	28	Madera, CA	17	49	6	27	22	147	155	156	82
24	53	29	Yakima, WA	33	38	20	35	3	161	92	147	126
56	86	30	Bremerton-Silverdale, WA	64	51	34	103	55	12	20	60	82
12	43	31	Missoula, MT	46	54	25	45	98	32	54	90	82
-12	20	32	Redding, CA	60	27	40	65	21	171	66	103	44
-3	30	33	Lake Charles, LA	2	3	3	2	53	167	168	185	173
5	39	34	Kahului-Wailuku-Lahaina, HI	44	25	15	12	38	169	65	193	126
-10	25	35	Janesville-Beloit, WI	57	41	62	40	122	65	5	64	44
-25	11	36	Chico, CA	31	14	33	17	29	193	136	122	126
-14	23	37	Mount Vernon-Anacortes, WA	43	32	57	22	116	73	53	119	44

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
-3	34	38	Lewiston, ID-WA	23	29	30	56	105	83	55	123	82
-4	35	39	Bowling Green, KY	50	36	23	26	24	18	150	188	173
-24	16	40	Punta Gorda, FL	76	18	17	25	95	26	31	165	173
62	103	41	Longview, WA	45	52	121	37	27	43	71	107	82
66	108	42	Sheboygan, WI	49	58	51	49	61	90	82	143	82
3	46	43	Jonesboro, AR	18	23	39	50	75	96	157	163	126
16	60	44	Winchester, VA-WV	40	37	53	64	31	129	48	158	173
-1	44	45	Hattiesburg, MS	41	47	95	84	79	35	21	169	44
-5	41	46	Lawrence, KS	152	85	73	76	4	113	1	27	44
22	69	47	Sherman-Denison, TX	53	55	94	115	40	71	42	30	126
1	49	48	Morgantown, WV	48	90	177	78	36	21	30	56	20
72	121	49	Dover, DE	111	74	79	74	34	6	13	149	82
-19	31	50	Columbia, MO	89	105	43	33	148	50	60	32	20
-33	18	51	Kokomo, IN	90	48	132	75	6	95	119	43	44
11	63	=52	Gettysburg, PA	63	69	77	79	25	144	115	99	20
-43	9	=52	Columbus, IN	78	53	157	23	10	166	113	63	20
-21	33	54	Ames, IA	69	40	142	44	52	160	36	77	44
4	59	55	Lake Havasu City-Kingman, AZ	15	34	88	106	20	118	146	164	82
51	107	56	Dalton, GA	136	70	29	47	67	74	152	31	82
-10	47	57	Iowa City, IA	81	61	46	48	150	61	111	54	44
-1	57	58	St. Cloud, MN	55	67	50	29	90	140	117	129	82
14	73	59	Walla Walla, WA	62	84	19	92	14	185	79	140	126
18	78	60	Corvallis, OR	21	39	45	100	165	135	199	1	1
106	167	61	Hammond, LA	9	92	60	188	76	1	2	117	126
-24	38	62	Napa, CA	38	21	66	7	162	119	121	95	173
78	141	63	Carson City, NV	3	57	112	150	50	124	124	93	20
23	87	64	Greenville, NC	92	103	81	61	89	115	58	2	82
-13	52	65	Tyler, TX	96	60	126	80	19	126	88	104	44
23	89	66	Pocatello, ID	29	35	59	118	42	142	84	171	173
56	123	67	Midland, TX	1	26	198	10	1	116	190	198	173
-47	21	68	Fargo, ND-MN	113	44	124	9	123	138	95	51	44
-15	54	69	Appleton, WI	148	75	47	58	80	58	104	102	82
-9	61	70	Fond du Lac, WI	112	100	89	59	86	179	34	39	20
5	76	71	Panama City, FL	84	43	58	71	46	176	183	80	126
-25	47	72	Brunswick, GA	106	59	27	73	165	146	38	84	44
8	81	73	Burlington, NC	107	110	11	90	85	199	123	44	4
-24	50	74	Jackson, MI	131	65	35	52	193	2	10	130	82
27	102	75	Chambersburg-Waynesboro, PA	118	97	123	107	37	10	70	70	82
-4	72	76	Manhattan, KS	99	141	119	113	7	9	64	128	44
-19	58	77	Ithaca, NY	144	91	117	122	5	121	107	15	12
1	79	78	Pueblo, CO	108	71	82	104	115	137	16	59	44

