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The Geography and Demographics of the Chattanooga Jobs Boom

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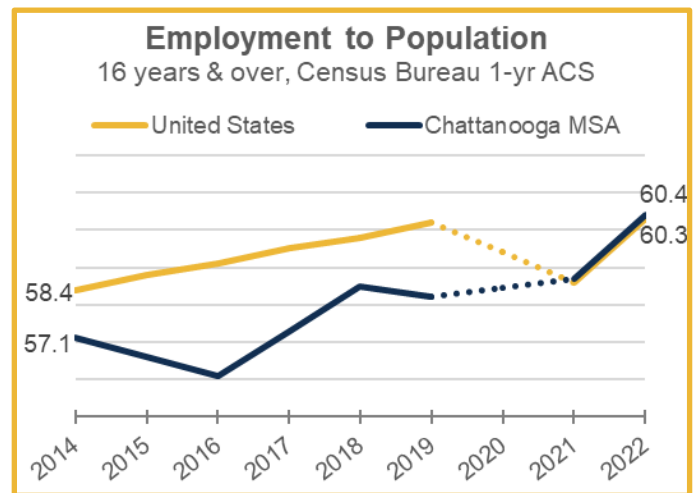
Summary

Previous CRER research described how employment growth in the Chattanooga metro area from 2014 to 2022 was spread across demographic groups. This paper extends that research by comparing the effects across parts of the metro area and across demographic groups within each part. For most categories, the changes in the city of Chattanooga differ from those in the rest of the metro area. For example, the city's large employment gains were driven by astounding gains for workers younger than 25, especially those with a college degree. Also, unlike the rest of the metro area, the increase in the rate of employment for white workers was much larger than it was for black workers.

Introduction

The Chattanooga metro area has undergone an economic resurgence over the past decade. Annual nonfarm employment rose by nearly 20 percent between 2014 and 2023 in the six-county Chattanooga Metropolitan Statistical Area (MSA), compared to just over 12 percent in the United States as a whole.ⁱ As outlined in more detail in a recent CRER white paper, this jobs boom was fueled largely by a reversal of fortunes in the local manufacturing sector.ⁱⁱ Further, post-pandemic job growth has been such that the level of employment in the Chattanooga MSA is at least what it would have been if the COVID pandemic had not occurred.

The employment-population ratio is a useful indicator of the extent to which the jobs boom of the past decade has led to expanded opportunities for Chattanooga residents. It can be more informative than the change in the number of jobs because it accounts for the rising population. As shown on the right, in 2014 the employment-population ratio for people ages 16 years and over was more than a full percentage point lower for the Chattanooga MSA than for the United States. However, the

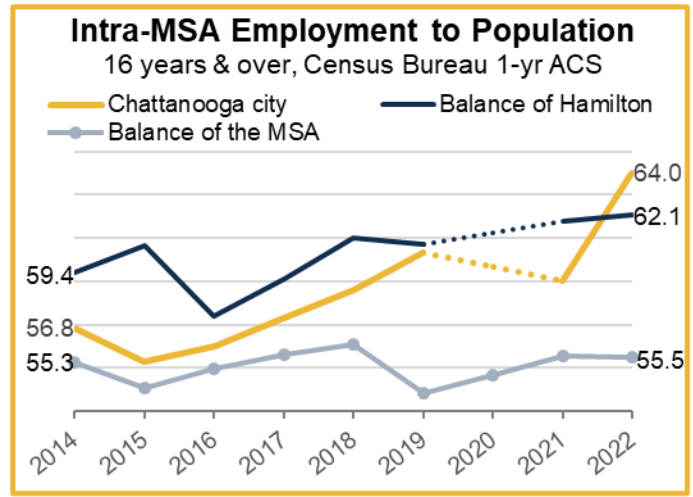


relatively rapid job growth since then has meant that Chattanooga’s employment-population ratio had risen by more than 3 points by 2022 and matched that of the United States. [Note that the COVID pandemic prevented the Census Bureau from releasing any data for 2020 from the American Community Survey (ACS), so the dotted lines simply connect the 2019 and 2021 points.]

