## Title TK: [Trends in Job density in metropolitan America](https://afdta.github.io/job-density-v3/)

(View 1)

The relationship between place and economy is constantly evolving, and continually shaping both the development and the decay of our communities. From the growth of industrial cities during the 19th century to the rise of auto-centric suburbs during the 20th, this changing relationship produced the varied patterns of concentration, dispersion, and racial and economic segregation that still largely characterize our cities, towns, and regions today.

But these patterns aren’t static: Today’s digital revolution is benefiting some industries and workers over others, while altering the physical geography of our economy in ways we are just beginning to understand.

This report aims to help leaders and local stakeholders understand how much, why, and where economic activity has been clustering and dispersing across and within 94 large metropolitan areas from 2004 to 2015—a period of dramatic urban and economic change. Specifically, it examines the changing trends in job density and how actual trends differed from those we would expect to see if prior patterns held true. These trends greatly varied across and within metro areas.

The full report and this accompanying interactive shed light on four key trends: (These will jump to sections of page)

* Job density increased in metropolitan America
* Job density trends varied *among* metropolitan areas
* Job density trends varied *within* metropolitan areas
* Job density trends in your metro area are distinct

A brief description of terms and methodology follows.

(View 2)

## Data and measures

The analysis covers density trends of private, non-administrative sector jobs in 94 of the nation’s largest metro areas from 2004 through 2015 (the latest year of data available).

*To read more about data sources, coverage, and limitations, see page 7 in the report.* (Jump link to PDF)

**What is perceived job density?**

(Figure 1: Average vs. perceived density of jobs schematic figure at the left)

1. (With all three squares faded) All the findings on job density here refer to the weighted or “perceived” density of jobs in metro areas. Perceived job density measures the job density of the place in which the average job is located, revealing how dense a metro area feels and how compactly its jobs are concentrated.
2. To see how this perceived density measure compares to the standard density, consider the following examples…
3. (First square highlighted) In the first example, jobs are spread evenly across the metro area, giving it the same standard and perceived job density of one job per square mile.
4. (Second square) The metro area in the second example has the same number of jobs and therefore the same standard density as the first one, but here jobs are more clustered in some parts than others, which makes its perceived job density greater than its standard job density.
5. (Third square) In the third example, the metro area again has the same number of jobs and therefore the same standard job density, but all the jobs are concentrated in just one part of the metro area, giving it a perceived job density nine-times greater than its standard job density.

*To read more about how we measure perceived job density, see page 8 in the report. (Jump link to PDF)*

**What is the difference between actual and expected changes in job density?**

(Figure 2: Actual vs. expected change in density of jobs schematic figure at the right)

1. (With all three squares faded) To better understand the factors behind job density trends, we compare actual changes in job density to counterfactual or “expected” changes, which indicate how much a metro area’s job density would have changed if its job growth accumulated according to where its existing jobs were located.
2. (First square highlighted) For example, this metro area started with five jobs in the manufacturing sector and four jobs in the services sector for a total of nine jobs in year one.
3. (Second square) From year one to two, this metro area added five new manufacturing jobs and two new services jobs. If these new manufacturing and services jobs had located according to where existing jobs in these sectors were located in year one, this metro area could have *expected* to see its job density increase by 100%.
4. (Third square) Instead, the metro area’s new manufacturing jobs actually located in just two subareas instead of five and new services jobs located in just one subarea instead of two. As a result of this more spatially concentrated job growth, this metro’s perceived job density *actually* increased by 115%.

*To read more about how we calculate expected trends in job density, see page 9 in the report.* (Jump link to PDF)

(View 3)

## (Meta header) Job density increased in metropolitan America

**(Sub-Header) Metropolitan America’s job density was expected to increase from 2004 to 2015**

(Figure 3: line chart on density trends – “Expected: 94 metro areas” line, first)

If the 94 metro areas’ job growth had accumulated according to where their existing jobs were located, we would have seen an overall increase in job density of about 18% from 2004 to 2015.

**Metropolitan America actually saw an even greater increase in job density from 2004 to 2015**

(Figure 3: line chart on density trends – “Actual: 94 metro areas” line added)

These 94 large metro areas actually posted a greater-than-expected increase in job density of 30%, which suggests that job growth during this period disproportionately favored already-dense parts of metro areas.

**Four extremely dense metro areas fueled much of metropolitan America’s increasing job density from 2004 to 2015**

(Figure 3: line chart on density trends – four metros added)

These job density trends were driven largely by just four especially large and extremely dense metro areas: New York, Chicago, San Francisco, and Seattle. In fact, these four metro areas accounted for about 90% of the increase in job density seen among all 94 large metro areas during this period.

**Other metro areas saw a smaller overall increase in job density from 2004 to 2015**

(Figure 3: line chart on density trends – other 90 added)

In contrast, overall job density in the other 90 large metro areas increased only 9%.

(View 4)

## (Meta header) Job density increased in metropolitan America

**Most sectors’ jobs were expected to grow** **slightly denser from 2004 to 2015 in metropolitan America**

(Figure 4: open dots showing expected changes)

If each major industry sector’s job growth had accumulated according to where its existing jobs were located, most sectors would have slightly increased their job density from 2004 to 2015.

**Most sectors’ job density increased by more than expected from 2004 to 2015 in metropolitan America**

(Figure 4: connecting lines & closed dots showing actual changes)

Every sector but manufacturing and logistics did in fact post an increase in job density from 2004 to 2015. The job density of most sectors actually increased more than their growth alone would predict. Especially, in the information and construction sectors, where job density increased by more than 40%.

