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# Has a Jobs Boom Meant a Poverty Bust for Chattanooga?

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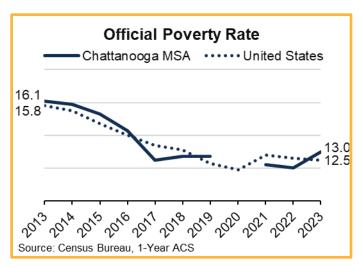
# **Summary**

This paper looks at the extent to which the recent jobs boom in the Chattanooga metro area has translated into a corresponding reduction in poverty. Following the national trend, Chattanooga's official poverty rate fell significantly between 2013 and 2023. For the working-age population, the local poverty rate fell by more than the national one, but for those younger than 18, poverty did not fall as much locally as it did nationally. Finally, a large part of the decrease in the local poverty rate was because of in-migration of people with bachelor's degrees rather than a decrease in core poverty.

#### Introduction

As described in previous CRER white papers, the economy of the Chattanooga Metropolitan Statistical Area (MSA) saw a dramatic resurgence after 2013. Job growth exceeded the national rate, the percentage of people employed rose across a variety of demographic categories, real wages rose across the distribution, and there was an influx of young, educated migrants. The purpose of this paper is to examine the extent to which this broad economic success has translated into reduced poverty for the MSA as a whole and across various demographic groups: age, sex, race, and education.

The figure below illustrates the official poverty rate for the Chattanooga MSA and the United States from 2013 to 2023, the most recent year for which data is available. The poverty rates are based on the Census Bureau's American Community Survey (ACS) and are meant to capture the prevalence of families who don't have the money income to maintain a minimum standard of living. (See the inset on the next page for a description of the official poverty measure and its main alternative.) Specifically, the poverty rate is the percentage of people who are in families whose income is at or below the poverty threshold given the family's size and other characteristics. The calculations do not account for non-cash benefits such as food stamps and subsidized housing. Note that ACS data for 2020 was not released due to the COVID pandemic, so the poverty rate for Chattanooga is not available. Nonetheless, it is safe to assume that it was kept very low by the extraordinary support payments from the Federal government, as was the national rate.



Following an extremely deep recession and a slow recovery, poverty rates in 2013 were just below their peaks. By 2017, poverty rates had settled into the 12-13 percent range, where they remained through 2023. Chattanooga's poverty rate largely followed that of the country as a whole, starting and ending the period a little above the national rate. Put simply, the strong job growth before the pandemic reduced the poverty rate locally and nationally, and the strong post-pandemic growth

kept it relatively low. The positive take on the chart is that the Chattanooga poverty rate fell along with the country's. The negative take is that, given that local growth was stronger than average, perhaps the local poverty rate should have fallen more than it did.

### Trends Across Demographic Groups

Local economic growth has had different effects across demographic groups, so we should expect that recent growth had non-uniform effects on poverty. For example, employment growth after 2013 was strongest in Chattanooga for those below 44 years of age, so we might expect that their poverty rates, and those of their children, to have fallen by more than average. Similarly, we might expect that poverty rates fell more for blacks than whites and more for those without bachelor's degrees. This analysis looks at the period 2013-2023 to quantify these differences in poverty rates by sex, age, race, and educational attainment.

One difficulty in disaggregating poverty this way is that the statistical margin of error rises with every level of disaggregation. For example, the margin of error for the national poverty rate is very small (±0.1) while the margin of error for the Chattanooga MSA is quite large (±1.5). Splitting the MSA by age, race, etc. means even larger margins of error that depend on the number of people in the subgroups. To reduce statistical noise, unless otherwise noted, the poverty rates in the rest of this paper are the

#### **Measuring Poverty**

The Census Bureau calculates official poverty rates by comparing families' pre-tax income to poverty thresholds meant to indicate the minimum level of resources to meet basic needs. There are 48 thresholds that depend on the ages and number of family members. They are set at three times the cost of a minimum bundle of food. For 2024 the poverty thresholds were \$31,812 for a two-parent family with two children, \$16,320 for one person under 65; \$21,006 for a married couple without children; etc. The highest was \$69,810, for a family of nine or more people with one child. The thresholds are uniform across the country (except for Hawaii and Alaska) and non-cash income such as food stamps are not counted. The poverty rate is the percentage of people whose family's pre-tax money income is at or below their poverty threshold.