As described in recent CRER research, improved employment outcomes between 2014 and 2022 in that the Chattanooga MSA were seen across demographic categories: “(T)he benefits of Chattanooga’s boom have been felt by every age group, race, and education level examined. The biggest gains were experienced by those aged 20 to 44, men, African Americans, and those with a college degree or high school diploma as their highest education.”ⁱⁱⁱ This paper takes this analysis a step further by examining how the effects of the jobs boom on various demographic groups have differed across parts of the Chattanooga MSA. It considers three comparably sized parts of the MSA: Chattanooga city, the balance of Hamilton County outside the city, and the other five counties that comprise the rest of the MSA.^{iv} In principle, it is possible to examine the question in even greater detail using county-level data, but data for the smaller counties is far too noisy

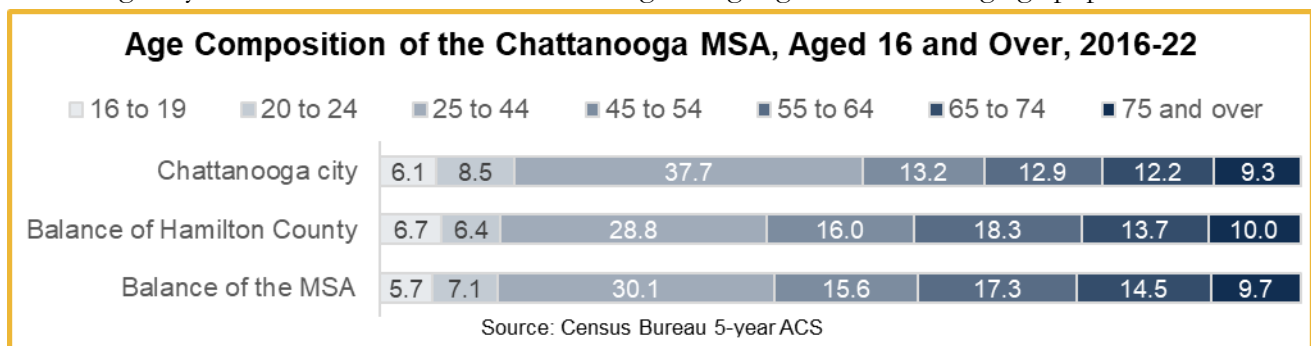
or incomplete to break down by demographic groups. Nevertheless, this three-part division is useful in separating the MSA roughly into its urban core, its inner suburbs, and its outlying areas.

The chart to the right provides the employment-population ratios for these three parts from 2014 to 2022 and reveals a great deal of geographic variation in both the levels and the trends. Most notably, Chattanooga city saw the most dramatic change since the start of the jobs boom: It started with an employment-population ratio well below that of the Balance of Hamilton County but ended the period with a significantly higher one. It is also notable that the employment-population ratio for the five counties in the Balance of the MSA was effectively unchanged over the period. For each part of the metro area, however, the overall employment-population ratio masks a great deal of variation across demographic groups and understates the actual gains from the jobs boom. The variation across demographic groups will be discussed in detail in a subsequent section, but it is worth noting how the relevant populations of the parts differ demographically.

