Convergence Across States and People

Income inequality has been and continues to be a major public policy topic. With respect to U.S. states, the common wisdom is that poorer states tend to grow faster than richer states and, as a result, per capita incomes of poor states and rich states are converging and will continue to converge in the future.[1] We argue that such an assessment is quite possibly misleading.

We analyze how the distribution of per capita personal income (PCPI), in percentage differences from the U.S. average, evolves over time for the period 1969-2005. We summarize the dynamics with the corresponding long-run distribution. A long-run distribution with a single-peak is consistent with convergence. A long-run distribution with multiple peaks indicates that, in the long-run, there will be groups of states that tend to cluster at different levels of income. The gray line in the chart is the long-run distribution of income across states. The lowest peak corresponds to a PCPI 19.2 percent below the U.S. average. The highest peak corresponds to a PCPI 3.7 percent below the cross-sectional average. In constructing this distribution, the income of any state, regardless of population, is treated the same as any other state.

Things change if the PCPI dynamics calculation is weighted by the number of people within each state. The evolution of California's PCPI will have a larger impact on the shape of the long-run distribution than Iowa's PCPI dynamics because of California's relatively larger population. The population-weighted distribution can be interpreted as the long-run distribution across people in the United States. The long-run distribution of income across people (the blue line in the chart) is still twin-peaked, but the low-income peak is much less pronounced. The population-weighted average PCPI is closer to the U.S. average and its standard deviation is 11 percent lower than that of the unweighted distribution. Convergence across people is driven by the fact that states experiencing a decline in their relative income are also losing population share. For example, Ohio in 1969 had the 15th highest income at 8 percent above the national average. By 2005 Ohio lost ground: It occupied the 30th place with a PCPI of 4.5 percent below the national average. At the same time, Ohio's population declined from 5.35 percent of the total U.S
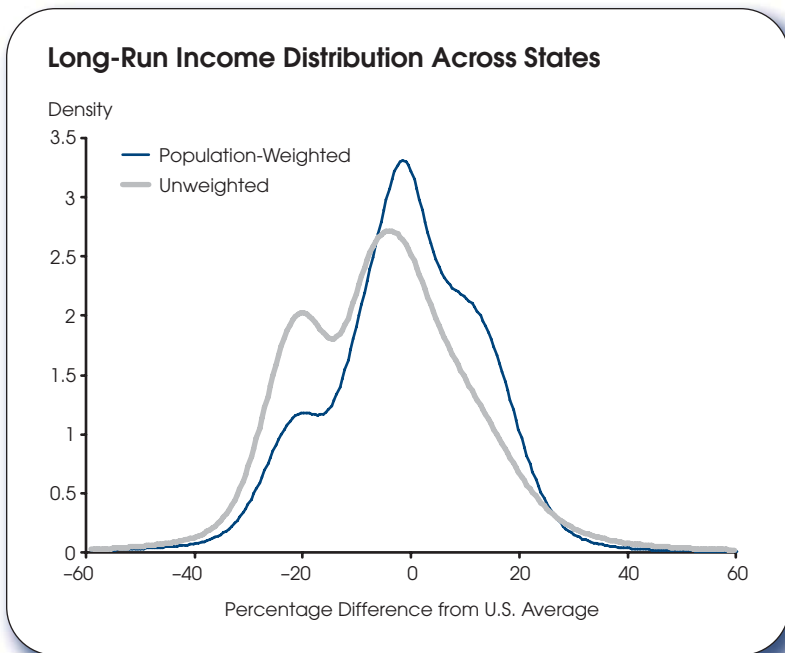
population in 1969 to below 4 percent in 2005. Conversely, states growing rapidly enough to move up in the overall ranking of states' income were gaining population, contributing to convergence. Colorado was the 22nd state in terms of PCPI in 1969 and climbed to the 9th place by 2005. During the same period, Colorado's population share increased from 1.1 to 1.6 percent.[2]

Contrary to previous findings of convergence across states, our finding of a twin-peaked long-run distribution indicates that state incomes will cluster at different levels rather than converge. However, weighting each state by its population produces a nearly single-peaked long-run distribution. In other words, although there is continued divergence across U.S. states, there is convergence across people, driven by migration to states experiencing relative income gains.

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[1] See Gomme, Paul and Rupert, Peter. "Per Capita Income Growth and Disparity in the United States, 1929-2003." Federal Reserve Bank of Cleveland *Commentary*, August 15, 2004.

[2] In general, the Sun Belt states experienced relative population and income gains, while the Rust Belt states experienced relative declines in income and population.

Long-Run Income Distribution Across States

Density

— Population-Weighted
— Unweighted

Percentage Difference from U.S. Average