

ANALYZING CORRELATIONS OF EDUCATION AND INCOME

Activity Items

The following items are part of this activity and appear at the end of this student version.

- Item 1: Completed High School, 1950 Map
- Item 2: Completed High School, 2000 Map
- Item 3: Completed College, 1950 Map
- Item 4: Completed College, 2000 Map
- Item 5: Median Household Income, 1969 Map
- Item 6: Median Household Income, 1999 Map
- Item 7: Completed College, Largest Metropolitan Areas, 2000 Map
- Item 8: Median Household Income, Largest Metropolitan Areas, 1999 Map

Student Learning Objectives

- I will be able to read maps to understand census data.
- I will be able to analyze data over time, making comparisons to identify trends and correlations in the data.
- I will be able to propose policies to address issues of income and education.

You will look at a series of choropleth maps that show U.S. Census Bureau data on education levels and median household incomes. Choropleth maps use various color tones to represent the average values of particular variables.

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Part 1 - Read Choropleth Maps of the Nation

1. Examine **Item 1: Completed High School, 1950 Map** and **Item 2: Completed High School, 2000 Map** and record your observations. In 1950, where were the percentages of high school completion highest and lowest? What regions of the country seemed to have the most and least educated residents? What about in 2000? Also, what changed from 1950 to 2000?

As we observed in 1950 Map, the highest school graduates were in the West side, left of the Middle and Northeast side of the States (50 to 69.9%). The lowest school graduates were mostly in South and some of North (0 to 14.9%).

In both 1950 and 2000, the Middle of the States (e.g., Texas, Tennessee and Alabama .etc.), the percentages of high school graduates were the lowest. Also, the highest percentages in both maps were in West and Northeast and Middle of the North.

Between 1950 and 2000, the high school graduates rate increased drastically across the whole country. From the average around 30-40% to around 70-80%.

However, the overall Southeast regions still under a gap with other States in 2000 Map.

2. Now look at **Item 3: Completed College, 1950 Map** and **Item 4: Completed College, 2000 Map**. Note your observations about college completion, identifying any changes that happened between 1950 and 2000.

In 1950, there were very few deep purple shade (18 to 23.9%), except the region in the Northwest of Wyoming .etc. Compared to 2000, the percent of people who completed their college degree were rising overall.

The upper bound of the percentage has rised from 18-23.9 to 37-63.7 in the 2000 Map. The westside, Colorado and northeast cities were have a higher population rate of college degree or higher education level completion.

3. Reviewing **Items 1-4**, do you see any region where a concentration of high or low rates of college or high school completion changed, or where the concentration intensified?

In 1950, we can see that the region in southeast had the lowest rates of college and high school in both Item 1 and 3.

By 2000, the overall percentage of educated population has raised a lot through the Item 2 and 4, we can realize though the proulation at 63% was still in some regions, however, with the comparsion, the high school and college completion rate was kept rising from 1950 to 2000.

4. Look at **Item 5: Median Household Income, 1969 Map** and **Item 6: Median Household Income, 1999 Map**. Note a few specific areas where median household incomes were very high as well as where they were very low. Are there any concentrations?

In the median household income of 1969 and 1999, we can see the concentrations were centralized in the northeast of States. Some of the concentrations were in the upper middle and west of the States. Yet, most of the regions still under a low percentage of income. In 1999, some of the regions in south were in the range about \$9,243 to \$24,999.

5. Are there areas of the country where median household incomes appear to increase from the '60s to the '90s? Are there areas where they appear to decrease? Do you notice a shift in the spatial distribution of wealth in particular states?

As we observed, the wealth of median household income were very scattered at first in the 1969 Map. The high income population most gathered in the cities along the coast. The significance increase from '60s to '90s can be watched in south of the States and the regions including Utah, Nevada and Arizona.

However, there are no significance decrease from the map. In opposite, the overall increase for median household incomes is obvious. Except some regions like south and northwest of some locations.

When it comes to shift change in states, there is an obvious increase in Alaska state, the north of its region increased from \$29,999 to \$82,929.

6. Why do you think any of the trends you found in question 5 may have happened? (Think of specific industries that may have come and gone in certain areas.)

From '60s to '90s, With the popularization of industrialization and mechanical automation, the economy of many regions has also grown at that time. Also, with the new technologies developed in Westside (ex, CA), the median household incomes become increased at different levels.

Part 2 - Read Choropleth Maps of Metropolitan Areas

Working as a group of four, refer to **Item 7: Completed College, Largest Metropolitan Areas, 2000 Map** and **Item 8: Median Household Income, Largest Metropolitan Areas, 1999 Map** to complete the table below. Two people in your group should look at **Item 7** (each looking at about half of the metropolitan areas), while the other two should look at **Item 8** (each looking at about half of the metropolitan areas). Write your observations — being sure to note the most interesting concentrations and correlations — in the appropriate cells and, if you have time, share what you observed with the other members of your group.

	Completed College, Largest Metropolitan Areas, 2000	Median Household Income, Largest Metropolitan Areas, 1999
San Francisco-Oakland-San Jose, CA	<p>Concentrations: The regions in the north of SF and the region in the east of Oakland, also the areas surrounded San Jose. (45 to 74.9%)</p> <p>Scattered: the regions in southeast of Oakland and north of SF. (10 to 24.5%)</p>	<p>Highest regions of median household incomes were in the east of Oakland and west of San Jose.</p> <p>Lowest regions were in the heart of Oakland, San Jose and SF. Part of north area was at the low range (\$25,000 to \$41,993)</p>
Los Angeles-Riverside-Orange County, CA	<p>Concentrations: Coastal regions had a higher rate of college completion than other regions.</p> <p>Scattered: The areas north of Long Beach, south of LA and west of Anaheim. (less than 10%)</p>	<p>Highest regions of median household incomes were in the coast areas.</p> <p>Lowest regions were in LA and Long Beach, which was less than \$25,000.</p>
Houston-Galveston-Brazoria, TX	<p>Concentrations: The regions in west and north of Houston around 45 to 74.9%.</p> <p>Scattered: The regions in the central and eastern areas around 10 or lesser.</p>	<p>Highest and increased median household incomes were in the outer regions of the downtown.</p> <p>Houston had the lowest incomes around \$25,000 or lesser.</p>
Chicago-Gary-Kenosha, IL-IN-WI	<p>Concentrations: In the northern downtown of Chicago which had a significance numbers around 45 to 74.9%</p> <p>Scattered: In the areas of western, central and southern parts of the urban around 10% or lesser.</p>	<p>Lowest median household incomes were in Gary and Chicago, and the surroundings were still low but a bit better.</p> <p>In the north of Chicago had a higher level of incomes.</p>