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
15	94	79	Valdosta, GA	143	106	87	114	48	150	8	22	44
-18	62	80	Staunton-Waynesboro, VA	156	114	67	81	73	130	46	53	20
-13	68	81	Rochester, MN	72	82	48	55	178	168	149	28	20
19	101	82	Oshkosh-Neenah, WI	85	112	42	91	139	102	91	61	44
1	84	83	State College, PA	91	111	84	83	126	127	101	16	4
-13	71	84	Flagstaff, AZ	54	62	138	62	84	114	154	66	126
5	90	85	Jackson, TN	139	78	32	77	47	70	76	196	173
10	96	86	Lebanon, PA	71	126	76	157	165	48	17	7	4
29	115	87	Pittsfield, MA	115	150	78	111	41	64	139	29	44
-43	45	88	Lafayette-West Lafayette, IN	83	76	72	67	164	62	172	88	20
20	109	89	La Crosse-Onalaska, WI-MN	114	115	61	72	59	97	129	139	82
-8	82	90	Rapid City, SD	66	87	64	70	151	153	83	138	44
-11	80	91	Wausau, WI	130	73	160	41	23	117	32	172	126
-9	83	92	Rome, GA	88	81	83	125	97	109	134	75	44
-23	70	93	Harrisonburg, VA	80	80	75	96	137	82	59	124	126
26	120	94	Yuma, AZ	79	89	24	95	129	75	189	110	126
-10	85	95	Amarillo, TX	171	120	113	97	28	8	37	106	126
14	110	96	Eau Claire, WI	134	124	130	54	81	72	126	49	44
25	122	97	Muskegon, MI	61	86	155	108	127	105	23	98	44
62	160	98	Albany, GA	51	122	55	168	107	106	102	55	82
-44	55	99	Monroe, MI	169	77	166	60	87	85	3	65	82
-33	67	100	Morristown, TN	102	63	85	102	56	180	67	194	126
12	113	101	St. Joseph, MO-KS	116	119	91	88	65	143	171	35	82
59	161	102	Decatur, AL	82	159	104	167	71	13	28	142	44
-4	99	103	El Centro, CA	42	66	128	87	62	84	184	187	173
-7	97	104	Hanford-Corcoran, CA	56	72	152	68	119	68	44	184	173
26	131	105	Champaign-Urbana, IL	94	94	161	109	110	108	105	38	20
-6	100	106	Sioux City, IA-NE-SD	200	131	12	8	124	77	90	170	126
-14	93	107	Tuscaloosa, AL	74	50	159	123	101	11	33	195	173
18	126	108	Kingston, NY	101	109	100	131	60	154	144	91	44
5	114	109	Sumter, SC	122	96	156	99	119	56	80	82	44
23	133	110	Warner Robins, GA	65	121	54	173	103	86	192	69	82
-37	74	111	Florence, SC	95	83	146	105	78	131	116	125	82
14	126	112	Niles-Benton Harbor, MI	105	113	120	66	125	67	81	148	126
63	176	113	Wichita Falls, TX	59	165	109	162	113	3	110	40	126
-8	106	114	Lewiston-Auburn, ME	73	93	103	112	135	132	26	134	173
4	119	115	Bloomington, IN	98	144	69	86	201	63	194	4	44
53	169	116	Cape Girardeau, MO-IL	120	162	102	144	74	136	69	89	44
-52	65	117	Blacksburg-Christiansburg-Radford, VA	159	129	144	98	72	145	141	52	4
-63	55	118	Billings, MT	125	99	133	53	154	148	56	97	126
-21	98	119	Hagerstown-Martinsburg, MD-WV	121	107	135	127	93	162	99	86	44