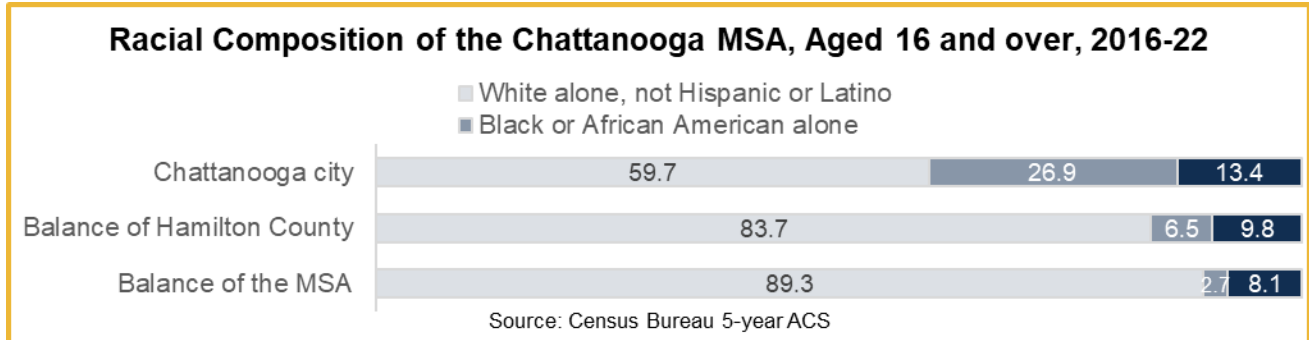


Intra-Metro Demographics

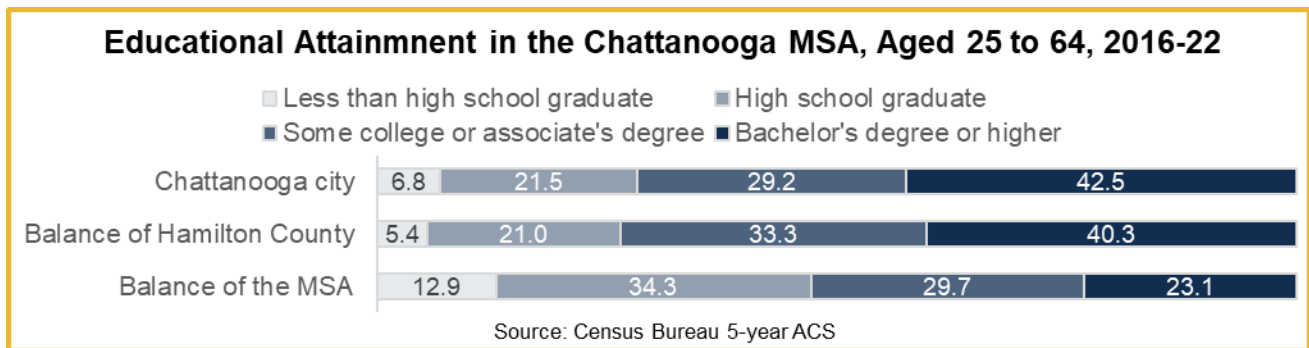
As shown in the figure below, the median adult in Chattanooga city is younger than the median adult in the other two parts. The city has large shares of residents who are 20 to 24 years old and 25 to 44 years old and, consequently, smaller shares of the oldest age groups. Given that 25 to 44 year olds are the most likely to be employed, while those 55 and older are less likely to be employed than the average worker, differences in age composition alone will tend to mean a higher employment-population ratio for Chattanooga city relative to the other two parts. Age differences also affected the gains over time because, unlike the rest of the MSA, Chattanooga city bucked the national trend of a rising average age of the working-age population.



Racial and ethnic composition also differs across the three parts. As the figure below illustrates, the vast majority of the Chattanooga MSA's black population resides in the city, which also has larger shares of people of Hispanic origin and of those in other categories.^v The Balance of Hamilton County is much less diverse than the city but is still notably more diverse than the Balance of the MSA.



