# MOST DYNAMIC METROPOLITANS

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HEARTLANDFORWARD.ORG

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#### ABOUT HEARTLAND FORWARD

Heartland Forward is an institute for economic renewal and the firstof-its-kind "think and do" tank with a mission to improve economic performance in the center of the United States by advocating for factbased solutions to foster job creation, knowledge-based and inclusive growth, and improved health outcomes. We conduct independent, datadriven research to facilitate action-oriented discussion and impactful policy recommendations.



## EXECUTIVE SUMMARY

As the dominant economic geography of America, metropolitan statistical areas largely determine our success as a nation.

> These groups of counties with a large central core account for 87.5 percent of jobs, 90.3 percent of wages and 88.3 percent of Gross Domestic Product (GDP). Further, metropolitan statistical areas account for the bulk of innovation such as research and development and patenting activity. Understanding the mechanisms underpinning the growth of top-performing metropolitan areas, and sharing best practices, could assist other communities boost their economic fortunes. The Most Dynamic Metropolitan Index, ranking 375 metropolitan areas, seeks to provide an objective measure of communities' economic vibrancy where the lion's share of Americans work and live.

Our Most Dynamic Metropolitan Index and the analysis in this report provide objective insight into the communities providing economic opportunity for their residents, separating high performers from the low. Most Dynamic Metropolitans provides fact-based metrics on near-term and medium-term performance and prospects for long-term growth. The index allows economic development officials the ability to monitor their metro's vivacity relative to others on a national basis or within their region and state. We also look through the lens of the Heartland—the 20 states in the middle of the nation—to discern its performance and understand practices that can boost economic prospects.

While international and national economic and geopolitical factors can influence growth patterns, the index provides an objective measure of whether local development strategies have the desired effect. Additionally, Most Dynamic Metropolitans aids public-policy groups, elected officials, academics, businesses and other researchers monitor and assess metropolitan dynamism across the nation.



The Most Dynamic Metropolitan rankings are generated using performance-based metrics such as job growth, average annual earnings and Gross Domestic Product (GDP) gains, as well as new metrics: the proportion of total jobs at young firms and the educational attainment of employees at young firms. The young firm employment ratio influences economic growth as new firms develop new products, services, and advanced innovation. It encapsulates information on entrepreneurs' capability to start businesses and scale them—critical for future job and wage gains.

## For example, just two metros out of the top 30 and 16 out of the top 100 have a young firm share below the mean of all metropolitan areas.

Educational attainment, particularly securing a bachelor's degree or higher, has been shown to increase innovation and idea generation within a region. Our inclusion of the share of employees at young firms with a bachelor's degree or higher is, therefore, a way of estimating the innovativeness of the young firms; the hypothesis is that more highly educated employees make a firm more innovative, leading to more new products, services and/ or efficiency gains within the firm. In other words, young firms with more highly educated employees should be more competitive and have a higher likelihood of survival.

We also include data on regional price parities from the Bureau of Economic Analysis (BEA). These regional price parities are indicating whether goods and services are generally more or less expensive than the national average. We use them to adjust income measures for varying inflation rates and differences in purchasing power across metropolitan areas. Per-capita personal income reflects these adjustments and can be viewed as a measure of longer-term economic development because it is the stock of all prior welfare improvements. In the context of COVID-19, our metrics include job momentum as evaluated between August, 2019 and August, 2020. This allows us to discern the economic fallout attributable to the pandemic.

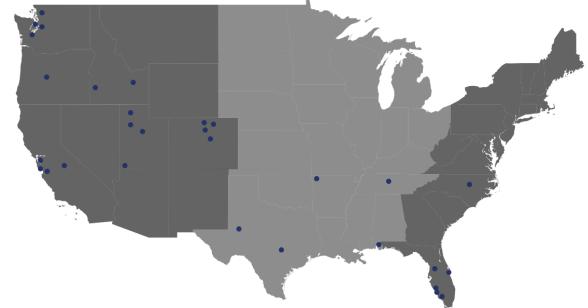
#### **KEY FINDINGS**

## Positioned first in Most Dynamic Metropolitans is Midland, Texas.

#### Located in the American Heartland, Midland held several top positions and had four other metrics among the top 10.

Midland is the Permian Basin capital that produces two in five barrels of oil in the U.S. The explosion in shale oil exploration activity drives the economy and the Tall City is the most reliant on oil activity in the nation. How long oil prices remain below \$50 per barrel will impact its future ranking.

**San Jose-Sunnyvale-Santa Clara, California, (Silicon Valley)** is second overall. Its unparalleled technology innovation ecosystem placed it tops among metros with a population above 1 million. Its biggest challenge in the future will be high housing costs, thereby making it difficult to retain talent. The median housing price is \$1.25 million and rents are astronomical. COVID-19 may accelerate remote work of its tech employees.



#### Figure 1: Top 30 Metropolitans



The University of Colorado Boulder campus

**Provo-Orem, Utah**, ranked third and has become an entrepreneurship haven. Over the last two decades, the region has experienced phenomenal technology sector growth building on STEM talent graduating from Brigham Young University located in Provo. The tech boom has attracted new residents to the region and supports an expansion of advanced manufacturing around technology components. The result has been one of the fastest GDP growth rates in the country.

Next, at fourth, is **Boulder, Colorado**, where the university's presence combined with the entrepreneurial culture, an attractive setting, and easy access to outdoor recreation means that Boulder will remain an appealing location for skilled workers and firms seeking to employ their talent. In fifth, **San Francisco-Oakland-Hayward, California**, has experienced more rapid tech-fueled growth over the past five years than its neighbor down the peninsula, Silicon Valley. However, San Francisco will be among the most impacted by its tech firms permitting remote work.

Austin, Texas, is sixth and has acquired well-deserved international recognition as an economic development model worthy of study. Austin has the 11th highest concentration of high-tech industries in the nation. Seattle- Tacoma-Bellevue, Washington, seventh overall, continues unabated as it is among the most innovative places in the world.

**Greeley, Colorado**, is eighth and has a mix of food, fracking, wind turbines and several corporate facilities. The economy of **Naples-Immokalee-Macro Island, Florida**, (ninth overall) is resilient, has withstood natural disasters the last three years, and is fast growing. **St. George, Utah** (10th overall) is home to Zion National Park, world-class outdoor recreation options, and arguably the preeminent mountain biking event worldwide, Red Bull Rampage. The Villages, Florida, is 11th, followed by Bend-Redmond, Oregon, (12th), and have been two of the nation's hottest economies over the past decade. Next are Madera, California, (13th), Mount Vernon-Anacortes, Washington, (14th), and Nashville-Davidson-Murfreesboro-Franklin, Tennessee (15th).

Boise City, Idaho (16th), which was second among medium metros (population of 500,000 to 999,999), followed by Idaho Falls, Idaho. Salt Lake City, Utah (18th), Denver-Aurora-Lakewood, Colorado (19th), and Fort Collins, Colorado (20th), round out the top 20. Fayetteville-Springdale-Rogers, Arkansas-Missouri was third among medium metros.

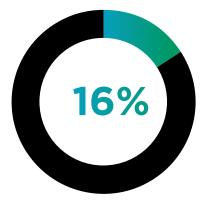
Other striking features of the findings include that only one large metro is in the bottom quartile; 25 are in the top quartile. Twelve large western metros are in the top quartile. The Heartland has five metros among the top 30, substantially below its proportionate share.

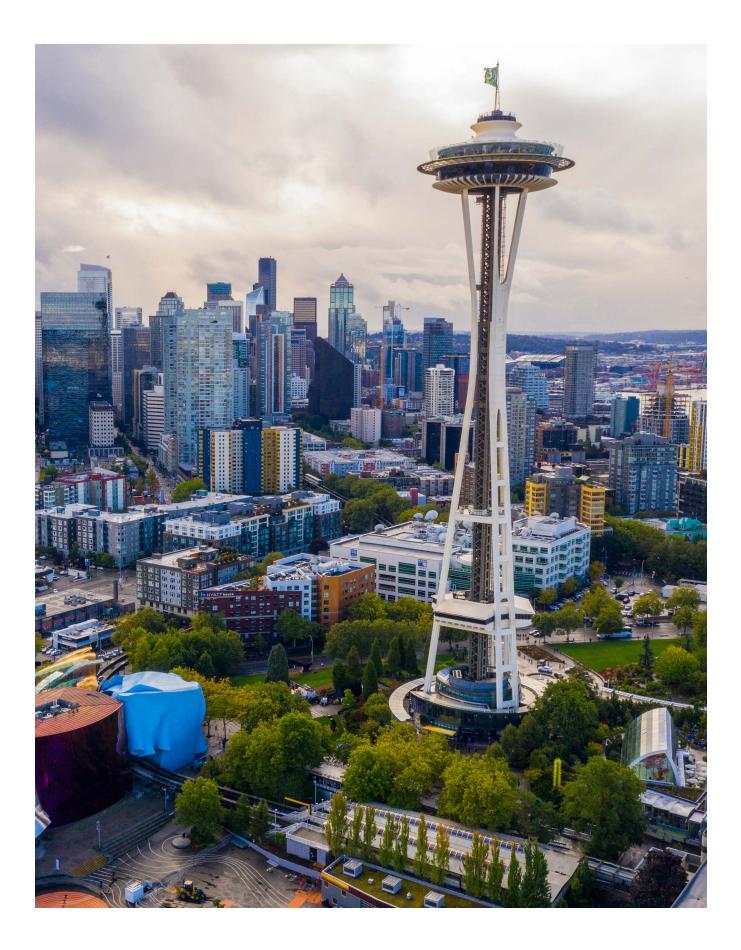
#### Striking Features of the Findings

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## **Industry Characteristics**

Common industry and structural characteristics separate top-performing metropolitan areas from lower performers over the evaluation period. Metropolitan areas with thriving professional, scientific and technical services were among the leaders.

Categories such as scientific research services, engineering services, accounting and business management consulting services are in this mix. These sectors have been among the fastest-growing industries since 2012. Another group of industries boosting growth in many metropolitan areas are information and communication services, data processing services and hosting services, cloud-based software, data visualization software, computer systems design, AI and machine learning, mobile applications, web design, internet publishing, social media, digital media and gaming software.

Other key industries differentiating the top from the bottom performers are research and development sectors, especially those involving physical and life sciences. The need for disease cures, effective treatment options and monitoring ongoing chronic conditions are powering research into drugs, diagnostics and a range of medical devices. High-tech and advanced manufacturing output has rallied since the Great Recession thrusting many metropolitan economies forward. High-tech manufacturing includes semiconductors, electronic instruments, computers, communications hardware such as routers and switches, energy-related cleantech, aerospace and aircraft, automotive, battery manufacturing, industrial control systems and material sciences.



Research and developement sectors were a key industry for top performing metros

Travel and tourism, recreation and lifestyle activities have advanced at a strong pace in recent years. Consumers postponed travel and tourism purchases during the Great Recession of 2007-2009. Pent-up demand for travel and tourism was unleashed when the economy improved. Domestic tourism destinations featuring outdoor adventures, such as those located near National Parks, benefited most, even during the pandemic; eventand attraction-based tourism, as well as air travel and cruises, have faced onerous restrictions in light of COVID-19, leading to reduced hours, layoffs and venue closures. Agriculture and food and beverage manufacturing also contributed to increased tourism, as producers identified niche and novel products and experiences to share with tourists, such as craft breweries and distilleries.

Metropolitan areas dependent upon coal mining have faced economic difficulties. With a combination of cheap natural gas and renewables gaining share in the electricity generation industry, coal's share of the energy portfolio has plummeted. Metropolitan areas with adjacent communities dependent on agricultural crop production have witnessed slower economic growth. Prices of agricultural products dropped since 2014, harming agricultural-based communities' economic fortunes— most of whom reside in the American Heartland. The U.S.-China trade war has exacerbated these trends.

The continuance of the U.S.-China trade war was not the only interruption to supply chains this year. China's response to COVID-19, shutting down factories in February and March, led to supply chain disruptions across most manufacturing industries as well. Such disruptions are causing some companies to reconsider production location decisions, and the U.S. Heartland, uniquely positioned with access to raw materials and distribution networks, may see the reshoring of some manufacturing employment over the next year or two.



Domestic tourism

## **Structural Characteristics**

Structural characteristics of metropolitan areas differentiate top performers from the rest of the pack. Metropolitan areas with leading research universities and four-year colleges embedded within their business milieu recorded exemplary economic gains, holding other factors constant. Research universities are increasingly critical to metropolitan performance as their fundamental output—knowledge—is central to an economy driven by innovative endeavors.

A strong culture of entrepreneurship, buttressed by numerous public and private groups, boosted the overall metropolitan leaders' performance. Metropolitan areas that support the expansion of entrepreneurs and small businesses are more dynamic and resilient in the face of structural change. Incubators, accelerators, and various spaces that provide services to new or recently established firms are essential. Supporting this conclusion is that just two metros among the top 30 and 16 out of the top 100 have a young firm share below the average of all metropolitan areas.

Providing early-stage finance such as crowdfunding, angel investment and venture capital fuels startup activity and scale-up. Angel investors and venture capitalists provide not mere money but smart money. They bring expertise in management, product development and marketing. Moreover, they offer partnering opportunities. Metropolitan areas with a portfolio approach to economic development perform better over the long term.

Metropolitan areas with multiple community colleges developing curriculum geared to local employers' requirements gain a competitive advantage. Smaller metropolitan areas located closest to large metropolitan areas exhibit more vital economic growth and share in that prosperity. Stronger economic linkages create a spillover effect. The arts, cultural, recreational and lifestyle amenities provide substantial advantages for metropolitan areas. They retain more residents who might otherwise seek career opportunities in other locations.

## **Heartland Implications**

While the Heartland has several metropolitan areas among the top performers, most metropolitan areas need to participate more fully in the knowledge-based economy. Technology sectors are underrepresented, too many economic development resources are devoted to smokestack chasing—heavy manufacturing recruitment, and too little emphasis is placed on supporting entrepreneurs. Financiers must become comfortable investing in early-stage firms in non-traditional sectors and more research universities need to embrace and pursue commercialization as a key component of their mission. The educational attainment and skills of residents must advance. A compelling narrative over the advantages of Heartland locations—such as lower housing costs and population density, access to raw materials, and distributional efficiencies—needs to be developed and conveyed for retaining and recruiting talent, especially in light of the COVID-19 pandemic.



Industrial worker



### INTRODUCTION

Metropolitan Statistical Areas capture the preponderance of economic activity in the United States. If metropolitan areas are not performing well, growth in the American economy will stagnate.

> Further, innovative activities such as research and development and patenting are concentrated in metropolitan areas. The U.S.'s longterm potential output is underpinned by the mechanisms determining economic growth at the metropolitan level. Consequently, it is critical to discern those factors and share best practices of top-performing metropolitan areas so that other regions can evaluate whether emulating some best practices could boost their economic performance.

The Most Dynamic Metropolitan Index is an objective measure of the economic vibrancy of metropolitan areas across the nation. The Most Dynamic Metropolitan Index seeks to provide fact-based metrics on near- term and medium-term performance and prospects for long-term growth. There is a variety of potential applications for this index. The index allows economic development officials to monitor their metro's vitality relative to others on a national basis or within their region and state. While international and national economic and geopolitical factors can influence growth patterns, the index provides an objective measure of whether local development strategies have the desired effect. Additionally, Most Dynamic Metropolitans aids public-policy groups, elected officials, academics and other researchers and businesses to monitor and assess metropolitan dynamism across the nation. If economic outcomes are not benchmarked, it is difficult to understand how a region is performing. Most Dynamic Metropolitans provide that benchmark, allowing change-agents to discern and address economic weaknesses.

Metropolitan areas can pursue various economic development strategies to achieve their goals for business expansion, job creation, income generation and expanding their tax base. Each metropolitan area must establish its pathway forward but should be aware of what factors have contributed to the success of other communities. We believe that the Most Dynamic Metropolitans provides additional information to help metropolitan areas improve their economic performance. The written analysis in this document is very detailed and provides a thorough perspective on what is working.

We utilize the metropolitan statistical area definitions developed by the U.S. Office of Management and Budget (OMB), based upon OMB Bulletin 18-03 (released April 10, 2018) for consistency with data sources. A metropolitan statistical area (MSA) is defined as a region having a large population nucleus, containing at least 50,000 people, with an adjacent population bearing a strong degree of economic and social interaction, including such measures as commuting patterns. Metropolitan areas are groups of counties. Data availability allows us to include 375 MSAs in our analysis.

The Most Dynamic Metropolitan rankings are generated using performance-based metrics such as job growth, wage and Gross Domestic Product (GDP) gains, proportion of total jobs at young firms and the share of employees at young firms with a bachelor's degree or higher.

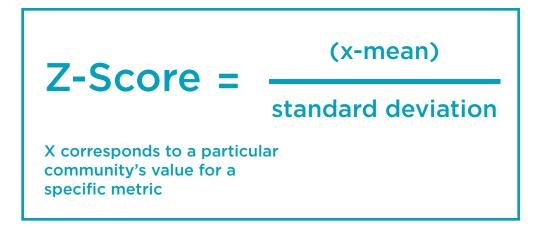
> The set of criteria is consistent with that used in our Most Dynamic Micropolitan Index.<sup>1</sup> The last two measures capture which metropolitan areas are building economic opportunity for their residents and those who might desire to migrate. Our index is comprised of three types of metrics: recent economic development metrics and backward-and forward-looking metrics of longer-term economic development.



Rankings are generated using performance-based metrics Recent economic development measures are 2018-2019 average annual pay growth, 2017-2018 real GDP growth, 2018-2019 job growth and job growth over the most recent 12 months ending in August 2020. Measures of longer-term economic development are the 2018 level of per-capita personal income, 2014-2019 growth in average annual pay, 2013-2018 growth in real GDP, 2014-2019 job growth, the 2017 ratio of employment at firms five years or younger to employment at all firms (young firm employment ratio), and the 2017 share of young firm employment with a bachelor's degree or higher level of education (young firm knowledge intensity). The level of per-capita personal income can be viewed as a measure of longer-term economic development because it is the stock of all prior welfare improvements.

The young firm employment ratio has implications for future economic growth as new firms develop new products and drive innovation. It provides information on entrepreneurs' ability to start new businesses and scale them—critical for future job and wage gains. Higher educational attainment can indicate higher potential for new ideas and innovations. Young firm knowledge intensity, then, suggests the potential for young firms to innovate and bring new products and services into the marketplace. Each metric's time period is restricted to data availability, with the most recent data incorporated and longer-term growth rates having a five-year span.

We standardize all metrics via z-scores. That is, we calculate the mean and standard deviation of a metric across all metropolitan areas, subtract the mean of the metric from each metropolitan area's metric value, and divide that difference by the standard deviation of the metric. The result is a number telling us how many standard deviations above the mean (positive z-score) or below the mean (negative z-score) a metropolitan area's metric value is. A metropolitan area's index value is its average z-score across all ten economic development metrics. If a metropolitan area has a positive average z-score, then, on average, it performs better than the mean metropolitan area for each metric.



While most of our metrics are commonly used indicators of economic development, the young firm employment ratio and young firm knowledge intensity are relatively new measures. As presented in "Young Firms and Regional Economic Growth,"<sup>2</sup> our analysis demonstrated that increasing the young firm employment ratio of the average metropolitan in 2010 by one percentage point led to an increase in private employment growth of half of one percentage point between 2010 and 2017; similarly, increasing young firm knowledge intensity of the same metropolitan area by one percentage point in 2010 led to an increase in private employment growth of nearly one percentage point between 2010 and 2017. These results clearly illustrate that a substantive relationship exists between young firms, higher education, and long-term private employment growth.

Additionally, we incorporate recent data on regional price parities from the Bureau of Economic Analysis (BEA) in our per-capita personal income and average annual pay metrics. These regional price parities are indexes indicating whether goods and services are generally more or less expensive than the national average. Therefore, the indexes can be used to adjust income measures for differing inflation rates and differing levels of purchasing power across regions.

#### **Measurements Table**

Measure	Time Period	Source
Young Firm Employment Ratio	2017	Census Bureau
Young Firm Knowledge Intensity	2017	Census Bureau
Per-Capita Personal Income	2018	Bureau of Economic Analysis
Medium-Term Job Growth	2014-2019	Bureau of Labor Statistics
Short-Term Job Growth	2018-2019	Bureau of Labor Statistics
Short-Term Job Momentum	Aug. 2019-Aug. 2020	Bureau of Labor Statistics
Medium-Term Average Annual Pay Growth	2014-2019	Bureau of Labor Statistics
Short-Term Average Annual Pay Growth	2018-2019	Bureau of Labor Statistics
Medium-Term GDP Growth	2013-2018	Bureau of Economic Analysis
Short-Term GDP Growth	2017-2018	Bureau of Economic Analysis

## **Overview**

Many of the top-performing metropolitan areas share common industry and structural characteristics, separating them from lower performers over the evaluation period. Perhaps the most important differentiator was the degree to which metropolitan areas participated in knowledgeintensive, high value-added industries that hire an above-average share of employees with advanced degrees and heavily invest in research and development. This manifests itself in high-tech service categories such as telecommunications and information services and specific manufacturing. Tourism was also a significant industry in the top-performing regions, reflective of their proximity to natural amenities. Growth in these industries also caused growth in transportation services and construction in these regions. West Coast metros benefitted the most from this industry composition, but some East Coast and Heartland locations are among the mix.

## **Industry Characteristics**

Metropolitan areas with flourishing professional, scientific and technical services were boosted in the rankings. These include categories such as scientific research services, engineering services, accounting and business management consulting services. Professional, scientific and technical services have been among the fastest-growing industries since 2012. Metros with a high concentration of these activities were bolstered by the secular shift underway in the national economy. Examples of communities include San Jose, Austin, San Francisco, Seattle, Raleigh, Boulder and Denver. Professional and technical services serve as important anchors for communities with a high concentration as they pay above-average wages and provide strong economic spillovers. Professional, scientific and technical services a broad swath of communities.

Information and communication services, data processing services and hosting services, cloud-based software, data visualization software, computer systems design, Artificial Intelligence (AI) and machine learning, mobile applications, web design, internet publishing, social media, digital media and gaming software are another group of industries propelling growth in many metropolitan areas. These sectors are creating highpaying jobs at a prolific rate in the United States as the demand for these activities proliferates. These industries have a high multiplier effect on local economies. In many cases, three to four other jobs are generated by one job in these sectors. Metros with a strong concentration, and the ability to expand them, are reaping the rewards. At the top of this list is San Francisco, closely followed by San Jose, Provo, Denver, Seattle, Austin, Boulder, Nashville, Raleigh and Salt Lake City.

Other key industries differentiating the top from the bottom performers are research and development sectors, especially around life sciences. The demand for cures to disease, effective treatment options and monitoring ongoing chronic conditions are driving research into drugs, diagnostics and a range of medical devices. This research requires extensive scientific, medical and technical expertise. Most of these occupations pay in excess of \$150,000 annually. Several of the top 30 metros have university research centers with expertise in the life sciences, especially in biotechnology. For example, in the Idaho Falls metro area, life science and engineering research and development are almost 17 times greater than the U.S overall. Boulder, Raleigh, Salt Lake City, San Francisco and San Jose also have large concentrations of these biomedical activities.

A rebound in high-tech and advanced manufacturing since the Great Recession has thrust many metropolitan economies forward. Semiconductors, electronic instruments, computers, communications hardware such as routers and switches, energy-related cleantech, aerospace and aircraft, automotive, battery manufacturing, industrial control systems and material sciences are among high-tech manufacturing. The high-wage occupations associated with these industries have strong ripple effects across the regional economy. Furthermore, they provide middle-class jobs for many technical professions that do not require a four-year college degree. Boise City, Boulder, Austin, Greeley, Seattle, Provo, Palm Bay and San Jose are among those metros supported by the expansion in these manufacturing sectors.



High-tech and advanced manufacturing Travel and tourism, recreation and lifestyle activities have advanced at a strong pace in recent years. Travel and tourism purchases were delayed during the Great Recession of 2007-2009. Pent-up demand for travel and tourism was generated and when the economy improved, these deferred purchases accelerated. This was especially the case for tourism-destination locations where visitors travel long distances to enjoy their amenities. The resurgence in these sectors was aided by the preference for experiential experiences of millennials. The Millennial age cohort allocates less of its consumption toward hard assets and more toward soft amenities.

At the top of the list of places benefitting from travel and tourism, recreation and lifestyle activities—at least before the pandemic—are Heartland-located Nashville, Tennessee and Fayetteville, Arkansas-Missouri. Nashville is home to the Ryman Auditorium—home of the Grand Ole Opry and other legendary country music venues. At the same time, Fayetteville-Springdale-Rogers, Arkansas-Missouri has become a mountain bikers haven, among other outdoor activities. Other smaller metropolitan areas such as Bend, Oregon; Saint George, Utah; Fort Collins, Colorado; Boise City, Idaho, and Daphne, Alabama are in this group. Larger metropolitan areas such as Naples, Florida; Cape Coral-Fort Myers, Florida; and Seattle were also experiencing gains.

Contributing to the tourist amenities in some locations is agriculture and food and beverage manufacturing. Metropolitan areas with adjacent communities dependent on agricultural crop and animal production, as well as food and beverage manufacturing, performed well in this year's rankings. Despite low prices for agricultural products and harmed the economic fortunes resulting from the U.S.-China trade dispute, niche and novel products as well as growth in the local and regional food movements -including craft breweries and distilleries-contributed to employment and GDP growth in nearly half of the top 30 metropolitan areas. Madera, California, Santa Cruz-Watsonville, California, and Mount Vernon-Anacortes, Washington led with exceptionally high concentrations of employment in agriculture, while Bend, Oregon has a high concentration of employment in forestry and logging and beverage manufacturing. Greeley, Colorado, Fayetteville-Springdale-Rogers, Arkansas, and Fort Collins, Colorado also have strong food and beverage manufacturing sectors from which they benefited.



Hauling rock in a coal mine

Oil prices recovered from 2012 to 2015 but collapsed again in 2016, harming metropolitan areas' economic performance with a heavy reliance on exploration and the downstream pipeline. The exception being metropolitan areas with high productivity shale deposits or those located close to them. Overall first-place, Midland, Texas, is the capital of the Permian Basin, the most productive basin in the U.S. Greeley, Colorado, and Mount Vernon-Anacortes, Washington, also benefited from the oil boom. However, they are experiencing contractions in the energy sector due to persistently low oil prices associated with reduced fuel demand during the COVID-19 pandemic.

A critical restraint on economic advances across a swath of metropolitans was a high dependence on mining activity, principally coal mining. Coal's share of electricity generation has plummeted in recent years as natural gas has replaced it in the generation mix and renewables have gained market share. This has affected metropolitan areas in the eastern and western interior. Charleston, West Virginia, Cumberland, Maryland, and Beckley, West Virginia, all three falling in the bottom quartile of the rankings, are examples of metropolitan areas feeling the ill effects of declining coal production. Additionally, communities reliant on commodity agriculture have struggled in the face of unseasonal flooding and the U.S.-China trade war that has limited agricultural exports to China.

## **Structural Characteristics**

Key characteristics separating top-performing metropolitan areas from their colleagues are structural. Metropolitan areas with leading research universities and four-year colleges embedded within the regional business milieu recorded exemplary economic gains, even after adjusting for other determinants. Research universities become ever more critical to metropolitan performance as their fundamental output—knowledge—is central to an economy driven by innovative endeavors.<sup>3</sup> The best create substantial talent, particularly in STEM fields; license their IP to established firms or startups, and business engagement by consulting and sharing tacit information. One measure of universities and colleges' importance to economic growth is the share of employees with a bachelor's degree or higher at firms 5 or less years old, or what is referred to as young firm knowledge intensity elsewhere in this report.

Several metropolitan areas with research universities—critical components of their metropolitan area's innovation ecosystem—were among the Most Dynamic Metropolitans' leaders. These include Stanford, a uniquely entrepreneurial institution assisting in driving the San Jose metropolitan area; the University of Texas-Austin in the Austin metro area; the University of California, Berkeley and the University of California, San Francisco in the San Francisco metro area; the University of Washington in Seattle; Brigham Young University in Provo-Orem; Vanderbilt University in Nashville; the University of Colorado-Boulder; Colorado State University in Fort Collins; the University of Arkansas-Fayetteville in Northwest Arkansas; North Carolina State University in Raleigh and University of California at Santa Cruz. Among others, these universities had faculty engaged in the commercialization of their research and founded companies that led to job creation. Much of their impact was in technology-based industries additionally, human capital assists in attracting knowledge-intensive firms.