RANKINGS BY COMPONENT

Rank Change	2017 Rank	2018 Rank	Metropolitan Statistical Area/Metropolitan Division	Job Growth (2016-17)	Job Growth (2012-17)	Wage Growth (2015-16)	Wage Growth (2011-16)	12-month Job Growth (8/2017-8/2018)	High Tech GDP Growth (2016-17)	High Tech GDP Growth (2012-17)	High Tech GDP Concentration	Number of Industries with LO>1 (2017)
-9	111	120	Battle Creek, MI	183	98	65	63	146	4	151	166	126
19	140	121	Jefferson City, MO	140	148	52	132	130	69	87	74	126
57	179	122	Jacksonville, NC	132	132	5	181	96	151	106	131	82
51	174	123	Lynchburg, VA	137	147	147	146	49	87	167	45	12
-19	105	124	Elizabethtown-Fort Knox, KY	119	64	149	195	88	38	68	108	126
14	139	125	Altoona, PA	129	156	167	151	132	41	27	14	20
-14	112	126	Monroe, LA	175	153	122	124	118	99	7	41	44
27	154	127	Glens Falls, NY	104	161	153	139	30	133	166	37	82
2	130	128	Grand Island, NE	103	166	108	89	108	78	109	190	82
-1	128	129	East Stroudsburg, PA	68	130	80	178	158	149	93	13	126
-79	51	130	Sebring, FL	128	46	28	128	197	170	45	173	173
56	187	131	Grand Junction, CO	28	104	185	169	63	22	176	154	173
-14	118	132	Johnson City, TN	109	127	110	140	179	120	128	46	20
-58	75	133	Macon, GA	127	102	162	110	133	196	89	48	44
-8	125	134	Burlington-South Burlington, VT	168	123	97	93	187	92	186	11	20
-1	134	135	Joplin, MO	149	164	125	143	121	45	75	105	20
14	150	136	Ocean City, NJ	37	79	98	145	195	128	73	174	173
-21	116	137	Gadsden, AL	138	101	99	142	117	80	85	180	126
32	170	138	Odessa, TX	5	154	199	149	51	17	161	199	173
32	171	139	Abilene, TX	70	117	178	121	56	182	148	133	126
-36	104	140	Grand Forks, ND-MN	174	155	90	32	165	111	52	153	126
-6	135	141	Cumberland, MD-WV	166	171	127	163	165	34	29	19	12
4	146	142	Cheyenne, WY	157	118	172	116	138	79	25	92	82
-11	132	143	Muncie, IN	87	137	164	119	191	31	86	94	82
-53	91	144	Owensboro, KY	100	128	141	69	109	190	98	189	126
-50	95	145	Bismarck, ND	191	95	181	6	128	165	131	121	82
1	147	146	Bloomsburg-Berwick, PA	93	174	93	126	155	7	193	100	126
-30	117	147	Saginaw, MI	179	142	56	136	157	164	49	79	82
0	148	148	Midland, MI	182	138	71	156	152	184	43	58	44
6	155	149	Dothan, AL	97	140	96	134	131	155	74	183	126
-13	137	150	Santa Fe, NM	178	152	174	164	82	91	35	72	44
5	156	151	San Angelo, TX	124	108	189	82	64	191	188	111	126
-29	123	152	Vineland-Bridgeton, NJ	117	145	118	154	106	110	135	155	82
-10	143	153	Terre Haute, IN	158	169	151	161	112	46	181	25	12
-62	92	154	Carbondale-Marion, IL	164	125	139	138	198	89	14	116	20
10	165	155	Lima, OH	77	136	74	129	182	198	163	137	82
12	168	156	Great Falls, MT	123	160	106	130	99	55	185	152	173
-117	40	157	Cleveland, TN	180	42	111	39	165	181	200	191	173
-16	142	158	California-Lexington Park, MD	161	146	148	170	111	158	170	8	20
22	181	159	Anniston-Oxford-Jacksonville, AL	86	177	101	197	104	152	145	120	82
-72	88	160	Hot Springs, AR	110	143	107	120	175	174	175	96	82