(View 5)

## (Meta header) Job density trends varied among metropolitan areas

**Job density trends varied among large metro areas from 2004 to 2015**

(Map 1: shows all 94)

Although metropolitan America as a whole saw a notable and greater-than-expected increase in job density, trends across individual metro areas varied considerably.

(Map 1: shows only those increased – blue + metro name label)

Out of the 94 large metro areas in our study, only 48 posted an increase in job density from 2004 to 2015. Of those, 14 metro areas saw job density increases that exceeded the 94-metro area average, led by San Francisco, Honolulu, Oxnard, Calif., Charlotte, N.C., and Albany, N.Y. (LABEL THESE NAMED METRO AREAS)

(Map 1: shows only those increased – blue + metro name label)

For instance, Charlotte’s job density increased by 44% to 8,092 jobs per square mile. Most of this increase was driven by job growth patterns in already dense parts of the metro.

(Map 1: shows only those decreased – red + metro name label)

Meanwhile, 46 metro areas saw job density decline, though most declines were relatively modest. However, six metro areas saw declines greater than 30%, including Scranton, Pa., Cape Coral, Fla., New Haven, Conn., Rochester, N.Y., Sacramento, Calif., and Youngstown, Ohio. (LABEL THESE NAMED METRO AREAS)

(Map 1: shows only those decreased – red + metro name label)

From 2004 to 2015, Cape Coral saw its job density decline by about 31% to 1,694 jobs per square mile. This decrease was largely driven by new jobs that spread out to less-dense parts of the metro area.

(View 6)

## (Meta header) Job density trends varied among metropolitan areas

**Most sectors’ job density increases were driven by a minority of metro areas**

(Figure 5: shows *all* sectors)

In most sectors, the job density increases seen across metropolitan America as a whole were driven by a rather narrow set of metro areas.

(Figure 5: shows 2 named sectors, fades others)

Across the 94 large metro areas, only two sectors of the economy saw widespread increases in perceived job density from 2004 to 2015. The density of jobs in the arts and entertainment and corporate headquarters sectors increased in 56 (or 60%) and 50 (53% of) metro areas, respectively.

(Figure 5: shows 3 named sectors, fades others)

The 60% overall increase in the information sector’s job density across the 94 metro areas was driven largely by the increasing concentration of information jobs in a small number of large and dense metro areas, such as San Francisco, New York, and Seattle. Gains in job density were least widespread in the manufacturing and logistics sectors—less than 30 (or 30% of) metro areas saw job density increase in these sectors.

(View 7)

(Meta header) Job density trends varied within metropolitan areas

**Metropolitan America’s more-urbanized counties posted larger increases in job density**

(Figure 6: total)

Job density trends not only varied among individual metro areas, but also *within* them.

(Figure 6: total + **UC**)

The core urban counties within metro areas—defined as counties where at least 95% of residents lived in an urbanized area in 2000—collectively saw job density increase by 35% from 2004 to 2015.

(Figure 6: total + UC + **MS + ES**)

Meanwhile, less-urbanized counties posted more modest increases in job density. Mature suburban counties (where 75% to 95% of residents lived in an urbanized area in 2000) collectively saw an increase in job density of 13% from 2004 to 2015.

Emerging suburban counties (where 25% to 75% of residents lived in an urbanized area in 2000) collectively saw a small increase in job density of 1%.

(Figure 6: total + UC + MS + ES + **EX**)

Exurban counties (where less than 25% of residents lived in urbanized areas in 2000) collectively saw job density decline by more than 18% from 2004 to 2015, largely as a result of new jobs spreading to less-dense parts of these counties.

(View 8)

## (Meta header) Job density trends varied within metropolitan areas

**Job densification trends varied among counties of similar levels of urbanization across metro areas**

(Figure 7: shows *all* types)

The job densification trends of similarly urbanized counties also varied *among* metro areas, and suggest that much of metropolitan America’s increasing job density during this period was driven by its most urbanized areas.

(Figure 7: highlights urban core and exurban)

While 73% of metro areas with core urban counties (where at least 95% of the residents live in an urbanized area) saw an increase in perceived job density in such counties, just 21% of metro areas saw perceived job density increase in their exurban counties.

(Figure 7: shows *all* types)

These trends in job density therefore suggest that jobs densified *and* sprawled from 2004 to 2015, growing both upwards and outwards: Almost every metro area had at least one county where jobs grew denser and almost every metro area also had at least one county in which job density declined.

(CONCLUSTION/STATIC TEXT)

This analysis helps leaders understand how economic activity has been clustering and dispersing across and within metropolitan areas—and where new land use and placemaking solutions may be most needed, and most ripe. When coupled with good design and programming driven by the vision and values of local stakeholders, efforts to advance density can not only promote economic and social benefits but also help address urgent fiscal and environmental challenges facing many U.S. cities and metropolitan regions today.

*Read more about our findings. (Jump link to PDF, page 12)*

(Meta header) Job density trends in your metro area are distinct

(STATIC TEXT)

The distinctive characteristics of a metro area’s development pattern and economy animate its job density trends and shape its opportunities for transformative placemaking to benefit residents and businesses.

(Page 9: Metro dashboard)

* Change in perceived job density since 2004 (line chart first or at the left)
* By sector
* By county

Source for all of graphics:

*Source: Brookings analysis of Census LEHD Origin-Destination Employment Statistics*