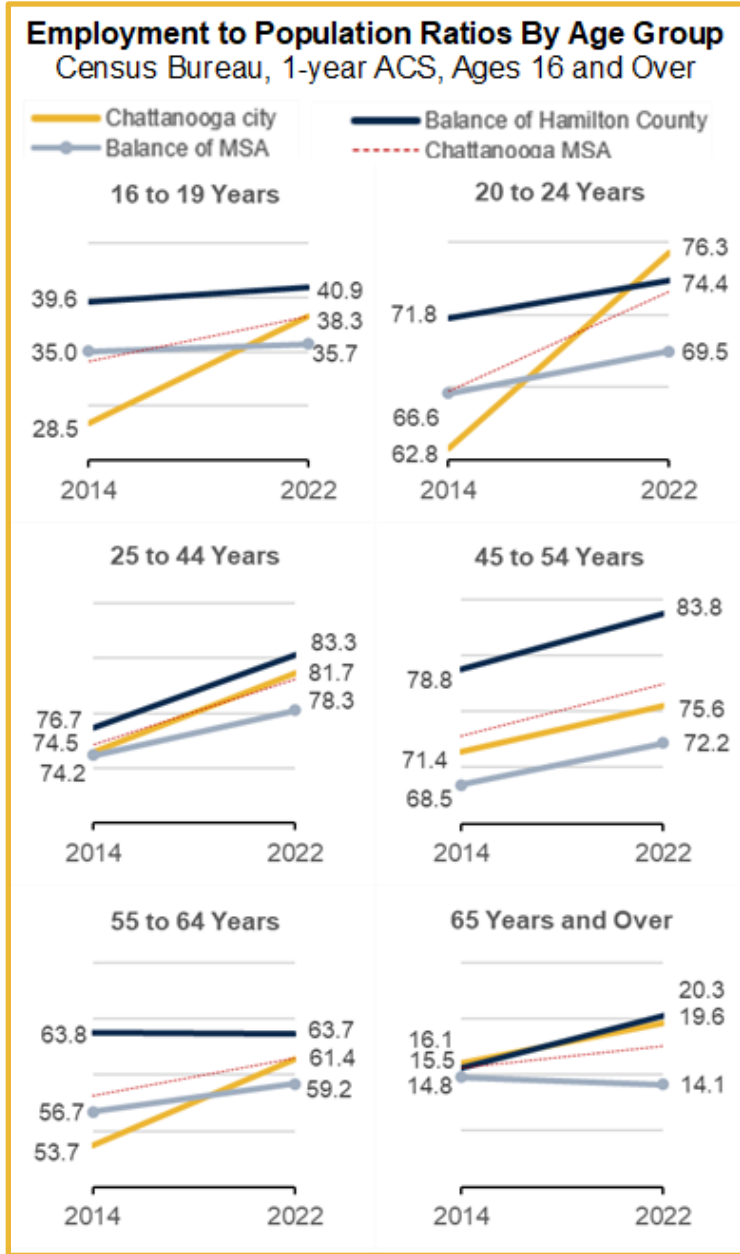
In terms of their education profiles, Chattanooga city is the most similar to the rest of the country, but with more with bachelor's degrees and fewer who have not graduated high school.^{vi} The Balance of Hamilton County, on the other hand, has even more people who have attended some college or received a degree, and even fewer who are not at least high school graduates. Almost 74 percent of those aged 25 to 64 in the Balance of Hamilton County have attended college or received a degree. The comparable number for the Balance of the MSA is just over 53 percent.



Intra-Metro Employment-Population Ratios

As already noted, previous analysis found that the boom in jobs since 2014 in the Chattanooga MSA was broadly beneficial across demographic groups (age, sex, race and ethnicity, and educational attainment). Across many groups the gains were much larger than what happened for the country overall. As we have seen, the boom itself differed within the Chattanooga metro area, with Chattanooga city seeing the biggest increase in its employment-population ratio and the five counties other than Hamilton County seeing only a small increase. This raises the question of whether the MSA's broad gains across demographic categories

occurred similarly across geographic parts. Data at this level of disaggregation is often subject to sharp year-to-year changes because of statistical noise rather than actual changes in conditions. To smooth these bumps, the figures below use two-year averages. That is, data labeled “2014” is the average over 2013-14 and data labeled “2022” is the average over 2021-22.