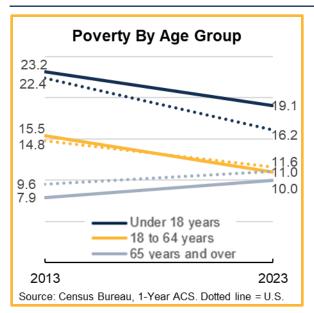
Since 2011, the Census Bureau has also used a supplemental poverty measure (SPM) that accounts for government benefits and taxes, looks at households rather than families, and includes food, clothing, shelter, and other items when calculating basic needs. In addition, thresholds vary by place of residence and whether the household rents or owns its home. Obviously, the SPM is more comprehensive than the official poverty measure, but the national poverty rates generated by the two measures don't differ a great deal from each other and tend to move together over time. Other than 2020 and 2021, when the Federal government provided massive financial support during the COVID pandemic, the SPM poverty rate has been above the official poverty rate by a little more than a percentage point, on average.

SPM poverty rates are produced for subnational areas, but irregularly and with long lags. As such the present analysis uses official poverty rates, which are good benchmarks that capture trends and relative differences in other, more comprehensive, measures.

See the infographic "How the Census Bureau Measures Poverty," June 2022.

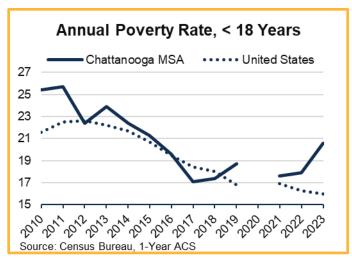
averages of the year indicated and the previous year. That is, the rate for 2013 is the average of the rates for 2012 and 2013. As our main interest is in long-term trends in poverty rather than year-to-year changes, this should be adequate. For reference, the 2013 and 2023 two-year poverty rates for Chattanooga were 16 percent and 12.5 percent, respectively, and for the United States they were 15.9 percent and 12.6 percent.

**Age:** The figure below shows the changes in poverty rates by age groups between 2013 and 2023. In this figure and subsequent ones, solid lines indicate the Chattanooga MSA and dashed lines indicate the United States. Note first that age-group poverty rates moved in the same direction for the two areas. The most



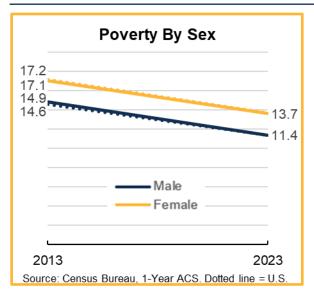
significant difference is in the size of the change for those under 18 years old: The U.S. poverty rate for the group fell by more than 6 percentage points whereas the rate for Chattanooga fell by just over 4 percentage points. For Chattanooga, the biggest change in poverty rate was for those aged 18 to 64, the working-age population. Thus, local and national employment over the period meant reduced poverty for the working-age population and their children, although child poverty did not fall by as much in Chattanooga as it did nationally. Finally, the poverty rate for those 65 and older tends to be lower than for other age

groups. It has been rising over time and by 2023 it was comparable to the rate for those ages 18-64. It is important to note, however, that drawdowns from Individual Retirement Accounts and 401(k)s are treated as capital gains income, so they are not included in the Census Bureau's calculations of money income. A rising poverty rate for seniors is likely indicating that they are more dependent on these resources than before, not that more are living in poverty.



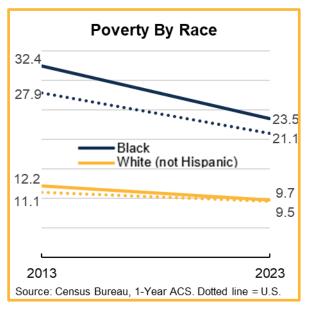
Child poverty is of particular concern, so it is worth looking deeper into the data to see if the increasing gap between Chattanooga and the rest of the country is real or if it is due to the large margin of error around its measurement. If the Chattanooga poverty rate fluctuated a great deal from year to year, we might conclude that the increasing poverty gap for those under 18 was due to statistical uncertainty. The figure to the left

shows the annual poverty rates for this group for 2010-2023 and it appears that rising gap is due to a change in local trend, not measurement error. The poverty rate in Chattanooga had a strong downward trend during the pre-pandemic period, beginning much higher than in the rest of the country but ending it with a comparable rate. Post-pandemic, however, the Chattanooga poverty rate trended upward while the national poverty rate continued to fall. It appears, therefore, that the earlier figure was accurate in showing a widening gap between the local and national poverty rate for those under 18 years of age. The rising gap is a post-pandemic phenomenon that reversed some of the progress that had been made in prior years.