Metropolitan areas with a culture of entrepreneurship supported by numerous public and private groups are among the overall leaders and improved several others' performance. A measure of entrepreneurship and scale-up success, the share of total employment represented by firms five years of age or fewer, is included in our metrics for Most Dynamic Metropolitans. While it should not be a surprise that metros scoring high on this measure performed well in our index since it is among the metrics, the relationships are intertwined and seemingly causal in nature. By examining other measures of economic performance such as job growth and gains in real GDP, they are closely correlated with metros with a high percentage of total employment at young firms. Only two metros out of the top 30 and 16 out of the top 100 have a young-firm share below the mean of all metropolitan areas. Metropolitan areas that support entrepreneurs and small businesses in expanding are more dynamic and resilient in the face of structural change. Incubators, accelerators, and various spaces that provide services to new or recently established firms are essential.

Access to early-stage financings such as crowdfunding, angel investors and venture capital fuel startup activity and scale-up. Angel investors, and venture capitalists in particular, provide not mere money but smart money. In other words, they have expertise in management, product development and marketing. Moreover, they offer partnering opportunities. San Francisco and San Jose have access to the densest venture capital located on Sand Hill Road. However, rising venture capital availability in Austin, Denver, Provo, Seattle and Raleigh is spurring growth. Local angel investors are assisting smaller areas such as Bend, Oregon, and various other Most Dynamic Metropolitans.

Metropolitan areas with a portfolio approach to economic development seem to perform better, in a fashion similar to that found for micropolitan areas. From our Most Dynamic Micropolitans, **"Communities actively recruiting firms from other locations to relocate or start local establishments appear to achieve stronger economic growth. Also,** their approach supports indigenous expansion and startup activity. Communities with economic development officials actively engaged in scanning for best practices in regulatory and tax policies, technical assistance, strategies for workforce development and business retention and recruitment exhibit stronger economic growth."<sup>4</sup>

Silicon Valley, California







Arts, cultural, recreational and lifestyle amenities provide substantial advantages

Metropolitan areas with multiple community colleges developing curriculum geared to local employers' requirements seem to gain a competitive advantage. Employers must adjust to alternations in skill requirements within their industries to be competitive. Community colleges that quickly adapt curriculum lend support to their students in obtaining local employment. Apprenticeship programs established at local firms linked to the curriculum at community colleges and certification programs assist retention of graduates.

Smaller metropolitan areas located closest to large metropolitan areas that are exhibiting stronger economic growth share in that prosperity. Stronger economic linkages create a spillover effect. Access to sophisticated business services, adjacent angel and venture capital availability, supplychain relationships and numerous other interactions explain the advantages of proximity. On average over the period of the study, large metropolitan areas (population of one million or above) recorded higher economic advances than smaller ones.

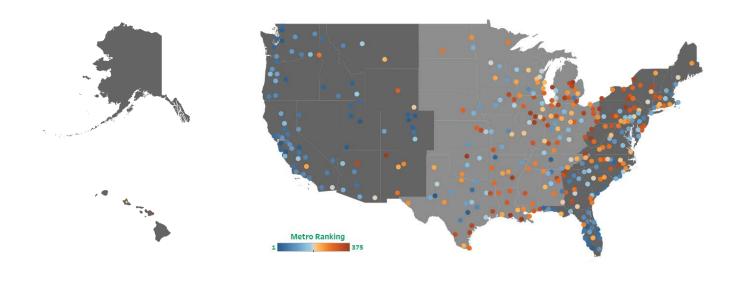
The arts, cultural, recreational and lifestyle amenities provide substantial advantages for metropolitan areas; particularly, research points toward smaller communities that emphasize them early during the growth cycle reach a 750,000-population threshold sooner. They retain more residents who might otherwise seek career opportunities in other locations. Quality of place also includes good K-12 education, access to quality health care, low crime rates, and various other factors. A growing body of evidence suggests a correlation between arts and culture and economic success.

**Figure 2** displays a map of all 375 metropolitans areas included in our analysis. The map color-codes the metropolitan areas from dark blue (highest rank) to burgundy (lowest rank); white represents the median metropolitan area—ranked 188th. The pattern of colored dots is explained by the combination of the industry and structural characteristics highlighted above. Only five metropolitan areas are in the Heartland are in the top 30 and featured herein; an additional 11 metropolitan areas located in the Heartland are found in the top 100. If they represented their share among all metros in the nation, there should be 39.

**Figure 3** displays the large metropolitan areas (population one million or above) represented by their distribution among all metros. Most striking is that only one large metro is in the bottom quartile of performers, while 25 are in the top quartile (their proportionate number would be just eight). The Heartland has four large metros in the top quartile. Only one of the 13 large Western metros is not in the top quartile.

**Figure 4** displays the medium metropolitan areas (population 500,000 to 999,999) represented by their distribution among all metros. The Heartland has two out of 19 medium metros in the top quartile, while the Western metros have 9 out of 12 medium metros in it.

Despite a substantially lower number of small metros in the West than in the Heartland, the West had 27 among in the top quartile, while the Heartland had just eight. **See Figure 5** 



#### Figure 2: All Metropolitan Areas

Figure 3: Large Metropolitan Areas (Population of 1 Million or More)

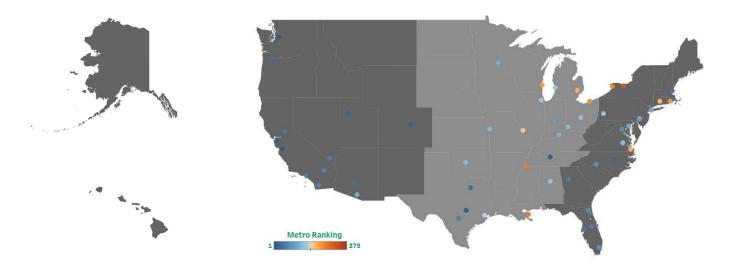
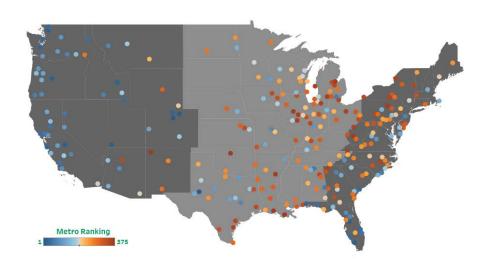


Figure 4: Medium Metropolitan Areas (Population Between 500,000 and 999,999)



Figure 5: Small Metropolitan Areas (Population Less Than 500,000)





## TOP 30 METROPOLITAN AREAS

1. Midland, Texas
2. San Jose-Sunnyvale-Santa Clara, California
3. Provo-Orem, Utah 37
4. Boulder, Colorado41
5. San Francisco-Oakland-Hayward, California
6. Austin-Round Rock, Texas
7. Seattle-Tacoma-Bellevue, Washington 52
8. Greeley, Colorado 56
9. Naples-Immokalee-Marco Island, Florida . 59
10. St. George, Utah 62
11. The Villages, Florida65
12. Bend-Redmond, Oregon 68
13. Madera, California
14. Mount Vernon-Anacortes, Washington 74
15. Nashville-Davidson-Murfreesboro- Franklin, Tennessee

16. Boise City, Idaho 80
17. Idaho Falls, Idaho
18. Salt Lake City, Utah
19. Denver-Aurora-Lakewood, Colorado 89
20. Fort Collins, Colorado
21. Fayetteville-Springdale-Rogers, Arkansas- Missouri
22. Santa Cruz-Watsonville, California 98
23. Olympia-Tumwater, Washington 101
24. Raleigh, North Carolina 103
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27. Cape Coral-Fort Myers, Florida 109
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30. Punta Gorda, Florida 115

## 1. MIDLAND, TEXAS

Midland, Texas, retained the top position in Most Dynamic Metropolitans. The rapid expansion in shale oil over the past five years has propelled Midland's economy. As the capital of the Permian Basin—the most productive structure in the nation—it has reaped the benefits of rapidly expanding exploration in its own geography; and as the provider of technology and oil service support firms to communities throughout the region. The high proportion of overall economic activity attributable to oil exploration and support functions drives the regional economy. For example, real GDP in Midland rose 23.5 percent in 2018—the highest in the nation. Real GDP growth in the five years through 2018 exceeded all metropolitan areas in the nation.

The global economic fallout from COVID-19, and the associated drop in oil demand, precipitated a collapse in oil prices. Declining Permian exploration and \$40 barrel prices create an abrupt contraction in Midlands economic activity. Nevertheless, the long-term prospects for the region remain favorable.<sup>5</sup> The breakeven oil price in the Permian has fallen to around \$47 per barrel, with some analysts claiming it may be as low as \$33—the lowest in the nation.<sup>6</sup>

Across all of the nine metrics in our evaluation, Midland's performance was more than three standard deviation units above the metropolitan average, this includes the decline in jobs between August 2019 and August 2020. Being more than three standard deviations above the average metro is an extremely rare occurrence as compared to the second-ranked metro which is two standard deviations above the mean. Midland was first in four metric categories and in the top ten in two other categories.

The Permian Basin produces one in five barrels of oil in the U.S.<sup>7</sup> There is no community whose fortunes are more closely tied to oil exploration and production activity than the Tall City.<sup>8</sup> Oil and gas extraction and support activities for mining are 73 and 57 times, respectively, more important to Midland than for the U.S. overall. Just a decade ago, the Permian Basin was in remission and Midland's economic prospects diminished. The synchronized development of horizontal drilling technology and advances in hydraulic fracturing techniques, merged with some of the thickest shale deposits in the U.S., have changed Midland's wealth and the communities of the Permian Basin. Many believe that production will eclipse the Ghawar field in Saudi Arabia, the world's largest, within three years. Even today, Permian oil production exceeds all 14 members of OPEC other than Saudi Arabia and Iraq.<sup>9</sup> Some Midland officials have warned that the boom-and-bust cycles of the past could return. Drilling activity is dependent upon the price of oil. COVID-19 contraction has been severe, but the ripple effects across the economy have been less onerous than in the past. However, the ultimate economic fallout rate will be determined by how long oil prices remain below \$50 per barrel.

The multiplier effect of oil exploration and production on the supply chain induces a positive influence on ancillary services. Average annual earnings in oil exploration in Midland was \$96,000 in 2018—double the non-energy wage. High wages are paid to professionals at petroleum engineering service firms like BCCK Engineering, Dawson Geophysical Company and Hy-Bon Engineering because they possess specialized knowledge on the latest technological advances in geologic sciences used in the fracking industry. Specialized software firms, such as Enertia Software, support oil exploration and are part of the activity's dense cluster.<sup>10</sup>

Oil, ranching, agriculture, healthcare and transportation remain economic pillars; however, focused efforts on diversifying its economy are underway in Midland. Strengthening its entrepreneurial ecosystem is a key focus. Midland improved its positioning to second on the young firm share of total private sector employment. This is up six spots from the previous year. It would behoove Midland to devote time to boost the knowledge intensity of startups in the area.



Midland, Texas



Role models that can serve as mentors are critical and Midland has a compelling female entrepreneurial-success story to tell. Susie Hitchcock Hall, the founder and owner of Susie's South Forty Confections, makes custom candies, and is well known for its Texas Pecan Toffee that ships around the world.<sup>11</sup> The Roden Entrepreneurial Development Center at the University of Texas, Permian Basin (UTPB) promotes building entrepreneurial skills. The program helps students develop a standard frame of reference to commercialize innovative ideas best described as "Real Business" projects.<sup>12</sup> UTPB has a business plan competition called the Entrepreneurial Challenge. After qualification, entrants have access to pertinent resources like one-on-one business coaching. Midland also supports black businesses with the African American Chamber of Entrepreneurs, Inc.

An emergent economic engine in Midland is in Aerospace. The Spaceport Business Park, located at the renamed Midland International Air & Space Port, claims to be the first located at a major commercial airport. The facility is FAA-approved, which is attractive to satellite firms, whether in the testing, producing, or launching segments. It has attracted a technology firm and another that manufactures and launches satellites.<sup>13</sup> The Midland Altitude Chamber Complex supports the testing and qualification of space and pressure suits, payloads, components and trains new flight crews. RBC | Sargent Aerospace & Defense, a leading provider of precision-engineered customized components and aftermarket aviation services, has expanded in the metro area and several other aerospace suppliers are establishing operations.

Employment in Midland in August 2020 was 13.7 percent lower than in August 2019 reflecting the impact of reduced energy activity. Mining, logging and construction jobs were down 28 percent over the same period. However, efforts are underway to mitigate the effects. Consolidation in the industry is taking place to restructure and survive the coronavirus pandemic. Pioneer Natural Resources, the area's largest employer, purchased Parsley Energy Inc. in an all-stock deal.<sup>14</sup> A number of transactions are taking place, which should improve firms' capital structure and cut operating costs. The Clean Economy Jobs and Innovation Act passed the House of Representatives. It aims to support research and development funding and finance clean energy initiatives such as the 1Pointfive carbon sequestration project proposed by Oxy Low Carbon Ventures and Rusheen Capital Management.<sup>15</sup> The Midland Development Corporation developed a creative small business assistance program to help local businesses survive the pandemic. Businesses can apply for up to \$25,000 in loans that can qualify for forgiveness.<sup>16</sup>

The Midland Chamber of Commerce understands that quality of place is a business and talent attraction and retention tool. Midland has a vibrant art and cultural scene that attracts and retains skilled workers and their families. The Midland Performing Arts Center is regarded as one of the best for a community of its size and is home to the Midland Symphony Orchestra.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	182,603
Overall Rank	1	1	
Young Firm Employment Share	2	2	20.5%
Young Firm Knowledge Intensity	364	259	14.6%
Per-Capita Personal Income	1	1	\$114,786
Medium-Term Average Annual Pay Growth	205	153	7.8%
Short-Term Average Annual Pay Growth	45	34	2.8%
Medium-Term GDP Growth	1	1	94.4%
Short-Term GDP Growth	1	1	23.5%
Medium-Term Job Growth	8	5	20.8%
Short-Term Job Growth	2	2	4.9%
Short-Term Job Momentum	364	259	-13.7%



## 2. SAN JOSE-SUNNYVALE-SANTA CLARA, CALIFORNIA

San Jose-Sunnyvale-Santa Clara, California remained second overall and first among large metropolitan areas. Silicon Valley has seen its rate of job creation diminish over the past several years. Still, high wages associated with the high-tech workforce provides an enormous multiplier impact on the economy. Additionally, wealth creation is spurred by stock options' generous use at its startups and mature tech firms. The San Jose metro area led the nation in gains in real average annual pay between 2014 and 2019. An estimated 29.6 percent of employment in the metro area are high-tech industries—nearly six times greater than the U.S. average.<sup>17</sup> COVID-19 in 2020 is adversely impacting its economy with foreign travel restrictions that are devasting the service industry that is dependent on leisure visitors. Along with San Francisco, the San Jose metro has the strongest ties to Asia and, in particular, China. However, high-tech employment is down just 2.1 percent from February 2020.

The metro area is the global capital of innovation. The unique combination of leading research universities focused on commercialization, engineering acumen and pioneering in the life sciences, extensive risk capital, dense business networks aligned with a risk-taking and entrepreneurial culture to fuel an innovation-driven economy.<sup>18</sup> Its IT hardware discoveries are legendary, but its recent innovation breakthroughs are in the softer side of technology including: AI, machine learning, cloud computing, data processing and hosting services, web design, social media, blockchain technology, autonomous vehicles and advances in medical science that are keeping the region on an expansion path over the long haul.<sup>19</sup>



Palm Trees in San Jose, California San Jose ranks among the top performers across several metrics. In addition to being first in medium-term average annual pay growth, it leads the nation in the knowledge intensity at young firms with 39.6 percent of employees with a bachelor's degree or higher. San Jose is second on two metrics and in the top five on two others in our analysis. San Jose's per capita income is forth in the nation. An astonishing 26 percent of San Jose households earn more than \$200,000 annually and 39 percent earn \$150,000 or above.<sup>20</sup>

The high-skilled workforce fuels, and is fueled by, the symbiotic relationship that exists with the broad employment category of professional, scientific and technical services, the largest category in the San Jose metro. Between 2014 and 2019, professional, scientific and technical services added 28,200 jobs. Other information services created 19,200 jobs from 2014 to 2019, the most of any metro in the nation, and the preponderance was in cloud computing. One rapidly growing startup in this space is Cohesity, Inc.; the firm quadrupled its global employees in 2018.<sup>21</sup> Even traditional communications equipment makers are entering this market with Broadsoft, a communications software firm, acquired by Cisco for \$1.9 billion in late 2017.<sup>22</sup>

The travel bans and restrictions on reopening business attributable to COVID-19 had a devastating ripple effect throughout the region's economy.<sup>23</sup> More than 150,000 jobs were lost between March and April and less than half of those jobs have been recovered. Employment in August 2020 was 8.3 percent lower than in August 2019. The unemployment rate rose from an extremely low 2.5 percent in February to 12.0 percent in April. It declined to 7.4 percent in August. However, job postings remained high at 93,841 in September, according to Emsi. The number of passengers screened by TSA in the metropolitan area fell from 496,163 in February to just 126,395 in September, a 74.6 percent decline.<sup>24</sup>





San Jose's unique innovation ecosystem and the ability to pivot to new growth sources will cause a rapid recovery. For example, venture capital investment in health is accelerating. Stanford is a bedrock of Silicon Valley's high-quality university research and commercialization with a unique breed of entrepreneurial undergraduates, graduate students and faculty fueling its economy. San Jose State University has one of the top-ranked computer science programs in the country courtesy of major tech firms' investments.

Tech stalwarts Alphabet, Apple, Cisco, Facebook, Hewlett-Packard, Intel and Oracle invest a high share of their revenues back into R&D in an attempt to keep ahead of the newly emerging competition that might disrupt their current lines of business. Further, they invest in early-stage firms (captive venture capitalists (VCs) that they may later acquire to develop a new product or service offering. Some might argue this practice stifles the growth of future competitors. The U.S. Department of Justice feels this is the case.

Many employees of large tech firms go on to establish their enterprises, underpinning an entrepreneurial culture. A disproportionate share of these tech entrepreneurs were foreign-born. Studies performed by Joint Venture Silicon Valley indicate that approximately 40 percent of tech firms had at least one foreign-born founder. Research and development (R&D), technology transfer, patenting, angel investing, venture capital, management talent, initial public offerings (IPOs), mergers and acquisitions (M&A) and market capitalization are the capstones of the regional innovation ecosystem.<sup>25</sup>

Most Sand Hill road-based VCs do not want to fly to the center of the U.S. It is hard to argue with this perspective as the density of knowledge creation in Silicon Valley provides numerous opportunities for investing, and they can manage a broader portfolio of firms. Data from the Census Bureau for 2019 show that 53 percent of the region's 25 or older residents have graduated from college. A remarkable 25 percent hold an advanced degree, contrasted to only 13 percent in the U.S. population overall. Venture capital funding became even more concentrated in Silicon Valley and the surrounding region in 2018. Silicon Valley and San Francisco venture capital investments dropped to \$42 billion (\$18 billion in Silicon Valley) in 2019, representing 40 percent of all venture placements in the nation.<sup>26</sup> However, early-stage angel investing declined substantially in 2019, indicating that the next generation of tech firms may not evolve at the same pace.

The friction generated by the scale of economic activity in a dense peninsula is causing the centrifugal forces to limit future growth. Silicon Valley has not added new housing units at a pace fast enough to house the new jobs. Perhaps the current COVID-19 retrenchment will provide an opportunity to close this housing gap. Residents fear that more housing will lead to even-greater congestion problems. Because housing costs are beginning to outstrip compensation gains for many workers, Silicon Valley had a net domestic migration of negative 26,000 in 2019. What has become a challenge for Silicon Valley is now becoming an opportunity for non-coastal sections of the country with lower housing costs, especially given the ability to work remotely. Expect San Jose to see its ranking drop in future years.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	1,990,660
Overall Rank	2	1	
Young Firm Employment Share	95	11	12.7%
Young Firm Knowledge Intensity	1	1	39.6%
Per-Capita Personal Income	4	1	\$76,523
Medium-Term Average Annual Pay Growth	1	1	19.9%
Short-Term Average Annual Pay Growth	251	42	1.2%
Medium-Term GDP Growth	5	1	49.4%
Short-Term GDP Growth	2	1	10.1%
Medium-Term Job Growth	56	17	13.8%
Short-Term Job Growth	96	22	1.8%
Short-Term Job Momentum	281	36	-8.3%

#### 3. PROVO-OREM, UTAH

The Provo-Orem, Utah economy has gone from strength to strength over the past decade by leveraging local assets to create opportunity. It outperformed every other mid-sized region on our index by a wide margin. It came very close to usurping the San Jose-Sunnyvale-Santa Clara region's hold on the second-place berth this year. The region's phenomenal technology sector growth has driven up both wages and GDP, and provided opportunities for the graduates from Brigham Young University (BYU). The STEM focus and the entrepreneurial culture at BYU and the broader Provo-Orem region help explain the large role young firms play in the local economy. Young firms provide more than 18 percent of jobs, the largest share among mid-sized regions on our index. This momentum carried the Provo-Orem region through the initial six-months of the COVID-19 pandemic; it is the only metro in the top five that managed to grow employment between August 2019 and August 2020.

The Provo metro is at the southern point of Utah's "Silicon Slopes," which has Salt Lake City at its center and then sweeps north through Ogden-Clearfield. Its key technology clusters are software publishers, semiconductor manufacturing, and computer systems design. These deeply rooted clusters continue to generate new opportunities for nascent firms through a vibrant startup culture and a willingness among successful founders to continue to invest locally. The list of locally grown success stories is long. Qualtrics International, a customer survey software provider, founded in Provo, was acquired by SAP for \$8 billion.<sup>27</sup> Domo was founded in 2010 by a BYU graduate and went public in 2018.<sup>28</sup> Omniture, an online marketing and web analytics firm founded in Orem, is another example. It was acquired by Adobe in 2009, attracting the software multinational to the region. While venture capital is still concentrated on the east and west coasts, the homegrown Utah pool of capital fosters new waves of successful firms.

The region supports fledgling tech firms through its tech incubators like Startup DoJo, Boom Startup and Camp 4 group.<sup>29</sup> Provo has several local angel and venture capital investors but attracts Silicon Valley venture capital investment as well. The National Federation of Independent Businesses ranked Provo second in the nation, after Austin, as a location to start a business.<sup>30</sup> This dynamic startup environment helped Provo claim sixth place nationally for the proportion of total jobs at young firms, first among mid-sized metros.

#### PROVO-OREM, UTAH



Brigham Young University campus

These impressive tech industry gains have had significant spillover effects across the economy. Only five metropolitan areas had faster real GDP growth than Provo during 2019, creating an opportunity for the skilled regional workforce. No mid-sized metro added jobs faster than the Provo-Orem region over the past five years, and the competitive labor market has helped drive up average annual pay between 2014 and 2019, so that only the San Jose metro bested its pace over that period. These wage gains, in turn, have fueled overall consumption and housing gains.

Another result of this sizzling economy has been a steady stream of new residents moving into the Provo-Orem metro. The region's population increased by more than 120,000 people between 2010 and 2019, with a quarter of that growth attributable to a combination of domestic and international in-migration.

Advanced manufacturing is also important to the regional economy. IM Flash Technologies, a subsidiary of Micros since late 2019, is located in Lehi and produces 20 percent of the world's microchips. It is also a prominent player in nanotechnology.<sup>31</sup> Firms like Boeing, Blend Tech, Klune Industries and Wavetronics also produce in the region.

Brigham Young University is central to the success of the metro area. BYU has expanded its student base and is creating more entrepreneurial STEM graduates. BYU was fourth in the nation among universities commercializing intellectual property through starting new firms or licensing the technology to existing ones.<sup>32</sup> The presence of a young, educated population is a draw for firms looking to hire trained talent, and the family-focused work culture can help retain employees that seek worklife balance over maximum possible salaries. Utah County has the youngest median age in the country at 26.1 and millennials comprise 30 percent of its labor force while baby boomers represent just 12 percent.



Based in Orem, Utah Valley University (UVU) has a history as a vocational school. It maintains its ties to workforce training through its continuing education programs. Recently, UVU launched the Live and Work in UT program to help Utah residents who are either unemployed or underemployed and seeking short-term training for high-demand jobs. The program is funded by federal CARES act dollars in response to the COVID-19 pandemic and provided at no cost to students.

Like many regions with sizeable student populations, there are concerns about the pandemic's impact on the census count and future federal funding.<sup>33</sup> Students' absence on campus also affects many firms that serve that population and depend on their spending. The region's demographic profile suggests the pandemic may have less dire health consequences for the local and student population, allowing a swifter reopening than elsewhere in the country.

The rapid population and economic growth in and around the Provo metro have also fueled real estate development and construction. In addition to new housing, several major construction projects have been underway in recent years. In Orem, new retail continued to open in the University Place development.<sup>34</sup> Adobe has been building Phase 2 of their Lehi campus, which broke ground in 2018. The four-story office building will provide an additional 160,000 square feet for the firm and incorporates 1,600 solar panels and other sustainable features. The building was due to open in 2020 and was being finalized when the pandemic hit.<sup>35</sup>

As Provo continues to develop its high-tech hub and foster local entrepreneurship, it will begin to experience more of the challenges faced by established tech hubs. Strong housing demand has pushed up median home and rental prices, and the region is changing the zoning rules to address the issue.<sup>36</sup> The area will need to maintain its house pricing, commute time and quality of life advantages, by focusing on a sustainable approach to development, broadening their transportation mode options and reducing congestion. Overall, the region is well positioned to emerge strongly from the pandemic.



Aerial view of Provo-Orem area

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	648,252
Overall Rank	3	1	
Young Firm Employment Share	6	1	18.3%
Young Firm Knowledge Intensity	44	11	25.8%
Per-Capita Personal Income	352	50	\$39,526
Medium-Term Average Annual Pay Growth	2	1	18.2%
Short-Term Average Annual Pay Growth	3	1	5.8%
Medium-Term GDP Growth	9	1	36.4%
Short-Term GDP Growth	6	1	7.1%
Medium-Term Job Growth	2	1	27.7%
Short-Term Job Growth	7	2	3.5%
Short-Term Job Momentum	10	2	0.4%

#### 4. BOULDER, COLORADO

Continuing its strong run, Boulder, in northern Colorado, ranks fourth by capitalizing on its stellar research and technology hub. Impressive local increases in average annual pay in the short- and medium-term ranked first among small metros, and its 2018 to 2019 performance on this measure beat every other metro on our index. Although the University of Colorado Boulder continues to deepen the pool of skilled graduates, the tightening labor market was beginning to slow the region's growth. The university's presence combined with the entrepreneurial culture, an attractive setting, and easy access to outdoor recreation means that Boulder will remain an appealing location for skilled workers and firms seeking to employ their talent.

The University of Colorado Boulder employs 7,000 faculty and staff and had a Fall 2019 enrollment of 34,500 students. With top tier programs in aerospace engineering sciences, physics, and geology, the university trains the technical workforce for the engineering and research laboratories in the Boulder region and beyond. The institution attracts significant research funding to the region, \$614 million in the fiscal year 2020, from national funders like the National Science Foundation and the National Institutes of Health.<sup>37</sup>

The students also contribute to the local economy through their consumption. However, their absence in the Spring semester of 2020 during the implemented stay at home restriction in response to the COVID-19 pandemic took a toll on local retail, leisure and hospitality spending. The pandemic's broader economic impact is likely to affect the university's public funding as the State budget is adjusted to reflect the new demands on limited public funds. Hopefully, these effects are temporary, as the need for scientists and engineers educated by the school will remain high.