	Completed College, Largest Metropolitan Areas, 2000	Median Household Income, Largest Metropolitan Areas, 1999
Detroit-Ann Arbor-Flint, MI	<p>According to Item 7, the Ann Arbor and its northeastern had a significant numbers of educated people.</p> <p>In addition, except the areas above, the total areas of Detroit were under very low rates of college completion.</p>	<p>For the median household incomes, Detroit had a lowest rate around \$ 25,000 or lesser</p> <p>The situation in Flint was quite the same. For higher median household incomes, Ann Arbor was the highest area in Detroit.</p>
Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH	<p>The distribution rate in Boston was quite average. Many regions were in the high completion of college around 45 to 74.9%</p> <p>For the regions of the lowest rate in Boston, Brockton, Lowell and Worcester had the rates about 10 to 24%.</p>	<p>The distance between each cities near Boston were close. However, leaving the downtown and each cities, the median household income was quite centralized.</p>
Dallas-Fort Worth, TX	<p>For Dallas-Fort, north and northwestern of Dallas were appeared to have a higher rate of college completion.</p> <p>For other regions, the rate were 10% or lesser.</p>	<p>The highest rate of median household income were focusing in the North and Northwestern and Fort Worth, with the incomes around \$100,000 to \$199,000.</p> <p>Other regions were under the low MHI.</p>
New York-Northern New Jersey-Long Island, NY-NJ-CT-PA	<p>In the downtown of Newark, there were areas at 10% or lesser. Yet, in the west, the college completion rate were higher.</p> <p>In NYC, only the Manhattan at a very low rate, other regions like Long Island and so on, were in a obvious high rate.</p>	<p>So, the MHI were inside the downtown and Newark for around \$25,000 to \$41,000.</p> <p>For the highest rate, northeast of NYC and west of Newark were both had a high MHI.</p>
Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD	<p>For Philadelphia, the CC rate was pretty low in the city around 10% or lesser.</p> <p>The west regions had a higher CC rate.</p>	<p>For the MHI in downtown Philadelphia, it came about \$25,000 or lesser.</p> <p>West of the downtown, we can see that the significace rate was quite centralized.</p>

	Completed College, Largest Metropolitan Areas, 2000	Median Household Income, Largest Metropolitan Areas, 1999
Atlanta, GA	<p>For the southern Atlanta and the central of Atlanta the CC rate were quite low around 10 to 25%</p> <p>For the northern Atlanta, the CC rate was higher than the areas above around 45% and more.</p>	<p>The MHI looks very high in the north of Atlanta around \$100,000 to \$199,000.</p> <p>The lowest income regions can be found in the central of Atlanta around \$25,000 or lesser.</p>
Washington-Baltimore, DC-MD-VA-WV	<p>From the north of Washington to west of D.C. the CC rate saw much higher than other regions, including east and southeast of the city.</p>	<p>For the low MHI of regions including Washington and Baltimore around \$25,000 or lesser.</p> <p>However, for the west of D.C. and north of Maryland, the MHI were pretty high.</p>

Determine with your group which metropolitan area has the most variability or diversity. How could those data be used by the government (at various levels) to propose programs to improve people's quality of life? What types of goals and priorities do you think people living in that area might have? (Keep in mind that different communities might face different challenges such as a community in Florida needing to focus more on weather-related challenges compared with a community in Tennessee.)

Part 3 - Propose Policies

Come up with three specific policies that you would propose if you were the mayor of the metropolitan area that your group selected at the end of part 2. Support each policy with a one-paragraph explanation of why it is needed and how it would address the educational and economic situations that exist in that area.

Policy 1:

Reduce the crime rate.

Paragraph Support:

With a lower crime rate, government can use many approaches to solve this issue, including increase the population educated rate. In this way, the CC rate and MHI will also have a positive influence.

Policy 2:

For downtown and cities, aiding people with more on tuition or free online courses.

Paragraph Support:

According to the figures below, we can have a quick view of that many cities' college completion rate and median household income are low and even under average. So, increase the education rate in the city, then MHI may also has a positive influence. In states, people who works inside the downtown may have a lesser income then the surrounding areas. Therefore, we can increase total college completion rate to improve this condition.

