Age Adjusted Labor Force Participation

Kentucky’s workforce has taken center stage over the last several months as Covid has shed a light on the state’s economy and its recovery. A particular interest raised has been the labor force participation rate (LFPR). LFPR, the percentage of the civilian noninstitutional population over the age of 16 that is working or actively looking for work, has declined over the previous 20 years for all states. Using data from the U.S. Bureau of Labor Statistics (BLS) Current Population Survey (CPS)*, the chart below details the decline in LFPR for Kentucky and the seven surrounding states. From the years 2000 to 2020, Kentucky’s LFPR decreased from 64.3% to 57.4% (a 6.9 percentage point decrease), which is greater than the amount for surrounding states (-5.3 percentage points on average) but less than that of Illinois (-7.1 points) and Missouri (-7.5 points). Virginia (-2.9 points) and West Virginia (-2.2 points) had the smallest declines over the previous two decades. Overall, Kentucky’s drop was the 3rd largest of the group.

* The LFPRs used in this analysis are from the Current Population Survey (CPS) rather than the Local Area Unemployment Statistics (LAUS) program since LAUS does not include demographic characteristics of the labor force at a subnational level. Statewide data on the demographic and economic characteristics of the labor force are published annually from the CPS. Although the LAUS program utilizes CPS data as an input for estimation, the two programs employ different methodologies. As a result, estimates between the two will differ. Data accessed January 10, 2022.
While the total LFPR looks at the entire population 16 years and older, looking at LFPR broken out by age illustrates the differences in participation rates among different age groups. As shown below, teenagers are unlikely to work at the same rate as 30 year olds; similarly, 30 year olds are unlikely to work like 70 year olds. For this reason, KYSTATS examined the LFPR by age groups over time. The Kentucky LFPR by age groups is shown below.

While some of the groups’ LFPR did decline over the 2000-2020 period, not all did, and those that declined did not drop uniformly. In Kentucky, the largest declines in LFPR were among 16-19 year olds (-20.0 percentage points), and 20-24 year olds (-8.8 points). These two groups were acutely impacted in 2020, with a majority of the decline occurring in that year. Similar drops for 16-19 year olds were present in all of the states surrounding Kentucky. The LFPR increased for 55-64 year olds (+5.3 points) and those 65 and over (+4.0 points).

Much of the workforce change in Kentucky, and surrounding states, can be explained by the aging population. The same individuals who were working in 2000 are now 20 years older. Those in the 35-44 age bucket in 2000 had a 82.2% LFPR. In the 20 years since, they’ve aged to the 55-64 bucket with a 56.4% LFPR.
In the year 2000, this 35-44 year old age bucket was the largest group in the civilian, non-institutionalized population. They were followed closely by those in the 45-54 year old bucket. These two buckets, responsible for 40% of the 16+ population, also had a LFPR above the average (64.3%) with those 35-44 with 82.2% participating in the labor force and those 45-54 with 75.5% participating. Kentucky’s largest groups in the 16+ population were also among the groups with the highest LFPR.

Advancing 20 years to 2020, illustrates how these individuals age without having a comparable sized group following behind, leading to much of the change in Kentucky’s workforce. In 2020, the two biggest groups in Kentucky’s 16+ population were those 55-64 and 65 and over. Accounting for 27% of the 16+ population in 2000, they are now 39% of the 16+ population in 2020. As shown previously, those 65 and over had an 18% LFPR in 2020. Kentucky’s biggest population group is also the least participating group.
Age Adjusted Labor Force Participation Rate

An age adjusted LFPR\(^1\) controls for the aging of the population over time. The age adjusted LFPR shows what the LFPR would have been each year assuming the size of the age groups that make up the 16+ population remained at 2000 levels. For the years 2001 to 2020, the age adjusted LFPR is determined by multiplying the actual LFPR for each age group by the age distribution from 2000 and adding the age groups together to get the total.

Utilizing this measure for Kentucky and surrounding states, some states actually increased their LFPR adjusting for age through 2019, prior to Covid. Kentucky, while it does decline, it decreased by only 0.9 points, considerably less than the 6.9 points when not taking the age of workers into consideration between 2000 and 2019. In 2020, every state other than West Virginia has a lower age adjusted LFPR since 2000.

What does all this mean?
Labor force participation rates have been decreasing in every state in America over the last 20 years. Adjusting for the age of each state’s population, it appears that much of this decrease, and in some states all of it, can be explained by the aging of the population. Those individuals 55 and over in 2020 are actually working more than individuals 55 and over in 2000. Those same individuals 55 and over in 2020 are just working less than when they were 35 and over in 2000. Kentucky’s LFPR does not seem to be 20 years in the making, but instead over 20+ years old. While a small part of the civilian labor force (a combined 14%), those between the ages of 16 -19 and 20-24 years old saw significant declines in labor force participation rates, -19.9% and -8.8%, respectively.

\(^1\) KYSTATS analysis of BLS data. Not an official BLS measure.
Kentucky Labor Force Update

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