Boulder's performance in the index is built upon its innovation culture. Local institutions and researchers produced the fourth-most technology patents per capita from 2000 to 2015.<sup>38</sup> In addition to the academics at the University of Colorado Boulder, the region is also home to multiple national research labs and other notable not-for-profit, tech-centric facilities. Among these are the National Ecological Observatory Network, the National Center for Atmospheric Research and related University Corporation for Atmospheric Research, the National Oceanic and Atmospheric Administration's Earth System Research Laboratory, and the National Institute of Standards and Technology Laboratories. The technology sector in Boulder is vast, encompassing high profile hightech firms like IBM, which has had a presence in Boulder for decades and is one of the metro's largest employers.<sup>39</sup> Google has offices in Boulder. In 2019 the search giant partnered with the City of Boulder to develop an eligibility calculator for residents interested in identifying public programs for which they might qualify.<sup>40</sup> It also includes high-tech manufacturers such as Medtronic, a global leader in medical device development and manufacturing that employs more than 1,500 people in the metro.<sup>41</sup> Boulder is home to Ball Aerospace, a subsidiary of the jar-maker Ball Corporation that undertakes advanced manufacturing projects in fields ranging from national security to space exploration; the aerospace firm began a major fixed capital expansion in 2017.42 Like much of Boulder's aerospace industry, the firm continued to add headcount even as the economy was affected by the COVID-19 pandemic. Blue Canyon Technologies, another aerospace firm in the Boulder region added jobs in 2020 after opening their new facility in Lafayette.43

These high-tech sectors have attracted and retained a large pool of highly skilled workers, whose rising incomes contributed to the Boulder metro's high ranking on our index. The per capita personal income in the region placed 11th in the nation, driven in part by the tightening labor market. The labor force's share, providing professional, scientific and technical services was 19 percent in 2019, much higher than typical for the United States. Many of these employees were able to switch to remote work when required in response to the pandemic. More businesses in Boulder continued operating and the impact of job losses was smaller than in regions more dependent on industries based on in-person interaction or discretionary consumer spending as a result.

Boulder is also an entrepreneurial hub, building on the innovations generated at its research institutions. It ranks sixth for its new firms' knowledge intensity, and young firms employ approximately 15 percent of the workforce. The research has yielded several vibrant startups that contribute to the metro's high-tech economy. Email management platform creator SendGrid, founded and incubated in Boulder, went public in 2017 and was acquired by Twillo in 2019 for \$3 billion.<sup>44</sup>

Downtown streets in Boulder, Colorado



A 2019 study estimated that through its technology transfer successes, the University of Boulder had an economic impact of \$1.2 billion on the Colorado economy between 2014 and 2018.<sup>45</sup>

Like the rest of Colorado, the Boulder economy benefits from its natural beauty and varied recreational opportunities. Boulder County is home to Longs Peak, one of the tallest mountains in the country. Boulder's easy access to world-class outdoor amenities, including mountain biking, road biking, hiking, climbing, kayaking and skiing offers a high quality of life to those who want to get out into nature.<sup>46</sup> The Boulder region was identified as the best place to live by U.S. News & World Report in 2020, with its high quality of life a major factor in its rating.<sup>47</sup>

Over the past few decades, Boulder's success and its expanding workforce have brought with them a tight housing market and skyrocketing housing costs. As in other successful tech hubs where new builds are limited, these housing costs create real hardships for those whose salaries are not keeping pace with the high-skill sectors. The June 2020 announcement that Japanese biopharmaceutical company AGC Biologics will invest \$100 million in their new facility on the former AstraZeneca site in Boulder indicates that the region remains attractive to firms looking to do highvalue manufacturing.<sup>48</sup> The desirable location, quality of life and career opportunities will maintain the region's luster for those who can afford it. Public investments to expand lower-cost housing options are necessary to allow more access to Boulder's opportunities.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	326,196
Overall Rank	4	2	
Young Firm Employment Share	43	32	14.8%
Young Firm Knowledge Intensity	6	2	33.1%
Per-Capita Personal Income	11	6	\$63,876
Medium-Term Average Annual Pay Growth	3	1	18.1%
Short-Term Average Annual Pay Growth	1	1	7.7%
Medium-Term GDP Growth	39	21	21.3%
Short-Term GDP Growth	139	90	2.9%
Medium-Term Job Growth	68	34	12.8%
Short-Term Job Growth	79	49	2.0%
Short-Term Job Momentum	209	157	-6.2%

#### 5. SAN FRANCISCO-OAKLAND-HAYWARD, CALIFORNIA

San Francisco-Oakland-Hayward, California's economy continued to advance at a strong pace just before COVID-19. The San Francisco metro area improved four places to fifth overall and second among large metropolitan areas in 2020. The San Francisco metro area was wellpositioned to exploit the movement towards the digital economy. As a Superstar city, it has been attracting technical talent from across the globe. The broad region is second in the nation with 52 percent of the 25 and overpopulation with a bachelor's degree or higher.<sup>49</sup> One measure of San Francisco's diversity is exhibited by 33 percent of its population being foreign-born. Because of restrictions on foreign travel and business activity to control the spread of COVID-19, the impact on leisure, restaurants, retail and other related sectors has been devastating. Short-term job momentum fell to 343rd in the nation, an employment decline of 11.2 percent.

The San Francisco metropolitan economy is huge, with 4.7 million people in 2019 and an employment base of 2.4 million, extending across the San Francisco Bay to Oakland and the East Bay. Despite the high cost of living in the Bay Area, San Francisco has the sixth-highest per capita personal income. San Francisco was sixth in the growth of average annual pay adjusted for inflation in 2019. The high-tech service sector has been fueling its growth over the last five years. It has excelled in mobile applications, social media, cloud-based software, internet publishing, gaming and digital media.<sup>50</sup> Across our indicators, the San Francisco metro area was in the top 10 in three and had three others in the top 20.

More so than in Silicon Valley, young firms turning into unicorns fueled its recent growth. The majority of jobs created are in the tech area as startups scale into unicorns—Airbnb, Dropbox, Yelp and Zynga (market capitalization of at least \$1 billion) developed in the city's and region's unique entrepreneurial ecosystem. Several more firms have joined the list of unicorns in 2020. However, software and digital tech giants such as Salesforce, Oracle, Facebook and Uber expanded at a prodigious rate in recent years, supporting overall job gains. High-wage jobs in the professional, scientific and technical services rose by 75 percent over the last decade, only exceeded by Austin among metropolitan areas with a population exceeding one million residents. Before the pandemic, unemployment fell below 3 percent in the metro area.



Golden Gate Bridge at sunset



There is scant evidence that early-stage equity investors pulled back in 2019 or 2020. The San Francisco metro area has passed Silicon Valley in the availability of venture capital and angel investing. Venture capital investments in San Francisco totaled \$24 billion in 2019, a decline of \$7 billion from 2018. However, the 2018 figure was skewed by the \$12.8 billion investment made by Altria Group into JUUL Labs—a manufacturer of electronic cigarettes. The number of mega-deals (above \$100 million) in 2019 increased to 55 from 37 in 2018. The top megadeals in 2019 included Flexport, JUUL Labs, DoorDash, Chime and Uber Technologies.<sup>51</sup> Further encouraging was San Francisco area based-firms received \$301 million in angel investment in 2019, exceeding Silicon Valley firms. The initial public (IPO) window remained open in 2019, with 12 San Francisco area companies going public that employed over 50,000. Through September 2020, venture-backed IPOs had a valuation of \$60.3 billion.<sup>52</sup>

Between September 2019 and September 2020, the San Francisco metro area witnessed a 34.6 percent decline in leisure and hospitality employment. Food services and drinking places accounted for two-thirds of the loss in jobs and hotels and motels, along with arts, entertainment and recreation, accounted for the bulk of the remainder.<sup>53</sup> TSA air passengers screened hit 2.1 million in February 2020, falling to 95,000 in April, and only recovered to 532,000 by September.<sup>54</sup> Due to the ability to work remotely, employment at tech firms is down just 2.1 percent since February 2020 helping to minimize the broader economic impact. On the flip-side, lower-wage service employees are feeling pain as their enhanced unemployment insurance benefits ran out.

San Francisco's technology startup scene is a unique one. The young firm knowledge intensity is second in the nation, with 35.6 percent of employees at young firms with a bachelor's degree or above. The region's ability to start, scaleup and take companies public at high valuations is remarkable. The urgent need to find therapeutic treatments and vaccines against COVID-19 has energized its thriving life science sector. The South San Francisco's biomedical cluster is an important core of the region's economy. Genentech—the biotech pioneer—employs 8,800 in the region and was an early collaborator with 23andMe, a genetic testing leader for people desiring to know their ancestry.<sup>55</sup> The research prowess of the University of California, San Francisco, is a critical component of the biomedical cluster. The East Bay has witnessed an expansion in biotech, with companies such as 10X Genomics calling the area home.

Tesla experienced a shutdown in production due to COVID-19 and announced it chose the Austin area for a new battery plant. Nevertheless, the company's expansion into the East Bay is reshaping the area's economic structure. Tesla achieved an important milestone by increasing production in four straight quarters.<sup>56</sup> Tesla is adding jobs faster than any employer on the Oakland side of the Bay in Hawthorne, and employment stands slightly above 10,000. Tesla's expansion is attracting automotive suppliers, tech support firms and automation and robotics investment.

The University of California, Berkeley, is an important member of the San Francisco metro area's tech-focused economy. Not only is it an elite research university with many capable entrepreneurial students and faculty, but it provides much of the technical talent for the area's firms. Since 2009, Berkeley undergraduates have founded 1,089 companies, including Cloudera, Zynga, Auris Surgical Robotics, Machine Zone and Sapphire Energy.<sup>57</sup> In addition to innovation leadership, Berkeley is an anchor for diversity and community for the region. Berkeley employs 25,000 people, tying the University of California, San Francisco, for the metro's top employer.

UC-Berkeley campus





Given its dynamic entrepreneurial ecosystem, San Francisco's economy should recover over the medium term. However, COVID-19 is reshaping where firms should locate their operations and the downsizing of needs for office and commercial space will hurt construction. Prior to COVID-19, congestion, high housing prices and transportation challenges caused the metro area to experience out-migration. During 2018 and 2019, 54,000 more people left the San Francisco metro area than moved in from other states. San Francisco had defied centrifugal forces by generating everhigher levels of productivity from its innovation density and talent.<sup>58</sup> Given the restrictions on reopening, local economists expect that the jobs lost won't be recovered until the end of 2022.<sup>59</sup>

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	4,731,803
Overall Rank	5	2	
Young Firm Employment Share	40	5	14.9%
Young Firm Knowledge Intensity	2	2	35.6%
Per-Capita Personal Income	6	2	\$70,413
Medium-Term Average Annual Pay Growth	14	3	14.5%
Short-Term Average Annual Pay Growth	6	1	4.5%
Medium-Term GDP Growth	11	2	31.5%
Short-Term GDP Growth	16	6	5.1%
Medium-Term Job Growth	44	13	14.6
Short-Term Job Growth	83	18	2.0%
Short-Term Job Momentum	343	48	-11.2%

# 6. AUSTIN-ROUND ROCK, TEXAS

While Austin-Round Rock, Texas, may not measure up to the Greater San Francisco Bay area on tech talent or its entrepreneurial ecosystem's knowledge intensity, the area is becoming a beacon for both with its lower costs and more business-friendly environment. The Austin metro area improved to sixth overall—improving two places—and was third among large metro areas. Austin has received international recognition as an economic development success story; more professional economic developers look to it for strategic planning advice than Silicon Valley.<sup>60</sup> COVID-19 has dealt the Austin metro area economy a blow, but it may be positioned to recover and accelerate faster than any other major metro. After an initial hit, Austin's employment has recovered more of its February pre-pandemic peak than any other large metro.<sup>61</sup> Lower housing prices and less restrictive COVID regulations have attracted remote workers from the West Coast.

Austin is creating a unique environment where IT and other tech firms can be started and scaled. Austin's expanding tech diversity with cybersecurity and transportation technology added to its advanced manufacturing, creative and digital media technology, cleantech, life sciences, and data management, among others.<sup>62</sup> It's multifaceted innovation environment combines creative sectors such as film, music, gaming and food with startups and major tech players. Austin has 115,000 employed in hightech industries and the share it represents of total employment is more than double that for the U.S.<sup>63</sup> Another gauge of Austin's remarkable performance can be seen in Austin being first in four of our metrics and four others where it was in the top five among large metro areas.

The University of Texas-Austin (UT-Austin) has created talent for the region for many decades. Still, due to its exponential growth, the university is contributing proportionally more than ever before. UT-Austin is one of the most difficult public universities in the nation to gain acceptance,<sup>64</sup> with 51,500 students enrolled in the 2019-2020 academic year. Over 47 percent of Austin's residents 25 or older have attained at least a bachelor's degree and a high proportion of those degrees are in the STEM fields.

The addition of digital content and technology services in Austin has made it more dynamic and less susceptible to IT hardware volatility. This added diversity in technology permits Austin to spark growth at different points of the business cycle. Dell Computer remains the largest privatesector employer at 13,000, but it may relinquish that position with Apple's planned expansion. Other major hardware employers include Samsung Austin Semiconductor, Apple Computer, IBM, NXP Semiconductors, Applied Materials and Flextronics. These tech anchor firms are a major attraction for other high-tech service providers. The multiplier for these IT manufacturers can reach four to five—meaning another three to four people owe their jobs to them.

Austin provides an environment conducive for recruiting firms to relocate or expand. Austin consistently ranks as one of the best business climates with low taxes and an advantageous regulatory environment while enjoying housing prices that are one-third of those in Silicon Valley or San Francisco.<sup>65</sup> Making it further attractive to firms, Austin has a dense concentration of talent. In July, Tesla announced that it would build its next Gigafactory just north of Austin. It wasn't a coincidence that this decision was made as Elon Musk was fighting to reopen his plant in the East Bay of San Francisco after COVID restrictions were imposed. The announcement's scope is breathtaking; Tesla plans to construct a 4-5 million-square-foot facility costing \$1.1 billion to manufacture the new Cybertruck and Model Y vehicles and ultimately employ nearly 5,000.<sup>66</sup>

Austin's economy contracted in the early stages of the pandemic, with unemployment reaching 12.7 percent in April. Leisure and hospitality jobs are still down 33,500 or 24.4 percent from February; however, it had recovered 33,800 of those lost by September. Unemployment fell to just 5.3 percent in August. Compared to its pre-pandemic peak, employment in September was down just 2.5 percent—the best performance of any large metro in the nation.<sup>67</sup> Financial jobs rose by 11.1 percent while professional services recorded a gain of 4.2 percent since February. One economic forecasting firm revised its projections to show that Austin is expected to have the highest rate of job growth in the nation between 2019 and 2024.<sup>68</sup>



Paddleboarders enjoying Lady Bird Lake At 11.1 percent, STEM occupations in Austin are substantially more concentrated than for the U.S. overall 6.3 percent, placing it sixth among large metros in the nation.<sup>69</sup> Software developers had the most jobs (13,250), followed by sales representatives for technical and scientific products (10,010). However, based on a measure of concentration, location quotient (LQ), Material scientists are 5.25 times more important to Austin than the U.S. overall. Within Austin's STEM occupations, Architectural & engineering managers had the highest median salary at \$152,560, closely followed by Computer & IS Managers at \$145,420.

UT-Austin plays a critical role in the region's entrepreneurial ecosystem. The University of Texas was third in the nation for patents issued in 2018 and many firms are founded based upon its intellectual property. Patents issued in 2019 rose 19.2 percent to 4,753 in the metro area.<sup>70</sup> Austin's innovation comes from a variety of new firms. The Austin Chamber of Commerce and many other local institutions support startup and scaleup efforts. Austin was 27th among all metropolitan areas in the share of total jobs that young firms represent and 57th on their knowledge intensity. There are 90 incubators, accelerators, maker and co-working spaces and 6,500 high-tech companies; in 2019, there were 163 VC deals and \$1.8 billion in VC investments.

Cece's Veggie Co., a local food manufacturing business carrying reinvented veggie products, was named a 2018 Austin A-List winner. Being named an Austin A-List winner provides a morale and confidence boost to team members and provides an opportunity to celebrate Austin's booming startup scene with other similarly sized startups like fellow winners, Rhythm Superfoods and Austin Eastciders.<sup>71</sup>

Austin is already Apple's largest location outside of Silicon Valley but based upon its updated plan for a new campus; it is slated to become the largest employer in the region when it opens in 2022. Apple will invest \$1.0 billion, including a recently announced hotel, with 5,000 jobs in the first phase. It could ultimately house 15,000.<sup>72</sup> Apple's current workforce in Austin reached 7,000 and the planned expansion will add high-paying positions in research and development, engineering, finance, operations, sales and customer support. Oracle is opening a cloud services facility and its first accelerator in the U.S.



Austin, Texas

Austin's job creation engine is more than high-tech. Through medical research, healthcare, travel and tourism, recreation, arts, culture, and a thriving music scene, you have a recipe for a diverse, stable long-term growth model for Austin. SouthXSouthwest (SXSW) is among the largest entertainment and talking head events in the nation, and even though the in-person event was postponed due to COVID-19, it is slated to return. Professional and business services add another sector to the diversity of Austin's economy.

In recent years, Austin has experienced one of the highest net in-migration rates in the nation and it rose to 46,600 in 2019 from 35,100 in 2018. Based upon real estate information, this seems to have accelerated in 2020. The Austin Board of Realtors reports that in August, home sales rose 12.9 percent and the median home price 11.3 percent from the same month in 2019.<sup>73</sup> There are rising concerns on the inclusiveness of this growth and calls for new policy approaches for sustainability.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	2,227,083
Overall Rank	6	3	
Young Firm Employment Share	27	1	15.5%
Young Firm Knowledge Intensity	57	24	24.7%
Per-Capita Personal Income	44	20	\$54,673
Medium-Term Average Annual Pay Growth	25	4	12.9%
Short-Term Average Annual Pay Growth	9	2	4.1%
Medium-Term GDP Growth	13	3	30.3%
Short-Term GDP Growth	13	5	5.6%
Medium-Term Job Growth	7	1	20.9%
Short-Term Job Growth	5	1	3.8%
Short-Term Job Momentum	54	1	-2.5%

# 7. SEATTLE-TACOMA-BELLEVUE, WASHINGTON

The Seattle-Tacoma-Bellevue, Washington metro rises through the ranks to seventh as its robust innovation economy adds jobs and economic output. The COVID-19 pandemic hit Seattle earlier than many of its peers. While major online retailer Amazon has gone from strength to strength as more consumers moved to shopping online, the local economy has trimmed jobs overall. Short-term job momentum for the region reflects significant reductions in jobs between August 2019 and August 2020. However, with 11 Fortune 500 firms, top tech employers, a world-renowned public research university, an educated workforce, an emerging biotech cluster, outstanding small-firm growth, a hub of international trade and a tourism cluster, Seattle's economic fundamentals remain strong.

Seattle is a global leader in software development and services. Software publishing is 14.4 times more concentrated in Seattle than for the nation. The digital services of cloud computing, artificial intelligence and data visualization have been driving job creation. Amazon Web Services was a pioneer in cloud computing services and is facing competition from peers. Under the leadership of CEO Satya Nadella, Microsoft has had a resurgence, becoming a leader in cloud computing and reviving its market capitalization.

As more consumers choose to purchase online, a shift accelerated by the pandemic, e-retailers like Amazon benefit. Non-store retailers—where Amazon's jobs are captured—added 27,400 jobs over the five-year period 2015-2019. Broadening its economic base, Seattle is also the headquarters of firms as varied as Starbucks, Costco, Nordstrom, Alaska Air Group and Weyerhaeuser. Thanks to this broad industrial base, economic output has risen steadily, placing the region 7th for GDP growth between 2017 and 2018.

The region's educated workforce is a major asset; 44 percent of adults 25-years old and above hold at least a bachelor's degree and 17 percent hold an advanced degree. Firms have been hiring this talent at a rapid clip. Regional employers added just under 38,000 jobs in professional, scientific and technical services from 2013 to 2018. Competition for these highly skilled professionals has helped drive up wages, and annual average pay increased by more than 17.3 percent between 2014 and 2019, the fourth highest pace in the nation.

Seattle skyline



Aerospace, a central pillar of the Seattle-Tacoma-Bellevue economy, hit headwinds. The drop in air travel due to the COVID-19 pandemic created uncertainty at airlines worldwide, reducing their willingness to commit to purchasing new airplanes. This comes on top of the grounding of the Boeing 737 Max in 2019 for safety concerns. Boeing announced it will reduce its workforce by 15 percent. In September 2020, the aerospace manufacturer announced that they would be consolidating their 787 Dreamliner production at their South Carolina plant, moving the line out of Everett by the end of 2021. The pandemic has hit international travel particularly hard, reducing the main market for Dreamliners.<sup>74</sup> Aerospace products and parts manufacturing are 16.3 times more important to Seattle's employment base than for the nation overall. These changes are likely to have ripple effects in the local aerospace supply chain. However, production for other Boeing models will remain in Everett.

The Seattle metro area is surrounded by areas of natural beauty to complement its urban amenities. In 2019, Seattle and Kings county attracted 41.9 million visitors, with approximately half staying overnight.<sup>75</sup> Pierce County, home to Mt. Rainier, had 9.2 million visitors in 2019.<sup>76</sup> The leisure and hospitality sector employed 209,000 people in 2019. The absence of office workers from downtown areas has affected the restaurants and bars and arts and recreation. Amazon announced that its headquarters workers could continue to work remotely into the first quarter of 2021, and other firms are likely to follow suit.

Seattle has extensive support ecosystems in place for entrepreneurs. Startup Seattle serves the community with industry meetups, garage co-working spaces and assists in the navigation of available resources. Seattle's incubators and accelerators include the Accelerator Corp., Entrepreneur's Organization, the Founder Institute, Microsoft Ventures and Techstars. Additionally, it has several venture capital firms. The third quarter, 2020 data shows that 57 deals received financing with \$1.2 billion committed, placing Seattle fifth in the amount raised.<sup>77</sup> Feeding into that entrepreneurial ecosystem is the world-class University of Washington (UW) which was named the fourth-best public university in the United States on the Times Higher Education ranking of the World University Rankings 2021. It educates 24,000 students in STEM subjects alone across its three campuses and contributes to the Seattle region's high-quality workforce.<sup>78</sup>

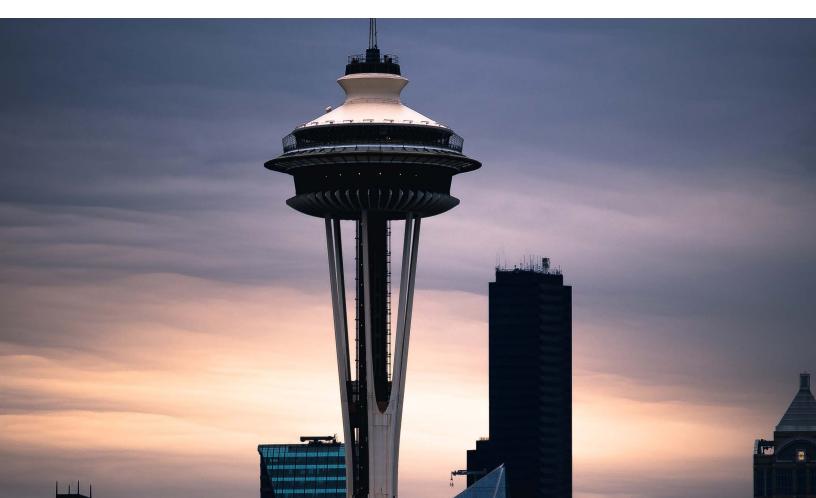
The school is a leading research institution and attracted \$1.58 billion in research funding from all sources in 2019.<sup>79</sup> It excels in medical and life sciences research, and Reuters ranked it as the most innovative public in the nation in 2019.<sup>80</sup> Seattle has many other assets in its medical research and life science cluster. The Fred Hutchinson Cancer Research Center, the Allen Institute for Brain Science and the Institute for Systems Biology are important anchors.

The City of Seattle has taken concrete action to address income inequality and housing affordability. They have permitted extensive construction, including high-and mid-rise residential buildings, to increase the total housing supply, adding more than 10,000 apartments and condominiums per year.<sup>81</sup> The pace of new permits has slowed as developers project slower job gains. The City of Seattle's higher minimum wage signals that the city values all its residents and does not appear to have reduced the number of positions in low-wage occupations, although some evidence shows that hours have been reduced for some workers.<sup>82</sup> The effect of the new "JumpStart Seattle" payroll tax on large firm employees earning \$150,000 and more remains to be seen, especially when combined with the impact of increased acceptance of remote work among the large technology firms.

Employment in the Seattle-Tacoma-Bellevue region is dominated by established firms, with young firms providing only 10.6 percent of regional jobs. However, these young firms are more likely to be knowledge-based than in most of Seattle's peers, given the region's high rank on our young firm knowledge intensity metric. Having a pool of new firms with the potential to grow significantly bodes well for Seattle's continuing economic evolution.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	3,979,845
Overall Rank	7	4	
Young Firm Employment Share	173	26	10.6%
Young Firm Knowledge Intensity	10	7	30.8%
Per-Capita Personal Income	13	4	\$61,567
Medium-Term Average Annual Pay Growth	4	2	17.3%
Short-Term Average Annual Pay Growth	16	3	3.8%
Medium-Term GDP Growth	15	4	27.6%
Short-Term GDP Growth	7	2	6.9%
Medium-Term Job Growth	51	15	14.1%
Short-Term Job Growth	56	13	2.3%
Short-Term Job Momentum	248	28	-7.5%

Space Needle at sunset



#### 8. GREELEY, COLORADO

**Greeley, Colorado, has experienced rapid economic output growth in recent years, thanks to its location atop rich oil and gas deposits.** Weld County, which makes up the Greeley metro, produces 87 percent of Colorado's crude oil.<sup>83</sup> The region is also home to major agricultural production and food manufacturing facilities. Together, these industries have helped Greeley expand its economic output by 55.4 percent between 2013 and 2018, the nation's fourth highest jump. The trend created jobs in Greeley, and the region ranked eighth for the number of jobs created between 2018 and 2019.

Greeley officially created an Oil and Gas Department in 2019, with the stated aim of "providing clarity for the oil and gas industry" and to serve as a resource for residents. It is part of Weld County asserting local control over permitting, regulating and enforcing land use regulations on natural resource extraction.<sup>84</sup> The Colorado Petroleum Council supported the creation of the new department. In contrast to other Colorado communities who have used a new state law to develop more stringent restrictions on drilling, Weld County affirms its plans to facilitate development, placing it in potential conflict with State regulators.<sup>85</sup> The mining, quarrying, and oil and gas extraction industry's value to Weld County has been significant, accounting for 35 percent of economic output in 2018. The industry also produced opportunities in the supply chain, with logistics and manufacturing firms benefiting from the need for drilling equipment. The drop in oil prices during the 2020 pandemic reduced the desire for new drilling, and the slowdown affected employment and output in the industry and its supply chain. In terms of employment, the oil and gas extraction industry is 8.2 times as concentrated in Greeley than the national average. Still, support activities for oil and gas extraction are 22.2 times more concentrated and a larger cause for concern.

The Greeley metro has long been an agricultural hub for Colorado, with a large dairy industry. Grain, sugar beets and beef cattle are also major agricultural outputs thanks to the climate and ready availability of cattle feed. Weld County is the largest milk producer in the state and has leveraged this output to move up the value chain.<sup>86</sup> Leprino Foods, a manufacturer of mozzarella cheese and other dairy products, built a plant in Weld County that employs more than 500 workers.<sup>87</sup> Greeley also hosts JBS USA, a major pork and beef processor that operates a beef meatpacking plant in the region that employs more than 3,000 people. J.M. Smucker, known for its peanut butter and jelly, opened its \$340 million plant in Weld County in July 2019 and has broken ground on a new phase, due to open in 2022. The current plant produces J.M. Smucker's popular pre-made PB&J, the Uncrustable, and employs 250 people.<sup>88</sup>

Outside of food production are firms such as Vestas, which produces wind turbine parts in the metro. After beginning metro operations in 2007 with an initial intent to hire 450 people, employment rose to nearly 2,300 ten years later.<sup>89</sup> The company has partnered with a local school district to offer apprenticeships in its manufacturing plant, helping to build students' skills and building connections for the future to help them compete for graduates in a tight labor market.<sup>90</sup> Helping expand that workforce is the University of Northern Colorado, which educates 13,000 undergraduate and graduate students on its campus in Greeley. One challenge is the low per capita personal income compared to neighboring regions, which at \$44,000 ranked 240 out of the 375 regions assessed. The average annual pay is rising, up by 3.2 percent between 2018 and 2019. Training, attracting and retaining skilled workers who can staff and found new high-tech manufacturing and service firms will be essential for future vibrancy.

The Greeley population has grown in recent years, swelling by approximately 71,500 people between 2010 and 2019, a 28 percent increase. New residents are drawn from nearby Denver, Fort Collins, and Boulder, where housing costs have risen significantly, making Greeley's affordable prices more attractive. More than two-thirds of the population rise can be attributed to people moving to the region, amounting to 49,000 new residents over the period. This has fueled some residential construction, with 4,400 permits issued in 2019. The market easily absorbs these new builds; Weld County's vacancy rate in late 2019 was just 3.45 percent.<sup>91</sup> In addition to housing, new residents help support growth in the retail, dining and entertainment sectors and increase demand for healthcare.