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17	178	161	Hinesville, GA	27	149	187	199	66	134	178	145	126
-26	136	162	Topeka, KS	170	134	92	141	136	157	78	144	126
10	173	163	Johnstown, PA	189	196	182	192	94	54	96	9	12
-15	149	164	Dubuque, IA	126	135	163	101	159	94	195	150	82
-7	158	165	Texarkana, TX-AR	181	173	105	175	91	5	143	179	126
-2	164	166	Binghamton, NY	142	186	131	179	165	159	142	5	4
-15	152	167	Racine, WI	135	133	165	155	165	103	94	136	82
-17	151	168	New Bern, NC	146	116	145	171	100	156	103	141	173
-7	162	169	Mansfield, OH	176	167	143	160	92	195	197	50	20
-26	144	170	Florence-Muscle Shoals, AL	153	139	158	135	181	23	40	182	173
-33	138	171	Bangor, ME	177	170	134	137	143	122	77	118	126
11	183	172	Lawton, OK	167	157	186	191	102	16	39	175	173
-44	129	173	Las Cruces, NM	194	158	116	152	199	183	162	23	4
18	192	174	Farmington, NM	145	183	196	190	70	25	100	197	126
-3	172	175	Longview, TX	163	188	193	182	147	100	72	81	20
-10	166	176	Homosassa Springs, FL	155	168	140	176	149	104	138	132	126
-20	157	177	Williamsport, PA	147	192	195	184	194	81	130	47	44
-19	159	178	Rocky Mount, NC	190	181	179	185	142	187	165	20	2
-26	153	179	Bay City, MI	197	184	169	159	114	201	127	33	126
9	189	180	Michigan City-La Porte, IN	172	180	150	172	189	101	182	114	20
-1	180	181	Wheeling, WV-OH	151	172	192	117	183	47	132	176	173
15	197	182	Sierra Vista-Douglas, AZ	187	198	180	200	177	37	122	36	82
-1	182	183	Goldsboro, NC	150	179	154	177	153	200	159	135	44
-39	145	184	Springfield, IL	186	151	173	147	188	175	108	71	126
5	190	185	Elmira, NY	173	193	190	187	200	88	137	57	44
-11	175	186	Charleston, WV	192	194	184	193	190	24	51	112	126
4	191	187	Watertown-Fort Drum, NY	165	163	188	198	134	188	140	78	126
-4	184	188	Parkersburg-Vienna, WV	199	190	191	183	180	52	133	85	82
6	195	189	Springfield, OH	133	175	136	153	140	197	201	201	173
-5	185	190	Waterloo-Cedar Falls, IA	162	176	175	148	163	139	153	186	126
-14	177	191	Decatur, IL	154	187	183	166	141	186	187	151	82
7	199	192	Alexandria, LA	198	178	115	165	160	172	177	168	126
-5	188	193	Danville, IL	193	189	176	174	144	194	156	113	82
0	194	194	Casper, WY	185	197	201	194	186	15	158	192	82
-9	186	195	Bloomington, IL	141	182	168	158	192	192	169	181	173
-33	163	196	Victoria, TX	195	185	197	133	196	163	118	162	173
-4	193	197	Fairbanks, AK	184	191	171	180	176	173	180	177	173
3	201	198	Pine Bluff, AR	188	200	129	196	165	189	198	200	173
-1	198	199	Weirton-Stebenville, WV-OH	196	195	170	186	185	123	179	178	173
-4	196	200	Houma-Thibodaux, LA	201	201	200	189	174	178	164	167	82
-1	200	201	Beckley, WV	160	199	194	201	184	141	196	160	173

ENDNOTES

1. This report draws on text and methodology from previous editions of the Milken Institute's Best-Performing Cities series.
2. The latest 12-month job performance calculates the percentage change from the same month in the previous year (e.g., the change in jobs from August 2017 to August 2018). The percentage change is a measure of recent momentum, capturing which metropolitan areas have improved their performance in recent months. Except in the case of the wage-related indicators, the annual growth rate measures the percentage change from calendar year 2016 to 2017. While the annual growth rate does not indicate whether high growth was achieved in the first or latter half of the year, the 12-month growth rate captures that aspect. Employment, wage, and gross metro product data are compiled from various government agencies, including the Bureau of Labor Statistics, the Bureau of Economic Analysis, and the U.S. Census Bureau. More detailed coverage on individual sectors is derived from Moody's Analytics at economy.com.
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