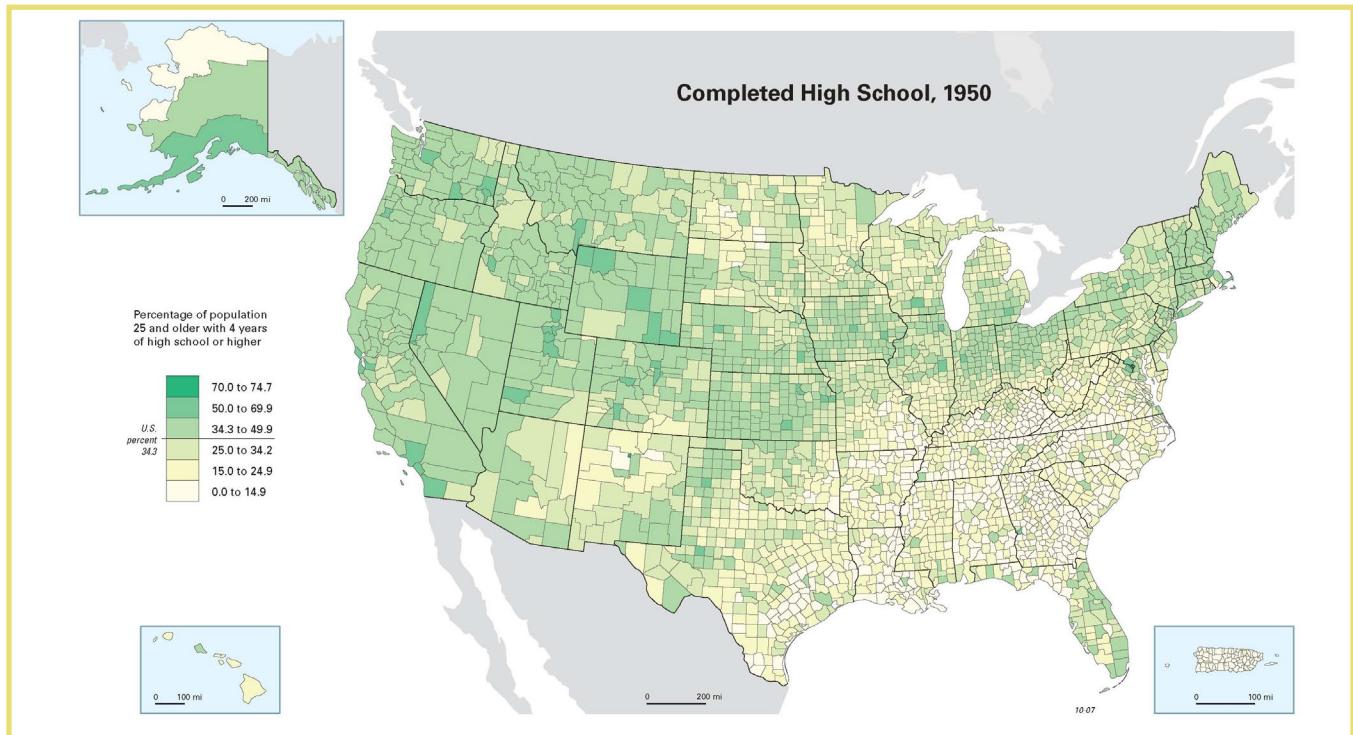
Policy 3:

Stimulate the economy

Paragraph Support:

With a proper stimulation of the economy, residents will have enough savings to pay for the tuition fee and the costs related in educated.