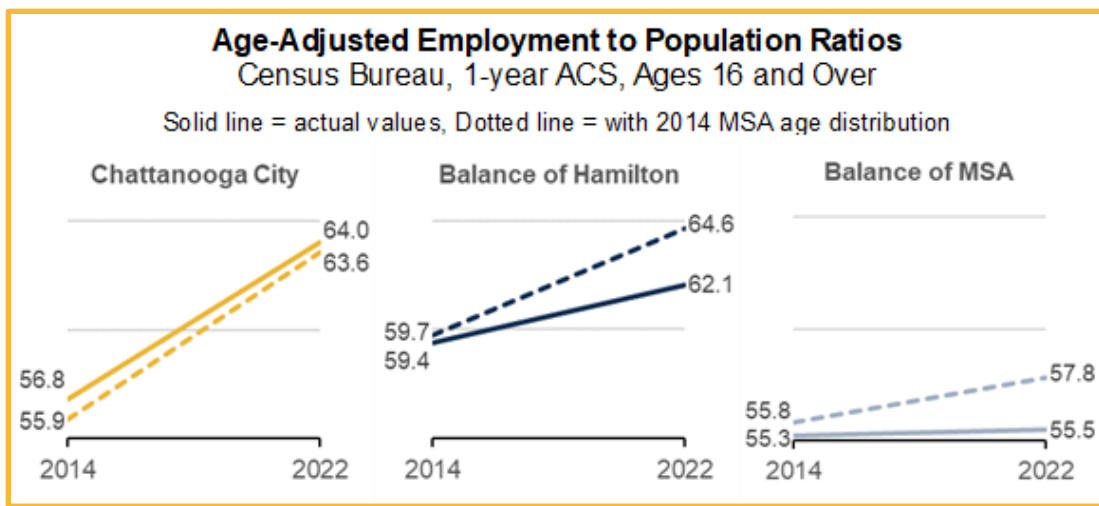


Age: Relative to the United States, the Chattanooga MSA had higher employment-population ratios for younger age groups, lower ratios for older age groups, and larger 2014-2022 increases in ratios for younger age groups.^{vii} As shown in the figure to the left, however, the picture differs a great deal across parts of the MSA. (For visual reference, the red dotted line shows what happened for the entire MSA.) For four of the six age groups depicted, including the three youngest, Chattanooga city had the biggest gain of the three parts. For 16-19 year olds and 20-24 year olds, the city's gains were fairly astounding and were the key to the city's employment-population ratio overtaking that of the Balance of Hamilton County. Notably, the age groups in which the city had the largest relative gains were the ones for which it started the period with the lowest ratios of the three parts. As a result, Chattanooga city's employment-population age profile became comparable to that of the Balance of Hamilton County.

The Balance of Hamilton County saw strong gains almost across the board but because its employment-population ratios started the period higher or just below the national average, the gains were not as dramatic as they were for Chattanooga city. The one age group that didn't see significant gains, 55 to 64 year olds, still

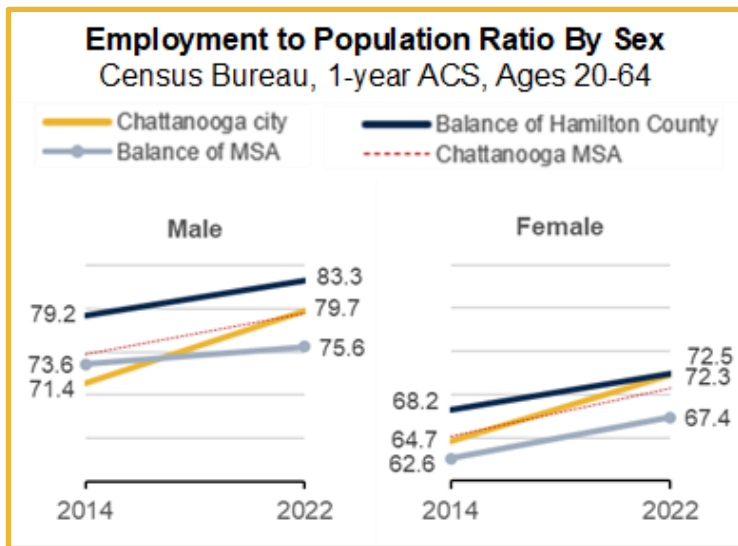
ended the period with a higher percentage of the population employed than was seen nationally. The good news for the Balance of the MSA is that the stagnant overall employment-population ratio is largely a result of the part's age composition rather than a stagnant economy. Each of its age groups 16 to 64 saw gains, albeit usually the smallest gains of the three parts. An aging population and a declining employment-population ratio for those aged 65 and over meant that the age group's gains were small overall.

