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ABSTRACT

Why did US inflation rise over 2021-22 and why has it retreated since then? Ball, Leigh, and Mishra (2022), writing near the inflation peak, explained the rise with a framework in which inflation depends on three factors: long-term expectations; the tightness of the labor market as measured by the vacancy-to-unemployment (V/U) ratio; and large changes in relative prices in particular industries such as energy and autos. This paper finds that the same framework explains the retreat in inflation since our earlier work.

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1. Introduction

After a quarter century of quiescence, US inflation rose sharply during the COVID-19 pandemic. The twelve-month CPI inflation rate rose from an average of 2.1 percent over 2017-2019 to 9.0 in June 2022, alarming economists and the public. Then inflation started declining, and in April 2025 it reached a low of 2.3, most of the way back to its pre-pandemic level. A large body of research has studied that experience.

One contribution to this literature is our earlier work: Ball, Leigh, and Mishra (2022). That paper analyzed data through September 2022, when inflation was near its peak, and sought to explain why inflation had risen sharply. We offered an explanation based on three factors: the tight labor market over 2021-2022, as captured by an extremely high ratio of job vacancies to unemployment (V/U); sharp rises in relative prices in certain industries, such as energy and autos; and a modest rise in long-term inflation expectations.

This paper asks whether the factors that explain the rise in inflation can also explain the subsequent fall. We conclude that they can. Over the period from late 2022 to early 2025, all three drivers of the inflation increase were reversed: the tightness of the labor market diminished; prices in sectors such as energy and autos fell; and long-term inflation expectations returned to pre-pandemic levels. As a result, the inflation equations estimated in our earlier paper, which fit the data through September 2022, also fit the fall in inflation through early 2025. They have continued to fit inflation behavior over 2025-2026, notably the uptick in Spring 2026, when oil prices rose sharply during the war in the Middle East.

Section 2 of this paper reviews the behavior of CPI inflation since 2020. As in our earlier work, we decompose the headline inflation rate into two components: core inflation, as measured by the weighted median inflation rate from the Federal Reserve Bank of Cleveland; and "headline shocks” arising from large relative-price changes in particular industries. We see that the inflation surge over 2021-2022 reflected both rising core inflation and positive headline shocks, and both declining core and negative shocks contributed to the subsequent disinflation.

Section 3 informally examines the drivers of inflation since 2020, and Section 4 estimates the equation for core (weighted median) inflation from our 2022 paper. We estimate the equation for the earlier paper's sample period of 1985 through September 2022, and for the sample extended through July 2026. We find that fitted values from our estimated equation follow actual core inflation fairly closely over the entire period from 2020 through 2026—even when the equation is estimated with the shorter sample, in which case the fitted values after September 2022 are out-of-sample conditional forecasts. In July 2026, the actual level of twelve-month core inflation was 2.7 and the fitted values are 2.8 and 2.9 for the shorter and extended samples, respectively.

Section 5 examines the sources of headline-inflation shocks, which in our framework affect inflation both directly and by passing through into core inflation. We again estimate an equation from our 2022 paper, one that explains headline shocks with changes in the relative prices of energy and autos and a measure of supply chain disruptions. We find that movements in these variables explain most of the positive headline shocks when inflation was rising and most of the negative shocks when inflation was falling, along with the headline-inflation spike during the Middle East conflict.

While most of this paper focuses on our 2022 inflation equation, Section 6 examines the robustness of our results to variations in our approach and relates our findings to other work on post-COVID inflation. Section 7 concludes with a discussion of how inflation could evolve in the future.

The inflation equation introduced in our earlier paper was a contribution to a 70-year-old literature on the Phillips curve—the relationship between inflation and economic slack. This literature is infamous for the repeated adjustments in specification that researchers have found necessary as economic developments revealed deficiencies in past approaches. Stock and Watson (2010) say that this history "is one of apparently stable correlations that fall apart upon publication," and Mankiw (2024) compares the search for a reliable Phillips curve to the perennially unsuccessful search for the Holy Grail. In light of this history, we think the fact that our 2022 equation has *not* fallen apart four years later, even as the state of the economy has changed greatly, is a significant success and strengthens the credibility of our approach.

2. Headline and Core Inflation

We study the behavior of inflation over the period from 1985 to the present, and especially since 2020. We focus primarily on the inflation rate in the consumer price index but also consider the personal consumption expenditure (PCE) deflator, for which our results are broadly similar.