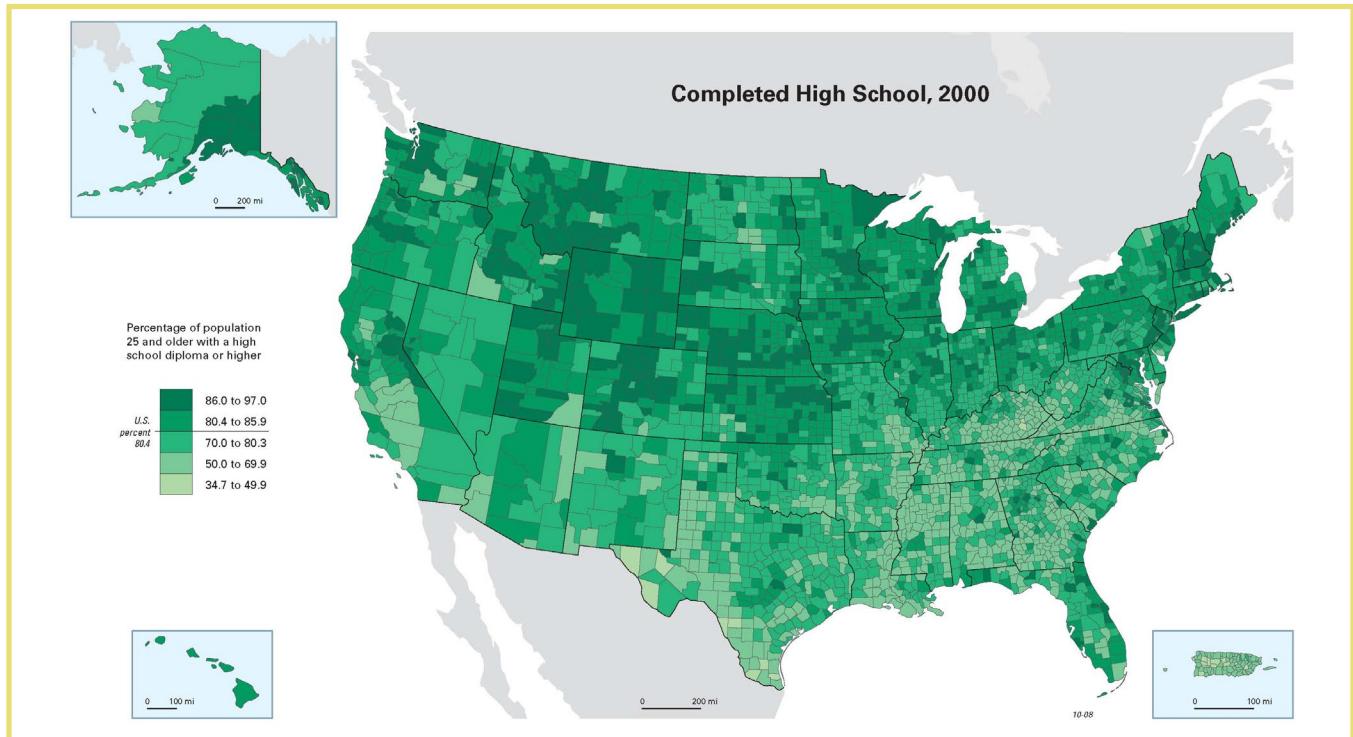
Item 1: Completed High School, 1950 Map



www.census.gov/population/www/cen2000/censusatlas

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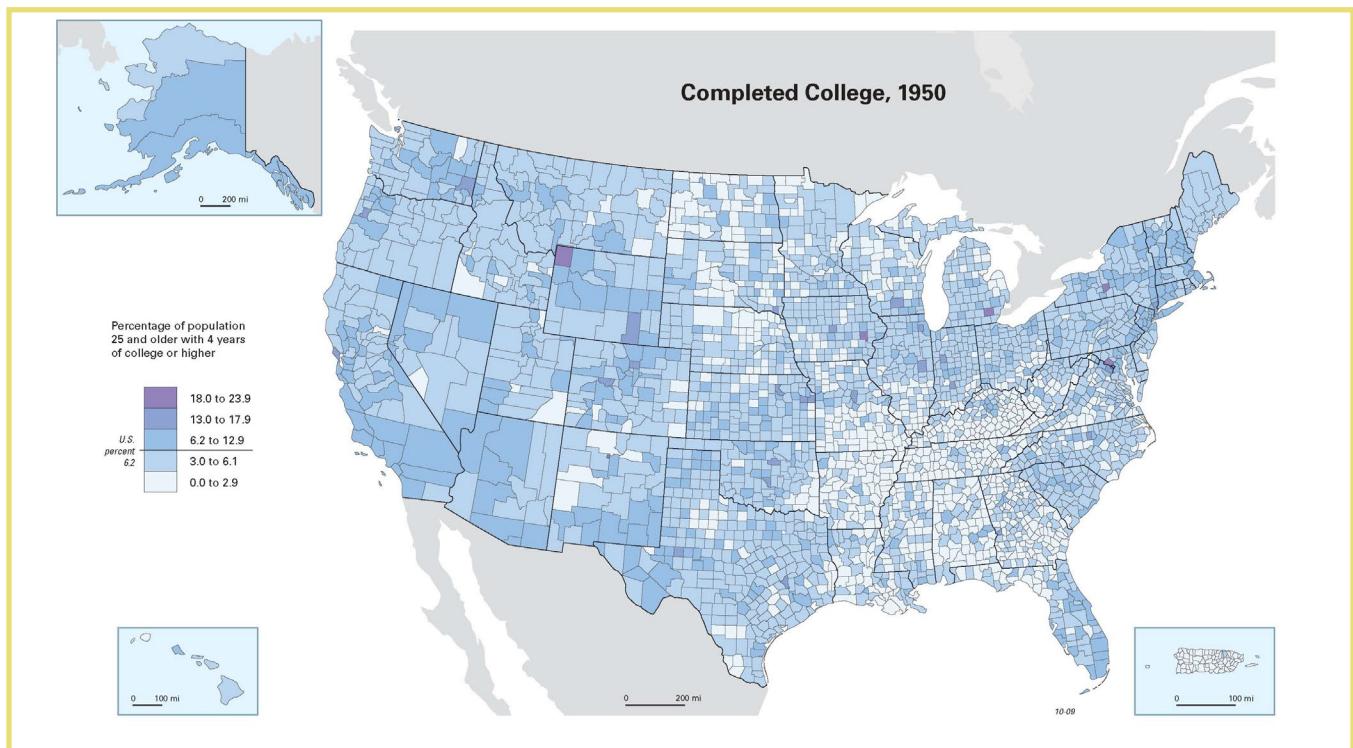
Item 2: Completed High School, 2000 Map



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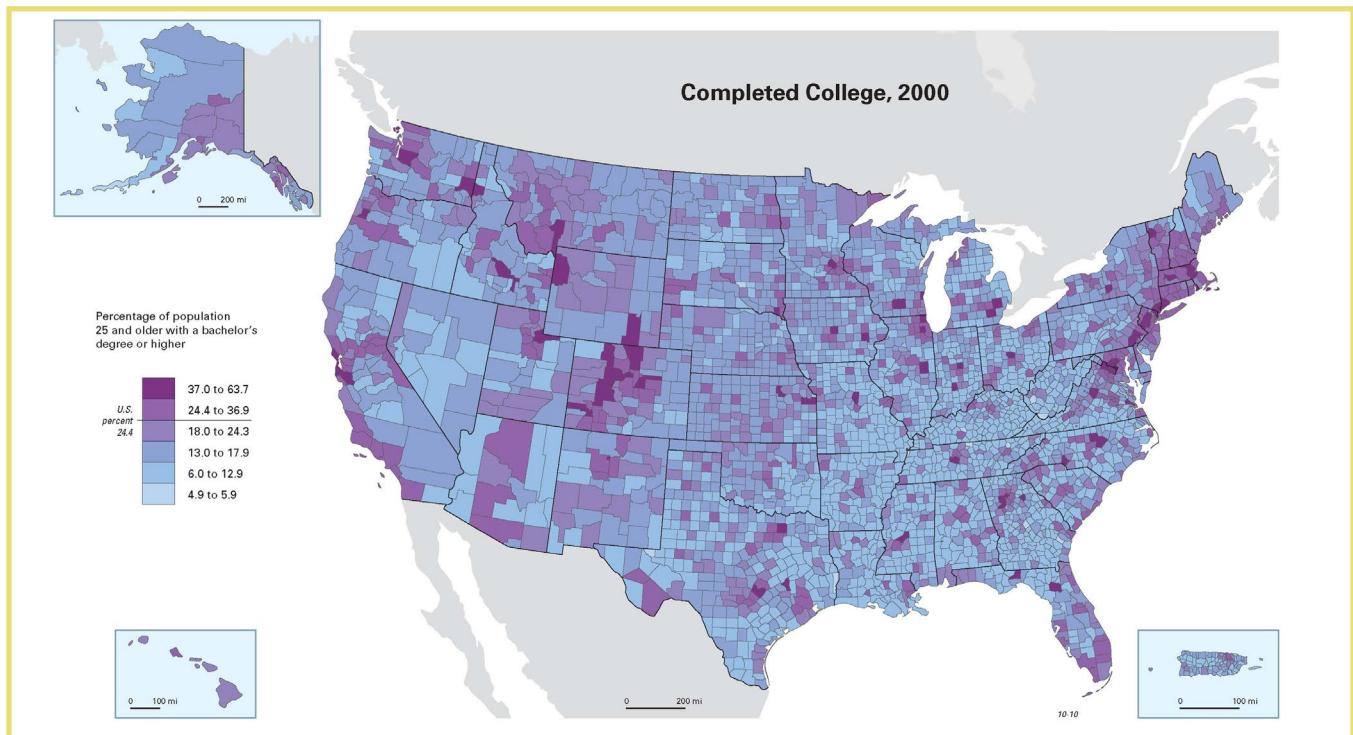
Item 3: Completed College, 1950 Map