Greeley, Colorado - an hour and a half away from the Rocky Mountain National Park Young firms are an important component of a regional economy, and one in seven employees in Greeley works for a young firm. The University of Northern Colorado and the East Colorado Small Business Development Center have developed the BizHub Collaborative, a virtual incubator that provides business counseling to entrepreneurs in the metro and surrounding areas.<sup>92</sup> The university connection may help raise the knowledge-intensity of the firms founded. Currently, Greeley ranks in the bottom 20 percent of metros on this measure, limiting the potential for these new firms to develop into a new economic engine.

After a stretch of phenomenal growth in output, lower oil prices have slowed drilling in Weld County. The effect on firms in the extraction industry supply chain is likely to limit the Greeley economy in the short term. Greeley's neighbors' more tech-focused economies may recover faster and continue to offer new fuel to Greeley via new residents commuting and create housing, retail and dining demand once the pandemic restrictions are lifted. The expanded food manufacturing sector and professional services jobs will also be assets for the local economy.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	324,492
Overall Rank	8	3	
Young Firm Employment Share	44	33	14.7%
Young Firm Knowledge Intensity	305	203	18.3%
Per-Capita Personal Income	240	151	\$44,099
Medium-Term Average Annual Pay Growth	31	26	12.6%
Short-Term Average Annual Pay Growth	26	20	3.2%
Medium-Term GDP Growth	4	4	55.4%
Short-Term GDP Growth	4	3	9.4%
Medium-Term Job Growth	39	18	15.4%
Short-Term Job Growth	8	5	3.5%
Short-Term Job Momentum	196	149	-5.9%

#### 9. NAPLES-IMMOKALEE-MARCO ISLAND, FLORIDA

The 2020 rankings show a Naples-Immokalee-Marco Island, Florida metro (NIM) that has recovered from Hurricane Irma in 2017 and red tides (toxic algae blooms) in 2018 and 2019. The metro has jumped from 18th to ninth as its short-term growth measures have reflected the economic recovery. The biggest question for NIM going forward is how it will navigate the COVID-19 epidemic, but economic diversification efforts noted in last year's report will continue to help the metro in the face of tourism uncertainty.

As alluded to above, the metro has seen significant improvement in shortterm GDP and employment growth to coincide with strong medium-term growth; the short-term GDP growth ranking jumped from 228th to 55th, and the short-term job growth ranking jumped from 336th to 22nd. Again, this is largely due to the metro's recovery from Hurricane Irma and red tides. While the metro generally sees weak average annual pay growth, which is likely due to the metro's reliance on the low-paying tourism industry, NIM's short-term average annual pay growth ranking climbed from 291st to 223rd. This may be the result of economic diversification efforts.

NIM's pre-COVID economic recovery and success are clearly reflected in its tourism numbers; the metro saw its highest visitor numbers on record in 2019 when tourism had an economic impact of \$2.3 billion.<sup>93 94</sup> Unfortunately, COVID-19 has the potential to reverse the tourism trend, and monthly data show that it has already done so. Data for January-July 2020 indicate that year-to-date visitation was down 31 percent from 2019. Data from the Florida Department of Economic Opportunity indicate that April's leisure and hospitality employment fell from 31,700 in 2019 to 19,900 in 2020.

Naples, Florida



Looking ahead, June's 2020 data indicates that leisure and hospitality employment is slowly trending toward the pre-pandemic level.<sup>95</sup> The metro's August 2019-August 2020 overall job growth also reflects a community that has gained back much of its initial job loss, as its four percent decline was 118th-best among all metros. It is difficult to predict the pandemic's future path and individuals' responses to that path as the metro moves into the cooler winter months representing its peak tourism period. However, an interest in getting away from the country's large and cold Midwest and Northeast population centers may attract large numbers of families and retirees, assuming travel restrictions are not reimplemented. The ability to explore unique natural offerings in Big Cypress National Preserve and Ten Thousand Islands National Wildlife Refuge will likely be appealing after months spent mostly inside their homes.

Last year's report highlighted how tourism does play an outsized role in NIM's economy, but does not completely dominate. The metro has a strong agriculture industry, with 29,000 acres of orange groves.<sup>96</sup> Additionally, NIM has shown an ability to produce startups reflected in its fifth-place ranking in the young firm employment share and 80th-place ranking in young firm knowledge intensity. If we look at average performance across those two entrepreneurship measures, NIM is eighth-best in the nation.

The community effort behind NIM's entrepreneurship success has continued during the pandemic. The Naples Accelerator announced a partnership with Florida Gulf Coast University's School of Entrepreneurship to expand the accelerator's capacity and entrepreneur support offerings.<sup>97</sup> Even before the partnership, the 2014-founded accelerator had assisted multiple successful NIM startups. One of those is MyLegalEdge, which was started by minority entrepreneurs and lawyer Carol Thompson-Finn to provide various legal forms to individuals in all 50 states.

The NIM entrepreneurial ecosystem also benefits from multiple venture capital and angel investor funds based in the metro. One of those angel investor funds is Tamiami Angel Funds in Naples, which has invested in a few of the metro's startups; Catalyst OrthoScience, a Naples-based medical device startup, is a Tamiami-portfolio company that has already brought



Beachsid living a shoulder replacement system to market.<sup>98</sup> NIM's investment funds have continued to raise capital during the pandemic<sup>99</sup> and could serve as a key driver of economic diversification moving forward.

One concern that was highlighted in last year's report is whether NIM can remain an affordable option for startup founders and their employees, given that the metro's increasing popularity among wealthy retirees and other wealthy individuals is driving up the cost of living and limiting housing options. It is unclear how the COVID-19 pandemic will impact the popularity trend. Still, the above-noted growth in investment funds reflects a double-edged sword, given that the metro's wealthy retirees and secondhome owners are creating and investing in these funds.

While not a flawless indicator of the longer-term trend, real estate data indicate that the housing market is robust. September sales are up significantly from the previous year and median home prices climbed from \$402,000 to \$474,000.<sup>100</sup> Thus, the wealthy individuals who are backing local startups are still moving into the area, but their influence on the cost of living may mean NIM only makes sense for startups in high-wage industries.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	384,902
Overall Rank	9	4	
Young Firm Employment Share	5	5	18.7%
Young Firm Knowledge Intensity	80	32	23.8%
Per-Capita Personal Income	3	2	\$84,955
Medium-Term Average Annual Pay Growth	313	221	5.2%
Short-Term Average Annual Pay Growth	223	151	1.3%
Medium-Term GDP Growth	24	15	24.0%
Short-Term GDP Growth	55	34	4.1%
Medium-Term Job Growth	11	6	19.7%
Short-Term Job Growth	22	14	2.9%
Short-Term Job Momentum	118	94	-4.2%

#### **10. ST. GEORGE, UTAH**

The home of Zion National Park is again in the top ten, although it fell four spots from 2019. A top-ten ranking is impressive for a metro so dependent on tourism, as COVID-19 has generally had a severe impact on tourism-dependent metros, but news reports and data reflect the fact that St. George's extensive outdoor adventure offerings have only made traveling to the area more appealing at a time when social distancing is so essential.

St. George's four-spot drop in the rankings is mostly due to slowing growth, which is not surprising given its blistering pace over the past several years. While St. George's ranking worsened in every short-term growth measure we track, its most severe decline was in short-term average annual pay growth – the metro fell from 118th to 243rd.

The slowing in pay growth is likely the result of continued tourism growth, as tourism jobs generally do not have large salaries. The metro's tourism growth is reflected in the visitor counts at Zion National Park, the area's biggest attraction. From 2010 to 2019, annual park visitation nearly doubled. From 2018 to 2019 – the growth period used for short-term pay growth – park visitation grew 4 percent, and the park jumped from the seventh-most-visited national park to the fourth-most-visited.<sup>101 102</sup>

Tourism data also reflect how the metro has managed to minimize the coronavirus's economic impact and rank 37th in August 2019-August 2020 employment growth. Although visitor numbers in March through May were significantly below their normal levels, due to coronavirus-related travel and economic restriction, visitation quickly rebounded, and the park posted its best September visitor numbers on record.<sup>103</sup>

As was noted in the 2019 Most Dynamic Metros report, the region has benefited from exceptional population growth; from 2010 to 2019, it had the fifth-fastest population growth among all metros.<sup>104</sup> While much of the population growth is due to an influx of retirees who find the outdoor opportunities and warm, dry climate appealing, there has also been an influx of younger adults attracted by a relatively affordable and outdoororiented community.<sup>105</sup> The growth in retirees has incentivized many health and retail industries to grow to accommodate the expanded population segment, and the increase in non-retirees has provided a strong labor and idea base for St. George's growing businesses and startup ecosystem.

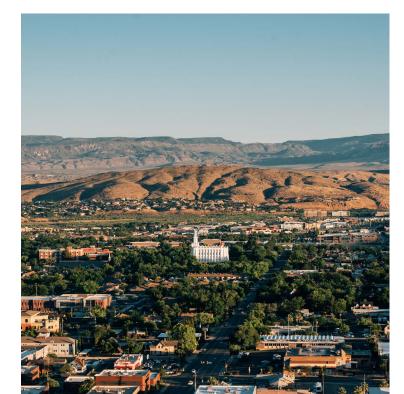


A few of St. George's growing aerospace companies were highlighted in the 2019 iteration of this report, and while the industry has been severely impacted by COVID-19, one company that was a pre-pandemic industry standout remains a standout during the pandemic. SkyWest was lauded before the pandemic for its focus on providing regional flights for national airlines instead of directly contracting with airports, which significantly reduces its fixed costs. The reduced fixed costs, in addition to the utilization of Payroll Support Program funds provisioned in the CARES Act, have resulted in SkyWest posting a profit for the third quarter of 2020 while other airlines continued to post sizeable losses.<sup>106</sup>

Regarding St. George's startup ecosystem, the metro had another strong showing in the young firm employment share rankings, placing eighth. St. George did not fare as well in the young firm knowledge intensity rankings, placing 180th. However, Tech Ridge, the planned tech entrepreneurshipfocused mixed-use development that will feature condominiums, office space, and numerous outdoor activity offerings, should improve that ranking; multiple young tech firms have already agreed to move to Tech Ridge.

The development of Tech Ridge may incidentally be more timely now than it was before the COVID-19 pandemic. That is because thousands of corporate and tech employees worldwide are being given the opportunity to permanently work remotely Plus, COVID-19 seems to have shifted people's preferences toward outdoor activities and areas with low population density. Combining those two post-COVID changes may result in an accelerated population influx for the already fast-growing metro. Tech Ridge's developers seem to have recognized the incidental timeliness and have pivoted by ensuring the development's housing offerings have comfortable office spaces.<sup>107</sup>

St. George, Utah



If there is a component of St. George's outlook that is particularly concerning, it is the current coronavirus case trend. Cases have been quickly increasing in recent weeks, and the metro's major medical center has exceeded its ICU capacity and had to expand. The trend is particularly concerning, given the metro's outsized retiree population. Regardless of the reason behind the upward case trend, the absence of a trend reversal will produce significant health and economic impacts and may reduce the community's appeal to prospective residents moving forward.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	177,556
Overall Rank	10	5	
Young Firm Employment Share	8	6	18.2%
Young Firm Knowledge Intensity	180	92	21.0%
Per-Capita Personal Income	360	257	\$38,273
Medium-Term Average Annual Pay Growth	29	24	12.6%
Short-Term Average Annual Pay Growth	243	164	1.2%
Medium-Term GDP Growth	7	6	38.6%
Short-Term GDP Growth	31	20	4.5%
Medium-Term Job Growth	1	1	29.2%
Short-Term Job Growth	10	7	3.4%
Short-Term Job Momentum	37	32	-1.7%

In March, the Census Bureau named The Villages the fastest-growing metro, by population, of the last decade. The retirement community-centered metro grew by 40 percent from 2010 to 2019, outpacing the next-fastest-growing metro by nine percentage points.<sup>108</sup> As the retiree population has grown, so has the suite of amenities and services catering to the population group. As a result, The Villages comes in at 11th in the 2020 Most Dynamic Metropolitans rankings.

The addition of new retiree-oriented businesses keeps The Villages in the top 10 for young firm employment share. The metro performed even better in job growth, placing third in medium-term job growth, first in short-term job growth, and 12th in short-term job momentum. The Villages and the 11 metros above it were the nation's only metros that did not lose jobs from August 2019 to August 2020. The Villages' lowest ranking was again in medium-term average annual pay, but it did improve from 347th to 324th due to stronger growth over the past few years.

The Villages retirement community, from which the metro is named, began development in the 1980s when Harold Schwartz and H. Gary Morse combined lessons from other retirement communities to form a community that could provide all the retirees' healthcare needs and recreational interests in one area. While most of the retirement community falls within the metro's borders, parts of the community fall in two counties outside the metro.<sup>109</sup> The retirement community's success has been attributed to its affordability, extensive list of recreation offerings, including 50 golf courses and numerous softball fields, tennis courts, pickle ball courts, and swimming pools, and comprehensive retail and healthcare facilities. The suite of offerings has earned The Villages the nickname "Disney World for Adults."<sup>110</sup>

While the retirement community has been a success for decades, the baby boomer generation's retirement accelerated its growth. Individuals 65 and older make up 58 percent of the metro's 132,420 residents<sup>111</sup> and have been the reason for the region's decade-long population growth tear. To meet the demands of this growing population group, the metro has been in constant expansion. The COVID-19 pandemic may have complicated expansion efforts, but did not slow the community's developers. Plans were announced in August for a new hospital campus, more golf courses, and an expansion of the charter school created for community employees' children.<sup>112</sup> In the backdrop of such announcements, houses continue to be built and sold.

Regarding COVID-19, navigating this pandemic is a difficult task for a retirement community, and even more daunting when the retirement community is so large it is declared a metropolitan area. So far, the metro has done well, given that such a large portion of its population is considered at-risk; at the time of writing, the metro has 66 deaths per 100,000 people,<sup>113</sup> while the nation as a whole is at 73.<sup>114</sup> There are concerns that the Northern Hemisphere will see a significant case spike as it moves into the winter months, but that may be less of a concern in The Villages, where winters are milder.

If The Villages can continue to navigate the pandemic successfully, it may be looked at as a model retirement community even more than it already has been. The completeness of the community's consumption and amenity offerings, in addition to the relatively low population density, means that community members can remain isolated from the rest of Florida and minimize the spread if positive tests occur. The Villages' biggest risk may be its employees, but the fact that those employees' children can attend school in The Villages adds another degree of separation from outside areas.

Continued coronavirus success in The Villages is also likely to increase appeal for prospective residents. Many current and soon-to-be retirees in the nation's largest cities have needed to spend most of their time at home to protect themselves from the virus. Safety could be the amenity that convinces those individuals to move to the community.

While the coronavirus pandemic could actually create short-term upside potential for The Villages, it is still unclear what happens to the community long term. The baby boomers are notably larger than the next few generations to retire, and retirement communities are being developed across the country to compete for the temporary increase in demand. What happens when the number of retirees begins to decline? Will The Villages' offerings be competitive with the newest communities, or will preference shift away from golf and retail options and toward a perk The Villages cannot provide, such as a mountain view or hiking opportunities? Can the metro and the employees serving its retirees transition smoothly, or will they transition back to a rural community, this time with thousands of abandoned houses and pickleball fields?



Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	132,420
Overall Rank	11	6	
Young Firm Employment Share	10	7	17.8%
Young Firm Knowledge Intensity	163	79	21.5%
Per-Capita Personal Income	202	121	\$45,689
Medium-Term Average Annual Pay Growth	324	228	4.9%
Short-Term Average Annual Pay Growth	52	41	2.8%
Medium-Term GDP Growth	75	43	17.6%
Short-Term GDP Growth	73	51	3.7%
Medium-Term Job Growth	3	2	25.7%
Short-Term Job Growth	1	1	6.1%
Short-Term Job Momentum	12	10	0.0%



# 12. BEND-REDMOND, OREGON

Bend-Redmond, Oregon is the twelfth Most Dynamic Metropolitan region and places seventh in the small metropolitan category. After years of stellar expansion, the area's economic pace has slowed. This is visible in the difference between the top tier medium-term job and GDP performance and the less exceptional one-year rankings on the same measures. The Bend metro has already sustained the velocity with which the region emerged from the great recession for an impressive stretch of time. This period has yielded a new crop of young firms that employ 17 percent of the region's workers. With a high quality of life and a scenic location that offers easy access to outdoor recreation, the region will remain attractive to newcomers and visitors.

The Cascade mountain range provides natural beauty and a wide range of outdoor sports opportunities in a picturesque setting. Mount Bachelor is a half-hour drive from Bend and offers a variety of winter sports, including 4,300 acres accessible by lift for skiing and snowboarding. Although the tourism industry was hit very hard at the beginning of the pandemic-related lockdown, the ability to enjoy winter recreation safely outdoors will be a major asset in the winter of 2020-21. Operators have restrictions in place to reduce the number of people onsite to reduce the risk to visitors.<sup>115</sup> The low rank on the short-term job momentum captures the August 2019-August 2020 reduction in employment by 9.6 percent. Leisure and tourism accounted for 15.7 percent of total jobs in the Bend-Redmond region, and the sector is a cornerstone of the local economy.

The setting and amenities that draw tourists to Bend-Redmond also draw firms and new residents. The region has experienced consistent positive net migration in recent years. New residents are drawn from Portland and other large cities in Oregon, Washington and California. The demand for housing has soared, thanks to a growing population. The Bend City Council is responding with progressive policies. The Council voted to permit the construction of duplexes and triplexes on smaller lots. This will lead to denser housing in the community and boost new construction and the attendant construction level. The residential construction sector is 3.3 times as important to the Bend-Redmond economy as to the nation as a whole. Despite the new building activity, housing costs have continued to rise in the region as demand outstrips available inventory.<sup>116</sup>



Some of the new residents creating housing demand are retirees. Beginning around 2008, Bend began witnessing a substantial increase in the 65-year-old and over population, partly to the lower cost of housing and recreational amenities available. One-fifth of residents are over the age of 65, substantially above the U.S. average. Overall, residents in their 60s are overrepresented in the region as compared to the national demographic profile. While these younger seniors are more likely to be active and looking to enjoy their retirement because they are still at higher risk during the COVID-19 pandemic, their dining and entertainment spending is likely to rebound more slowly until a vaccine or effective treatment is available.

Another cohort of new residents is highly skilled workers seeking to live closer to nature and recreation and leaving high-priced tech hubs on the West Coast. In 2019, Bend already held the distinction of leading the country with 12.1 percent of its workforce telecommuting each day.<sup>117</sup> This experience with remote workers is an asset to the region as many workers can work remotely and afford to relocate have chosen to move to scenic locations like Bend. Peer small metros around the country could learn from the Bend-Redmond region's strategies to supporting and integrating these workers into the community and benefiting from their expertise and income.

Through thoughtful, well-articulated strategic planning, led by the Economic Development for Central Oregon (EDCO), the region has evolved to include aviation/aerospace and other advanced manufacturing, automotive, biomedical, brewing, IT hardware including data centers and software. EDCO has created a unique, balanced portfolio approach to economic development in the region, including business retention, expansion and an impressive focus on startups and scaleups.<sup>118</sup>



Bend-Redmond,

EDCO has been a key collaborator for the support of the entrepreneurial community. The support services include the Central Oregon PubTalks and the Stable of Experts. FoundersPad and the Innovation Center for Entrepreneurship associated with Oregon State University-Cascades are hubs for the entrepreneurial community. The region ranked 13th for the share of employment at young firms. These firms are at risk during the lockdown, as many are not knowledge-intensive and may not operate through remote work alone.

Bend-Redmond has a small but growing high-tech sector. Most of Bend's high-tech success has been through homegrown or early-stage firms relocating rather than recruiting operations of large tech firms. New tech firms find Bend attractive due to the low cost of living, recreational amenities, and early-stage risk capital availability. The Bend Venture Conference is the largest angel conference in the West, and Bend is one of a few smaller metros that has developed a substantive network of local angel firms. Local risk capital availability is critical to nurturing firms that are innovative and disruptive in their industries.

As these innovative firms develop, they will benefit from access to graduates from local institutions. Oregon State University-Cascades offers bachelor's and master's degrees, and Central Oregon Community College, trains students in key sectors relevant to the local economy. The high quality of life will also attract new residents, expand the workforce and the network in high-tech hubs.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	197,692
Overall Rank	12	7	
Young Firm Employment Share	13	9	17.0%
Young Firm Knowledge Intensity	158	75	21.6%
Per-Capita Personal Income	99	51	\$50,590
Medium-Term Average Annual Pay Growth	146	117	9.1%
Short-Term Average Annual Pay Growth	41	31	2.9%
Medium-Term GDP Growth	6	5	44.0%
Short-Term GDP Growth	61	39	3.8%
Medium-Term Job Growth	4	3	25.3%
Short-Term Job Growth	45	26	2.4%
Short-Term Job Momentum	319	229	-9.6%

### 13. MADERA, CALIFORNIA

#### Madera, located in California's Central Valley, ranks 13th this year.

Unlike many other dynamic California metros, Madera's economy is concentrated in forestry, agriculture and tourism, with a different industry and demographic profile than the tech-focused cohort near the top of this year's index. The economy has expanded in the medium and short term, with the 8th highest growth in output among all metros in 2019 and the 14th highest growth in output between 2013 and 2018. However, Madera's economy has been affected by the COVID-19 pandemic as visitors stayed home and foreign workers were less able or willing to cross the border to help farm and harvest.

Founded around the lumber industry, the Madera forestry, fishing and hunting sector is 62 times as important to the regional economy as to the national economy. Farming is five times as important locally than nationally, benefiting from the fertile Central Valley soil.

Agriculture is a major source of exports for the region, and in 2018 agricultural products worth \$2.06 billion were cultivated in Madera. Almonds are the top crop, and farms in Madera harvested \$730 million worth in 2018. Grapes, pistachios, and milk are also important products. Industrial hemp is a new possible crop, after the federal government classified it as an agricultural commodity in the 2018 Farm Bill. Local ordinances to allow wider cultivation of industrial hemp are being discussed and developed. If approved, it could open the door to this highvalue crop, used to make Cannabidiol (CBD) oil.<sup>119</sup>





The natural beauty and access to recreation is another regional asset. The Southern entrance to Yosemite National Park is in Oakhurst within the Madera metro area, and higher numbers of visitors to the national park have helped lift the tourism industry in the region. A few miles to the southwest of the park entrance, Bass Lake offers outdoor recreation opportunities for visitors. Overall, Visit California estimates that tourism brought in \$355 million to the region in 2019, and the industry employs 4,300 people in hotels, restaurants, retail and arts, entertainment and recreation services.<sup>120</sup>

The government sector is a major employment source in Madera, representing 28 percent of non-farm jobs in 2019. The two state prisons, Central California Women's Facility and Valley State Prison, with 2,300 employees, account for a large share of the total.<sup>121</sup>

Workers in Madera were more likely to be employed at a young firm than anywhere else in the country, earning the region the top spot on our young firm employment share ranking. These firms were typically not in the knowledge economy, and the knowledge intensity of young firms in Madera was among the lowest 10 percent of metropolitan regions evaluated.

The per capita income in Madera of around \$39,500 is low relative to other metros, ranking 350 out of 375, again differentiating the metro from its peers on the California coast. Over the past five years, there have been improvements with average annual pay rising by 15 percent between 2014 and 2019. While generating a high percentage increase is easier off a low base, the pace of growth has slowed recently, so although the metro ranked 11th for medium-term performance, it only ranked 204th for the short-term growth measure.

One source of high wage, high skill job opportunities is in the healthcare sector. Children's Hospital Central California and Madera Community Hospital are major regional employers, and in 2020 Camarena Health announced they would be building a five-building campus in Madera to provide one-stop healthcare services around their existing emergency care facility.<sup>122</sup> Population growth was cited as one reason for the expansion.



Sunset over the metro The risk of large-scale wildfires is an increasing concern for Madera communities. The 2020 Creek Fire in Madera and Fresno Counties was the largest single fire incident in California's history, burning more than 350,000 acres and reducing air quality in Madera and other affected counties. The utility schedules public safety power shutoffs to reduce sparking fires on hot, dry and windy days. This creates additional challenges for businesses and households as they must function without electricity, sometimes for extended periods. Wildfire prevention, management, and mitigation is difficult and shared by many US metros.

The regional share of jobs in the professional, scientific and technical services sector is only 40 percent of the US average. This industry includes accountants and lawyers alongside engineers, computer scientists and other professionals found in the high-tech field. Diversifying the local economy – in ways that create more high skill, high wage jobs in the region to offer educated residents opportunities and attract educated migrants – will be essential to creating sustainable prosperity.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	157,327
Overall Rank	13	8	
Young Firm Employment Share	1	1	23.7%
Young Firm Knowledge Intensity	338	235	17.1%
Per-Capita Personal Income	350	249	\$39,541
Medium-Term Average Annual Pay Growth	11	8	15.0%
Short-Term Average Annual Pay Growth	204	140	1.4%
Medium-Term GDP Growth	14	10	27.6%
Short-Term GDP Growth	8	5	6.6%
Medium-Term Job Growth	96	54	10.6%
Short-Term Job Growth	63	36	2.2%
Short-Term Job Momentum	68	57	-3.0%

# **14. MOUNT VERNON-ANACORTES, WASHINGTON**

The Mount Vernon-Anacortes, Washington metro (MVA) has climbed seven spots to 14th in our 2020 rankings. The multi-faceted metro, which has strengths ranging from flower production to advanced manufacturing, again reported economic growth across multiple measures. However, there are signs that the MVA economy may have been slowed more by COVID-19 than its peers.

MVA was again above the mean in every metric we track. It performed exceptionally well in short-term and medium-term average annual pay growth, at 18th and fifth, respectively. While job growth remains an area of relative weakness for the metro, there were sizable ranking jumps in shortterm and long-term growth. Short-term job momentum, which internalizes the COVID-19 pandemic, is the one area where MVA saw a sizable ranking drop, falling from 114th to 185th. While the metro's job momentum is still above the national average, the 71-spot drop indicates that the pandemic has had more of a negative impact on MVA's growth trend than it has on many other metros.

As noted in the 2019 report, MVA has a large and rather unique agriculture industry; its share of employment is more than four times the national share.<sup>123</sup> Free-range poultry producer Draper Family Farms was the metro's largest non-hospital employer in 2018. Skagit Horticulture, a wholesale flower and gardening product producer, was not far behind.<sup>124</sup> According to the USDA's 2017 Census of Agriculture, Skagit County, which encompasses the metro, is the nation's 21st-largest producer of aquaculture products; 38th-largest producer of nursery, greenhouse, floriculture and sod plants; and 40th-largest producer of vegetables, melons, potatoes and sweet potatoes.<sup>125</sup>



Mount Vernon-Anacortes, Washington MVA's coastal communities continue to provide new economic opportunities for the metro. Dakota Creek Industries, a shipbuilder that is also a major employer for the metro, is currently delivering on a 6-boat contract with the U.S. Navy.<sup>126</sup> Anacortes boat designer Bieker Boats is designing a prototype ferry for a statewide project focused on improving ferry efficiency and speed;<sup>127</sup> the project is receiving national attention and could have applications well beyond the Washington ferry system.<sup>128</sup> If the design phase is successful, the expectation is that local boat-building firms Janicki and Jim Betts Enterprises will be involved with manufacturing the boats. This would expand the metro's already sizable advanced manufacturing employment and help sustain MVA's strong wage growth.

Looking at 2020 economic activity, there are a few reasons why MVA's short-term job momentum ranking fell 71 spots. The first is industry mix; the metro's arts, entertainment and recreation industry and retail trade industry have employment shares that are, respectively, 1.8 and 1.3 times the size of the national share, and the pandemic has significantly impacted these two industries.<sup>129</sup>

The other component influencing short-term job momentum is the statelevel response to COVID-19. WalletHub released a report on the degree of COVID-related economic and social restriction across U.S. states, and Washington was placed in the high-restriction group. The report did note that, while Washington has seen relatively high unemployment, it has also seen relatively low death rates, reflecting the pros and cons of restrictions.<sup>130</sup> It remains to be seen what will happen long term, and if states that applied earlier and more significant restrictions will come out of the pandemic more smoothly and return to full employment more quickly.

