Annual Revision of Gross Domestic Product by Metropolitan Area

Advance Statistics for 2015 and Revised Statistics for 2001–2014

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ECONOMIC GROWTH WAS WIDESPREAD across metropolitan areas in 2015; real gross domestic product (GDP) increased in 292 of the nation's 382 metropolitan areas (chart 1), according to the advance statistics from the Bureau of Economic Analysis (BEA). For the United States as a whole, real GDP by metropolitan area—the sum of current-dollar GDP for all metropolitan areas deflated by a national price measure—increased 2.5 percent in 2015 after increasing 2.3 percent in 2014 (table 1).

GDP by metropolitan area—the metropolitan area counterpart to GDP in the national income and product accounts (NIPAs)—is the most comprehensive measure of overall economic activity in a metropolitan area. In September, BEA released advance current-dollar and chained-dollar (real) statistics on GDP by metropolitan area for 2015. Additional highlights for 2015 include the following:

- Professional and business services was one of the leading contributors to growth in many metropolitan areas in 2015.
- Wholesale and retail trade growth was widespread, contributing to growth in many metropolitan areas.
- The finance, insurance, real estate, rental, and leasing industry group contributed to growth in many metropolitan areas, with concentrated areas benefiting from this industry's growth.
- Natural resources and mining was a major contributor to strong growth in several of the fastest growing metropolitan areas.
- Transportation and utilities detracted from growth in 310 metropolitan areas.

Gross Domestic Product (GDP) by Metropolitan Area Statistics

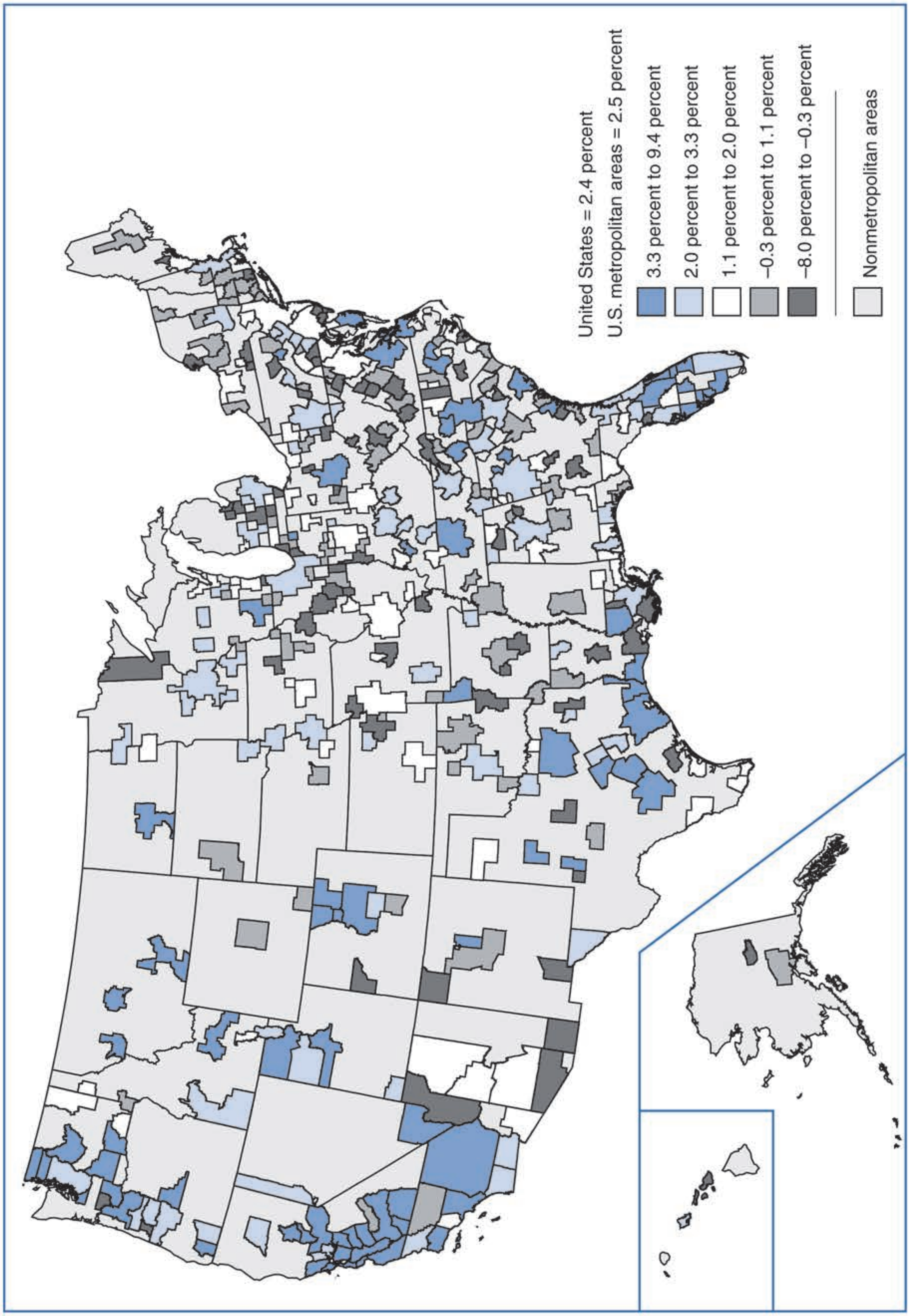
Metropolitan (statistical) areas defined by the U.S. Office of Management and Budget are standardized county-based areas that have at least one urbanized area with a population of 50,000 or more and adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