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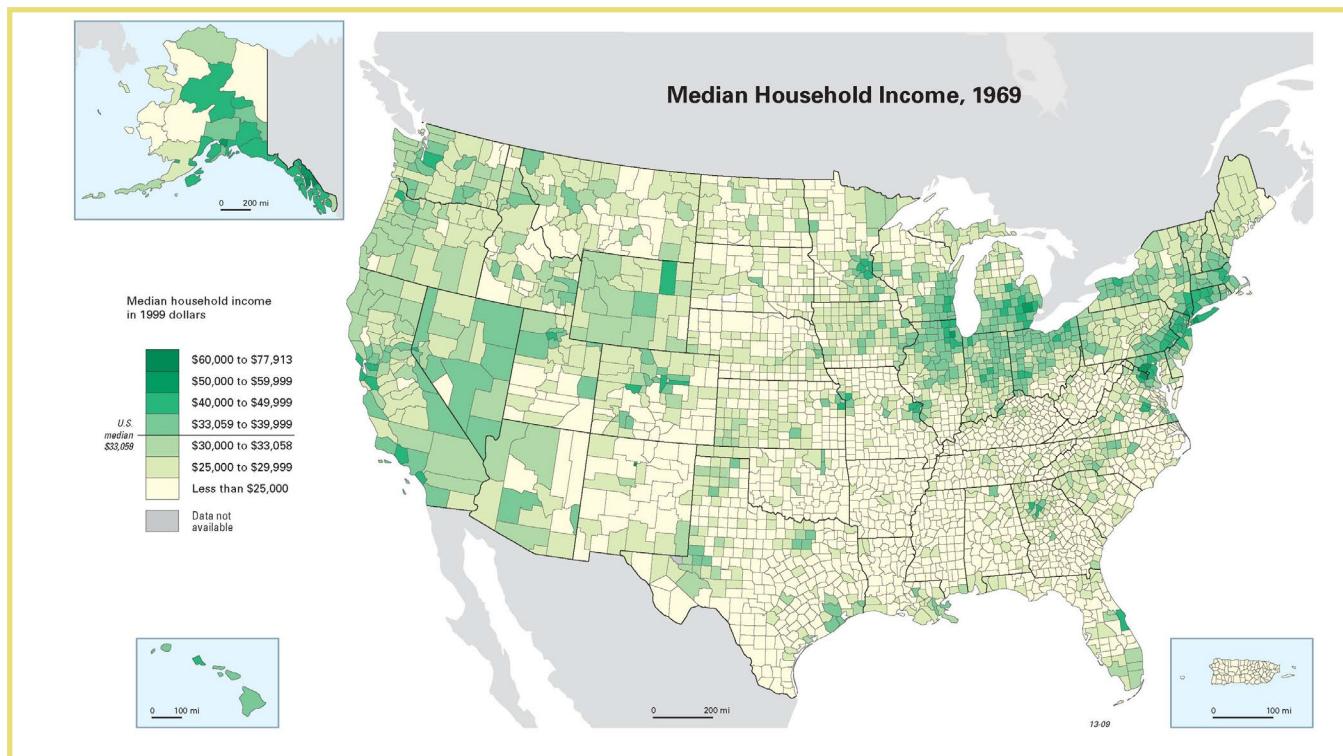
Item 4: Completed College, 2000 Map



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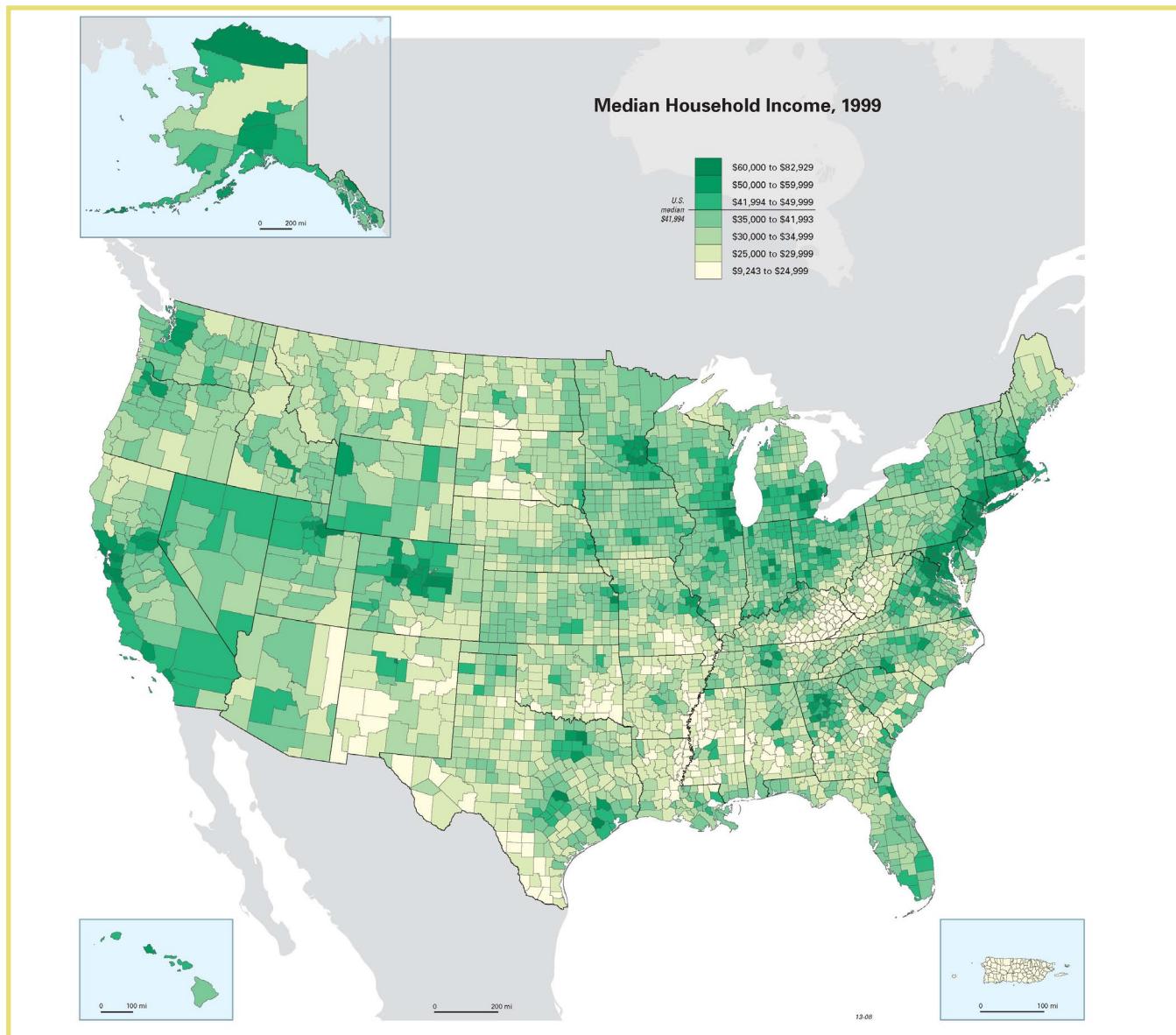
Item 5: Median Household Income, 1969 Map



