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Job Density in the Mountain West

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JOB DENSITY IN THE MOUNTAIN WEST

Economic Development & Workforce Fact Sheet No. 15 | February 2020

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PURPOSE:

This Fact Sheet highlights the job density patterns in large metropolitan statistical areas (MSAs) in the Mountain West states (Nevada, Utah, Arizona, New Mexico, and Colorado) using the findings of *Where Jobs are Concentrating and Why it Matters to Cities and Regions*, a report by Chad Shearer, Jennifer S. Vey, and Joanne Kim of the Brookings Institution.¹

WHAT IS JOB DENSITY AND WHY DOES IT MATTER?

Job density is the “degree to which jobs are concentrating or dispersing,”² With adequate planning, increasing job density offers a number of potential benefits:

Economic: Density fosters economic growth by allowing more recurring and efficient interactions between firms and their workforce. It can also encourage sharing inputs and ease the distribution of goods and services among firms by decreasing the distance between them. Workers may also find better job placement because higher density improves access to a variety of employment options. Similarly, workers employed by different firms in the same industry are able to collaborate and develop innovative ideas in more dense areas because of their close proximity compared to less dense regions.

Civil: Increased density may result in social benefits by providing more opportunities for community interaction in shared public spaces. The Brookings report argues that people living in denser areas are more active in local politics and have higher rates of civil participation, which may increase the feeling of social connection. More concentrated development also reduces the fiscal burden on local governance by decreasing ambulance response time and the cost of infrastructure like roads, transit, water, and police.

Health: Increased city density reduces the environmental impact of residential areas by decreasing the amount of land consumed by urban sprawl, using energy more efficiently, and decreasing dependency on private transportation. Denser urban areas also encourage increased physical activity because citizens walk or ride their bike more frequently when the distance between their residence and place of work is shorter.

KEY FINDINGS:

1. From 2004 to 2015, the average job density of 94 of the nation’s largest metro areas increased by almost 6,000 jobs per square mile, an average increase of 40%. The New York, Chicago, San Francisco, and Seattle metro areas were responsible for 90% of the country’s job density growth.
2. The remaining 90 large metro areas in the study (excluding New York, Chicago, San Francisco, and Seattle) averaged a 9% increase in job density.
3. Of the 94 large metro areas described in the report, only 19 reported actual increases in job density higher than their expected growth, including just Las Vegas in the Mountain West.
4. Albuquerque is the only large metro in the Mountain West to have lower job density in 2015 than in 2004.

¹ Chad Shearer, Jennifer S. Vey, and Joanne Kim, “Where Jobs Are Concentrating and Why It Matters to Cities and Regions,” *The Brookings Institution*, June 2019 (www.brookings.edu/research/where-jobs-are-concentrating-why-it-matters-to-cities-and-regions/)

² The Brookings Institution, “New Brookings Report Finds Increase of 6,000 Jobs per Square Mile in Nation’s Largest Metro Areas, on average,” June 18, 2019 (www.brookings.edu/wp-content/uploads/2019/06/JobDensityReport_PressRelease_Basscenter_Final.pdf)

MEASUREMENTS:

The original report, *Where Jobs are Concentrating and Why it Matters to Cities and Regions*, analyzes job density “within and across 94 of the nation’s largest metro areas.”³ A Metropolitan Statistical Areas (MSA) is defined by the Office of Management and Budget as follows: “A region generally consisting of a large population nucleus and adjacent territory with a high degree of economic and social integration, as measured by community ties.”⁴ To evaluate job density, the report uses data from the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics program (LODES),⁵ which provides annual employment data connecting home and work locations at the Census block level (a subsection of a MSA). The analysis uses block level data from 2004 to 2015. Because of limitations in data availability and participation, the analysis in the report covers “private, non-administrative sectors of the economy for areas outside of the District of Columbia, Massachusetts, and Wisconsin” in the largest 100 U.S. metro areas.⁶