With MVA's economy slow to reopen, business owners and towns are making quick pivots to a new norm of less in-person interaction. For example, small farmers, which tend to rely heavily on farmers markets for revenue, have quickly pivoted to online sales and established contactless pick-up locations.<sup>131</sup> Similarly, an MVA tulip farm, which would normally generate most of its revenue through people driving out in March and April to tour its fields and buy flowers, quickly moved to an online sales system and virtual tours.<sup>132</sup> In Anacortes, city officials have overcome the complexities of COVID-19 to roll out city-provided fiber optic internet service, which is significantly improving connectivity for the city's residents and businesses. If MVA's economic reopening continues to move slowly or restrictions are reinstated, business pivots and fiber optic internet will reduce the economic impacts of such restrictions.<sup>133</sup>

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	129,205
Overall Rank	14	9	
Young Firm Employment Share	69	52	13.5%
Young Firm Knowledge Intensity	153	72	21.7%
Per-Capita Personal Income	123	65	\$49,267
Medium-Term Average Annual Pay Growth	5	2	16.3%
Short-Term Average Annual Pay Growth	18	14	3.7%
Medium-Term GDP Growth	12	9	30.7%
Short-Term GDP Growth	23	15	4.9%
Medium-Term Job Growth	102	59	10.0%
Short-Term Job Growth	93	56	1.8%
Short-Term Job Momentum	185	140	-5.7%



## 15. NASHVILLE-DAVIDSON-MURFREESBORO-FRANKLIN, TENNESSEE

The Nashville-Davidson-Murfreesboro-Franklin, Tennessee metropolitan area combines a dynamic entrepreneurial environment with a music and entertainment cluster to create an intangible coolness factor that aides its economic growth. The Nashville metro area improved to 15th, up 11 places from last year, and was fifth among large metros. Although Nashville doesn't have the technology concentration that Austin has, it is rising and the healthcare sector provides several high-paying jobs. Before COVID-19, job growth from 2014-2019 was 13th in the nation and fourth among large metro areas. Its high quality of life and attractive cost of living has been a talent attraction magnate. Due to its high dependence on leisure and hospitality and strong restrictions on businesses in these industries being allowed to operate, it has witnessed large job losses during COVID-19. However, employment was down just 6.9 percent in September relative to the February peak.<sup>134</sup>

Nashville's entrepreneurial ecosystem is a rare combination of "Main Street" and knowledge-intensive young firms. Young firms represent 14.2 percent of total private sector employment 57th and 28.2 percent 18th of employees working at young firms with at least a bachelor's degree. Overall, the Nashville metro area ranks 12th in the importance of young firms' activity—the highest in the Heartland.<sup>135</sup>

Nashville has invested in developing a robust small business support system. The Nashville Area Chamber of Commerce created the Business Studio as a resource organization for small firms in the broader Nashville region.<sup>136</sup> Business Studio works in the entrepreneurial space to help founders build, connect with peers and potential customers, and provide access to mentoring and inspirational support. Scale Nashville is another component of the entrepreneurial support system. It is a competitive sixmonth intensive training program comprised of three sections: 1. evaluation of the business model, 2. streamlining operations, and 3. building leadership skills.<sup>137</sup> #Nashpreneurs is a Twitter network created for and by Nashville entrepreneurs.<sup>138</sup> Nashville.gov has a program to connect business owners to technical, financial and market resources, emphasizing minority, female and veteran-owned businesses.<sup>139</sup> Essential components of its economic base include eds (education), meds (medical), auto manufacturing, logistics and supply-chain fulfillment. Nashville has one of the largest medical and health care centers in the nation anchored by Vanderbilt University Medical Center—the largest employer in the metro area at 20,000—and HCA Inc. The Greater Nashville region has 250 health care firms, 17 are publicly traded, directly and indirectly employing 250,000 while generating \$46 billion—one out of every three dollars in the region—in local economic impact.<sup>140</sup> Philips, a health technology innovator, is expanding in a downtown location.<sup>141</sup> Further aiding the health technology cluster is The Laboratories of Innovations in Global Health Technologies at Vanderbilt University.

Capacity expansion and recovering production in the auto industry have been key components of the region's success. Nissan has major operations in Smyrna—employing over 10,000 and GM—4,000 workers—has its main plant in Spring Hill.<sup>142</sup> Logistics and warehousing expansion has been a source of strength. Amazon's new operations center will deepen logistics capabilities and increase its knowledge intensiveness. The new Amazon facility has been assigned the responsibility of optimizing Amazon's disparate supply chain. Amazon has hired 1,000 employees as it embarks on making Nashville its East Coast logistics hub—ultimately hiring 5,000.<sup>143</sup> Amazon is racing to fill positions before other tech companies choose to expand in Nashville.<sup>144</sup> Facebook is reportedly considering a facility.<sup>145</sup>

Leisure and hospitality jobs in September 2020 were 24.8 percent below their September 2019 level. COVID is still harming restaurants hotels and other tourism-related sectors.<sup>146</sup> However, logistics and financial activities managed to squeak out small job gains versus a year ago. Recovering auto sales and low inventories are spurring increases in auto production at plants in the area.

Nashville recorded a positive net migration in excess of 20,000 annually for the past five years. Millennials have been flocking to the area,<sup>147</sup> and when combined with numerous local graduates, 36 percent of the population over the age of 25 holds at least a bachelor's degree. Nashville has one of the lowest education attainment gaps between African Americans—26 percent—and whites in the South.<sup>148</sup> Based upon available information, Nashville is third in the nation in relocations taking place in 2020.<sup>149</sup> This is supported by the median home price being 8.4 percent higher in August 2020 than in August 2019.

Nashville is renowned for live country music



Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	1,959,495
Overall Rank	15	5	
Young Firm Employment Share	57	6	14.2%
Young Firm Knowledge Intensity	18	10	28.2%
Per-Capita Personal Income	28	13	\$56,608
Medium-Term Average Annual Pay Growth	182	19	8.3%
Short-Term Average Annual Pay Growth	227	36	1.3%
Medium-Term GDP Growth	34	9	22.0%
Short-Term GDP Growth	48	10	4.2%
Medium-Term Job Growth	13	4	19.1%
Short-Term Job Growth	12	3	3.3%
Short-Term Job Momentum	205	24	-6.1%

#### 16. BOISE CITY, IDAHO

Boise City, Idaho, is another metro creeping up the Most Dynamic Metropolitans rankings, moving up four spots to 16th. Boise is viewed as one of the last relatively affordable western mountain cities, and that perception is leading to an influx of talent and firms. Boise's biggest question may be how to ensure currently influxes do not drive up costs and force out long-time residents.

The metro again performed generally well in growth metrics, with ranking improvement in all GDP and job growth measures. Boise City climbed from 58th to 14th in short-term job momentum, reflecting that it was one of the few metros to manage relatively stagnant job growth from August 2019 to August 2020. This was partially the result of a stable public sector in Idaho's state capital. However, the sector could shed jobs moving forward if declining tax revenues push state officials to cut payrolls. The one area where the metro did not perform as well was in average annual pay growth, dropping 25 spots to 95th in medium-term growth and dropping 197 spots to 217th in short-term growth. The latter is certainly impacting the former, and the latter may be the result of a natural slowing from the strong growth of the past few years or simply lower-paying industries creating more jobs in 2019.

Boise's picturesque landscape and significant near-downtown public land make it attractive for talent and business owners looking to attract talent. Boise gives its citizens the opportunity to access a hiking or biking trail within minutes of leaving the office, and it is a short drive to ski lifts and other major outdoor draws on the weekends. The opportunities were major contributors to Boise City having the eighth-fastest population growth of any metro from 2018 to 2019. Suppose the pandemic's impact on population dynamics aligns with what demographers are predicting. In that case, the metro's outdoor offerings and low population density may lead to even stronger population growth as those characteristics attract newly remote workers.<sup>150</sup> *The Wall Street Journal* has already highlighted Boise as one of the areas these remote workers are moving to.<sup>151</sup>

Entrepreneurs are attracted to Boise City for the same reasons as the talent. Also, the metro is an affordable place to start a business, and capital offerings are growing. The combination of talent, affordability and capital resulted in Boise City landing in 5th on Inc.'s Surge Cities list, which highlights the top communities for starting a business.<sup>152</sup>



While there are many other examples of journalists and financial analysts lauding Boise City, a recent report by Brookings questioned whether a decline in the area's anchor firms—Hewlett-Packard and Micron Technology in particular—and lackluster human capital creation would make current growth unsustainable.<sup>153</sup> However, this report was released before the coronavirus pandemic, which the metro has so far navigated well, and, as noted above, Boise City may now do even better at attracting talent than it did before. Additionally, Boise State University has worked to meet human capital demand in recent years and moved its expanded computer science program into the downtown tech district so that students could intern and job shadow across the street from their classroom.<sup>154</sup> Last year's report noted that Boise is particularly good at retaining graduates for a metro its size, and even better at retaining computer science graduates, so Boise State does not need to grow as much as other universities to see a return to its local economy.

Focusing on the Boise business community, the metro landed its first venture capital firm in 2019; early-stage investment firm StageDotO moved from Seattle to Boise and created a \$50 million fund specifically for local tech startups.<sup>155</sup> On the startup side, cloud software company Tackle.IO has received a \$7 million investment from major Silicon Valley venture capital firm Bessemer, indicating that Boise's startups are among the world's best.<sup>156</sup> Boise City performed moderately well in the 2017 young firm employment share and young firm knowledge intensity; announcements such as the two above indicate that the metro will move into elite territory when we update the metrics in future years.



Idaho State Capital, Boise One of Boise City's biggest future hurdles is one that most fast-growing metros struggle with—how to preserve affordability for long-time residents and middle-class families while maximizing the benefits of the current growth trend. There are already indications that locals fear home prices will go the way of Boulder, Colorado, and the Silicon Valley, and their concerns are legitimate.<sup>157</sup> The metro can likely grow outward to provide affordable housing at the expense of less intimacy and a longer commute. Still, those expenses start to chip away at what makes Boise City so appealing. Fortunately, the metro is coming into the early stages of this predicament at a time when there is a nationwide conversation on affordability, so it may be able to find some answers in the efforts of metros that have gone before it.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	749,202
Overall Rank	16	2	
Young Firm Employment Share	98	13	12.7%
Young Firm Knowledge Intensity	155	38	21.7%
Per-Capita Personal Income	198	34	\$45,836
Medium-Term Average Annual Pay Growth	95	11	10.2%
Short-Term Average Annual Pay Growth	217	37	1.4%
Medium-Term GDP Growth	26	5	23.9%
Short-Term GDP Growth	25	3	4.8%
Medium-Term Job Growth	6	2	22.1%
Short-Term Job Growth	6	1	3.7%
Short-Term Job Momentum	14	3	-0.1%

## 17. IDAHO FALLS, IDAHO

Idaho Falls, lies in the eastern Idaho region and ranks 17th. The region is home to an innovative national lab, a low cost of living, high quality of life, and access to outdoor recreation—a combination which makes it an attractive region for highly skilled workers. Bucking the national trend, the area managed to increase its employment by 4.5 percent between August 2019 and August 2020 despite the economic effects of the COVID-19 restrictions. With most regions contracting, this earned Idaho Falls second place on our short-term job momentum measure. This extends momentum gathered over the past five years, during which the region placed 17th among metros for job growth.

One reason for the strong performance on employment measures during the downturn is the federal laboratory's stability and a concentration in local government, which employed 5,900 people in 2019. Idaho imposed stay at home restrictions in March and began to lift them in May in phases, bolstering economic activity earlier than in many peer regions. This helped sectors like leisure, hospitality and retail, which rebounded by August.

The Idaho National Laboratory (INL) is a federal nuclear research facility operated by the Battelle Energy Alliance for the Department of Energy. The national lab researches a range of topics, including nuclear energy generation, clean energy deployment, and modernizing energy infrastructure. INL has a \$1 billion budget and has more than 5,200 employees.<sup>158</sup>

Addressing key challenges for the U.S. economy, INL's work extends beyond pure research. In October 2020, INL was awarded \$1.355 billion in cost-sharing funds by the Department of Energy for the Carbon-Free Energy project. This project aims to build small modular reactors at an INL site and generate energy for a number of municipalities in Idaho and Utah by 2029. Implementing this project offers essential research opportunities and creates economic activity in the nuclear supply chain.<sup>159</sup>

The researchers at INL also partner with academics in regional universities, for example, collaborating on a cybersecurity project with Montana State University faculty and students.<sup>160</sup> Cybersecurity is a crucial challenge facing the nations' critical energy infrastructure, and this is an area of focus for INL.

INL is being evaluated as a possible site for the Department of Energy's Versatile Test Reactor and is part of a broad coalition of six national laboratories, 19 universities and nine industry partners developing the project. A location decision is expected in late 2021, although INL will benefit from the expanded opportunities to research and test new nuclear designs even if it is not selected.

Technology transfer is another way the lab affects the local economy. Firms like Advanced Ceramic Fibers spun out of the lab to commercialize intellectual property created there, while others like Cogent Energy Systems came to INL in search of licensable technology to solve a problem they were facing and ended up locating research operations in the region.<sup>161</sup>

Idaho Falls has a high proportion of its workforce in the professional, scientific and business services sector. According to the preliminary Bureau of Labor Statistics figures for September 2020, the sector makes up 22.5 percent of private non-farm employment in the metropolitan area. These knowledge-workers typically have post-secondary qualifications, and 43.2 percent of residents over 25 have an associate, bachelor, or graduate degree.

To help expand the workforce for these high-skill occupations, local higher education institutions are expanding their options for those interested in studying courses that prepare them for careers in energy, technology and the environment. The College of Eastern Idaho will be building a new career and technical education facility in Idaho Falls, thanks to a \$1.2 million grant from the Economic Development Administration.<sup>162</sup>

The growing economy in Idaho Falls has consistently drawn new residents to the region, and it has gained close to 7,000 net new residents in the last five years. With approximately the same number added through the natural increase of more births than deaths, the region's population continues to expand. This creates demand for housing, and more than 1,000 new single-family home permits were issued in 2019. Demand for local services is also going up as the population rises. For example, to meet the demand for healthcare services, Idaho Falls Community Hospital opened in 2019. This 110-bed facility is the third hospital in the city and includes 22 emergency room beds.

Idaho Falls has enjoyed several years of employment and population growth, thanks to its anchor institution's stability. Leveraging its educated professional labor pool could help generate more entrepreneurial firms to bolster broader economic output. After a successful pilot, Idaho Falls is investing in a fiber network that will up internet speeds and make the region more attractive.<sup>163</sup>

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	151,530
Overall Rank	17	10	
Young Firm Employment Share	61	46	14.1%
Young Firm Knowledge Intensity	103	46	23.0%
Per-Capita Personal Income	188	110	\$46,452
Medium-Term Average Annual Pay Growth	166	131	8.6%
Short-Term Average Annual Pay Growth	190	129	1.5%
Medium-Term GDP Growth	61	33	18.8%
Short-Term GDP Growth	66	44	3.7%
Medium-Term Job Growth	17	10	17.8%
Short-Term Job Growth	9	6	3.4%
Short-Term Job Momentum	2	2	4.5%

Idaho Falls, Idaho



# **18. SALT LAKE CITY, UTAH**

Salt Lake City, Utah improved its economic performance rising up 53 spots to rank 18th. The region experienced swift employment growth between 2018 and 2019, also ranking 18th. With an educated workforce, an entrepreneurial culture and a core part of the Silicon Slopes, the Salt Lake City metro has a plethora of high wage jobs in technology and knowledgebased industries. The business-friendly climate and low business costs make it conducive to corporate expansions and new firm formation.

The University of Utah is an innovation engine. It ranked first in the nation in a report identifying the most successful American universities for technology transfer.<sup>164</sup> The university was awarded \$547 million in research funding, and it takes a purposeful approach to commercialize any research outcomes that have economic value. The University of Utah Technology and Venture Commercialization group manages intellectual property and partners with the private sector. For aspiring student entrepreneurs, the Lassonde Entrepreneur Institute offers courses and resources to help them form a venture and to be successful. Scholars interested in entrepreneurship are encouraged to network, and specific centers foster medical and engineering innovation. The Salt Lake City metro benefits from this entrepreneurial ecosystem; its young firms are very knowledgeintensive, ranking 17th among the 375 metros evaluated.

Professional and business services are a cornerstone of the Salt Lake City economy. At 17.3 percent of the region's total workforce, this sector represents a much higher proportion of the local economy than at the national level. As firms were more able to switch these positions to remote work when required, Salt Lake City experienced less disruption and fewer job losses precipitated by the pandemic lockdown.



Salt Lake City, Utah



The region has an educated population, with 36.5 percent holding a bachelor's degree or higher. The University of Utah helps expand this pool. Just under 33,000 students were enrolled in the Fall 2019 semester. A quarter of them were graduate students.<sup>165</sup> This workforce is attractive to employers seeking to relocate key back-office operations away from high-cost or high-tax regions. Business support services are 3.1 times as concentrated in the Salt Lake City metro as the national average.

Goldman Sachs has relocated back-office operations from New York City to Salt Lake City. Starting with just 100 employees in 2000, the Salt Lake City base had grown to more than 2,300 by 2017, when it was chosen as the home office of Marcus, Goldman Sachs' new consumer loan business.<sup>166</sup> Other financial firms, including Wells Fargo, Fidelity Investments and JPMorgan Chase also have operations in the Salt Lake City metro, drawn by the educated workforce, lower rents than New York and high quality of life. The financial services sector is important to the Salt Lake City metro economy, accounting for eight percent of total employment in 2019, well above the national average. The non-depository credit intermediation subsector is 4.3 times as concentrated locally than in the nation as a whole.

The transportation and warehousing sector has expanded rapidly, adding more than 17,200 positions between 2013 and 2018, a 52 percent increase over the period. Amazon opened an 855,000 square foot fulfillment center near the airport in April 2019 and was expected to hire 1,500 people to staff it.<sup>167</sup> The Utah legislature created the Inland Port Authority in 2018 to facilitate the development of a major goods distribution hub on land adjacent to the Salt Lake City airport. The Utah economy is a major exporter, producing \$17.3 billion in exports in 2019, with two-thirds created in the Salt Lake metro.<sup>168</sup> The inland port is still in the planning phase.

The population of Salt Lake City continues to expand. With a culture that values family life, the natural population increase has added 109,000 people between 2010 and 2019. The economy also lures newcomers, with 36,000 net new residents moving in since 2010. These new households have created a market for new homes. Attempting to meet this demand, Salt Lake City has approved more than 10,000 new permits for single and multi-family homes in 2019. Utah led the nation in new housing units built in 2018, but Salt Lake City hasn't prevented housing costs from rising in the region.<sup>169</sup> By building transit-oriented developments like South City in South Salt Lake, planners and developers are trying to enhance density in areas close to rail nodes.<sup>170</sup>

Salt Lake City is investing in the downtown area, including public transit investments by the Utah Transit Authority, to try to create a high-quality urban core and manage the propulsive growth the region has experienced. The community is also investing in cultural amenities. For example, the George S. and Dolores Dore' Eccles Theater, a 2,500-seat performing arts center, opened in 2016 and is jointly owned by Salt Lake City and Salt Lake County.<sup>171</sup> The arts, entertainment and recreation sector has deepened, adding more than 4,000 jobs between 2013 and 2018. An ongoing commitment to thoughtful expansion, including building sufficient housing and a vibrant innovation ecosystem, are assets that bode well for the region's long-term prospects.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	1,232,696
Overall Rank	18	6	
Young Firm Employment Share	144	22	11.3%
Young Firm Knowledge Intensity	17	9	28.7%
Per-Capita Personal Income	133	41	\$48,853
Medium-Term Average Annual Pay Growth	38	6	12.3%
Short-Term Average Annual Pay Growth	30	5	3.1%
Medium-Term GDP Growth	71	18	17.7%
Short-Term GDP Growth	88	18	3.4%
Medium-Term Job Growth	37	10	15.5%
Short-Term Job Growth	18	4	3.0%
Short-Term Job Momentum	142	13	-4.7%

#### **19. DENVER-AURORA-LAKEWOOD, COLORADO**

The Denver-Aurora-Lakewood, Colorado metropolitan area, sits at the Rocky Mountains' base and places 19th on our index. The region offers residents and visitors outdoor recreation in the mountains and vibrant cultural amenities ranging from the Denver Art Museum to professional sports teams. Economically, Denver also has a lot to offer, with various sectors generating jobs and opportunities for long-time residents and the many newcomers. The region ranked 28th for the pace at which average annual pay rose, had a relatively high per-capita personal income, ranked 23rd, and saw substantial output and job growth gains.

The aerospace industry is a key high-tech manufacturing sector in the Denver metro and has performed very well in recent years. Large government contracts will help sustain activity through the pandemic. Northrop Grumman, a defense contractor that employs 2,200 in Colorado, including sites in Aurora and Denver, has billion-dollar contracts with the U.S. Airforce, among others. Like its peers in the aerospace cluster, it is expanding and in November 2020, the firm announced that it would be adding 350 jobs in their Colorado offices.<sup>172</sup> Lockheed Martin Space, one of four divisions of security and aerospace company Lockheed Martin, is based in the Denver region. The firm develops both satellite- and exploration-related technology and contracts with government agencies, including NASA. Lockheed Martin Space operates six spacecraft from their Denver base. One recent success was the tagging of an asteroid in the fall of 2020 by spacecraft OSIRIS-Rex, built in Littleton within the Denver metro area. The craft will return to earth with the samples gathered in 2023 if all goes as planned. The division also leverages the skilled local manufacturing workforce to design and build defense goods, and in 2020 was awarded \$474 million to work on nuclear missiles for U.S. Navy submarines, with 80 percent of the work expected to take place in their Denver area facilities.<sup>173</sup>

Employment in the region is predominantly at established firms, with fewer than one in eight jobs at a young firm. Firms like Western Union and Frontier Airlines are headquartered in the region, and other national and international firms have major divisions in the area. Those young firms that do exist leverage the high educational attainment in the Denver area, earning the region 23rd place for the knowledge intensity of new firms. Overall, high-tech and high-skill firms constitute a significant component of the regional economy. At 18.3 percent, the share of employment in professional and business services in 2019 was well above both the Colorado and national average. These sectors combine to form a healthy regional economy, and the economy in tandem with a high quality of life has drawn new residents to the region. Between 2010 and 2019, Denver welcomed 258,000 more new residents than moved away, 20,500 in 2019 alone. The population has a higher concentration of residents in their prime working years, swelling the local workforce. The region is also adding population as births outnumber deaths, resulting in a natural increase of an additional 162,000 people. Competition for housing in the Denver region is high, driving up a home's cost significantly and leading some residents to commute in from neighboring areas with a more affordable housing stock. The construction industry is kept busy, with 18,800 new units permitted in 2019. Although employment in construction dipped in April 2020 due to the pandemic restrictions, by August 2020, it had risen above its 2019 average of 19,000 jobs.

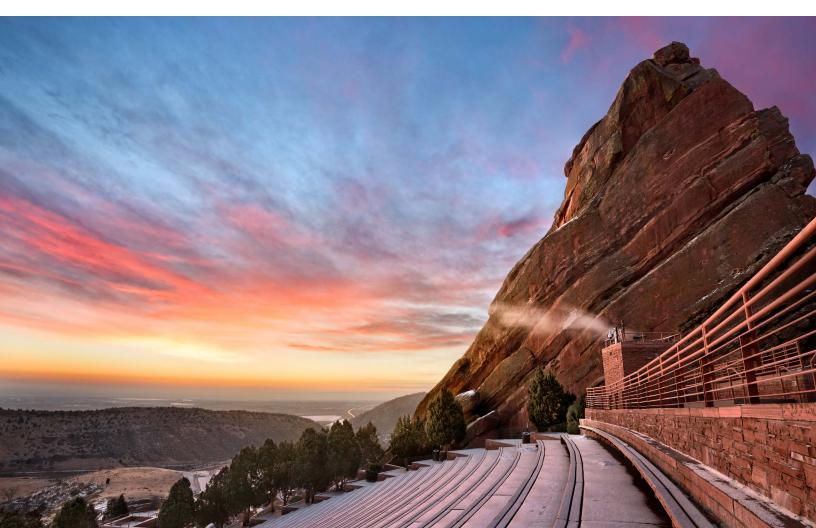
More than 45 percent of the Denver-Aurora-Lakewood metro area have a bachelor's or higher degree. Local universities educate residents and help expand this skilled talent pool. The University of Colorado Denver serves 14,000 mostly local students. It is currently building its first student dorm, expected to open in 2021.<sup>174</sup> The Metropolitan State University of Denver educates 19,500 undergraduate and graduate students in downtown Denver. The University of Colorado Hospital is both a healthcare and an educational asset in the region. The highly ranked teaching hospital is affiliated with the University of Colorado Denver's Anschutz Medical Campus in Aurora.

Since it is so diversified, the Denver metro did not experience the big gains afforded metros that are concentrated in a particularly high growth sector. However, this lack of specialization also insulates the metro somewhat against industry shocks. While the pandemic's effect has been felt across the economy, the prevalence of high-skill service sectors in the Denver region allowed firms to switch to a remote workforce more easily when restrictions were in place. This limited the short-term impact on output from these firms and reduced the need for immediate downsizing. However, the effects on the broader economy of reduced consumer spending may ripple through eventually.



Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	2,967,239
Overall Rank	19	7	
Young Firm Employment Share	111	15	12.4%
Young Firm Knowledge Intensity	23	14	27.6%
Per-Capita Personal Income	23	9	\$57,093
Medium-Term Average Annual Pay Growth	139	14	9.2%
Short-Term Average Annual Pay Growth	28	4	3.1%
Medium-Term GDP Growth	40	11	21.3%
Short-Term GDP Growth	80	16	3.5%
Medium-Term Job Growth	52	16	14.1%
Short-Term Job Growth	61	15	2.2%
Short-Term Job Momentum	134	12	-4.5%

Red Rocks ampitheatre



## 20. FORT COLLINS, COLORADO

The home of Colorado State University performed well again in the Most Dynamic Metropolitan rankings, coming in 20th. However, the COVID-19 pandemic has had a significant impact on Fort Collins' growth trajectory due to the degree of economic restriction implemented by the state government and the metro's reliance on some of the hardest hit industries.

Our entrepreneurship measures again reflect a metro that has created a healthy entrepreneur ecosystem, with Fort Collins coming in 33rd in young firm employment share and 53rd in young firm knowledge intensity. Looking at growth metrics, the one area where the metro was slowing down even before the coronavirus was average annual pay growth; Fort Collins was still above average in this area but was unable to again post top-25 finishes in short-term and medium-term pay growth. The metro's performance in short-term job momentum indicated a significant diversion from pre-COVID job growth. After posting the 37th-fastest 2018-2019 job growth, Fort Collins was in the middle of the pack for August 2019-August 2020 growth with a six percent decline in employment. This drop from the 90th percentile to the 50th percentile reflects a metro that has been severely impacted by the pandemic.

Before the pandemic, Fort Collins' biggest concern was balancing economic and population growth with affordability. The metro's expanding job opportunities, proximity to the Rocky Mountains, the perks of being a college town, and numerous outdoor recreation and consumer offerings have made Fort Collins a desirable home for people of all ages.



Highlands area



Those concerns may be taking a backseat as the area grapples with the pandemic. Colorado has been one of the most restrictive states in the country during the COVID-19 pandemic. While that has contributed to low per-capita case and death numbers, it has also contributed to economic struggles.<sup>175</sup> In addition to the societal health benefits of restrictions, there is a hope that they will allow areas to rid themselves of the coronavirus more quickly by completely stopping the spread. In theory, Colorado could significantly restrict activity for a short time, but then more fully reopen after that due to the reduced prevalence of the virus in the population. This theory seemed to hold initially, as Colorado was able to move through its reopening process throughout the summer. Unfortunately, a coronavirus outbreak across the Midwest and Mountain West have resulted in Colorado experiencing its worst case spike yet, and necessitated the reimplementation of restrictions in Fort Collins and beyond.<sup>176</sup> At the time of writing, it is unclear how the spike will play out in Fort Collins and, more broadly, Colorado, and how Colorado's strategy for handling the virus will compare to other states' strategies.

Like many other Colorado metros, Fort Collins has above-average employment concentrations in tourism-related industries such as retail trade and accommodation and food services. This has meant a worsethan-average impact on employment, reflected in the metro's short-term job momentum performance. Colorado State University's decision to have most fall classes occur in person<sup>177</sup> has certainly mitigated impacts on retailers and restaurants, but that may change if the current case increase necessitates a move back to online course delivery after fall break.