Sex: The figure to the left shows that the poverty rates for males and females were effectively identical for the Chattanooga MSA and the United States as a whole. In 2023, for both areas the poverty rate for females was 2.3 percentage points higher than that for men and the gap was unchanged over time as both rates fell. An obvious explanation for this persistent poverty gap is that women with jobs, on average, earn less than men with jobs. In addition, women are more likely to have childcare responsibilities and, therefore, have less opportunity to work. A third explanation is the peculiar way in which

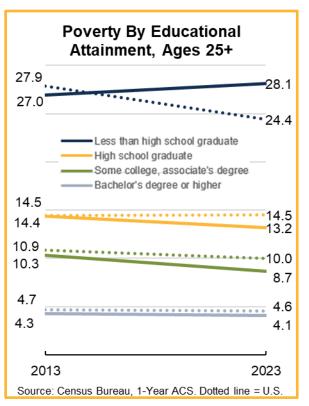
official poverty rates are determined. Because they are based on families of related people rather than households that might include unrelated people, a household that has a mother who is not working, her children, and an unrelated male who is working would be counted as being in poverty because the male's income is not part of family income. Part of the gap between the male and female poverty rates is because this household arrangement is more common than an unrelated woman working to support a family headed by a man. For the Supplemental Poverty Measure (see inset), which looks at households rather than related family members, the gap between the national male and female poverty rates averaged only one percentage point over 2022 and 2023. Regardless of the explanation for the gap, we can conclude that poverty rate levels for men and women fell at comparable rates over 2013-2023.



Race: One of the notable trends during Chattanooga's jobs boom has been the relatively stronger employment prospects for black Chattanoogans. Specifically, between 2014 and 2022, the employment to population ratio of white Chattanoogans rose 2.7 points, from 57 percent to 59.7 percent. Over the same period, the ratio for black Chattanoogans rose 5 points to 59.4 percent, making it essentially the same as for whites. As shown by the figure, poverty rates mirrored this pattern, except that the poverty rate for blacks was still more than double that for whites. Nevertheless, the 9.4 point drop in the black poverty rate from 32.4 percent to 23.5 percent is a notable gain from

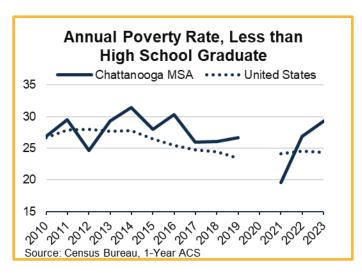
the jobs boom, as was the 2.5 point drop in the white poverty rate from an already low level.

**Educational Attainment:** It is no surprise that poverty rates differ a great deal by educational attainment given that higher education levels mean greater employment opportunities and higher earnings. In the



United States in 2023, the poverty rate for those 25 and older without a high school diploma was more than five times that for those with a bachelor's degree or higher, and nearly two and a half times the rate for those with some college or an associate's degree. As the figure to the left shows. The general differences in poverty across education levels in Chattanooga is similar to the rest of the country. In 2013, poverty rates in Chattanooga were slightly lower than in the United States for those with a high school diploma or higher, and a little higher for those with less than a high school diploma. By 2023, however, the area's poverty rates were quite different than the country's for those without a bachelor's degree. The poverty rate in Chattanooga for high school graduates and those with some college but not a bachelor's degree fell by 1.2 and 1.6

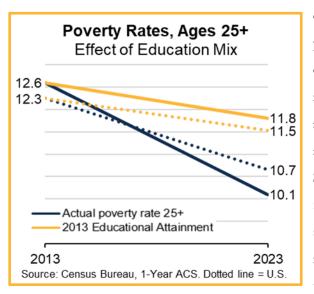
points, while barely budging nationally. On the other hand, the poverty rate for those without a high school degree rose locally while falling by 3.5 points nationally. This group, however, is a shrinking share of the population, falling from about 15 percent to 9 percent in Chattanooga between 2013 and 2023.



Because the share of the population with less than a high school diploma is small, the measurement error surrounding its poverty rate is relatively large. Vi As such, the increase in the local poverty rate for the groups might be due to measurement error rather than an actual trend. The figure to the left shows the annual poverty rates for the Chattanooga MSA and the United States and suggests that there is a good deal of year-to-year fluctuation in the local measure. Although it is

possible that the poverty rate in Chattanooga for those with less than a high school diploma fell sharply in 2012 and rose sharply a year later, for example, much of the movement was likely due to statistical uncertainty. If so, then the starting point of the earlier figure is artificially low. The 7.3 point increase in the poverty rate from 2021 to 2022 is also suspect, although some of the increase could be due to the winding down of Federal COVID-era programs. Overall, it appears from this figure that, although poverty at the national level for this group fell between 2013-2023, it was relatively stagnant at the local level.