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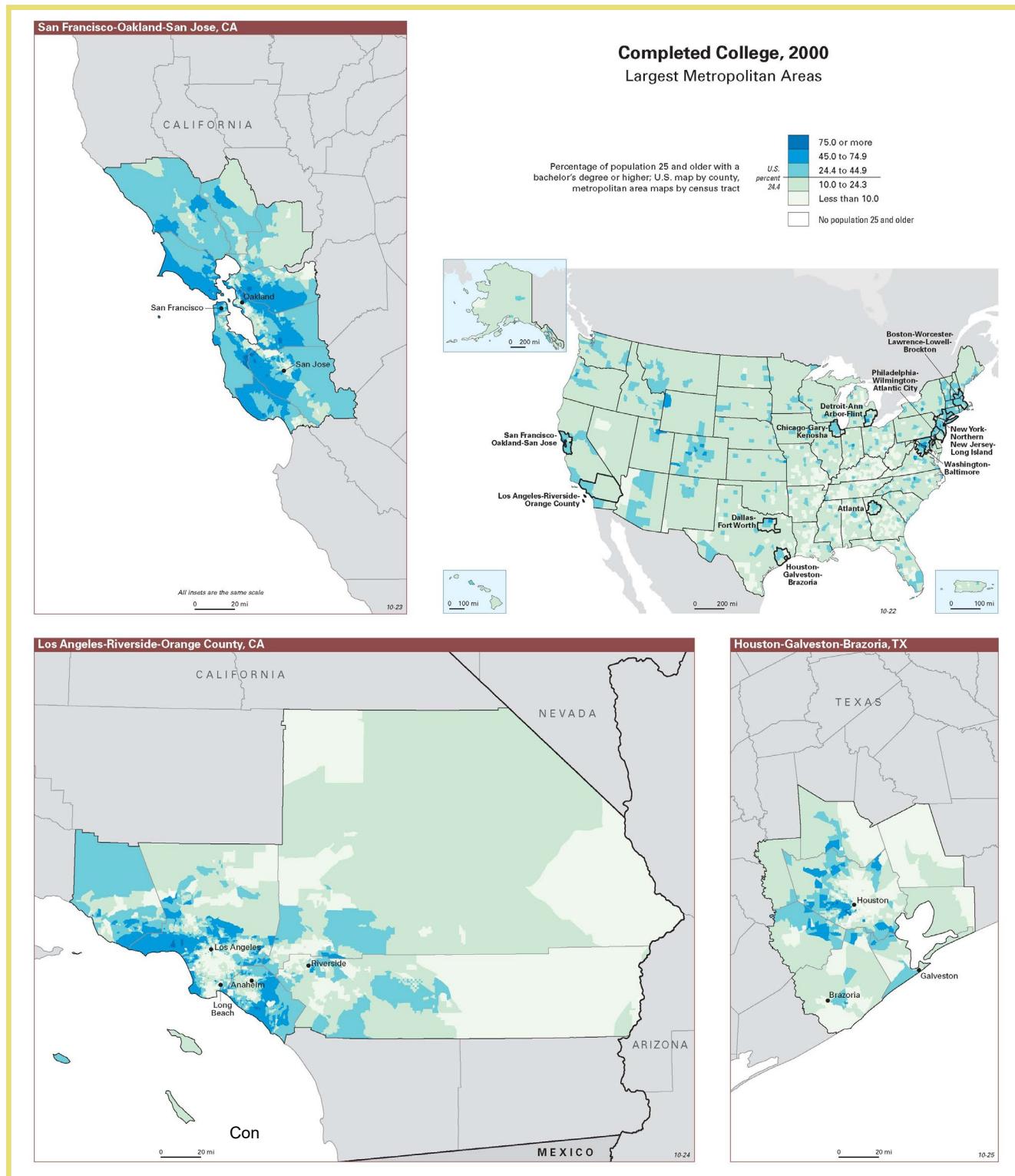
Item 6: Median Household Income, 1999 Map