While the impact of COVID-19 on Fort Collins has been complex and remains uncertain, the metro benefits from a significant amount of dynamism. Central to that dynamism are Colorado State University's ability to produce major research findings and Innosphere Ventures' ability to commercialize those findings. The university's success in biotechnology research is particularly important during the current pandemic; Colorado State researchers have announced a saliva-based COVID-19 test that is more time- and cost-efficient than current testing methods.<sup>178</sup> If the test is approved by the U.S. Food and Drug Administration, it should benefit national health and the Fort Collins economy. While Innosphere will likely be involved in test production ramp-up, it has also stayed busy growing the Fort Collins entrepreneurial ecosystem during the pandemic. The organization recently brought plant disease-prevention startup Innate Immunity to Fort Collins so that the startup could work more closely with Colorado State.<sup>179</sup> The efforts of Innosphere and Colorado State mean the metro will not lose its economy-driving base of young firms during the COVID-19 pandemic.

As mentioned above, the Fort Collins economy has sustained growth through its combination of amenities and excellent job opportunities, but this growth has come at the cost of reduced affordability. It remains to be seen how high-quality amenities and high living costs combine to determine the metro's appeal to the coronavirus-created cohort of remote workers who are looking to move to areas with high-quality outdoor offerings. Will these workers prefer to move to a more affordable area such as Boise City, Idaho, or will they choose Fort Collins and drive living costs up further?

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	356,899
Overall Rank	20	11	
Young Firm Employment Share	33	24	15.2%
Young Firm Knowledge Intensity	53	16	25.1%
Per-Capita Personal Income	120	63	\$49,487
Medium-Term Average Annual Pay Growth	101	80	10.1%
Short-Term Average Annual Pay Growth	70	53	2.5%
Medium-Term GDP Growth	29	16	23.6%
Short-Term GDP Growth	47	30	4.2%
Medium-Term Job Growth	26	14	16.7%
Short-Term Job Growth	37	22	2.5%
Short-Term Job Momentum	189	144	-5.8%

## 21. FAYETTEVILLE-SPRINGDALE-ROGERS, ARKANSAS-MISSOURI

**Fayetteville-Springdale-Rogers, Arkansas-Missouri (Northwest Arkansas-NWA) is third in the mid-sized metros category and 21st overall.** The region is a corridor anchored in the north by a cosmopolitan small city, Bentonville, the global headquarters of Walmart, the world-class Crystal Bridges Museum of American Art and its downtown annex, the Momentary and a growing music scene. Its southern anchor is Fayetteville, home to the University of Arkansas (UA), an R1 university with nearly 30,000 students, and nearly half hailing from out of state or foreign countries. Bentonville and Rogers, the northern end of the corridor, is the fastest-growing in population and economic activity. Bentonville has made vast investments in bike trails and claims to be the mountain biking capital of the world.<sup>180</sup>

The region's per capita personal income is the eighth-highest in the nation adjusted for purchasing power. The area is home to corporate headquarters Tyson Foods, J.B. Hunt Transport and Walmart, with nearly seven-times the national concentration of employment in corporate management.<sup>181</sup> The region has been among the top performers in the country, since COVID-19 hit as Arkansas did not issue mandatory stay at home orders. The leisure and hospitality industry is less important to the region than for the nation.

The region has a unique economic composition of large Fortune 500 firms, the University of Arkansas—the state's flagship research university, a cluster of food and protein-related businesses, logistics expertise, an emerging startup location, and many cultural and recreational attractions. The transformation of NWA over the past three decades is astonishing. It is on a path similar to what Austin and Nashville established 20-years ago, widely hailed as the top Heartland economic success stories of recent years.<sup>182</sup>



Old Town Hall, College Ave, Fayetteville, Arkansas The region's expertise in logistics and distribution, a potential area of collaboration with big corporations, their suppliers and a growing array of high-tech startups is a rapid source of growth.<sup>183</sup> Supply chain management is also an area of research emphasis for the University of Arkansas. The UA Walton College of Business' undergraduate supply chain program ranked the best in North America in 2020 by Gartner, a leading global research firm. The Plug and Play program is attempting to improve the connectivity in the innovation space. First established in Silicon Valley, the Plug and Play Tech Center is an entrepreneurial accelerator that serves as a matchmaker between selected startups and corporations in the community. It hopes to attract new technology-savvy talent possessing entrepreneurial experience into the region. It aspires to foster a more innovative and entrepreneurial culture by linking innovators with corporations. WeWorks Labs just opened an office in the region with a major focus on supporting entrepreneurs of color and women.<sup>184</sup>

The metro area has not been unscathed by COVID-19. Leisure and hospitality employment in April 2020 fell by 41.4 percent from the previous year. However, as the economy reopened, jobs in this category began to recover and were down just 7.9 percent in September.<sup>185</sup> Brookings reported that the metro area was 18th in the nation to regain peak jobs reached in February.<sup>186</sup> In September 2020, employment was just 1.8 percent below the same month in 2019. Remarkably, professional and business services recorded a job gain of 2.6 percent. Over the same period, trade, transportation and utilities added jobs at a 1.9 percent clip. Furthermore, the region is among the nation's leaders in developing a strategy to recover from the economic impact of COVID-19.<sup>187</sup>

A key to long-term success for the region is advancing the University of Arkansas's research and entrepreneurial support contributions. UA-Fayetteville's research expenditures rose to \$180.2 million in 2019 and increased at an average annual double-digit rate over the past five years.<sup>188</sup> Invention disclosures rose to 67 in 2019 (up from 43 in 2018) and patent applications reached 37 (up from 27 in 2018).<sup>189</sup> The university upgraded its technology transfer and commercialization capabilities, strengthened by a recent \$194 million grant from the Walton Family Charitable Support Foundation.<sup>190</sup> More focus on entrepreneurial programs is part of the grant as well. The Brewer Entrepreneurship Hub and McMillon Innovation Studios are key additions to these efforts.

The region is establishing a new academic medical center to become a world leader in health and resiliency. The vision is to lead across the full spectrum of healthcare, from self-care to primary care to specialty care, in a "whole health" paradigm. A top-tier academic medical center, partnering with an affiliated health system, will vastly expand specialized health care. The Northwest Arkansas Council is an important business and community support organization that is championing many of these efforts. The region's demographic composition is changing rapidly. An influx of Latinos, now representing 17 percent of the population, have experienced upward mobility. The region was seventh in a measure of upward mobility among Latinos.<sup>191</sup> The region has a high net in-migration rate and contributes to the labor force and population growth. COVID-19 appears to be accelerating this trend.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	557,741
Overall Rank	21	3	
Young Firm Employment Share	232	36	9.6%
Young Firm Knowledge Intensity	113	24	22.8%
Per-Capita Personal Income	8	2	\$66,882
Medium-Term Average Annual Pay Growth	67	5	10.9%
Short-Term Average Annual Pay Growth	36	5	3.0%
Medium-Term GDP Growth	54	12	19.7%
Short-Term GDP Growth	184	29	2.5%
Medium-Term Job Growth	20	5	17.4%
Short-Term Job Growth	78	14	2.0%
Short-Term Job Momentum	33	5	-1.6%

#### 22. SANTA CRUZ-WATSONVILLE, CALIFORNIA

Adjacent to the top tech metros San Jose and San Francisco, the Santa Cruz-Watsonville, California region has benefited from the overflow of tech dollars and places to be 22nd on our index. With attractive outdoor recreation opportunities and a less expensive housing market than its neighbors, the region has experienced growth in the tourism and construction industries. The most recent employment figures indicate a significant slow-down, as the current economic and health crisis has taken a toll on the local economy. The effect on retail, restaurant and recreational spending was amplified by the absence of students on campus at the University of California Santa Cruz. The region ranked in the bottom 10 percent of metros for the pace of adding employment to the economy over the 12 months ending in August 2020. However, the housing market remains strong, and construction resumed once restrictions allowed.

While expensive compared to many other dynamic metropolitan regions on our index, the cost of housing in Santa Cruz County is lower than in the neighboring Bay Area Counties. In the summer of 2020, the median sales price for a three-bedroom, two-bathroom home in Santa Cruz county was still just under \$1.0 million, while in San Francisco a comparable house cost \$1.6 million.<sup>192</sup> Construction employment dipped slightly in April but had more than recovered by June 2020. With a high quality of life and access to high-wage jobs, the region remains an attractive location for those who can afford it. Average annual pay has risen dramatically in recent years – up 6.5 percent in 2019, the second-highest percentage increase for all metros assessed. This is part of an ongoing trend – the region ranked 8th in this measure looking at the last five years. The region's high educational attainment contributes to this, with 40 percent holding at least a bachelor's degree.

The University of California Santa Cruz (UCSC) is a vital source of talent and employment in the region, drawing people to its campus outside of Santa Cruz near the Pacific coast. In the fall of 2019, there were approximately 19,500 undergraduate and graduate students enrolled.<sup>193</sup> The campus population contributes to the community through consumer spending. Their absence in the Spring and Fall of 2020 has contributed to the drop in leisure and hospitality spending. A long run study by the University of California system showed that 10 percent of UCSC graduates work in the California tech industry.<sup>194</sup> The proximity to Silicon Valley creates opportunities for students and the transfer of new knowledge into the field. The Support Program for Long-term Innovation,

Commercialization & Entrepreneurship (SPLICE), established with a \$2.2 million grant awarded in 2017, has created tools to aid start-ups. These include wet labs to commercialize UCSC inventions and programs that support new firms formed by UCSC and community entrepreneurs.<sup>195</sup>

UCSC is recognized as a Hispanic serving institution—one of the few research (R1) universities with this designation. In 2020, UCSC received a 5-year, \$3 million grant from the U.S. Department of Education to redesign curriculum and facilitate Hispanic student success. The "Graduating and Advancing New American Scholars (GANAS)—Career Pathways" project joins other UCSC initiatives focused on Hispanic students, including three more federally funded multi-million-dollar programs.<sup>196</sup>

The Santa Cruz region has a vibrant small business sector, and in 2017 approximately 70 percent of private-sector employees worked at a business that employed fewer than 500 workers. Small businesses have been put under significant strain due to the closure of non-essential businesses during the pandemic. Young firms account for approximately 15 percent of employment in the region. The leisure and tourism industry has experienced year over year growth, although it was hit hard in April 2020. The preliminary figures for September 2020 suggest that the industry has recovered 80 percent of its employment since then.

The COVID-19 pandemic and its effects create significant uncertainty in the region in the near term, especially as the State of California makes adjustments to its budget in response to shifts in revenues and ongoing emergency expenditures. The prospect of cuts in public funding for the University of California Santa Cruz is a cause for concern, compounded by the possibility of an extended absence of students if remote teaching remains necessary. Expanded demand for safe outdoor recreation may provide some relief, and companies that can successfully pivot to serve that market will benefit.



Santa Cruz. California

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	273,213
Overall Rank	22	12	
Young Firm Employment Share	35	26	15.1%
Young Firm Knowledge Intensity	46	14	25.6%
Per-Capita Personal Income	81	40	\$51,489
Medium-Term Average Annual Pay Growth	8	5	15.5%
Short-Term Average Annual Pay Growth	2	2	6.5%
Medium-Term GDP Growth	140	89	11.5%
Short-Term GDP Growth	251	168	1.8%
Medium-Term Job Growth	110	64	9.5%
Short-Term Job Growth	114	71	1.6%
Short-Term Job Momentum	339	243	-10.8%

## 23. OLYMPIA-TUMWATER, WASHINGTON

Olympia-Tumwater, Washington moved from 61st last year to 23rd overall in this year's rankings. The region performed well, ranking in the top quartile of all metropolitan areas for seven of the ten metrics. Led by strong medium and short-term average annual pay growth and shortterm GDP growth, as well as strong growth in young firms and young firm knowledge intensity, it seems that the region's focus on innovation and entrepreneurship is paying off. Recognizing their location in between two much larger metros—Seattle and Portland, and with access to the Puget Sound and Deschutes River, the Thurston County Economic Development Council is focused heavily on innovation through its Innovation Partnership Zone and Center for Business and Innovation. They are creating vibrant agricultural production and processing industries around diverse and highvalue markets—craft brewing and distilling, plant-based cleaning products, natural beauty products and flavor extracts.<sup>197</sup>

Olympia is also the capital city of the state of Washington, so the economy relies heavily on public sector employment. While COVID-related work-from-home orders have adversely impacted retail and hospitality businesses that would typically cater to government employees and those conducting business with the state government, the public employment itself provided some stability through the pandemic. However, government employment will likely shrink due to lower state revenues. Joint Base Lewis-McChord, which employs roughly 4,000 from the Olympia area and is located outside of the metro in the neighboring county. This also helps stabilize personal income in the region.<sup>198</sup> However, the preponderance of government employment tends to keep per capita income low in the region, as noted by their low ranking for this metric. Chmura estimates that the Olympia-Tumwater metro will lose fewer jobs than the average job loss expected in the United States.<sup>199</sup> This is also reflected in the region's ranking for short-term job momentum, seeing that it is in the top third of all metropolitan areas.

Olympia's proximity to Seattle, which has struggled since the beginning of the pandemic to contain COVID-19 infections, makes it susceptible to further pandemic impacts, especially since 22 percent of employed residents in Olympia worked in Seattle or Tacoma. In comparison, about nine percent of Olympia's employment resides in these two cities. Working from home might mitigate some of this risk since Chmura also predicts that the occupational mix in Olympia means that more jobs can work remotely than the average region of similar size.<sup>200</sup> Olympia has been recognized as a highly livable city and desirable place, as acknowledged by Livability in 2017<sup>201</sup> and 2018<sup>202</sup> and National Geographic in 2018.<sup>203</sup> The region boasts several ways to experience the outdoors. Whether you want to hike, bike, or run through natural landscapes, take in breathtaking views of the city or Puget Sound, or find a playground or bike park for the children, the Olympia-Tumwater metro has all these spaces and more.<sup>204</sup>

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	290,536
Overall Rank	23	13	
Young Firm Employment Share	78	59	13.0%
Young Firm Knowledge Intensity	79	31	23.9%
Per-Capita Personal Income	227	140	\$44,594
Medium-Term Average Annual Pay Growth	26	21	12.8%
Short-Term Average Annual Pay Growth	19	15	3.6%
Medium-Term GDP Growth	66	36	17.9%
Short-Term GDP Growth	12	7	5.6%
Medium-Term Job Growth	40	19	15.3%
Short-Term Job Growth	147	94	1.3%
Short-Term Job Momentum	115	92	-4.1%

State Capital Building in Olympia, Washington





#### 24. RALEIGH, NORTH CAROLINA

The Raleigh, North Carolina metro is the larger of the two metros that make up North Carolina's Research Triangle.<sup>205</sup> Its major research university, North Carolina State University (NCSU), and nearby Duke University and the University of North Carolina at Chapel Hill give the Raleigh metro an almost unparalleled supply of talent and ideas. This talent has produced numerous successful startups in Raleigh and has attracted major tech companies across the U.S. to open local offices.

The Raleigh metro performed well in almost every pre-pandemic metric we consider; the lone exception was short-term average annual pay growth, where the metro saw significant slowing after several years of strong growth. While pre-pandemic economic indicators were generally positive, that was not the case for our one pandemic-period measure, short-term job momentum. The metro's August 2019-August 2020 job growth ranked 300th in the nation, reflecting a significant change in trend given that the metro's 2018-2019 job growth (short-term job growth) ranked 32nd.

As noted above, the Raleigh metro has benefited significantly from the three Research Triangle universities' talent and ideas. One of the best examples of this is the SAS Institute, owner of the SAS statistical software. The software's initial iterations were produced by NCSU faculty to help agricultural researchers analyze their data and make predictions. The software's popularity resulted in creating the private corporation SAS Institute, which sells software to corporations and researchers across the world and employs 5,600 people in the metro.

Unlike the SAS Institute, IBM was not borne out of Research Triangle talent. However, it has continued to expand its footprint in the area to utilize the human capital. That footprint grew significantly in 2019 when IBM acquired local cloud-focused enterprise software company Red Hat for \$34 billion in one of the largest tech mergers in U.S. history.<sup>206 207</sup>

In addition to software development firms, various life sciences and biotechnology companies have oriented around the Research Triangle's medical schools and research institutes; several pharmaceutical companies are among the area's largest employers, and the metro's share of employment in biotechnology R&D is four times the national average. Overall, Raleigh has outsized employment in life sciences and biotechnology, and these jobs, with many earning well above \$100,000, provide significant benefits to the rest of the metro economy. Focusing on the local entrepreneurial ecosystem, the hope of bringing the next great Research Triangle idea to market has resulted in a sizable suite of investment funds, incubators, and accelerators. That suite has nurtured some of the nation's fastest-growing young firms. One such firm is Raleighbased product development software provider Pendo.io, which was identified by Inc. as the nation's 26th fastest-growing private company.<sup>208</sup>

While the academic, corporate and startup ecosystems in the Raleigh metro should result in long-term economic success, they could not prevent the COVID-19 pandemic from having a severe short-term impact on the metro economy. North Carolina state officials have implemented some of the nation's strictest and longest-lasting economic restrictions, with bars, movie theatres and other indoor entertainment venues required to close from March until October. Restaurants and many retailers reopened in May but continue to require significant capacity restrictions. As a result, communities across North Carolina, Raleigh included, have experienced a much slower return to pre-pandemic employment levels than other parts of the U.S. Health benefits have accompanied the restrictions, as North Carolina has fewer per-capita cases and deaths than all bordering states except Virginia.<sup>209</sup> Additionally, it is unclear whether some states' decisions to quickly reopen will prove costly if the predicted winter case spike becomes a reality. If the case spike does occur, Raleigh and the rest of North Carolina may be more economically prepared to reimplement restrictions. Further, they may see a smaller spike because of their cautious approach to reopening.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Large	1,390,785
Overall Rank	24	8	
Young Firm Employment Share	143	21	11.4%
Young Firm Knowledge Intensity	39	20	26.2%
Per-Capita Personal Income	58	23	\$53,201
Medium-Term Average Annual Pay Growth	32	5	12.6%
Short-Term Average Annual Pay Growth	258	45	1.1%
Medium-Term GDP Growth	16	5	26.9%
Short-Term GDP Growth	10	4	6.0%
Medium-Term Job Growth	33	8	16.2%
Short-Term Job Growth	32	8	2.6%
Short-Term Job Momentum	300	41	-8.9%

### 25. PALM BAY-MELBOURNE-TITUSVILLE, FLORIDA

The 25th most dynamic metropolitan area is Palm Bay-Melbourne-Titusville, Florida. This area is home to Port Canaveral, the world's secondbusiest cruise ship port pre-pandemic,<sup>210</sup> and Cape Canaveral, home to NASA's Kennedy Space Center and Cape Canaveral Air Force Station. As a result, the economy is heavily dependent on federal defense and space contracts and tourism.

Federal funding for defense and space contractors have risen the last few years, providing a substantial source of high-wage employment in the region. Recent growth in commercial space activity has attracted new companies and generated new jobs for the area. The long-term nature of defense contracts also adds to the region's resilience in the face of the pandemic. The high employment growth rankings for both medium- and short-terms are largely the result of these events.<sup>211</sup> The highly skilled and educated nature of the workforce associated with aerospace, defense and space design and manufacturing explains why Palm Bay ranked in the top quartile for young firm knowledge intensity. Having two 4-year colleges in the region helps—Florida Institute of Technology and Eastern Florida State University.<sup>212</sup> In 2019, USA Today recognized the Palm Bay metro has having the 12th largest number of high-tech jobs in the U.S.<sup>213</sup>

Housing has been another bright spot for the region, and the demand was already strong due to historically low mortgage interest rates, but the growth in regional employment has further contributed to the sale of existing homes and new construction. A strong residential housing market also supports retail and home improvement sales, as people seek to furnish, decorate and/or upgrade homes.

Tourism has slowed, with cruise ships subject to a no-sail order through October 30, 2020. However, beach tourism remained relatively steady in the region, given Florida's eagerness to reopen businesses in early May



Palm Bay, Florida

2020. The Centers for Disease Control and Prevention issued on November 4, 2020 a Framework for Conditional Sailing<sup>214</sup> that provides a pathway for cruise ships to resume sailing, though significant increases in cruise passengers are not expected until effective treatment and vaccines for COVID-19 are readily available.

Palm Bay and surrounding communities are also home to a sizable population of retirees. The largest single segment of the population is greater than 75 years of age, and it represents 11 percent of the region's population. The region's share of the population aged 0 – 50 lags the U.S. share, while population shares of those 50 and older exceed the U.S. share. With such a high concentration of older persons, it's no surprise that Education and Health Services is the largest industry in the metro, comprising 17 percent of employment.

The Palm Bay-Melbourne-Titusville metropolitan area is poised for continued growth. Through aggressive recruitment of aerospace firms, sizable investments by existing firms like Lockheed Martin's \$40 million Fleet Ballistic Missile Program headquarters,<sup>215</sup> and growth in commercial space activity, the regional economy should continue to grow as long as federal government support for space programs and defense spending continues. Tourism should resume once a vaccine and effective treatments for COVID-19 are available in 2021, as well. Its greatest challenge could be managing the region's growth in such a way to maintain its appeal as a place to live and recreate.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	601,942
Overall Rank	25	4	
Young Firm Employment Share	71	9	13.4%
Young Firm Knowledge Intensity	91	17	23.4%
Per-Capita Personal Income	247	42	\$43,974
Medium-Term Average Annual Pay Growth	197	26	8.0%
Short-Term Average Annual Pay Growth	59	9	2.6%
Medium-Term GDP Growth	49	11	20.0%
Short-Term GDP Growth	39	7	4.3%
Medium-Term Job Growth	18	4	17.6%
Short-Term Job Growth	14	3	3.2%
Short-Term Job Momentum	44	6	-2.1%

#### 26. DAPHNE-FAIRHOPE-FOLEY, ALABAMA

Daphne-Fairhope-Foley, Alabama ranks 26th among metropolitans this year. Given its location on the Gulf of Mexico, the Daphne metro experiences a desirable climate for year-round tourism and retirees. In recent years, population growth has exceeded the national average, as both commuters to Mobile and retirees relocate to the area. The population has grown by 10 percent and employment growth has been over 15 percent over the last five years.<sup>216</sup>

The Daphne metro area ranks in the top 25 metros for its share of employment in accommodations; at over 21 percent, the region's dependence upon tourism is evident.<sup>217</sup> COVID-19 dramatically impacted Daphne's economy, as business closures and layoffs have disproportionately affected the leisure, hospitality and retail industries. Struggles to manage COVID-19 outbreaks have limited tourists despite the state's efforts to keep businesses open. As a result, Daphne's economy is highly vulnerable to contraction until the pandemic is contained by effective treatment and/or a vaccine. Chmura Economics and Analytics classifies Daphne in the most vulnerable category, and it estimates that job losses could be as many as 1.5 times the national average.<sup>218</sup>

Retail, the industry with the second-highest share of employment at 20 percent, and health services were hit hard by COVID-19, as the region experienced high infection levels during the summer, which led the older population to cut back on in-person spending in the area. Elective surgeries were suspended for a time to free hospital resources to handle COVID cases. This led to a contraction of healthcare in the region. With the return of elective surgeries, and once effective treatment and/or a vaccine for COVID exists, healthcare will return as a significant source of well-paying jobs for the region, particularly as the area continues to attract retirees.<sup>219</sup>

One promising component of the region is the presence of Collins Aerospace, which brings both high-wage jobs and industrial diversification to the area with the production of nacelles for Airbus' final assembly line located in neighboring Mobile, Alabama. The first A220 aircraft produced in this facility was delivered to Delta Air Lines in October 2020, though the 5-year-old facility also produces Airbus' A320 series aircraft for U.S. carriers.<sup>220</sup> Once effective treatment and/or a vaccine for COVID-19 is widely distributed, tourism and retail should return to the Daphne-Fairhope-Foley metropolitan area. In addition to the easy access to water-based activities on the Gulf of Mexico, the region semi-regularly experiences a phenomenon known as the Jubilee, in which blue crabs, shrimp and fish swim into the shallow waters along the shoreline and are easily scooped up by eager onlookers. From this event, Daphne gets its nickname as the "Jubilee City."<sup>221</sup> However, it could also be applied to acknowledge celebrations around the region's rich heritage and vibrant economy.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	223,234
Overall Rank	26	14	
Young Firm Employment Share	31	22	15.3%
Young Firm Knowledge Intensity	233	138	19.7%
Per-Capita Personal Income	172	96	\$47,055
Medium-Term Average Annual Pay Growth	73	60	10.8%
Short-Term Average Annual Pay Growth	66	50	2.6%
Medium-Term GDP Growth	130	82	12.4%
Short-Term GDP Growth	32	21	4.5%
Medium-Term Job Growth	14	7	18.8%
Short-Term Job Growth	13	8	3.2%
Short-Term Job Momentum	101	80	-3.9%

Sunset in Daphe, Florida





## 27. CAPE CORAL-FORT MYERS, FLORIDA

The Cape Coral-Fort Myers, Florida metro (CCFM) is part of a chain of Gulf Coast metros that have benefited from an influx of retirees and expanding entrepreneurial ecosystems over the past decade. CCFM is particularly well-suited for the latter, given that the metro is home to Florida Gulf Coast University and its School of Entrepreneurship.

CCFM continues to be a national frontrunner in the young firm employment share, placing seventh overall and second among mid-size metros. The metro's performance in young firm knowledge intensity, 121st overall, indicates that CCFM's startups are a bit more technical than the average metro's. CCFM performed relatively well in all growth metrics except shortterm and medium-term average annual pay growth; the metro's shortterm growth ranking fell from 90th to 187th, and its medium-term growth ranking fell from 115th to 260th.

The slow in wage growth is likely the result of tourism growth from 2017 to 2019, as tourism-related jobs tend to have low wages. The metro has seen notable growth in effectively every revenue and visitor count metric its tourism board tracks.<sup>222</sup> CCFM benefits from a relatively diverse set of tourism offerings for a coastal area. Specifically, the metro attracts thousands of fisherwomen and fishermen annually to battle with the silver king in the Boca Grande Pass, the "Tarpon Capital of the World."<sup>223</sup> The Bunche Beach area allows kayakers to paddle mangrove creeks alongside manatees and dolphins.<sup>224</sup> As red tides – toxic algae blooms that have plagued the area in recent years – have diminished along the Florida Gulf Coast, these niche offerings have combined with the metro's numerous white-sand beaches to attract visitors from across the U.S. and beyond.

Like its southern neighbor, the Naples-Immokalee-Marco Island metro has navigated the past year better than one might think; CCFM's August 2019-August 2020 job growth, -4.2 percent, ranked 121st. That is very respectable, given how severely the pandemic has impacted the tourism industry nationally. While passenger numbers are still significantly below expected levels at the metro's Southwest Florida International Airport, CCFM has been able to substitute in-state and road-tripping tourists for fly-in tourists, minimizing losses.<sup>225</sup>

CCFM's efforts to diversify through a vibrant startup community were highlighted in last year's report; those efforts likely contributed to the metro's relative success over the past year and are still being undertaken. The most significant development in CCFM's entrepreneurial ecosystem is the announcement of Florida Gulf Coast University's Center for Entrepreneurship and Innovation. The center's groundbreaking has been postponed by the pandemic, but when finished, it will house the university's fast-growing School of Entrepreneurship, an incubator, a small business development center, and a locally focused economic research group.<sup>226</sup> The School of Entrepreneurship is directed by a lifelong entrepreneur, Sandra Kauanui, who is so passionate about the school that she has donated her 2020 salary to the center's construction fund. She has been a part of the school since its beginning 12 years ago and has guided a program that has helped students create 407 businesses.<sup>227</sup> In an era when universities' impacts on their local economies are increasingly valued, other metros may soon learn to envy what CCFM has in the School of Entrepreneurship and its students.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	770,577
Overall Rank	27	5	
Young Firm Employment Share	7	2	18.2%
Young Firm Knowledge Intensity	121	26	22.7%
Per-Capita Personal Income	131	23	\$48,871
Medium-Term Average Annual Pay Growth	260	35	6.6%
Short-Term Average Annual Pay Growth	187	32	1.5%
Medium-Term GDP Growth	28	6	23.7%
Short-Term GDP Growth	112	16	3.2%
Medium-Term Job Growth	9	3	19.8%
Short-Term Job Growth	42	8	2.4%
Short-Term Job Momentum	121	16	-4.2%

### 28. OGDEN-CLEARFIELD, UTAH

Ogden-Clearfield, Utah, the 28th most dynamic metro overall, has experienced stability in recent years, especially during the COVID-19 pandemic, from the large share of federal government employment. The IRS Service Center and Hill Air Force Base, the largest of the federal government employers in the area, not only provide good jobs but the IRS began normalizing operations in Ogden in May and the base, given its restricted access, was already somewhat isolated from the virus. Besides, federal defense spending increased in 2020, leading to new investments in Hill AFB facilities and increased pay for military personnel. These employers have helped to minimize employment losses in local businesses.<sup>228</sup>

The region is also home to Weber State University, the state's third-largest university. A large employer in the region, Weber State will face funding costs due to declines in state revenues from the pandemic's business shutdowns.<sup>229</sup> It also faces potentially lower enrollments and fee cuts, as Weber State University recognized cost savings from COVID-related changes in extracurricular activities. However, Weber State and the region's proximity to Salt Lake City and the higher education institutions there, provide a young and highly educated workforce, as reflected in the region's top quartile ranking for young firm knowledge intensity.