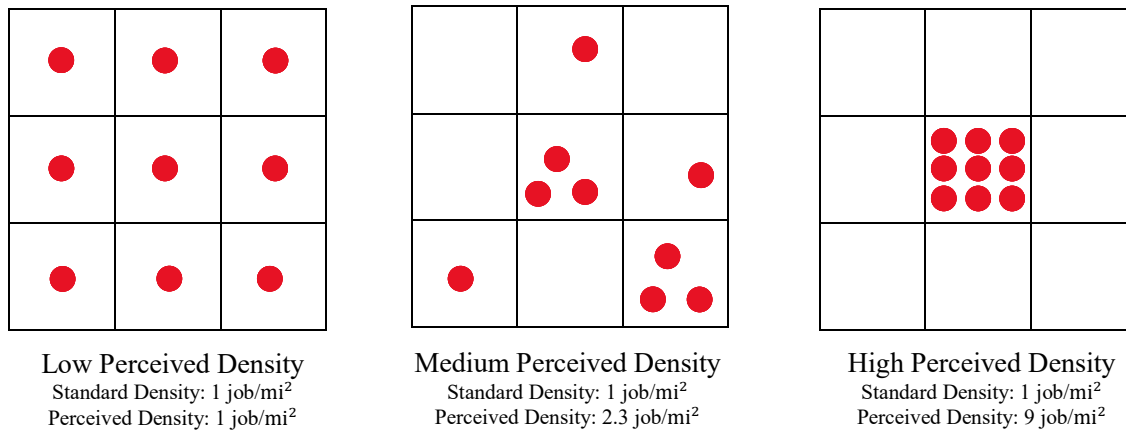
In lieu of the *standard* measure of job density, Brookings’s report focuses on *perceived* density. A description of the two measurement methods follow.

Standard job density is the number of jobs in a metro area divided by the metro’s land area. It is an average measurement of the number of jobs in each square mile.

Perceived job density “measures the job density of the place in which the average job is located,” which demonstrates the average number of jobs within the vicinity of each job in a smaller area.⁷

Figure 1 displays a reproduced version of Brookings’ density visual. Each hypothetical in Figure 1 has the same *standard* density, but a different *perceived* density. The *standard* density in each hypothetical is 1 job/mi². Each red dot represents the location of a job and each small box represents one square mile for a total of 9 square miles in each hypothetical. Perceived metrics better represent how density is experienced in the region and vary as described in the figure.

FIGURE 1: PERCEIVED VERSUS STANDARD JOB DENSITY



Shearer et al. compares two measurements to understand how job density changed in 94 populated metros from 2004-2015. They are as follows:

The **actual** job density trend measures *observed* change in a metro area’s perceived job density.

The **expected** trend specifies how a metro area’s job density *would have* looked if job growth in each sector were spatially allocated to its share at the start of the measurement period.

³ The Brookings Institution, 1.

⁴ Office of Management and Budget, “2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas,” Vol. 75, Rep. No. 123., *Federal Register*, 2010 (www.govinfo.gov/content/pkg/FR-2010-06-28/pdf/2010-15605.pdf)

⁵ LEHD Origin-Destination Employment Statistics data (2002-2015). *U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program*, 2019, (lehd.ces.census.gov/data/lodes/LODES7/)

⁶ *Ibid.*

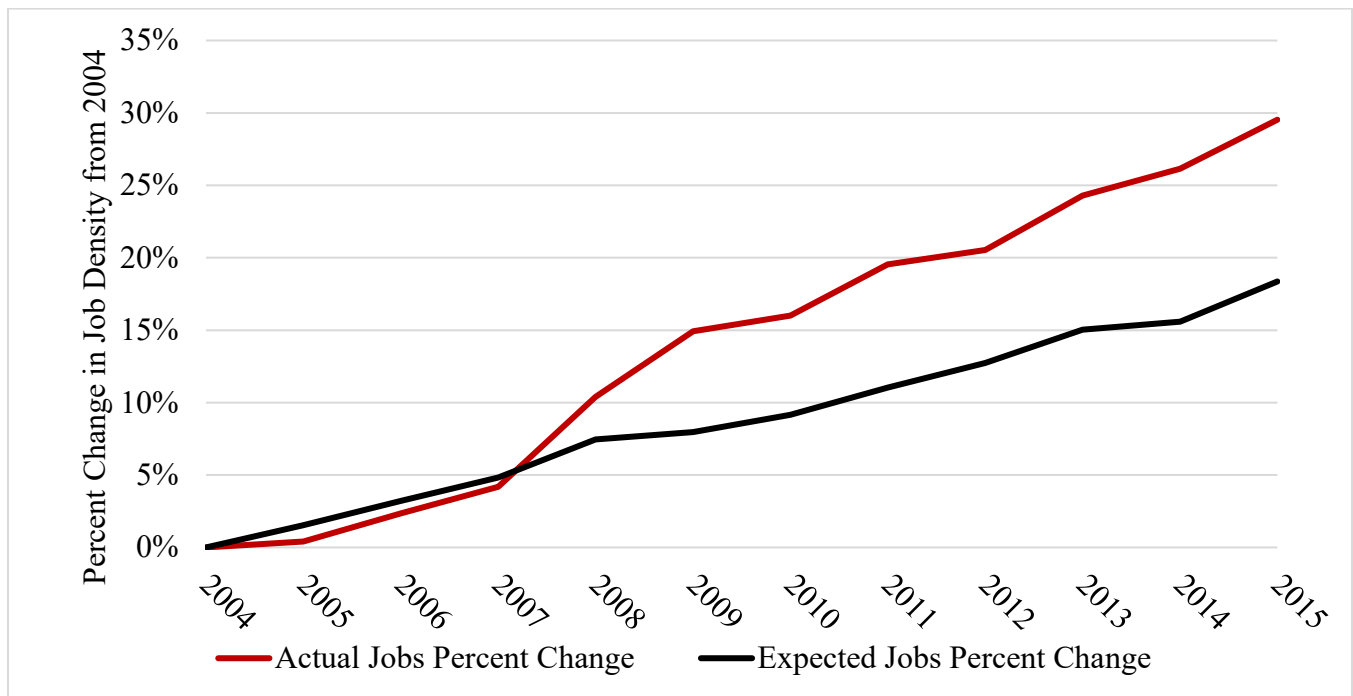
⁷ Shearer et al., 15.