GDP by metropolitan area is the most comprehensive measure of overall economic activity in a metropolitan area—it is the metropolitan area counterpart to the nation's GDP. The methodology developed for these statistics is relatively simple and allows for the production of timely statistics.

GDP by metropolitan area is derived as the sum of the value added originating in all of the industries in the metropolitan area. Real GDP by metropolitan area is an inflation-adjusted measure based on national prices for the goods and services produced within that area. The statistics on real GDP by metropolitan area and on quantity indexes with a reference year of 2009 were derived by applying national chain-type price indexes to the statistics on current-dollar GDP by metropolitan area for 61 industry subsectors based on the 2007 North American Industry Classification System. Then, the chain-type price index formula that is used in the national accounts is used to calculate the statistics on total real GDP by metropolitan area and on real GDP by metropolitan area at more aggregated industry levels.

The statistics on GDP by metropolitan area are consistent with those on GDP by state released on June 14, 2016, which are based on the annual revision of the national income and product accounts (NIPAs) released in July 2015 and the national GDP by industry statistics released on November 5, 2015. The growth rate of real GDP in the nation's metropolitan areas usually differs from the NIPA real GDP growth rates released annually in July, partly because of the inclusion of nonmetropolitan areas in the national statistics. The growth rates also differ because of differences in the timing of production cycles and the availability of data in preparing national and regional statistics, which preclude the incorporation of the immediately preceding annual NIPA revisions into the advance statistics on GDP by metropolitan area.

Chart 1. Percent Change in Real Gross Domestic Product by Metropolitan Area, 2015



U.S. Bureau of Economic Analysis

After providing an overview of the importance of metropolitan areas to the nation, this article will discuss the industries that drove national economic growth and the metropolitan areas where these industries were concentrated. It will discuss characteristics of large, intermediate, and small metropolitan areas. It will then examine per capita real GDP by metropolitan area before concluding with a discussion of the revisions to the statistics on GDP by metropolitan area.

The importance of metropolitan areas

Metropolitan areas accounted for 90.9 percent of the nation's GDP in 2015, with the five largest metropolitan areas accounting for 23.4 percent of national GDP. In most states, metropolitan areas also accounted for most of GDP. Among the single-state metropolitan areas, Urban Honolulu, HI, accounted for the largest percentage of GDP by state in 2015 (76.6 percent).

The size of metropolitan areas varies significantly. Most metropolitan areas (275) have populations under 500,000. GDP for these small metropolitan areas ranges from $30.8 billion (Trenton, NJ) to $2.0 billion (Sebring, FL). GDP for intermediate metropolitan areas, which include areas with populations between 500,000 and 2,000,000, ranges from $235.2 billion (San Jose-Sunnyvale-Santa Clara, CA) to $15.1 billion (Deltona-Daytona Beach-Ormond Beach, FL). GDP for large metropolitan areas, which include areas with populations greater than 2,000,000, ranges from $1.6 trillion (New York-Newark-Jersey City, NY-NJ-PA) to $103.3 billion (Las Vegas-Henderson-Paradise, NV).