The figure below further illustrates the importance of age differences and trends in explaining the overall employment-population ratios. For each part of the metro area, the dotted line shows what the ratios would have been if the part had the MSA's 2014 age distribution in both 2014 and 2022. As already noted, Chattanooga city is much younger than the other parts and has become younger since 2014. As a



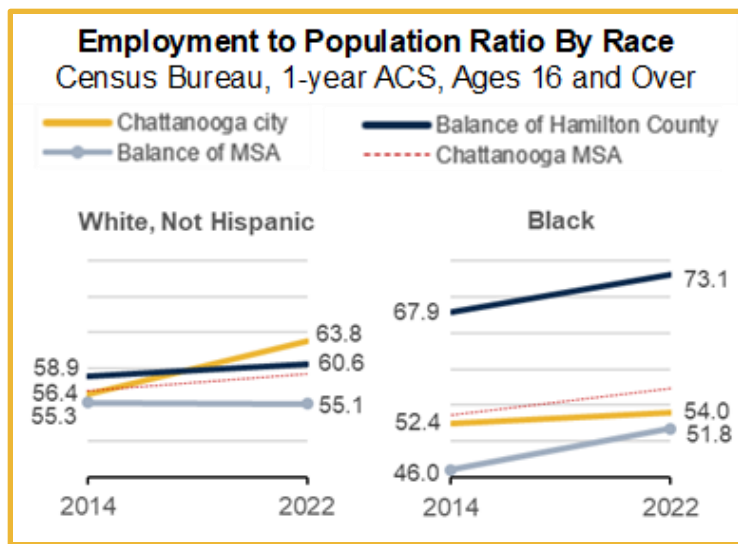
consequence, Chattanooga city employment-population ratio would have been slightly lower in 2014 and 2022 than it actually was if its age profile was the same as the MSA's, but the change between the two years would have been half a point larger. For the other two parts, the actual employment-population ratios greatly understate the strength of the jobs boom. Once age is controlled for, the gain in Hamilton County's employment-population ratio is 4.9 points rather than 2.7 points and the gain for the Balance of the MSA is 2 points rather than the 0.2 points that actually occurred.

These age-adjusted changes are better measures of the scale of the overall gains from the jobs boom. They reveal that Chattanooga city had the greatest gains from the boom, bringing its labor market strength from well below that of the Balance of Hamilton County to on par with it. Although not shown by these numbers, it is likely that a major contributor to this gain in Chattanooga city was the influx of young adults, who have a higher average education and are more likely to be employed than the existing population.^{viii}



Sex: The metro area as a whole saw its male and female employment-population ratios rise during its recent jobs boom so that both caught up to and exceeded those of the United States.^{ix} Breaking things down by the three parts of the metro area reveals that the metro-level results were driven by what happened in Chattanooga city. In fact, for the other two parts, it was the female employment-population ratio that rose more over the period. Given the data, it is not

possible to disentangle the reasons for this difference between the city and the other two parts, but differences in age distributions likely played a role.