Figure 2 shows job density across 94 of the nation’s largest metro areas increasing nearly 30% from 2004 to 2015. It is important, however, to recognize that just 4 metros - New York, Chicago, San Francisco, and Seattle- produced 90% of this growth. These four metros’ average job density increased by 40% from 2004 to 2015, largely due to their “size, density, and growth.”⁸ The remaining 90 large metro areas experienced 9% job density growth from 2004 to 2015 on average. Despite the core four’s disproportionate impact on the top metro areas’ overall growth and the high variation in the job density growth of the remaining 90, 48 of the 94 large metro areas experienced an increase in job density.

Job density grew modestly from 2004 to 2007 because job growth occurred quicker in suburban and exurban regions than it did in dense urban regions. From 2007-2009, the Great Recession shifted the trend as jobs located in less dense areas at a much faster rate than jobs in dense areas. During this period, the average job density increased by over 10 percentage points. Since then, job density has increased at a steady rate, indicating slightly faster growth in dense areas than suburban neighborhoods.

Most of the metro areas (home to 66% of the country’s private sector employment⁹) also had more jobs in 2015 than in 2004. Jobs created in that time typically concentrated in dense neighborhoods. Because job density grew faster than job growth, core urban areas became denser even though sprawling job growth continued to dilute the concentration. Figure 2 shows this phenomenon; in 2007, the percent change in actual job density surpassed the percent change in expected job density. This indicates that actual job density growth was greater than the projection based on 2004’s distribution of jobs. The difference between the expected and actual density trends indicate that job growth disproportionately located in already-dense areas.