Metropolitan areas also vary in terms of their economic output. Much of this can be explained by the industries that are typically concentrated in the areas. Often the trends shown in national GDP are driven by a few metropolitan areas in which specific industries, such as mining, are most heavily concentrated.

Industry contributions to growth

In 2015, increases in U.S. metropolitan areas were led by growth in professional and business services, in wholesale and retail trade, and in finance, insurance, real estate, rental and leasing (table 2). One or more of these three industry groups contributed to growth in 369 of the 382 metropolitan areas nationwide. In contrast, government and transportation and utilities detracted from growth in 2015.

Professional and business services. Professional and business services contributed 0.61 percentage point to real GDP growth for the nation's metropolitan areas in 2015. This industry group contributed to growth in 293 of the nation's 382 metropolitan areas in 2015, most notably in the intermediate metropolitan area of San Jose-Sunnyvale-Santa Clara, CA (2.75 percentage points) and in the small metropolitan area of Peoria, IL (2.41 percentage points).

Growth in professional and business services was concentrated in large metropolitan areas. This industry was the leading contributor to growth in 14 of the 33 large metropolitan areas (45.5 percent), in 10 of the 74 intermediate metropolitan areas (13.5 percent), and in 26 of the 275 small metropolitan areas (9.5 percent).

Wholesale and retail trade. This industry group contributed 0.40 percentage point to real GDP growth for the nation's metropolitan areas in 2015. Similarly, in 2014, this industry group contributed 0.32 percentage point to real GDP growth. In 2015, growth in this industry contributed to real GDP growth in 335 metropolitan areas. Growth in this industry group was the leading contributor to growth in 67 metropolitan areas, accounted for more than half of real GDP growth in 48 metropolitan areas, and contributed more than 1 percentage point to growth in 20 metropolitan areas, most notably in the intermediate-size metropolitan area of Fayetteville-Springdale-Rogers, AR-MO (1.69 percentage points) and in the small metropolitan area of Hickory-Lenoir-Morganton, NC (1.44 percentage points).

Advance Statistics on Gross Domestic Product (GDP) by Metropolitan Area for 2015

As with the previous releases of advance statistics, the 2015 advance statistics are based on source data that are incomplete or subject to further revision by the source agency. Revised statistics based on more complete data will be released in September 2017.

The advance statistics are prepared at the sector level of the North American Industry Classification System. The advance 2015 statistics use subsector-level industry detail for unpublished county wages for metropolitan areas from the Bureau of Labor Statistics' quarterly census of employment and wages, and the advance 2015 current-dollar statistics on GDP by state, which were released on June 14, 2016. The annual percent change in county wages from 2014 to 2015 was calculated and then applied to the county GDP statistics underlying the statistics on GDP by metropolitan area for 2014. These extrapolated statistics for all sectors were scaled to the advance statistics on GDP by state for 2015 by allocating the difference between the two measures among the counties. The resulting county statistics were then summed to their related metropolitan areas to yield GDP by metropolitan area.

Growth in wholesale and retail trade was concentrated in small and intermediate-size metropolitan areas. This industry group was the leading contributor to growth in 52 of the 275 small metropolitan areas (18.9 percent), in 12 of the 74 intermediate metropolitan areas (16.2 percent), and in 3 of the 33 large metropolitan areas (9.1 percent).

Finance, insurance, real estate, rental, and leasing. This industry group contributed 0.39 percentage point to real GDP growth for the nation's metropolitan areas in 2015. It contributed to growth in 246 metropolitan areas in 2015. Growth in this industry group accounted for more than half of real GDP growth in 51 metropolitan areas and contributed more than 1 percentage point to growth in 48 metropolitan areas, most notably in the small metropolitan areas of Sebastian-Vero Beach, FL (3.22 percentage points) and Bismarck, ND (3.12 percentage points).