Employment growth was robust before the COVID-19 pandemic. All but two sectors—mining and information realized positive one-year growth, and seven of the remaining ten industries grow at or faster than 2.8 percent.<sup>230</sup> Given the limited exposure of jobs to COVID-related constraints, it's not surprising that the region's recovery from pandemic shutdowns has been robust. Hence, Ogden-Clearfield ranked highly for both job growth and job momentum metrics.



Downtown street in Ogden, Utah Much of Ogden's growth can be attributed to its location in northwest Utah and access to highway, rail, and air transportation modes, especially to the western United States. Distribution and logistics companies view this as a tremendous asset, especially given access to Canada and Mexico via Interstate 15 that runs through Odgen. Manufacturing is diversified between aerospace components and outdoor products, which reflect the region's open landscape and opportunities for rigorous testing of products in the Wasach Mountains. Tech companies also find Ogden-Clearfield a desirable location given its dense internet infrastructure and generous state incentives for technology-based companies; over 50 percent of households in Ogden<sup>231</sup> and 90 percent of households in Clearfield<sup>232</sup> have access to fiber broadband.

As a desirable location in northern Utah, housing prices are rising, making the region more expensive to live in, though per capita income lags the U.S. by almost \$11,000. This makes Ogden a cost-effective location for businesses, and access to outdoor recreation intensifies the attraction, particularly for young people. Proximity to Salt Lake City is also advantageous since 21 percent of employment in the Ogden-Clearfield region commutes from there.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Medium	683,864
Overall Rank	28	6	
Young Firm Employment Share	83	12	12.9%
Young Firm Knowledge Intensity	49	13	25.2%
Per-Capita Personal Income	261	44	\$43,510
Medium-Term Average Annual Pay Growth	69	6	10.8%
Short-Term Average Annual Pay Growth	192	33	1.5%
Medium-Term GDP Growth	65	13	18.1%
Short-Term GDP Growth	103	13	3.3%
Medium-Term Job Growth	28	7	16.6%
Short-Term Job Growth	26	5	2.7%
Short-Term Job Momentum	9	1	0.6%

## 29. BREMERTON-SILVERDALE, WASHINGTON

A ferry ride across the Puget Sound from Seattle, the Kitsap peninsula holds Bremerton-Silverdale, Washington, which makes its debut on our list of Most Dynamic Metropolitans in the 29th spot this year. While not in the top ten of the index categories, it is well above average in all categories, indicating a stable economic base with enormous potential. Business costs are slightly below the national average at 94 percent, and it is in the top quintile of quality of life measures 68 out of 378.<sup>233</sup> Bremerton has above-average income combined with a low poverty rate, creating an income distribution that is more-equal than almost all metropolitan areas.<sup>234</sup> There is much to aspire to in Bremerton-Silverdale.

Bremerton has a well-educated workforce, slightly more educated than the current labor demands of the area, allowing for ample expansion opportunities for industries utilizing highly skilled workers. The metro has relatively low employment in the private sector, particularly among young firms and the tech sector, with many tech professionals living in Bremerton but working in Seattle. Over 16 percent of Bremerton's residents work in Seattle or Tacoma to escape twice as high housing costs in Seattle. Net in-migration had slowed in 2019 but may resume if tech workers want to get out of Seattle to take advantage of more flexible work from home arrangements. They would have the option to work mostly from home but are still within commuting distance.

While there is some lingering debate as to whether "Give 'em hell, Harry" was first proclaimed here, there is no doubt that Bremerton's primary economic driver is the Naval Base Kitsap. The government employs over one-third of local workers and is the industry with the highest average annual earnings.<sup>235</sup> The defense industry's concentration has provided some economic stability for Bremerton and as of August 2020, the overall employment is back to March levels.<sup>236</sup> However, Bremerton will not come through the pandemic unscathed. Relative to the national economy, it only has 87 percent of the expected number of jobs that can be done remotely<sup>237</sup> due to a small professional and business services sector and substantial retail and arts and leisure sectors. Overall, Bremerton is expected to have temporary job losses on par with the national average.<sup>238</sup>

Like much of the U.S., Kitsap County has seen an increase in the number of COVID-19 cases this fall. Despite the recent uptick, the early lockdowns and restrictions still in place have allowed it to have a very low infection and death rates with 23 deaths as of November 1 for a remarkably low rate of 8 per 100,000 residents<sup>239</sup> – a fraction of the national rate of 70.77.<sup>240</sup>

We'll repeat; there is much to aspire to in Bremerton-Silverdale.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	271,473
Overall Rank	29	15	
Young Firm Employment Share	42	31	14.9%
Young Firm Knowledge Intensity	59	20	24.7%
Per-Capita Personal Income	137	69	\$48,612
Medium-Term Average Annual Pay Growth	116	94	9.7%
Short-Term Average Annual Pay Growth	139	99	1.9%
Medium-Term GDP Growth	76	44	17.4%
Short-Term GDP Growth	40	24	4.3%
Medium-Term Job Growth	91	50	11.2%
Short-Term Job Growth	58	32	2.3%
Short-Term Job Momentum	24	21	-1.2%



### **30. PUNTA GORDA, FLORIDA**

Breaking into our Most Dynamic Metropolitans ranking list at number 30 this year is Punta Gorda, Florida, a perennial contender as the best place to retire and a small town with a recognized food scene. Known as the "Fat Point" of Charlotte Bay on Florida's west coast, Punta Gorda is the end of the Florida Southern Railwayline<sup>241</sup> and later part of the Atlantic Coast Line Railroad. The current mix of old-world charm, waterfront beauty, walkability, and economic diversity were influenced by city founders with an emphasis on public waterfront parks<sup>242</sup> and a commitment to strategic rebuilding following the devastation of Hurricane Charley in 2004.<sup>243</sup> <sup>244</sup>

Punta Gorda's Dynamic debut is largely driven by strong metrics in Young Firm Employment and Short-Term Job Momentum. Punta Gorda is three standard deviations above the average for U.S. metropolitan areas and number four in the nation, with almost 20 percent of employment in young firms. This bodes well for future job growth in Punta Gorda. There seem to be no significant barriers to young firm expansions since the cost of doing business is slightly below the U.S. average and the cost of living right at the national average.<sup>245</sup>

Punta Gorda has no dominant employers, with the healthcare/education and retail sectors each employing about 20 percent of the workforce. It's worth noting that the categories where Punta Gorda ranks highest are derived from data collected before the pandemic emerged. Staying in the top 30 will be more challenging for this area than most.

Like much of Florida, Punta Gorda's economy has taken a big hit from tourism loss this year. Hospitality and leisure industry employment fell from 8,400 jobs in March to 4,600 in April. As of August, hospitality employment rose to 6,900<sup>246</sup> jobs, but it likely faces a slow climb back to pre-pandemic levels.

Additional factors that make this metro particularly vulnerable to the economic effects of COVID-19 are heavy reliance on retail employment and demographics.<sup>247</sup> Relative to the national average, Punta Gorda only has 75 percent of the expected jobs that can be performed from home.<sup>248</sup> As a retirement haven, it has over 40 percent of its population above 65 years old, contributing to a COVID-19 death rate per capita higher than the national average.

Punta Gorda also has reasons to anticipate the economic effects will be moderated. The concentration of healthcare activity and mild winter climate may help soften the impact. August's employment in healthcare and education was only down about 100 jobs relative to the high in March.<sup>249</sup> Plus, outdoor dining and small gatherings may comfortably continue through the winter in Punta Gorda, hopefully minimizing the lost revenue for hospitality venues. The metro may benefit from U.S. travelers who vacation within driving distance rather than flying for international travel over the next year. As a family-friendly city with modestly priced canal front properties and abundant opportunities for outdoor activities, Punta Gorda could easily attract additional residents. Professionals who will utilize the new work-from-home policies may consider moving further away from the office to live in a retirement mecca long before retirement.

Index Metrics	Overall Ranking	Size-Group Ranking	Value
2019 Population		Small	188,910
Overall Rank	30	16	
Young Firm Employment Share	4	4	20.0%
Young Firm Knowledge Intensity	141	66	22.1%
Per-Capita Personal Income	343	242	\$40,197
Medium-Term Average Annual Pay Growth	200	150	7.9%
Short-Term Average Annual Pay Growth	111	78	2.1%
Medium-Term GDP Growth	81	48	17.0%
Short-Term GDP Growth	94	64	3.4%
Medium-Term Job Growth	60	29	13.5%
Short-Term Job Growth	51	29	2.3%
Short-Term Job Momentum	20	17	-0.8%

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# **RESULTS TABLE**

	Overall Ranking	2019 Population	Young Firm Em- ployment Ratio	Young Firm Knowledge Intensity	2018 Per-Cap- ita Personal Income	2018- 2019 Em- ployment Growth	Aug. 2019- Aug. 2020 Employ- ment Growth	2018-2019 Average Annu- al Pay Growth
Midland, TX	1	182,603	20.5%	14.6%	\$114,786	4.9%	-13.7%	2.8%
San Jose-Sunny- vale-Santa Clara, CA	2	1,990,660	12.7%	39.6%	\$76,523	1.8%	-8.3%	1.2%
Provo-Orem, UT	3	648,252	18.3%	25.8%	\$39,526	3.5%	0.4%	5.8%
Boulder, CO	4	326,196	14.8%	33.1%	\$63,876	2.0%	-6.2%	7.7%
San Francis- co-Oakland-Hay- ward, CA	5	4,731,803	14.9%	35.6%	\$70,413	2.0%	-11.2%	4.5%
Austin-Round Rock, TX	6	2,227,083	15.5%	24.7%	\$54,673	3.8%	-2.5%	4.1%
Seattle-Taco- ma-Bellevue, WA	7	3,979,845	10.6%	30.8%	\$61,567	2.3%	-7.5%	3.8%
Greeley, CO	8	324,492	14.7%	18.3%	\$44,099	3.5%	-5.9%	3.2%
Naples-Immoka- lee-Marco Island, FL	9	384,902	18.7%	23.8%	\$84,955	2.9%	-4.2%	1.3%
St. George, UT	10	177,556	18.2%	21.0%	\$38,273	3.4%	-1.7%	1.2%
The Villages, FL	11	132,420	17.8%	21.5%	\$45,689	6.1%	0.0%	2.8%
Bend-Redmond, OR	12	197,692	17.0%	21.6%	\$50,590	2.4%	-9.6%	2.9%
Madera, CA	13	157,327	23.7%	17.1%	\$39,541	2.2%	-3.0%	1.4%
Mount Ver- non-Anacortes, WA	14	129,205	13.5%	21.7%	\$49,267	1.8%	-5.7%	3.7%
Nashville-David- son-Murfrees- boro-Franklin, TN	15	1,959,495	14.2%	28.2%	\$56,608	3.3%	-6.1%	1.3%
Boise City, ID	16	749,202	12.7%	21.7%	\$45,836	3.7%	-0.1%	1.4%
Idaho Falls, ID	17	151,530	14.1%	23.0%	\$46,452	3.4%	4.5%	1.5%
Salt Lake City, UT	18	1,232,696	11.3%	28.7%	\$48,853	3.0%	-4.7%	3.1%
Denver-Auro- ra-Lakewood, CO	19	2,967,239	12.4%	27.6%	\$57,093	2.2%	-4.5%	3.1%
Fort Collins, CO	20	356,899	15.2%	25.1%	\$49,487	2.5%	-5.8%	2.5%

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Fayette- ville-Spring- dale-Rogers, AR-MO	21	557,741	9.6%	22.8%	\$66,882	2.0%	-1.6%	3.0%
Santa Cruz-Wat- sonville, CA	22	273,213	15.1%	25.6%	\$51,489	1.6%	-10.8%	6.5%
Olympia-Tumwa- ter, WA	23	290,536	13.0%	23.9%	\$44,594	1.3%	-4.1%	3.6%
Raleigh, NC	24	1,390,785	11.4%	26.2%	\$53,081	2.6%	-8.9%	1.1%
Palm Bay-Mel- bourne-Titusville, FL	25	601,942	13.4%	23.4%	\$43,974	3.2%	-2.1%	2.6%
Daphne-Fair- hope-Foley, AL	26	223,234	15.3%	19.7%	\$47,055	3.2%	-3.9%	2.6%
Cape Coral-Fort Myers, FL	27	770,577	18.2%	22.7%	\$48,871	2.4%	-4.2%	1.5%
Ogden-Clear- field, UT	28	683,864	12.9%	25.2%	\$43,510	2.7%	0.6%	1.5%
Punta Gorda, FL	30	188,910	20.0%	22.1%	\$40,197	2.3%	-0.8%	2.1%
Bellingham, WA	31	229,247	12.6%	24.7%	\$45,388	1.1%	-2.2%	2.4%
Hilton Head Island-Bluff- ton-Beaufort, SC	32	222,195	16.3%	23.5%	\$52,066	2.3%	-3.2%	3.4%
Sebastian-Vero Beach, FL	33	159,923	14.9%	21.5%	\$76,441	1.7%	-4.4%	0.9%
Santa Rosa, CA	34	494,336	14.9%	23.7%	\$49,087	0.5%	-9.2%	4.0%
Logan, UT-ID	35	142,165	11.0%	26.3%	\$39,480	2.3%	0.6%	2.8%
Charleston-North Charleston, SC	36	802,122	13.0%	22.6%	\$49,046	2.4%	-7.2%	2.8%
Dallas-Fort Worth-Arlington, TX	37	7,643,907	12.2%	24.6%	\$51,697	2.7%	-3.4%	1.7%
Crestview-Fort Walton Beach-Destin, FL	38	284,809	14.5%	21.3%	\$51.042	2.2%	-5.8%	3.1%
Coeur d'Alene, ID	39	165,697	14.3%	18.3%	\$44,366	2.2%	-5.4%	2.1%
Portland-Van- couver-Hillsboro, OR-WA	40	2,492,412	11.6%	27.1%	\$51,205	1.8%	-8.1%	2.3%
San Luis Obispo-Paso Robles-Arroyo Grande, CA	41	283,111	16.0%	22.2%	\$50,164	1.7%	-12.0%	4.3%
Yuba City, CA	41	175,639	16.8%	22.2%	\$41,474	4.9%	-12.7%	2.0%
Port St. Lucie, FL	43	489,297	17.3%	21.8%	\$51,597	2.6%	-1.9%	1.4%

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Phoenix-Me- sa-Scottsdale, AZ	44	4,948,203	11.2%	22.6%	\$43,845	3.3%	-3.2%	2.3%
North Port-Sara- sota-Bradenton, FL	45	836,995	17.2%	23.3%	\$52,377	1.6%	-5.8%	O.1%
Colorado Springs, CO	46	745,791	12.1%	23.3%	\$45,575	2.2%	-2.2%	2.7%
Fresno, CA	47	999,101	16.3%	18.7%	\$41,627	2.4%	-6.4%	2.1%
Reno, NV	48	475,642	11.6%	24.6%	\$56,530	2.1%	-5.5%	2.1%
Napa, CA	49	137,744	14.4%	22.9%	\$57,284	1.1%	-10.3%	1.9%
Tampa-St. Pe- tersburg-Clear- water, FL	50	3,194,831	12.7%	24.0%	\$44,482	2.5%	-4.4%	1.9%
Sacramen- to-Roseville-Ar- den-Arcade, CA	51	2,363,730	14.2%	25.5%	\$50,610	2.0%	-8.4%	2.4%
Boston-Cam- bridge-Newton, MA-NH	52	4,873,019	10.2%	34.2%	\$64,240	1.1%	-11.9%	2.5%
Auburn-Opelika, AL	53	164,542	16.0%	19.6%	\$41,524	2.6%	-3.3%	1.9%
Wilmington, NC	54	297,533	14.3%	23.4%	\$43,138	3.1%	-9.1%	1.7%
Huntsville, AL	55	471,824	10.9%	23.2%	\$51,824	2.5%	-4.5%	2.8%
Ann Arbor, MI	56	367,601	9.8%	30.2%	\$54,662	1.9%	-4.7%	1.6%
Atlanta-Sandy Springs-Roswell, GA	57	6,020,364	11.0%	26.6%	\$50,262	2.3%	-4.4%	1.7%
Las Vegas-Hen- derson-Paradise, NV	58	2,266,715	13.9%	22.7%	\$45,322	2.8%	-12.3%	0.8%
Los Ange- les-Long Beach-Anaheim, CA	59	13,214,799	15.0%	26.5%	\$50,886	1.2%	-10.0%	2.0%
Stockton-Lodi, CA	60	762,148	10.9%	22.0%	\$41,662	2.3%	-8.4%	2.6%
Grants Pass, OR	61	87,487	15.0%	16.9%	\$41,018	1.9%	-9.0%	2.4%
San Anto- nio-New Braunfels, TX	62	2,550,960	12.4%	16.9%	\$46,622	1.9%	-3.8%	2.1%
Orlando-Kissim- mee-Sanford, FL	63	2,608,147	11.8%	23.0%	\$41,068	2.7%	-9.1%	1.5%
Trenton, NJ	64	367,430	8.6%	35.0%	\$59,472	1.6%	-7.7%	2.8%

	Overall Ranking	2019 Population	Young Firm Em- ployment Ratio	Young Firm Knowledge Intensity	2018 Per-Cap- ita Personal Income	2018- 2019 Em- ployment Growth	Aug. 2019- Aug. 2020 Employ- ment Growth	2018-2019 Average Annu- al Pay Growth
Riverside-San Bernardino-On- tario, CA	65	4,650,631	15.3%	19.0%	\$35,267	2.4%	-8.6%	2.5%
Kennewick-Rich- land, WA	66	299,612	10.9%	19.9%	\$42,391	2.6%	-1.7%	2.1%
Twin Falls, ID	67	111,290	13.2%	16.8%	\$40,777	1.5%	0.8%	1.4%
Gainesville, GA	68	204,441	11.5%	20.8%	\$45,100	1.6%	-3.9%	1.7%
San Diego-Carls- bad, CA	69	3,338,330	13.8%	26.3%	\$49,148	1.5%	-9.0%	2.1%
College Sta- tion-Bryan, TX	70	264,728	15.8%	20.9%	\$39,652	2.7%	0.9%	0.8%
Visalia-Porter- ville, CA	71	466,195	16.4%	15.1%	\$40,020	1.7%	-8.4%	3.0%
Ocala, FL	72	365,579	15.5%	20.1%	\$37,829	2.2%	-0.5%	1.8%
Missoula, MT	73	119,600	12.6%	19.1%	\$48,569	1.2%	-0.6%	1.4%
Washington-Ar- lington-Alexan- dria, DC-VA-MD- WV	74	6,267,226	10.5%	31.9%	\$57,384	1.3%	-6.1%	1.1%
Columbia, MO	75	180,463	10.6%	22.3%	\$49,778	0.2%	-3.0%	4.7%
Madison, WI	76	664,865	8.5%	25.6%	\$57,307	1.1%	-10.0%	3.3%
Jacksonville, FL	77	1,559,514	11.2%	22.9%	\$48,588	2.3%	-3.6%	0.8%
Medford, OR	78	220,944	12.4%	18.6%	\$44,639	0.3%	-4.3%	3.4%
Gainesville, FL	79	287,625	12.9%	23.2%	\$43,242	1.7%	-3.9%	1.2%
Oxnard-Thou- sand Oaks-Ven- tura, CA	80	846,006	16.4%	29.5%	\$49,095	1.0%	-7.7%	3.2%
Prescott, AZ	81	235,099	16.6%	19.6%	\$39,521	0.9%	-0.3%	0.7%
Santa Maria-San- ta Barbara, CA	82	446,499	15.9%	23.7%	\$52,548	2.0%	-9.0%	1.1%
Spokane-Spo- kane Valley, WA	83	582,245	10.9%	21.9%	\$44,555	1.9%	-7.9%	2.5%
Miami-Fort Lauderdale-West Palm Beach, FL	84	6,166,488	15.5%	23.7%	\$48,540	1.4%	-7.7%	1.7%
Asheville, NC	85	462,680	13.4%	24.2%	\$45,342	1.8%	-10.4%	1.6%
Deltona-Daytona Beach-Ormond Beach, FL	86	668,365	14.1%	22.0%	\$41,815	0.7%	-3.1%	2.2%
Charlotte-Con- cord-Gastonia, NC-SC	87	2,612,437	10.3%	24.4%	\$51,777	2.5%	-7.7%	1.2%

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Pensacola-Ferry Pass-Brent, FL	88	502,629	9.9%	20.3%	\$43,607	2.4%	-3.8%	2.0%
Bridge- port-Stam- ford-Norwalk, CT	89	943,332	10.6%	33.7%	\$97,518	-0.4%	-10.2%	1.9%
Modesto, CA	90	550,660	11.3%	20.1%	\$41,350	1.1%	-9.3%	2.2%
Durham-Chapel Hill, NC	91	583,924	9.9%	28.9%	\$54,660	1.9%	-8.0%	1.9%
Charlottesville, VA	92	235,763	14.4%	25.2%	\$60,193	2.2%	-4.1%	-1.4%
Bloomington, IN	93	169,230	10.6%	22.9%	\$42,629	1.5%	-1.7%	1.4%
Wenatchee, WA	94	120,629	16.8%	16.4%	\$47,101	0.4%	-6.9%	3.8%
Salem, OR	95	433,903	12.6%	19.1%	\$40,680	1.6%	-8.3%	2.5%
Vallejo-Fairfield, CA	96	447,643	12.4%	22.7%	\$40,299	1.2%	-10.1%	4.0%
Longview, WA	97	110,593	9.2%	18.7%	\$44,237	2.1%	-2.2%	2.7%
Carson City, NV	98	55,916	11.3%	22.4%	\$48,990	2.4%	-4.5%	1.6%
Wichita, KS	99	647,370	13.0%	21.5%	\$54,415	1.9%	-4.8%	1.2%
Omaha-Council Bluffs, NE-IA	100	949,442	10.2%	22.9%	\$58,742	0.9%	-4.0%	2.2%
Yakima, WA	101	250,873	12.6%	15.3%	\$43,250	0.5%	-2.5%	2.4%
Portland-South Portland, ME	102	538,500	10.1%	26.9%	\$52,122	1.3%	-9.5%	2.3%
Sherman-Deni- son, TX	103	136,212	14.3%	20.6%	\$43,100	1.7%	-2.3%	0.8%
Abilene, TX	104	172,060	12.8%	16.7%	\$43,976	3.0%	-3.2%	2.2%
Merced, CA	105	277,680	13.4%	17.4%	\$37,801	2.4%	-7.5%	3.8%
Rochester, MN	106	221,921	7.5%	22.6%	\$55,267	1.0%	-6.4%	0.5%
Jonesboro, AR	107	133,860	11.8%	19.9%	\$40,972	2.3%	0.3%	2.2%
Lancaster, PA	108	545,724	10.3%	22.7%	\$49,589	1.0%	-2.2%	1.6%
Indianapolis-Car- mel-Anderson, IN	109	2,074,537	8.4%	24.0%	\$55,116	1.5%	-2.9%	1.2%
Lakeland-Winter Haven, FL	110	724,777	10.6%	20.3%	\$35,463	3.0%	-3.1%	1.4%
Killeen-Temple, TX	111	460,303	11.6%	17.9%	\$43,054	1.4%	-3.0%	2.3%
Chattanooga, TN-GA	112	565,194	8.8%	21.8%	\$48,163	1.7%	-1.4%	1.4%
Des Moines-West Des Moines, IA	113	662,107	8.2%	26.5%	\$55,026	0.8%	-7.1%	0.9%
Salisbury, MD-DE	114	415,726	11.6%	21.1%	\$50,678	1.5%	-8.9%	1.8%

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Philadel- phia-Cam- den-Wilmington, PA-NJ-DE-MD	115	6,102,434	10.2%	27.9%	\$57,026	1.3%	-7.9%	1.7%
Grand Junction, CO	116	154,210	10.7%	18.1%	\$44,890	1.3%	-0.6%	1.7%
Albany, OR	117	129,749	9.3%	17.6%	\$41,360	0.7%	-3.3%	1.5%
Redding, CA	118	180,080	14.3%	19.2%	\$44,747	1.6%	-7.3%	2.3%
Baltimore-Co- lumbia-Towson, MD	119	2,800,053	9.3%	27.7%	\$54,500	0.7%	-5.7%	1.8%
Springfield, MO	120	470,300	10.1%	19.1%	\$45,119	1.5%	-2.6%	1.9%
New York-New- ark-Jersey City, NY-NJ-PA	121	19,895,340	12.7%	31.9%	\$57,030	1.4%	-12.2%	1.6%
Tucson, AZ	122	1,047,279	10.0%	18.7%	\$43,678	2.0%	-3.4%	2.2%
Odessa, TX	123	166,223	14.1%	12.7%	\$46,572	3.0%	-12.0%	2.6%
Minneapolis-St. Paul-Blooming- ton, MN-WI	124	3,654,908	9.2%	28.1%	\$57,059	0.6%	-7.7%	1.3%
Athens-Clarke County, GA	125	213,750	12.8%	24.3%	\$41,563	-1.6%	-3.7%	2.7%
Barnstable Town, MA	126	212,990	13.8%	26.2%	\$66,156	0.6%	-17.6%	2.8%
Eugene, OR	127	382,067	11.8%	20.5%	\$43,443	0.8%	-2.9%	1.7%
Yuma, AZ	128	213,787	13.2%	10.8%	\$37,442	2.1%	-2.3%	1.3%
Manches- ter-Nashua, NH	129	417,025	8.4%	29.6%	\$52,804	1.0%	-7.7%	1.7%
Fargo, ND-MN	130	246,145	9.1%	20.8%	\$53,733	1.2%	-2.9%	1.7%
Myrtle Beach- Conway-North Myrtle Beach, SC-NC	131	496,901	14.6%	19.5%	\$39,249	2.0%	-11.7%	2.4%
Decatur, AL	132	152,603	11.4%	18.3%	\$43,262	2.2%	-5.4%	3.1%
Louisville/Jef- ferson County, KY-IN	133	1,297,452	9.6%	23.4%	\$51,478	0.4%	-5.6%	2.3%
Lincoln, NE	134	336,374	9.9%	24.6%	\$51,061	0.5%	-1.7%	1.2%
State College, PA	135	162,385	11.2%	26.4%	\$42,457	0.6%	-4.5%	2.8%
Allentown-Beth- lehem-Easton, PA-NJ	136	844,052	8.2%	26.1%	\$50,579	1.6%	-7.0%	2.5%
Greenville-An- derson-Mauldin, SC	137	920,477	9.6%	22.4%	\$45,581	1.2%	-3.4%	1.2%