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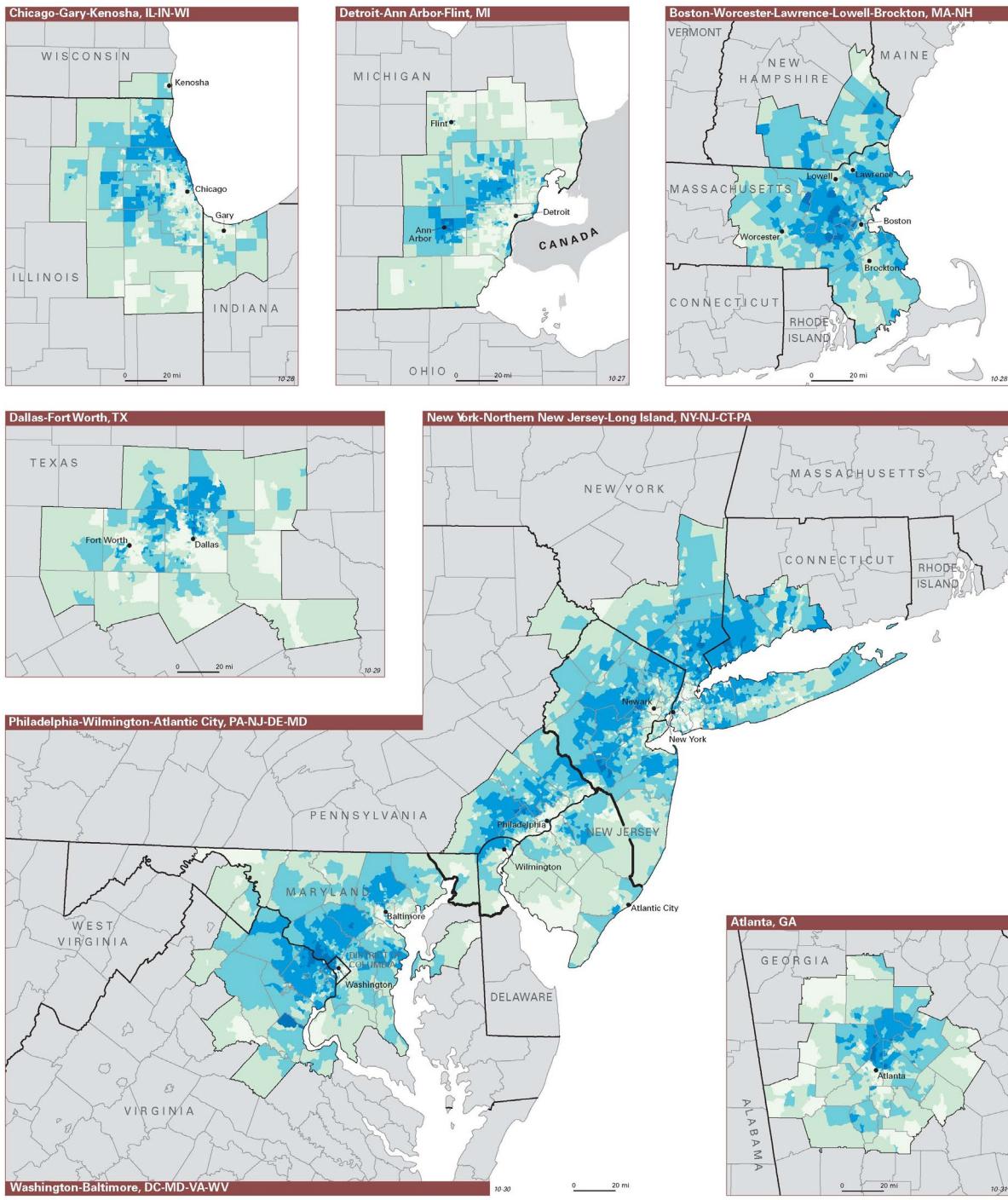
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Item 7: Completed College, Largest Metropolitan Areas, 2000 Map



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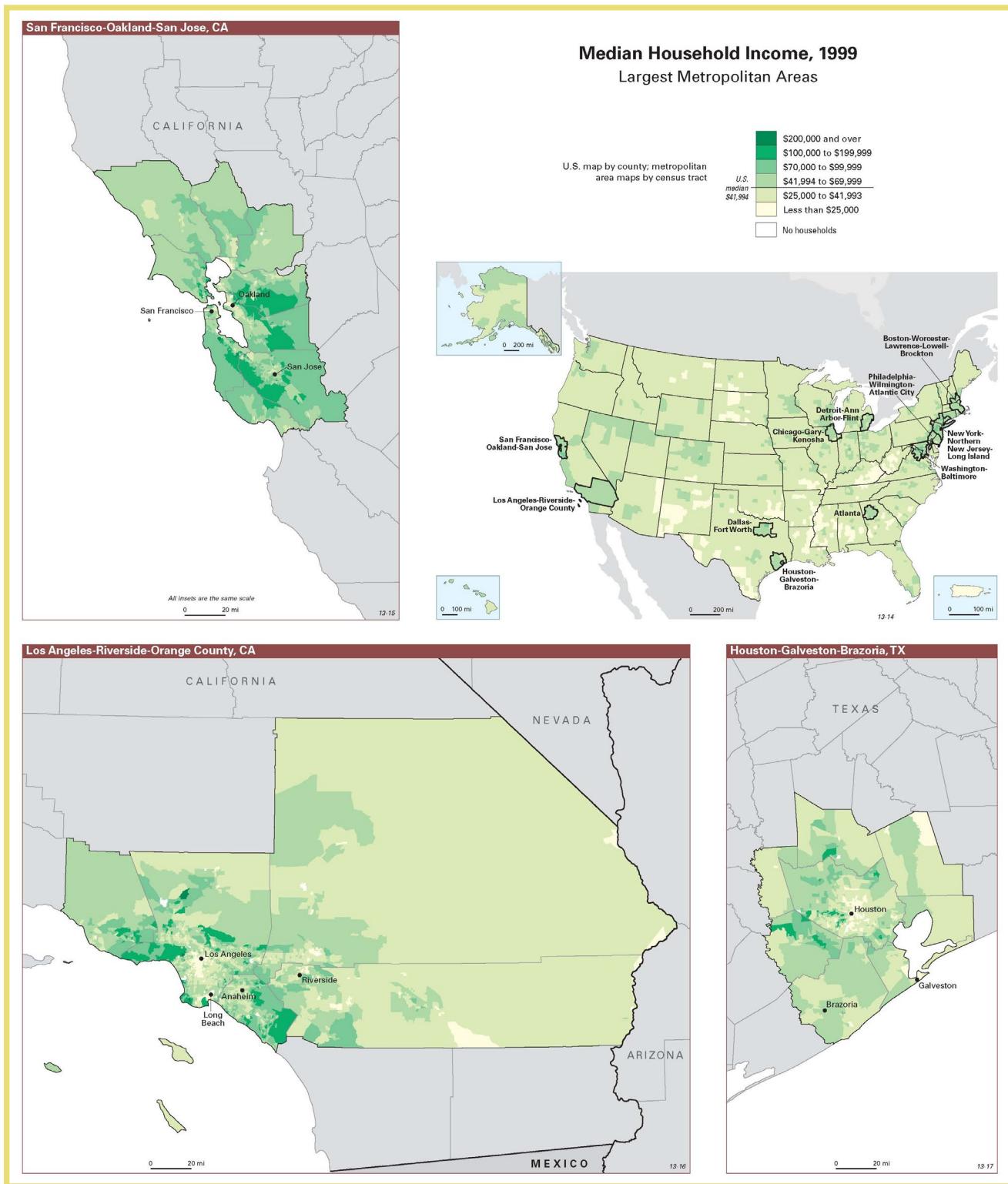
Item 7: Completed College, Largest Metropolitan Areas, 2000 Map (Continued)