Growth in finance, insurance, real estate, rental, and leasing was particularly strong in intermediate-size metropolitan areas. This industry group was the leading contributor to growth in 27 of the 74 intermediate metropolitan areas (36.5 percent), in 53 of the 275 small metropolitan areas (19.3 percent), and in 6 of the 33 large metropolitan areas (18.2 percent).

Natural resources and mining. This industry group was not a major contributor to growth for the nation. However, it was the leading contributor to growth in 49 metropolitan areas, including 2 of the 5 fastest growing metropolitan areas in 2015. Most notably, this industry group contributed significantly to growth in the fastest growing metropolitan area in 2015—Midland, TX (12.9 percentage points) and the fourth-fastest growing metropolitan area in 2015—Visalia-Porterville, CA (5.85 percentage points). The continuation of mining of shale oil deposits in the Permian Basin contributed to strong growth in real GDP in Midland, TX, while increased agricultural activities contributed to growth in Visalia-Porterville, CA.[1] Both of these are small metropolitan areas.

Contributions to growth from natural resources and mining were consistent among all metropolitan areas. This industry group was the leading contributor to growth in 38 of the 275 small metropolitan areas (13.8 percent), in 4 of 33 large metropolitan areas (12.1 percent), and in 7 of the 74 intermediate metropolitan areas (9.5 percent).

Transportation and utilities. This industry group subtracted 0.14 percentage point from U.S. metropolitan area real GDP growth in 2015 and subtracted from growth in 311 metropolitan areas. The largest subtractions occurred in Houma-Thibodeaux, LA (5.50 percentage points) and Homosassa Springs, FL (3.37 percentage points).

The slowdown in transportation and utilities was widespread across metropolitan areas. This industry group subtracted from growth in 31 of the 33 large metropolitan areas (93.9 percent), in 220 of the 275 small metropolitan areas (80.0 percent), and in 59 of the 74 intermediate metropolitan areas (79.7 percent).

Government. This sector subtracted 0.03 percentage point from U.S. metropolitan area real GDP growth in 2015. This sector subtracted from growth in 269 metropolitan areas. The largest subtractions occurred in the small metropolitan areas of Watertown-Fort Drum, NY (1.35 percentage points) and Carbondale-Marion, IL (0.74 percentage point).

The slowdown in the government sector was widespread across metropolitan areas. This sector subtracted from growth in 55 of the 74 intermediate metropolitan areas (74.3), in 195 of the 275 small metropolitan areas (70.9 percent), and in 20 of the 33 large metropolitan areas (60.6 percent).

Growth by size of metropolitan area

As expected, large metropolitan areas generally showed less volatility than intermediate and small metropolitan areas. Large metropolitan areas had a narrow range of growth rates, 4.8 percentage points, while intermediate and small metropolitan areas had much larger ranges of growth rates, 11.3 percentage points and 17.4 percentage points, respectively.

Large metropolitan areas. Of the large metropoli-

Data Availability

Summary statistics on gross domestic product (GDP) by metropolitan area in current dollars and in real chained (2009) dollars for 2001–2015 as well as quantity indexes are presented in tables 1–6 in this article. More detailed statistics for metropolitan areas and the U.S. metropolitan portion can be accessed interactively on BEA's Web site.

The following annual statistics are available on BEA's Web site:

- Advance statistics on current-dollar GDP by metropolitan area, real GDP by metropolitan area in chained (2009) dollars, and quantity indexes for 2015 for 22 sectors based on the North American Industry Classification System (NAICS).
- Current-dollar and real GDP by metropolitan area and quantity indexes for 2001–2014 for 22 NAICS-based sectors and for 61 NAICS-based subsectors.
- Per capita real GDP by metropolitan area for 2001–2015.

For further information, call 301–278–9310 or e-mail gdpbymetro@bea.gov.

1. The location of these formations can be found on the map released by the Energy Information Administration.

tan areas, San Antonio-New Braunfels, TX (5.9 percent) and Austin-Round Rock, TX (5.0 percent) were the fastest growing. San Antonio-New Braunfels, TX, was led by a strong contribution from natural resources and mining (2.51 percentage points), while growth in Austin-Round Rock, TX, was led by professional and business services (1.57 percentage points).

