Is Inflation in 2024 Fueled by Supply or Demand?

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Commentary

Inflation picked up in October, but remains more or less on track. The Personal Consumption Expenditures Price Index (PCEPI), which is the Federal Reserve's preferred measure of inflation, grew at a continuously compounding annual rate of 2.9 percent in October 2024. It has grown at an annualized rate of 2.1 percent over the last three months and 2.3 percent over the last year.

Core PCEPI inflation, which excludes volatile food and energy prices but puts more weight on lagging housing services prices, was 3.3 percent in October 2024. It averaged 2.8 percent over the last three months and 2.8 percent over the last year.

Pandemics, Hurricanes, Strikes, and Supply Shocks

Why did inflation pick up in October? Adverse supply conditions are at least partly to blame. Hurricane Helene ripped through north Florida, Georgia, the Carolinas, and Tennessee in late-September, leaving those in its wake to deal with debris and high water in the weeks that followed. Dockworkers went on strike in early October, disrupting roughly half of the country's ocean shipping. Then, Hurricane Milton crossed Florida. These factors all worked to constrain supplies, resulting in a temporary surge in prices.

Many will recall a similar constrained-supplies explanation offered to account for the high inflation in late 2021, 2022, and early 2023. But, unlike the current situation, the inflation then had much more to do with demand-side factors.

Prices rise as output falls, but prices return to trend as output recovers. Of course, prices did not return to trend as output recovered from the COVID-19 pandemic and corresponding restrictions on economic activity. They remained permanently elevated. For this, we know something other than constrained supplies is required to explain the excess inflation observed in that period.

Some researchers continue to claim post-pandemic inflation was largely supply-driven. In a recent Washington Post article, Peter Orszag summarizes the results of his work with Robin Brooks and William Murdock as follows:

"The results show that supply-chain variables directly accounted for 79 percent of the rise in underlying inflation in 2021. These effects then continued into 2022, with ongoing supply issues directly explaining 60 percent of the rise in inflation that year. The rest was more than accounted for by spillovers from the 2021 supply-driven inflation. All of which leaves only a modest role for demand-driven effects like the covid relief package."

Not so fast! As Josh Hendrickson explains, micro data—like increased shipping times or CEO testimonials—are not typically useful for determining whether inflation is supply- or demand-driven. Instead, we must look at macro spending data.

With a simple identity, we can produce counterfactual forecasts of the price level in order to estimate the extent to which the post-pandemic inflation was supply-driven.

The Identity

Let's start with the identity. The total amount of spending in an economy has to equal the nominal value of all purchases. This is just two sides of the same transaction. When you spend money, you get goods or services. If you hand over too much money, the seller gives you change. If you hand over too little money, the seller calls the police. So, the amount of money spent equals the nominal value of the goods or services sold.

Furthermore, we can note that the nominal value of goods or services sold is equal to the price of the good or service multiplied by its real value. Hence, for the macroeconomy, nominal spending is equal to the price level times real output.

The Counterfactual Forecast

Next, consider how high prices would be today if we had *only* experienced supply disturbances—that is, if nominal spending were stable.

Nominal spending grew at an annualized rate of 4.1 percent over the five-year period just prior to the pandemic. Real Gross Domestic Product (GDP) grew at an annualized rate of 2.5 percent. Inflation, as measured by the GDP deflator, averaged 1.5 percent.

Real GDP growth averaged just 2.3 percent from the start of 2020:Q1 to the end of 2024:Q3. If nominal spending had continued to grow at its pre-pandemic rate, inflation would have averaged 1.7 percent over the period. That's about 20 basis points faster per year over the last 4.75 years.

Comparing the Forecast with Reality

If only we had been so lucky! Actual inflation, of course, was much higher than the counterfactual forecast implies. The GDP deflator has grown at an average rate of 3.9 percent since the start of 2020:Q1. That is about 220 basis points faster than the counterfactual forecast implies. Since the forecast only allows for supply-driven inflation, any additional inflation realized must be attributable to demand.

How much of the excess inflation realized in the post-pandemic period can be attributed to constrained supplies? Recall that the forecast implies an additional 20 basis points per year, while excess inflation has been around (220 + 20=) 240 basis points per year. Hence, only about (20/240=) one twelfth—or, 8.3 percent—of the observed excess inflation can be attributed to supply-side factors. In other words, about 91.7 percent of the excess inflation realized in the post-pandemic period was demand-driven.

Supply-driven Inflation, Now

Might the recent uptick in inflation also be demand-driven? It is certainly possible. But I think that is unlikely. Monetary policy remains tight. Nominal spending has slowed.

With the right data we can test whether the recent inflation is supply driven. To the extent that adverse supply disturbances pushed prices higher in October, we should see lower inflation rates as those supplies recover in the months ahead. Time will ultimately tell. But the supply-driven inflation view looks much better now than it did then.

From the American Institute for Economic Research (AIER)

Views expressed in this article are opinions of the author and do not necessarily reflect the views of The Epoch Times.

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