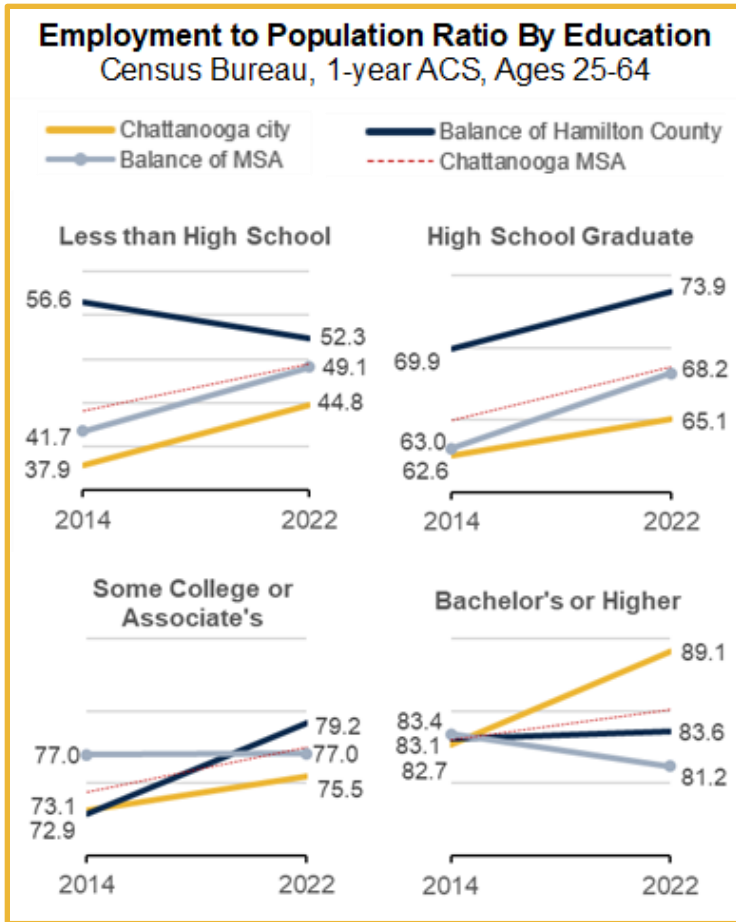


Race and Ethnicity: The ACS does not provide useful data for the Chattanooga MSA on labor market status for groups other than non-Hispanic whites and blacks or African Americans. Nevertheless, these two groups account for more than 90 percent of those aged 16 and over. For the metro area as a whole, the breakdown by these two races reveals that the jobs boom had provided more gains to black Chattanoogaans and that by 2022 the black employment-population ratio was

within 0.3 points of that for whites.^x As shown in the chart, breaking the data down by the three parts, shows a much more complicated picture. For Chattanooga city, the much larger gains were felt by whites rather than blacks, but for the other two parts the larger gains were for blacks. In fact, for the Balance of the MSA, the white employment-population ratio actually fell during the jobs boom.

As with the results by sex, differences in age distribution across whites and black and across the three parts played a role in driving these results. Another important factor is the differences in education levels with racial groups. In particular, note that the black employment-population ratio is highest in the Balance of

Hamilton County, where more than 25 percent of blacks older than 25 years have a bachelor's degree or higher. In Chattanooga city, on the other hand, only 13 percent of blacks have this level of educational attainment. Nationally, the share is about 23 percent.



Education: For the metro area as a whole, all education levels saw significant gains from the jobs boom in that their respective employment-population ratios rose more than they did nationally. And by 2022, the ratios for all but those who did not graduate high school exceeded those of the United States.^{xi} As with our other demographic categories, the local picture is very different across the three parts of the metro area and is intertwined with their age and race profiles. For example, the employment-population ratios for those with bachelor's degrees or higher increased by 6 points in Chattanooga city, but barely budged or fell in the other two parts. This is probably due to the influx of young adults with college degrees into Chattanooga city, combined with an aging of those with college degrees in the

rest of the MSA. It is also worth noting that the employment-population ratios for the other three education levels are lowest in Chattanooga city.

Summary

The Chattanooga metro area has experienced a jobs boom that has resulted in employment gains across a wide variety of demographic categories. This paper examines how these gains have differed within the metro area across its three parts: Chattanooga city, Hamilton County excluding Chattanooga city, and the five counties in the metro area other than Hamilton County. The table at the top of the next page summarizes the employment-population ratio changes for the metro area and its three parts across the demographic categories discussed above. It also indicates those changes that were above or below what occurred at the national level. Except for two categories, the metro area as a whole saw larger changes than the country did.

| Summary: Changes in Employment-Population Ratios, 2014 to 2022 | | | | | |
|---|---------------|-----------------|------------------|---------------------|--------------------|
| Gold (blue) shading indicates that the change was greater (less) than the change for the U.S. | | | | | |
| | United States | Chattanooga MSA | Chattanooga City | Balance of Hamilton | Balance of the MSA |
| Overall, 16+ | 1.3 | 2.8 | 5.7 | 2.0 | 0.6 |
| 16 to 19 Years | 6.3 | 4.1 | 9.8 | 1.3 | 0.7 |
| 20 to 24 Years | 4.2 | 6.9 | 13.5 | 2.6 | 2.9 |
| 25 to 44 Years | 2.8 | 6.0 | 7.2 | 6.6 | 4.1 |
| 45 to 54 Years | 3.3 | 4.7 | 4.1 | 5.0 | 3.7 |
| 55 to 64 Years | 2.9 | 3.4 | 7.7 | -0.1 | 2.5 |
| 65 Years and Over | 1.4 | 2.0 | 3.5 | 4.7 | -0.7 |
| Males, 20 to 64 | 2.6 | 4.8 | 8.3 | 4.1 | 2.0 |
| Females, 20 to 64 | 3.5 | 5.6 | 7.6 | 4.3 | 4.8 |
| White, Not Hispanic 16+ | 0.0 | 2.4 | 7.5 | 1.7 | -0.2 |
| Black or African American, 16+ | 3.8 | 3.6 | 1.6 | 5.2 | 5.7 |
| Less than High School, 25 to 64 | 3.1 | 5.3 | 7.0 | -4.2 | 7.4 |
| High School Graduate, 25 to 64 | 1.2 | 3.7 | 2.6 | 4.0 | 5.2 |
| Some College or Associate's, 25 to 64 | 1.8 | 3.1 | 2.4 | 6.3 | 0.1 |
| Bachelor's or Higher, 25 to 64 | 2.0 | 2.1 | 6.4 | 0.5 | -2.2 |