The slowest growing large metropolitan areas were Washington-Arlington-Alexandria, DC-VA-MD-WV (1.3 percent) and Cleveland-Elyria, OH (1.1 percent). Growth in Washington-Arlington-Alexandria, DC-VA-MD-WV, was restrained by a decline in finance, insurance, real estate, rental and leasing (–0.17 percentage point), while growth in Cleveland-Elyria, OH, was restrained by a decline in durable-goods manufacturing (–0.32 percentage point).

Intermediate metropolitan areas. Of the intermediate metropolitan areas, San Jose-Sunnyvale-Santa Clara, CA (8.9 percent) and Provo-Orem, UT (7.6 percent) were the fastest growing and the second- and fifth-fastest growing metropolitan areas overall, respectively. Services industries such as professional and business services (2.75 percentage points), drove growth in San Jose-Sunnyvale-Santa Clara, CA, while the information industry group drove growth in Provo-Orem, UT (1.66 percentage points).

The intermediate-size metropolitan areas with the largest declines were Tucson, AZ (–2.4 percent) and Greensboro-High Point, NC (–0.5 percent). The decline in Tucson, AZ, was mainly due to a decline in transportation and utilities (–0.83 percentage point), while finance, insurance, real estate, rental, and leasing (–2.25 percentage points) mainly caused the decline in Greensboro-High Point, NC.

Small metropolitan areas. Of the small metropolitan areas, Midland, TX (9.4 percent) and Lake Charles, LA (8.3 percent) were the fastest growing and the fastest and third-fastest growing metropolitan areas, respectively. Midland, TX, was led by a strong contribution from natural resources and mining (12.91 percentage points).

The small metropolitan areas with the largest declines were Bloomington, IL (–8.0 percent) and Houma-Thibodaux, LA (–7.8 percent). The decline in Bloomington, IL, was mainly due to professional and business services (–8.69 percentage points), while the decline in Houma-Thibodaux, LA, was mainly due to transportation and utilities (–5.50 percentage points).

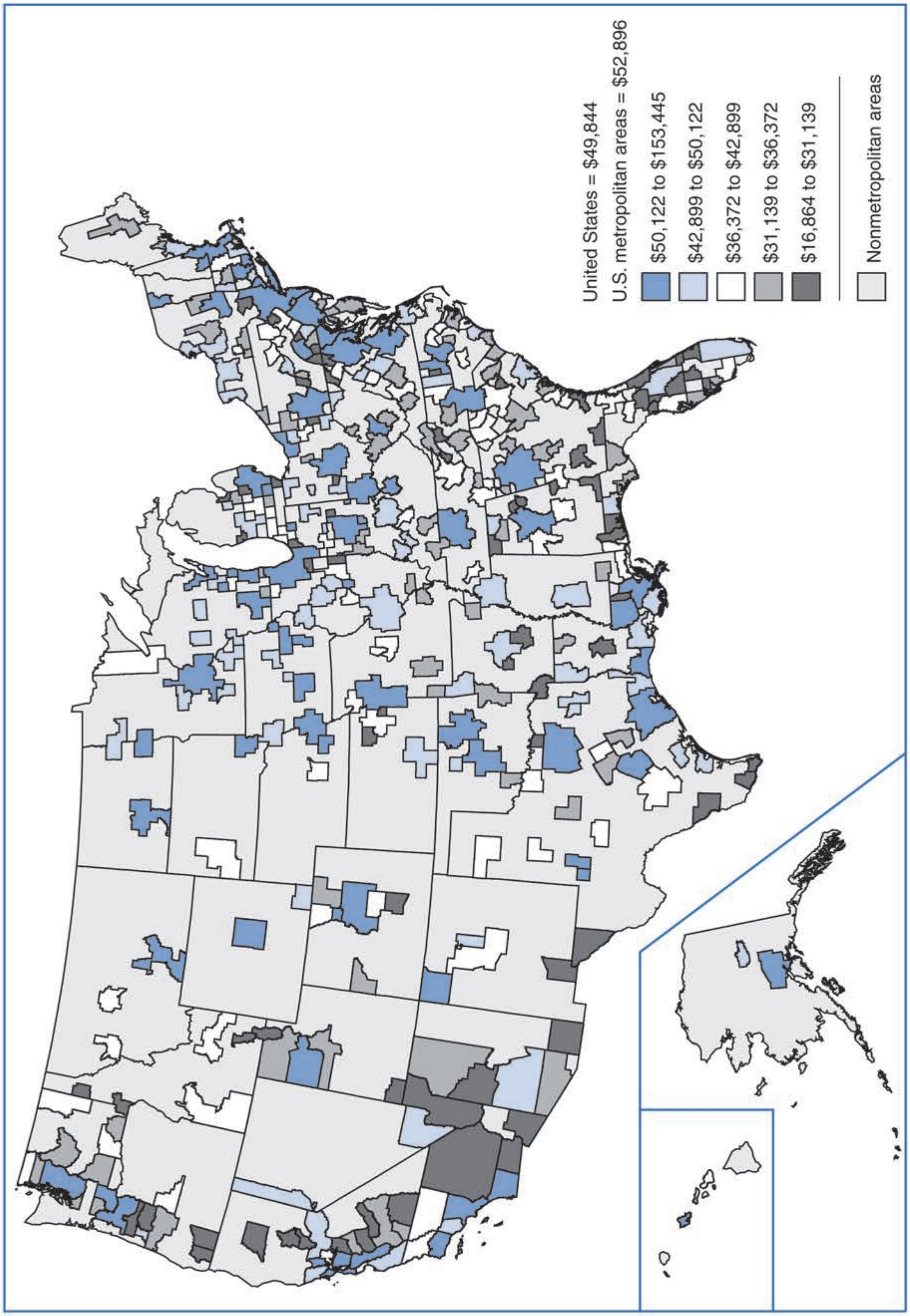
Per capita real GDP by metropolitan area

