

# Inflation does not repeat itself, but it often rhymes

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W. H. Phillips's 1958 article on wage inflation and unemployment represents a critical moment in the history of economics. His contribution, known as the Phillips curve, showed an inverse relationship between wage inflation and unemployment in the United Kingdom from 1861 to 1957. Phillips showed that when inflation was high, unemployment was low. Likewise, when inflation was low, unemployment was high.

This relationship suggests that inflation is partly fueled by gap variables, or variables that measure how much economic activity differs from its maximum potential. The modern variation of the Phillips curve depends on gap variables as well as on expected inflation. However, studies have shown that the relationship between *changes* in U.S. inflation and the output gap has faded in past decades. Over the same period, a positive correlation between the *level* of U.S. inflation and the output gap has become evident, reviving the original Phillips curve.

In their article "[\*Return of the original Phillips curve\*](#)" (*Economic Letter*, Federal Reserve Bank of San Francisco, August 9, 2021), Peter Lihn Jørgensen and Kevin J. Lansing demonstrate that inflation expectations have become more firmly anchored in recent decades, as shown by the reduced sensitivity of expected inflation to incoming data on inflation itself.

Jørgensen and Lansing begin by detailing the idea of a weaker link between changes in inflation and the output gap. To demonstrate this weak link, Jørgensen and Lansing use a plot of the estimated coefficient from a regression of change in Consumer Price Index inflation on the output gap. The regressions show that the estimated gap coefficient declines over time and is infrequently statistically significant for 20-year sample periods ending after mid-2003.

Several hypotheses exist as to why the gap coefficient has continued to decline. One hypothesis suggests that structural changes in the economy have decreased the inflationary pressure of gap variables. Another hypothesis points to successful monetary policy efforts in response to supply shocks that push inflation and the output gap in opposite directions. This divergence would create the illusion of a declining gap coefficient. Similarly, other researchers postulate that vigilant monetary policy has anchored inflation expectations and, therefore, inflation itself. Some believe that demographic shifts, among other slow-moving forces, have caused the gap variable to be mismeasured.

Jørgensen and Lansing suggest that an alternative Phillips curve regression can help explain the plausibility of some of these hypotheses. The authors regress the level of inflation, rather than the change in inflation, on a constant term and the value of the output gap. The form of this regression resembles the 1958 version of the Phillips curve. The authors present a new estimated gap coefficient for the alternative Phillips curve regression plot, noting that since 2012, the estimated gap coefficient has been positive and statistically significant. A positive and statistically significant link between the level of inflation and the output gap is an important finding because it signals that structural changes in the economy have not removed the inflationary pressure of gap variables.

The authors explore how improved anchoring, or insensitivity to incoming data, of expected inflation is achieved by watchful monetary policy that keeps inflation close to its target. They detail how improved anchoring can account for the trends in both the first and second regression plots. Jørgensen and Lansing construct a third plot to illustrate that the link between changes in inflation and changes in the output gap has strengthened in recent decades, true to a shift toward stronger anchoring of expected inflation.