All calculations in this table use the two year averages of employment-population ratios (2013-14 and 2021-22), so those for the United States and the Chattanooga MSA do not necessarily line up with those from previous research.

Within the metro area, the one lagging category was for blacks or African Americans, for which the employment-population ratio rose by less than half what it did nationally. The relative changes for the other two areas were less consistent than for Chattanooga city. As discussed above, however, much of this is due to increases in the areas' average ages rather than to weak economic performance.

The most notable differences were:

- Those aged 16-19 and 20-24 saw much larger increases in employment-population ratios in Chattanooga city. Consistent with earlier findings, an influx of highly educated young adults into Chattanooga city meant that its ratio for 20-24 year olds rose by an astounding 13.5 points.
- Chattanooga city became younger, on average, while the other two parts followed the national trend and became older. For the Balance of Hamilton County and the Balance of the MSA, age-adjusted changes in employment-population ratios were significantly larger than for the unadjusted ratios.
- For the metro area as a whole, the employment-population for males rose by more than that for females. This was driven by the changes within Chattanooga city, perhaps because of the strength of the manufacturing sector.
- By 2022 the MSA's employment-population ratios for whites and blacks were very similar. The story is quite different across the three parts of the metro area, however:

- The black employment-population ratio in the Balance of Hamilton County was the highest for either race across the three parts. This ratio in the Balance of the MSA was the lowest.
- The increase in the white employment-population ratio for the metro area was driven by Chattanooga city, primarily because of age differences across the three parts.
- For the black employment-population ratio, the opposite occurred: The ratio in Chattanooga city rose by a small amount whereas the ratios for the Balance of Hamilton County and the Balance of the MSA rose by 5.2 and 5.8 points.
- Changes in employment-population ratios by education were entangled with changes by age. That is, the metro area as a whole saw increases across education levels, but the change for the three parts depended on the age distribution of people with the various education levels.

Endnotes

ⁱ The Chattanooga MSA includes six counties, three in Tennessee (Hamilton, Marion, and Sequatchie) and three in Georgia (Catoosa, Dade, and Walker).

ⁱⁱ "[Chattanooga Metro Employment, 1990-2023: Decline, Recovery, and Transformation](#)," CRER White Paper Number 1, January 2024.

ⁱⁱⁱ "[The Demographics of Chattanooga Employment Growth](#)," CRER White Paper Number 5, May 2024.

^{iv} In 2022, the populations 16 years and over were: Chattanooga city, 149,000; the Balance of Hamilton County, 159,000; and the Balance of the MSA, 163,000.

^v The Chattanooga MSA is much less diverse than the rest of the country in that more than 90 percent of the Chattanooga MSA population is either white (almost 80 percent) or black (about 12 percent). Nationally, the number that is white alone (just over 60 percent) or black alone (about 12 percent) is below 75 percent.

^{vi} According to the Census Bureau, the shares for the United States are 10.1 percent with less than a high school diploma, 25.1 percent with a high school diploma, 29 percent with some college or an associate's degree, and 35.8 percent with a bachelor's degree or higher.

^{vii} "[The Demographics of Chattanooga Employment Growth](#)," CRER White Paper Number 5, May 2024.

^{viii} "[Origins and Destinations of Chattanooga's Young Adult Migrants](#)" CRER White Paper Number 6, July 2024.

^{ix} "[The Demographics of Chattanooga Employment Growth](#)," CRER White Paper Number 5, May 2024.

^x Ibid.

^{xi} Ibid.