It is not just the changes in poverty rates within each level of education that matter in explaining poverty rates over time, but changes in the mix of education levels. This is especially relevant for Chattanooga, which saw larger than average increases in the share of adults with college degrees.<sup>vii</sup> That is, Chattanooga's



overall poverty rate fell partly because there were more people with higher levels of education and a lower chance of being in poverty. The figure to the left illustrates the importance of this effect. The solid blue line shows the actual poverty rate for those 25 and older for Chattanooga, and the dashed blue line shows the same for the United States. The share of this group in poverty in Chattanooga fell by 2.5 points, and in the United States by 1.6 points, suggesting that conditions for alleviating poverty improved more in Chattanooga. The gold lines, however, control for the change in the mix of education levels by calculating

what the poverty rates would have been if the education mix hadn't changed. Poverty still would have fallen because of improved conditions, but by only a third of what actually happened. And the fall in poverty rates would have been only a little larger in Chattanooga than nationally. That is, Chattanooga's poverty rate for this age group declined more than the country's because it saw a larger increase in the group less likely to experience poverty, not because of bigger improvements in the conditions for avoiding poverty.

# **Summary and Conclusions**

The analysis above describes the levels and changes in Chattanooga MSA's official poverty rates between 2013 and 2023 relative the United States as a whole:

• Age: The poverty rates for those of working age fell 40 percent more locally than nationally, whereas the poverty rate for those younger than 18 fell by a third less.

- Sex: The poverty rate for females was higher than for males both locally and nationally. Local trends
  were nearly identical to national trends in reducing female and male poverty rates at the same rate
  over the period.
- Race: Although the poverty rate for blacks in Chattanooga was twice that for whites in 2023, the gap was half what it had been in 2013.
- Educational attainment: Poverty rates for the middle two education levels (high school diploma and some college or associate's degree) fell more locally than nationally. The poverty rate for those without a high school degree was stagnant locally but fell nationally.

The central question is whether changes in poverty rates over the period were reflective of the strong economic growth that occurred in Chattanooga. Overall, the answer is that poverty rates did fall as the local economy grew, but they only kept pace with country-wide trends. Looking deeper into the data reveals that, although the poverty rate for the working-age population fell more in Chattanooga than in the United States, this success did not extend to child poverty, indicating that growth had a limited effect on local poverty. In addition, a large part of the reduction in the overall poverty rate was due to an increase in the number of people with bachelor's degrees, many of whom were migrants into the area. That is, the poverty rate fell partly through the addition of more people unlikely to experience poverty. While that is good for growth and the economic health of the region, it means that the measured drop in the local poverty rate overstates the success in reducing core poverty in Chattanooga.

#### **ENDNOTES**

- <sup>i</sup> The Chattanooga MSA includes six counties, three in Tennessee (Hamilton, Marion, and Sequatchie) and three in Georgia (Catoosa, Dade, and Walker).
- Employment trends are described by "Chattanooga Metro Employment, 1990-2023: Deline, Recovery, and Transformation," CRER White Paper Number 1. The distribution of those gains across areas and demographic groups is examined by "The Demographics of Chattanooga Employment Growth," CRER White Paper Number 5 and "The Geography and Demographics of the Chattanooga Jobs Boom," CRER White Paper Number 7. Wage trends are analyzed by "Wages in Chattanooga: Measurement, Trends, and Composition," CRER White Paper Number 8. And the migration of young adults is analyzed by "Origins and Destinations of Chattanooga's Young Adult Migrants," CRER White Paper Number 6.
- For comparability with the Chattanooga poverty rate, the present analysis uses the national official poverty rate from the ACS rather than from the Current Population Survey Annual Social and Economic Supplements (CPA ASEC), also conducted by the Census Bureau. The former poverty rate uses data collected throughout the year whereas the latter uses data for April. As a consequence, the two series move together but generally provide different poverty rates for each year.
- <sup>iv</sup> The highest poverty rate for the United States was 15.0 percent in 2011 and 2012 while the highest for the Chattanooga MSA was 17.6 percent in 2011.
- <sup>v</sup> The margin of error for the annual Chattanooga MSA poverty rate for those under 18 years of age is usually around 4 percentage points.
- vi In 2023 the measurement error for the annual poverty rate for the group in the Chattanooga MSA was about five percentage points.
- vii The share of those 25 and older in the Chattanooga MSA with a bachelor's degree or higher rose more than 9 percentage points to 32.5 percent between 2013 and 2023. For the United States as a whole, the increase was 6.6 percentage points to 36.3 percent.