Per capita real GDP for the nation's metropolitan areas was $52,896 in 2015, 6.1 percent higher than the national average ($49,844) (chart 2 and table 3).[2] The five metropolitan areas with the highest per capita real GDP in 2015 were Midland, TX; San Jose-Sunnyvale-Santa Clara, CA; Bridgeport-Stamford-Norwalk, CT; San Francisco-Oakland-Hayward, CA; and Seattle-Tacoma-Bellevue, WA. Midland, TX, had the highest per capita real GDP in the nation at $153,445, which was 207.9 percent higher than the national average; a strong concentration of the mining industry in this area contributed greatly to per capita real GDP.

The five metropolitan areas with the lowest per capita real GDP in 2015 were Lake Havasu City-Kingman, AZ; The Villages, FL; Sebring, FL; Homosassa Springs, FL; and Punta Gorda, FL. Lake Havasu City-Kingman, AZ, had the lowest per capita real GDP in the nation at $16,864, which was 66.2 percent lower than the national average.

2. Per capita real GDP by metropolitan area was computed using Census Bureau midyear population estimates.

Chart 2. Per Capita Real Gross Domestic Product by Metropolitan Area, 2015



Revisions

The statistics on GDP by metropolitan area for 2001–2014 that were released in September 2015 have been revised. The revised statistics incorporate the annual revisions from GDP by industry (released in November 2015), GDP by state (released in June 2016), and local area personal income (released in March 2016).

Current-dollar statistics. The revisions to the current-dollar GDP statistics, measured as a percentage of the previously published statistics, were modest for most metropolitan areas (table 4). The mean absolute revision (MAR) was 1.2 percent for 2010–2014. The MARs were less than 5.0 percent for all metropolitan areas except Farmington, NM (13.8 percent), Casper, WY (6.6 percent), and Merced, CA (5.3 percent). The revisions for all three of these areas were mainly due to revisions in natural resources and mining.

Real growth rates. The revisions to real GDP growth rates are measured as a percentage point difference from the previously published growth rate. The MAR of annual growth rates for metropolitan areas was 0.8 percentage point for 2010–2014. For 2010–2014, the MAR of annual growth rates was less than 3 percentage points for all metropolitan areas except for Visalia-Porterville, CA (3.7 percentage points) (table 5); revisions to natural resources and mining mainly caused revisions to real GDP growth rates for Visalia-Porterville, CA.

Acknowledgments

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Tables 1 through 6 accompany this article.