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Kansas City, MO-KS	138	2,157,990	9.7%	23.0%	\$54,004	0.8%	-4.1%	1.6%
Salinas, CA	139	434,061	13.7%	19.1%	\$47,742	1.6%	-11.2%	1.5%
Fort Wayne, IN	140	441,559	7.4%	20.9%	\$48,237	1.3%	-4.6%	1.4%
California-Lex- ington Park, MD	141	113,510	9.4%	24.8%	\$53,961	3.1%	-7.8%	1.1%
Oklahoma City, OK	142	1,408,950	12.2%	21.1%	\$49,919	1.5%	-3.4%	0.8%
Cincinnati, OH- KY-IN	143	2,198,450	8.8%	23.9%	\$56,164	0.7%	-6.0%	2.6%
Staunton- Waynesboro, VA	144	123,120	10.2%	19.9%	\$48,013	2.1%	2.1%	O.1%
Janesville-Beloit, WI	145	163,354	6.8%	18.3%	\$45,807	0.7%	-7.3%	2.4%
Tallahassee, FL	146	387,227	12.8%	22.7%	\$42,516	1.6%	-5.8%	1.1%
Walla Walla, WA	147	64,745	8.8%	18.9%	\$44,821	1.7%	-1.0%	2.3%
Harrisburg-Carl- isle, PA	148	577,941	8.5%	24.2%	\$50,486	1.6%	-5.1%	1.9%
Richmond, VA	149	1,315,600	10.0%	24.7%	\$55,296	1.1%	-5.3%	1.7%
Corvallis, OR	150	93,053	13.0%	22.7%	\$42,901	0.7%	-9.6%	0.7%
Chico, CA	151	219,186	13.8%	20.8%	\$41,445	-2.2%	-8.6%	3.8%
Columbus, OH	152	2,122,271	9.4%	25.1%	\$51,891	1.1%	-7.8%	1.3%
Ames, IA	153	97,117	10.3%	26.4%	\$42,653	-0.7%	2.9%	1.9%
Savannah, GA	154	393,353	12.4%	21.0%	\$46,539	1.3%	-4.9%	-0.4%
Lake Havasu City-Kingman, AZ	155	212,181	12.7%	16.3%	\$34,315	2.2%	-4.4%	1.3%
Pittsburgh, PA	156	2,317,600	8.5%	24.4%	\$58,130	0.7%	-8.3%	1.8%
Lebanon, PA	157	141,793	7.8%	20.5%	\$46,944	1.6%	-7.0%	2.7%
Waco, TX	158	273,920	11.4%	17.9%	\$42,400	1.7%	-1.2%	-0.3%
Birming- ham-Hoover, AL	159	1,153,956	9.4%	22.5%	\$52,978	1.4%	-4.7%	0.7%
Dover, DE	160	180,786	10.5%	20.5%	\$42,447	1.8%	-2.4%	2.6%
Tyler, TX	161	232,751	12.4%	18.8%	\$55,562	0.8%	-3.3%	1.9%
Chicago-Na- perville-Elgin, IL-IN-WI	162	9,458,539	9.7%	28.8%	\$55,135	0.5%	-7.4%	1.0%
Worcester, MA- CT	163	947,404	10.0%	26.7%	\$50,362	0.8%	-6.6%	1.5%
Grand Rap- ids-Wyoming, MI	164	1,074,223	8.7%	22.7%	\$51,626	0.4%	-8.3%	1.4%

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Eau Claire, WI	165	169,304	9.4%	21.4%	\$49,479	0.0%	-7.3%	1.7%
Augusta-Rich- mond County, GA-SC	166	608,980	8.7%	19.9%	\$44,081	0.8%	-4.9%	3.0%
Pueblo, CO	167	168,424	10.3%	15.9%	\$40,901	1.0%	-3.6%	2.9%
Tulsa, OK	168	998,626	10.7%	20.3%	\$57,093	1.1%	-5.4%	1.7%
Clarksville, TN- KY	169	294,105	11.9%	19.2%	\$41,882	1.8%	-4.4%	2.6%
Pocatello, ID	170	87,808	11.6%	19.0%	\$40,639	2.3%	-4.5%	0.9%
Hanford-Corcor- an, CA	171	152,940	16.4%	18.1%	\$34,546	0.8%	-8.0%	2.8%
Great Falls, MT	172	81,366	10.5%	16.6%	\$47,949	0.6%	-1.9%	1.3%
Spartanburg, SC	173	347,101	9.1%	20.0%	\$44,075	2.5%	-7.1%	1.0%
Jacksonville, NC	174	197,938	13.5%	18.4%	\$46,655	1.5%	-5.2%	2.5%
Houston-The Woodlands-Sug- ar Land, TX	175	7,066,141	12.6%	22.8%	\$51,353	2.2%	-5.8%	1.4%
Lawrence, KS	176	122,259	10.6%	23.1%	\$44,262	0.0%	-2.1%	2.1%
Springfield, IL	177	206,868	12.6%	18.7%	\$50,562	-0.9%	-7.7%	4.1%
Iowa City, IA	178	173,105	10.1%	26.1%	\$53,015	-0.3%	-3.5%	0.4%
Lubbock, TX	179	322,257	12.7%	16.1%	\$42,694	1.5%	-4.8%	1.1%
Kalamazoo-Por- tage, MI	180	340,743	7.5%	22.4%	\$48,493	0.5%	-6.9%	1.0%
Green Bay, WI	181	322,906	8.5%	22.3%	\$53,478	-0.1%	-5.6%	1.5%
Lexington-Fay- ette, KY	182	517,056	9.8%	25.1%	\$49,254	0.7%	-6.4%	1.8%
Warner Robins, GA	183	196,546	12.9%	19.5%	\$43,182	2.4%	-5.7%	1.4%
El Centro, CA	184	181,215	20.2%	8.7%	\$38,355	1.9%	-5.8%	2.4%
Knoxville, TN	185	892,366	8.4%	22.5%	\$47,759	1.4%	-2.8%	-0.4%
Appleton, WI	186	237,974	8.0%	22.1%	\$53,099	0.7%	-8.0%	1.1%
Kingston, NY	187	177,573	12.1%	26.5%	\$45,544	-0.5%	-6.1%	2.2%
St. Cloud, MN	188	201,964	7.0%	24.8%	\$47,705	0.6%	-3.5%	0.5%
Sierra Vis- ta-Douglas, AZ	189	125,922	11.7%	15.2%	\$42,340	0.7%	4.8%	1.3%
South Bend-Mishawa- ka, IN-MI	190	323,613	7.7%	21.4%	\$50,047	0.7%	-7.8%	1.5%
Columbia, SC	191	838,433	10.3%	21.9%	\$45,590	1.1%	-5.6%	2.2%
Lewiston-Au- burn, ME	192	108,277	8.0%	21.6%	\$40,555	0.6%	-5.0%	3.5%

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Champaign-Ur- bana, IL	193	238,994	8.9%	24.2%	\$46,873	1.1%	-4.0%	1.3%
Dothan, AL	194	149,358	9.0%	19.3%	\$45,425	2.1%	-3.5%	1.0%
Valdosta, GA	195	147,292	11.7%	18.3%	\$40,512	0.5%	-1.4%	1.6%
Cheyenne, WY	196	99,500	10.2%	19.8%	\$51,371	1.3%	-3.4%	1.8%
Burlington, NC	197	169,509	7.8%	19.8%	\$40,939	2.0%	-5.9%	1.5%
Reading, PA	198	421,164	7.6%	21.8%	\$48,350	1.4%	-0.9%	0.1%
Rocky Mount, NC	199	145,770	8.1%	17.3%	\$43,500	0.5%	-6.6%	1.3%
St. Louis, MO-IL	200	2,803,228	9.0%	21.4%	\$57,258	0.6%	-5.6%	1.2%
Wausau, WI	201	135,692	8.5%	22.1%	\$52,417	0.4%	-5.4%	1.0%
Evansville, IN-KY	202	315,086	7.4%	20.7%	\$50,067	0.4%	-1.2%	2.9%
Kankakee, IL	203	109,862	8.6%	18.4%	\$41,167	1.4%	-3.1%	3.2%
Jefferson City, MO	204	151,235	9.5%	20.6%	\$50,002	1.0%	-4.2%	1.6%
Albany-Sche- nectady-Troy, NY	205	880,381	8.9%	27.2%	\$54,201	0.2%	-9.0%	2.1%
Urban Honolu- lu, HI	206	974,563	9.4%	30.1%	\$44,751	-0.3%	-14.0%	2.8%
Oshkosh-Neen- ah, WI	207	171,907	8.6%	23.0%	\$49,949	-0.6%	-4.2%	3.1%
Harrisonburg, VA	208	134,964	11.3%	20.1%	\$40,992	1.9%	-4.6%	1.6%
Dayton, OH	209	807,611	7.4%	23.3%	\$50,355	0.4%	-6.1%	2.0%
East Strouds- burg, PA	210	170,271	14.0%	22.4%	\$41,000	0.9%	-11.8%	2.2%
Sheboygan, WI	211	115,340	7.5%	20.7%	\$55,516	-0.0%	-6.8%	1.5%
Lafayette-West Lafayette, IN	212	224,737	6.6%	23.2%	\$41,251	1.6%	-7.4%	-1.9%
Hartford-West Hartford-East Hartford, CT	213	1,204,877	9.5%	32.6%	\$58,756	0.1%	-6.6%	1.5%
Billings, MT	214	172,846	9.3%	18.8%	\$51,099	0.2%	-2.8%	1.2%
Columbus, IN	215	83,779	5.9%	20.6%	\$52,329	0.1%	-5.4%	0.9%
Baton Rouge, LA	216	832,993	11.6%	18.4%	\$48,858	0.0%	-5.0%	0.9%
Tuscaloosa, AL	217	243,936	11.5%	17.9%	\$40,827	2.8%	-3.5%	1.2%
Virginia Beach-Nor- folk-Newport News, VA-NC	218	1,732,436	10.0%	21.4%	\$48,774	0.5%	-5.2%	1.8%
Lima, OH	219	102,351	6.5%	17.7%	\$47,416	-0.1%	-7.7%	2.2%
Panama City, FL	220	188,344	13.3%	19.5%	\$41,915	-4.2%	-5.2%	5.7%

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Johnson City, TN	221	203,649	10.2%	19.2%	\$43,775	0.9%	-4.7%	0.9%
Detroit-War- ren-Dearborn, MI	222	4,319,629	10.0%	26.9%	\$51,842	0.5%	-10.7%	0.1%
McAllen-Edin- burg-Mission, TX	223	868,707	14.6%	12.8%	\$29,774	2.4%	-5.2%	1.0%
Morristown, TN	224	119,429	8.6%	18.0%	\$41,233	2.2%	-1.9%	0.3%
Albuquerque, NM	225	918,018	10.3%	17.3%	\$42,074	1.3%	-5.5%	2.4%
Sebring, FL	226	106,221	14.2%	18.4%	\$36,402	0.6%	-1.1%	1.7%
Muncie, IN	227	114,135	7.7%	21.1%	\$40,218	0.0%	-5.8%	4.0%
Amarillo, TX	228	265,053	9.3%	17.5%	\$46,644	0.9%	-6.3%	1.9%
Bakersfield, CA	229	900,202	18.2%	16.7%	\$38,360	2.5%	-8.5%	2.3%
New Haven-Mil- ford, CT	230	854,757	10.0%	26.7%	\$48,752	0.1%	-7.1%	1.7%
Mankato-North Mankato, MN	231	101,927	8.6%	24.5%	\$47,227	0.8%	-4.1%	1.4%
Lake Charles, LA	232	210,409	11.9%	18.1%	\$51,428	-3.4%	-12.6%	-0.2%
La Crosse-On- alaska, WI-MN	233	136,616	6.2%	23.1%	\$51,389	-0.4%	-8.0%	2.4%
Chambers- burg-Waynes- boro, PA	234	155,027	8.5%	18.6%	\$45,717	1.2%	-4.8%	1.0%
Milwau- kee-Wauke- sha-West Allis, WI	235	1,575,179	9.1%	21.7%	\$56,052	-0.0%	-6.9%	1.3%
Cleveland, TN	236	124,942	8.3%	18.0%	\$42,165	4.0%	-1.4%	0.6%
Hot Springs, AR	237	99,386	12.8%	19.4%	\$43,625	1.5%	-2.5%	0.4%
Burlington-South Burlington, VT	238	220,411	9.8%	28.0%	\$50,771	-0.1%	-10.5%	2.0%
Florence, SC	239	204,911	8.7%	18.1%	\$43,362	1.1%	-3.3%	2.1%
Little Rock- North Little Rock-Conway, AR	240	742,384	9.9%	21.4%	\$47,557	0.7%	-5.2%	1.3%
Gettysburg, PA	241	103,009	9.8%	19.4%	\$47,694	0.1%	-2.8%	2.4%
Providence-War- wick, RI-MA	242	1,624,578	9.5%	25.7%	\$50,967	0.6%	-7.9%	1.3%
Blacks- burg-Christians- burg-Radford, VA	243	183,280	10.0%	23.5%	\$40,387	0.2%	-4.7%	0.9%
Fond du Lac, WI	244	103,403	6.4%	18.0%	\$51,526	1.0%	-2.9%	0.8%
Bangor, ME	245	152,148	9.0%	19.1%	\$40,631	1.5%	-8.7%	1.9%

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Lansing-East Lansing, MI	246	482,269	8.7%	23.5%	\$43,097	0.3%	-9.7%	1.4%
San Angelo, TX	247	120,736	12.9%	13.5%	\$46,887	0.2%	-8.6%	3.0%
Cleveland-Elyria, OH	248	2,048,449	8.2%	23.9%	\$55,629	0.9%	-11.0%	1.4%
Wichita Falls, TX	249	151,254	11.5%	17.3%	\$46,305	0.4%	-5.3%	2.2%
Grand Forks, ND-MN	250	100,815	8.8%	18.9%	\$51,916	-1.3%	-4.7%	1.8%
El Paso, TX	251	844,124	10.9%	11.8%	\$37,683	1.8%	-4.2%	1.5%
Weirton-Steu- benville, WV-OH	252	116,074	9.2%	20.2%	\$44,869	0.1%	-7.4%	-0.2%
New Bern, NC	253	124,284	8.2%	19.7%	\$47,957	1.4%	-7.5%	2.0%
Lawton, OK	254	126,415	13.0%	16.9%	\$43,648	0.5%	-2.7%	2.0%
Dubuque, IA	255	97,311	5.3%	21.5%	\$51,076	0.2%	-7.2%	2.1%
Hammond, LA	256	134,758	13.4%	18.6%	\$42,363	0.4%	-5.4%	4.2%
Florence-Muscle Shoals, AL	257	147,970	12.1%	20.3%	\$42,639	0.8%	-3.7%	0.9%
Buffalo-Cheek- towaga-Niagara Falls, NY	258	1,127,983	8.8%	23.1%	\$49,572	0.2%	-9.4%	1.8%
Santa Fe, NM	259	150,358	14.3%	20.6%	\$55,724	1.8%	-11.6%	1.2%
Bowling Green, KY	260	179,240	11.6%	22.5%	\$40,508	0.8%	-10.7%	0.9%
Hickory-Le- noir-Morganton, NC	261	369,711	9.2%	19.9%	\$42,438	0.7%	-10.2%	0.7%
Greenville, NC	262	180,742	10.3%	18.4%	\$44,102	1.0%	-10.0%	2.1%
York-Hanover, PA	263	449,058	7.7%	21.0%	\$48,419	0.5%	-6.0%	0.8%
Homosassa Springs, FL	264	149,657	15.3%	19.6%	\$39,958	0.3%	-2.4%	0.8%
Jackson, TN	265	129,511	7.7%	18.3%	\$46,977	0.9%	-5.0%	0.8%
New Orle- ans-Metairie, LA	266	1,270,530	12.0%	20.2%	\$51,964	0.9%	-11.4%	1.2%
Toledo, OH	267	601,291	7.2%	21.8%	\$49,995	0.2%	-8.2%	1.0%
Roanoke, VA	268	313,222	7.7%	24.1%	\$48,366	0.6%	-5.8%	1.3%
Brunswick, GA	269	118,779	14.9%	19.3%	\$43,530	-0.1%	-14.7%	0.8%
Memphis, TN- MS-AR	270	1,354,304	9.1%	18.9%	\$48,058	1.1%	-5.9%	0.5%
Montgomery, AL	271	373,290	9.3%	19.2%	\$45,394	0.1%	-6.0%	2.6%
Duluth, MN-WI	272	278,091	7.2%	18.4%	\$47,952	-0.4%	-8.9%	1.9%

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Morgantown, WV	273	139,044	11.0%	21.0%	\$44,051	0.0%	-4.3%	1.3%
Lewiston, ID-WA	274	62,990	8.9%	17.1%	\$46,723	-0.1%	-6.4%	1.3%
Bismarck, ND	275	133,179	10.6%	19.9%	\$55,838	0.6%	-4.2%	0.6%
Hager- stown-Martins- burg, MD-WV	276	270,220	6.8%	22.1%	\$42,358	0.3%	-7.9%	1.1%
Sumter, SC	277	106,721	8.7%	16.1%	\$42,189	-0.4%	-4.0%	2.7%
Flint, MI	278	405,813	10.6%	21.0%	\$42,646	0.2%	-10.7%	1.3%
Hattiesburg, MS	279	150,213	10.5%	19.2%	\$43,253	0.6%	-1.2%	-0.1%
Las Cruces, NM	280	218,195	13.0%	13.4%	\$39,070	1.1%	-8.7%	1.7%
Hinesville, GA	281	80,994	9.1%	16.4%	\$34,468	2.9%	0.0%	1.8%
Macon-Bibb County, GA	282	229,996	8.5%	20.1%	\$43,874	-0.1%	-4.7%	1.0%
Winston-Salem, NC	283	676,008	9.0%	20.4%	\$47,062	1.5%	-8.2%	1.1%
Lynchburg, VA	284	263,566	9.9%	21.1%	\$42,144	0.7%	-4.8%	0.7%
Binghamton, NY	285	238,691	7.9%	21.3%	\$43,639	-0.6%	-7.2%	2.8%
Brownsville-Har- lingen, TX	286	423,163	10.9%	12.6%	\$32,310	1.7%	-5.4%	1.7%
Fort Smith, AR- OK	287	282,506	10.7%	19.7%	\$41,424	-0.3%	-2.8%	2.1%
Beckley, WV	288	115,767	9.5%	19.1%	\$47,100	1.1%	-5.2%	2.5%
Altoona, PA	289	121,829	8.2%	19.3%	\$48,139	-0.2%	-6.4%	1.9%
Texarkana, TX- AR	290	148,761	10.8%	16.4%	\$40,700	1.7%	-1.5%	0.4%
Norwich-New London, CT	291	265,206	9.3%	25.1%	\$53,975	-0.2%	-9.1%	1.3%
Shreve- port-Bossier City, LA	292	433,046	9.9%	17.5%	\$48,568	-0.3%	-5.8%	1.1%
Springfield, MA	293	627,202	10.4%	23.5%	\$49,469	0.4%	-13.7%	1.2%
Michigan City-La Porte, IN	294	109,888	8.5%	21.0%	\$46,733	0.4%	-4.3%	0.4%
Syracuse, NY	295	648,593	8.1%	23.0%	\$48,054	0.6%	-11.1%	1.1%
Racine, WI	296	196,311	9.7%	18.2%	\$50,201	-0.4%	-3.9%	0.4%
Anniston-Ox- ford-Jackson- ville, AL	297	113,605	9.6%	19.0%	\$41,614	0.2%	-7.4%	2.8%
Grand Island, NE	297	84,877	10.5%	17.4%	\$49,793	-1.1%	-7.4%	2.8%
Manhattan, KS	298	98,615	12.1%	22.1%	\$49,793	-0.1%	-3.0%	1.0%
Mannattan, KS	299	98,615	12.1%	∠∠.۱%	<b>⊅40,240</b>	-0.1%	-4.0%	1.0%

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Casper, WY	300	79,858	12.8%	16.3%	\$68,219	1.2%	-9.0%	2.0%
Davenport-Mo- line-Rock Island, IA-IL	301	379,172	7.3%	20.3%	\$51,651	0.3%	-7.2%	1.5%
Monroe, LA	302	175,387	10.6%	19.2%	\$45,097	-0.8%	0.6%	-0.6%
Columbus, GA- AL	303	308,232	12.3%	21.1%	\$43,578	-0.1%	-4.9%	0.4%
Utica-Rome, NY	304	289,990	7.4%	23.6%	\$44,036	0.5%	-10.9%	2.1%
Springfield, OH	305	134,083	9.1%	16.7%	\$44,411	-0.3%	-5.3%	1.2%
Elizabeth- town-Fort Knox, KY	306	153,928	12.9%	20.8%	\$45,809	0.4%	-9.2%	1.0%
Niles-Benton Harbor, MI	307	153,401	8.8%	19.8%	\$50,728	0.7%	-8.0%	0.4%
Gulfport-Bi- Ioxi-Pascagoula, MS	308	399,329	12.3%	18.8%	\$39,459	0.7%	-1.8%	-0.3%
Jackson, MI	309	158,510	7.0%	19.2%	\$42,195	-0.3%	-10.4%	1.3%
Greensboro-High Point, NC	310	771,851	7.9%	22.5%	\$44,802	1.0%	-9.0%	1.1%
Alexandria, LA	311	152,037	10.5%	19.3%	\$47,562	-0.1%	-4.4%	1.7%
Ocean City, NJ	312	92,039	12.8%	23.4%	\$54,992	0.6%	-23.3%	1.5%
Atlantic City-Hammon- ton, NJ	313	263,670	11.1%	22.7%	\$45,231	1.5%	-17.9%	0.2%
Akron, OH	314	703,479	8.7%	23.4%	\$51,162	0.1%	-9.9%	0.6%
lthaca, NY	315	102,180	7.6%	27.1%	\$39,861	-1.2%	-3.9%	0.2%
Bloomsburg-Ber- wick, PA	316	83,194	5.3%	18.5%	\$45,848	0.2%	-2.1%	1.2%
Canton-Massil- Ion, OH	317	397,520	7.7%	19.7%	\$48,292	-0.4%	-8.2%	1.4%
Rochester, NY	318	1,069,644	9.0%	24.3%	\$48,823	0.1%	-12.0%	1.3%
Vineland-Bridge- ton, NJ	319	149,527	10.2%	21.6%	\$38,116	0.2%	-5.4%	1.0%
Carbondale-Mar- ion, IL	320	123,347	8.2%	19.4%	\$46,059	0.6%	-5.9%	-1.3%
Joplin, MO	321	179,564	8.0%	15.9%	\$43,554	0.8%	-3.6%	1.0%
Scranton-Wil- kes-Barre-Hazle- ton, PA	322	553,885	8.1%	22.6%	\$46,783	-0.4%	-10.1%	0.8%
Fayetteville, NC	323	390,743	10.0%	18.8%	\$39,601	0.7%	-9.4%	0.9%
Jackson, MS	324	577,796	10.3%	19.6%	\$46,227	0.4%	-4.7%	0.2%

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Cumberland, MD-WV	325	97,284	10.3%	19.3%	\$43,343	0.5%	-8.7%	2.1%
Huntington-Ash- land, WV-KY-OH	326	349,485	9.7%	19.6%	\$43,971	-0.1%	-3.6%	0.9%
Pittsfield, MA	327	124,944	10.9%	24.4%	\$53,507	-0.2%	-13.9%	0.7%
Rome, GA	328	98,498	7.3%	22.7%	\$43,382	0.9%	-0.5%	-0.0%
Cedar Rapids, IA	329	273,032	6.7%	22.1%	\$54,972	0.6%	-6.6%	-2.6%
Laredo, TX	330	276,652	15.2%	11.9%	\$33,762	2.4%	-6.3%	0.3%
Danville, IL	331	75,758	6.5%	18.5%	\$46,834	-0.3%	-4.1%	1.5%
Kokomo, IN	332	82,544	5.4%	19.8%	\$45,431	-1.0%	-3.2%	3.3%
Rockford, IL	333	336,116	7.4%	20.2%	\$47,157	-1.7%	-8.1%	0.3%
Longview, TX	334	220,104	12.6%	16.7%	\$43,138	2.1%	-7.3%	0.9%
Mobile, AL	335	413,210	8.5%	19.2%	\$41,478	0.6%	-6.4%	0.8%
Wheeling, WV- OH	336	138,948	8.8%	20.0%	\$53,597	-1.8%	-13.4%	-3.9%
Topeka, KS	337	231,969	8.9%	20.8%	\$48,490	-0.4%	-3.9%	-0.6%
Albany, GA	338	149,764	7.3%	18.5%	\$42,208	1.0%	-3.9%	0.7%
Midland, MI	339	83,156	9.6%	21.6%	\$62,209	-0.5%	-9.0%	-3.0%
Owensboro, KY	340	119,440	8.0%	20.3%	\$43,982	0.2%	-6.7%	0.8%
Kahului-Wailu- ku-Lahaina, HI	341	167,503	10.7%	26.0%	\$41,736	-0.1%	-28.0%	1.0%
Waterloo-Cedar Falls, IA	342	168,522	6.6%	20.7%	\$47,932	-0.4%	-3.4%	0.2%
Beaumont-Port Arthur, TX	343	406,158	12.6%	17.6%	\$46,672	0.4%	-8.0%	0.1%
Terre Haute, IN	344	169,430	7.4%	19.7%	\$41,615	-1.0%	-4.1%	2.9%
Flagstaff, AZ	345	143,476	14.7%	17.8%	\$45,534	0.7%	-15.2%	-0.2%
Victoria, TX	346	99,742	16.3%	13.7%	\$46,107	0.1%	-7.0%	1.4%
Gadsden, AL	347	102,268	10.2%	17.5%	\$41,810	-1.2%	-7.8%	1.6%
Glens Falls, NY	348	125,148	10.5%	20.1%	\$44,583	-0.6%	-15.2%	2.2%
Saginaw, MI	349	190,539	7.1%	19.6%	\$41,492	-0.6%	-10.8%	0.5%
Erie, PA	350	269,728	7.2%	20.5%	\$45,357	-0.2%	-10.4%	1.4%
Johnstown, PA	351	130,192	8.0%	18.9%	\$46,890	-0.6%	-8.1%	1.9%
Monroe, MI	352	150,500	7.7%	20.5%	\$48,318	-1.1%	-12.9%	1.7%
Corpus Christi, TX	353	452,534	12.3%	14.9%	\$44,525	0.4%	-6.4%	1.1%
Elmira, NY	354	83,456	6.8%	21.0%	\$43,333	-0.4%	-1.4%	0.6%
Goldsboro, NC	355	123,131	7.2%	18.1%	\$41,191	-0.6%	-9.5%	2.6%

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Elkhart-Goshen, IN	356	206,341	7.9%	17.3%	\$49,125	-3.1%	-8.9%	-3.0%
Mansfield, OH	357	121,154	7.5%	17.5%	\$43,115	-1.3%	-7.5%	0.8%
Parkersburg-Vi- enna, WV	358	89,339	8.4%	16.3%	\$44,573	0.5%	-3.6%	0.8%
Dalton, GA	359	144,724	6.7%	19.6%	\$40,173	-1.9%	-5.0%	0.7%
Watertown-Fort Drum, NY	360	109,834	10.5%	19.6%	\$44,562	-1.4%	-14.0%	2.9%
Muskegon, MI	361	173,566	10.5%	18.5%	\$41,832	-1.0%	-12.6%	0.1%
Battle Creek, MI	362	134,159	7.1%	20.6%	\$42,802	-0.8%	-12.2%	-0.7%
Kingsport-Bris- tol-Bristol, TN-VA	363	307,202	7.6%	19.3%	\$43,953	-0.3%	-6.1%	-1.4%
Decatur, IL	364	104,009	7.1%	16.4%	\$52,693	-2.4%	-8.3%	0.1%
Bloomington, IL	365	187,155	7.1%	24.2%	\$49,611	-0.7%	-6.4%	-1.6%
Peoria, IL	366	366,221	7.6%	19.5%	\$52,822	-1.1%	-10.4%	-0.9%
Pine Bluff, AR	367	87,804	8.0%	17.6%	\$39,535	-1.7%	-4.0%	1.7%
Youngstown- Warren- Board- man,OH-PA	368	536,081	9.4%	19.6%	\$45,934	-1.4%	-12.4%	-0.4%
Bay City, MI	369	103,126	10.4%	20.7%	\$45,449	-0.4%	-12.0%	-1.5%
Williamsport, PA	370	113,299	7.4%	19.1%	\$44,311	-0.8%	-12.5%	0.9%
Charleston, WV	371	208,089	7.6%	20.0%	\$49,811	-1.7%	-7.8%	0.5%
Lafayette, LA	372	489,207	11.1%	19.4%	\$47,657	0.3%	-5.8%	0.2%
Houma-Thi- bodaux, LA	373	208,075	10.5%	18.1%	\$46,110	0.6%	-6.1%	0.4%
Enid, OK	374	61,056	9.8%	18.3%	\$46,222	-0.0%	-8.7%	-1.4%
Farmington, NM	375	123,958	8.3%	13.6%	\$36,288	-0.8%	-7.4%	-0.7%