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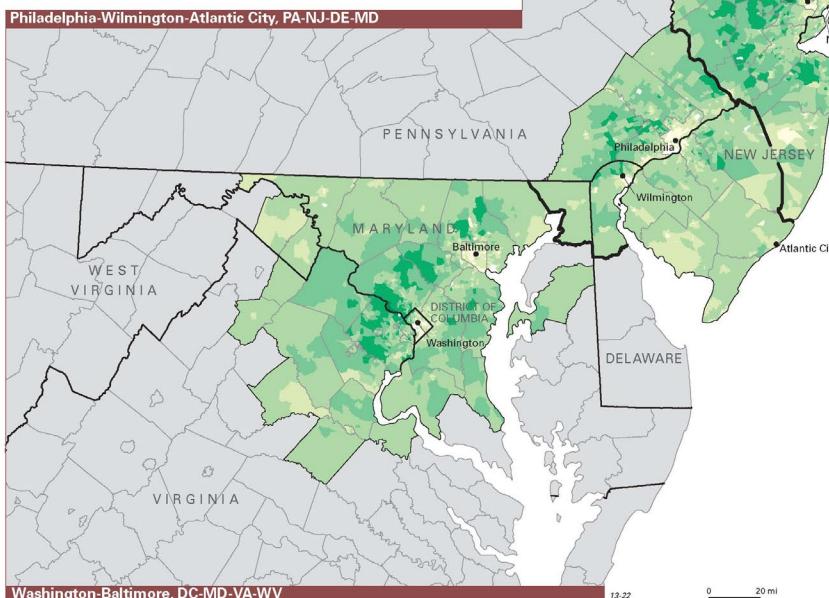
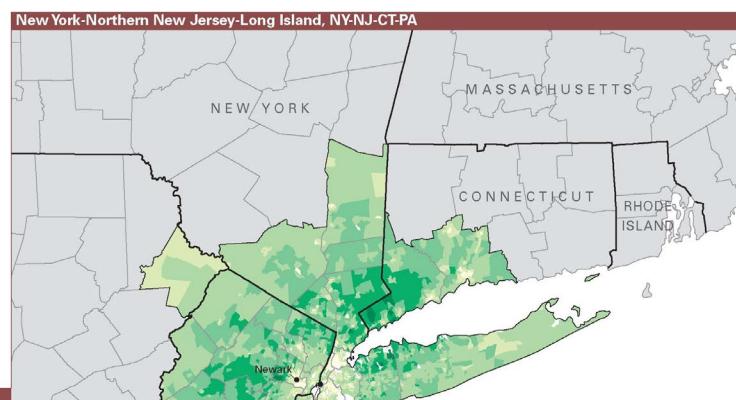
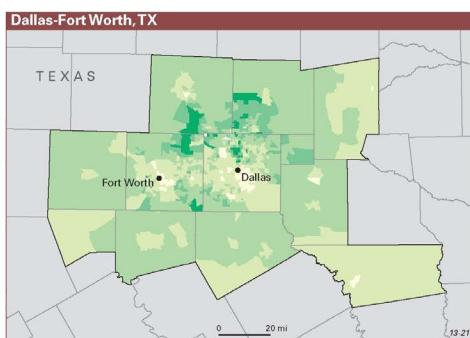
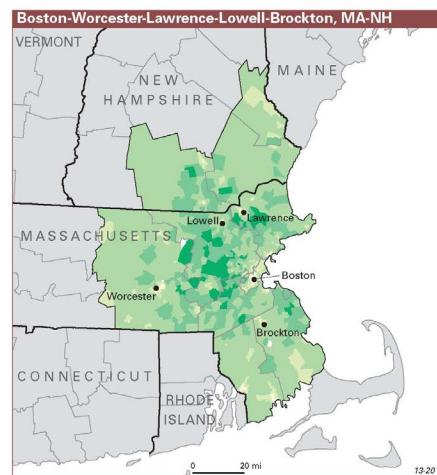
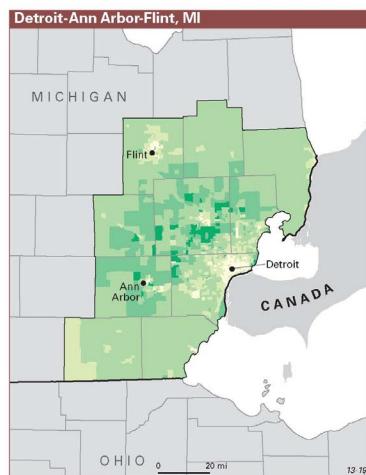
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Item 8: Median Household Income, Largest Metropolitan Areas, 1999 Map



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Item 8: Median Household Income, Largest Metropolitan Areas, 1999 Map (Continued)



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