FIGURE 2: PERCENT CHANGE OF JOB DENSITY SINCE 2004 IN 94 LARGE METRO AREAS

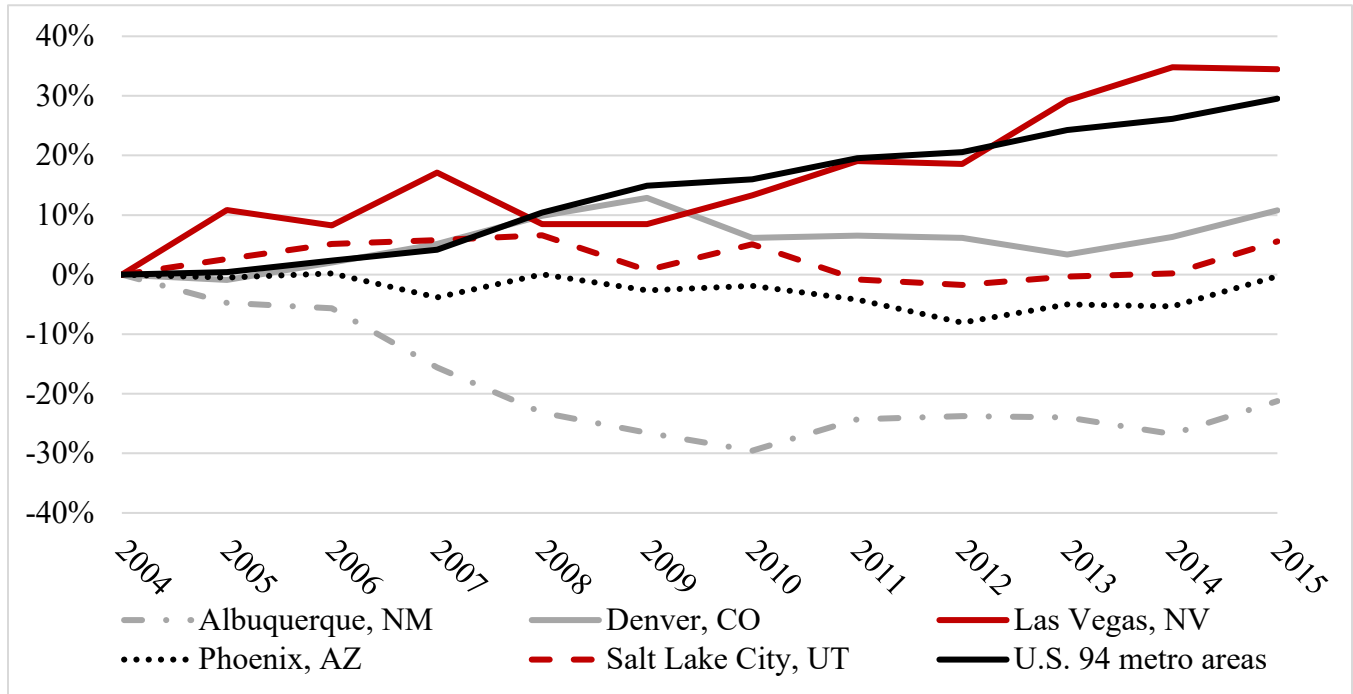


*Metro areas are the top 100 metro areas without Boston, Madison, Milwaukee, Springfield, Washington D.C., and Worcester (Mass.)

⁸ Shearer et al., 15.
⁹ Shearer et al., 9.

Figure 3 shows the percent change of actual job density in the largest metro areas of each state in the Mountain West and the average job density for the 94 large metro areas.

FIGURE 3: PERCENT CHANGE OF ACTUAL JOB DENSITY SINCE 2004 IN THE MOUNTAIN WEST



DENVER

From 2004 to 2015, Denver’s job density grew by about 10%. Even though density increased on par with the 9% average of the top 90 metro areas (excluding the 4 extremely high performing metros), Denver fell nearly 20 percentage points short of its expected job density in the same time period.

SALT LAKE CITY

Similar to Denver, Salt Lake City’s expected change in job density was about 15 percentage points higher than its actual growth. Salt Lake City achieved just over 5% job density growth from 2004 to 2015, suggesting that job growth in dense areas was only slightly faster than job growth in less dense, suburban areas.

PHOENIX

Phoenix’s job density growth fluctuated below 0% from 2006-2014 and made a return to its 2004 starting point in 2015. Similar to both Denver and Salt Lake City, Phoenix’s expected growth exceeded its actual growth by about 20 percentage points.

ALBUQUERQUE

Albuquerque’s actual job density growth was among the lowest 12 of the 94 large metro areas with a decline of 20% in 2015 from its 2004 level. It is the only metro of the largest metros in the Mountain West states that had lower job density in 2015 than in 2004. As is the case with every other metro area specified in the Mountain West besides Las Vegas, Albuquerque fell short of its expected growth. The metro’s expected growth exceeded its actual growth by about 30 percentage points, suggesting a decentralization of the city’s jobs.

LAS VEGAS

Although the average job density of the 94 metro areas is misleadingly high because of the impact of Seattle, San Francisco, New York, and Chicago, Las Vegas increased its job density (compared to its 2004 baseline) above the national average. It is the only city in the Mountain West among the nineteen metro areas in the country that reported higher increases in actual job density than expected. This is likely due to Las Vegas’ low starting job density as a result of its expansion during a suburban boom (a period propelled by high personal vehicle utilization). Older cities designed prior to the advent of affordable vehicles are likely to have denser infrastructure in 2004 compared to cities developed in the mid to late 20th century.¹⁰ It is also possible that any deviation could appear very large in the city because it started the measurement period (2004) with relatively limited job density growth. Even though its actual job density growth outperformed expectations, Las Vegas’ job density is much smaller than older, historically denser cities.

FIGURE 4: PERCENT CHANGE OF JOB DENSITY SINCE 2004 IN LAS VEGAS



¹⁰ Tracy Hadden Loh, Christopher B. Leinberger, and Jordan Chafetz. The George Washington University School of Business & Smart Growth America, “Foot Traffic Ahead: Ranking Walkable Urbanism in America’s Largest Metros,” June 2019 (cpb-us-e1.wpmucdn.com/blogs.gwu.edu/dist/a/326/files/2019/06/FTA19.pdf)