As in our earlier work, we decompose headline inflation into core inflation and headline inflation shocks, defined as headline minus core inflation. We seek to explain core inflation with inflation expectations and labor market tightness—the variables in the Phillips curve—and pass-through from headline shocks. The headline shocks themselves reflect large relative price changes in particular industries.

We measure core inflation with the weighted median of industry inflation rates, which is published by the Federal Reserve Bank of Cleveland. This variable is less volatile and more closely related to macroeconomic conditions than the traditional core measure of inflation excluding food and energy prices, because it filters out unusually large price changes in all industries. The difference between median inflation and the traditional core measure was especially pronounced during the pandemic and subsequent recovery (Ball and others 2021).

For the period from January 2020 through July 2026, Figure 1 shows the paths of headline inflation and core (median) inflation, both at annualized monthly rates (in the left panel) and at the smoother twelve-month rates that are often the focus of policy discussions (in the right panel). The vertical line indicates September 2022, the last month in the sample period for our 2022 paper. We can see that both rising core inflation and positive headline shocks contributed to the run-up in inflation over 2021-2022. Similarly, the subsequent fall in headline inflation reflected both falling core inflation and negative headline shocks. Finally, over March-July 2026, positive shocks caused headline inflation to spike up while core remained stable. In what follows we examine the economic forces underlying these patterns.

3. Three Drivers of the Inflation Cycle

This section examines the behavior since 2020 of inflation expectations, labor market tightness, and headline inflation shocks. Each of these variables moved in the right direction to help explain the rise in inflation over 2021-2022, and then each shifted course, helping to explain the subsequent retreat in inflation. We examine the data informally in this section and then estimate equations for core inflation and headline shocks in sections 4-5.

Inflation Expectations

In conventional macroeconomics, one determinant of the inflation rate is expected inflation. Like a number of other researchers (for example, Hazell and others 2022), we measure expected inflation with the median ten-year-ahead forecast of CPI inflation from the quarterly Survey of Professional Forecasters. Figure 2 shows this variable from 2016 through 2026.[1]

Expected inflation appeared well-anchored before the pandemic, and it stood at 2.2 percent in 2019:Q4. But after a brief dip at the start of the pandemic, it rose over 2021 and 2022 and peaked at 2.95 percent in 2022:Q4. This rise was modest compared to the rise in actual inflation, but economists such as Reis (2021) warned that it might be the start of a de-anchoring of expectations from the Federal Reserve's target.

Starting in 2023:Q1, the rise in expected inflation was sharply reversed, and by the next year, expected inflation had stabilized near its pre-pandemic level. Evidently the Federal Reserve's policy tightening and communication over 2022-2023, as well as the progress in reducing actual inflation, reassured forecasters that inflation would remain near the Federal Reserve's target in the long run.

The Vacancy-to-Unemployment Ratio

Another tenet of macroeconomics is that inflation is influenced by tightness or slack in the labor market. The traditional Phillips curve includes the unemployment rate as a measure of labor market tightness (Phillips 1958), but in the last five years a consensus has grown that a better measure, both theoretically and empirically, is the ratio of job openings (vacancies, V) to unemployment (U). This measure was adopted by Furman and Powell (2021) and Barnichon, Oliveira, and Shapiro (2021), and used in our 2022 paper and subsequent work such as Bernanke and Blanchard (2024) and Benigno and Eggertsson (2023).

[1] These data come from the Federal Reserve Bank of Philadelphia website. The data are quarterly and come from the SPF starting in 1991:Q4 and from the Blue Chip survey before then. In the monthly analysis below, we allocate the quarterly forecasts to the middle month of each quarter and interpolate between these months.

Figure 3 shows the path of V/U in monthly data since 2016. This ratio rose rapidly over 2021 and peaked at 2.0 in March 2022. That level of V/U is dramatically higher than the average level of 0.6 over 1985-2019, and is the highest at any point since 1951, the first year for which data are available.[2] After the peak, V/U fell steadily for three years, reaching a trough of 0.9 in December 2025 before ticking up slightly. In June 2026, the V/U ratio stood at 1.0, close to its December 2019 level (1.1) but still higher than the historical average. In the econometric work below, we find that the rise and fall in V/U is the most important factor behind the behavior of core inflation.

The path of the V/U ratio reflects both shifts in aggregate demand and shifts in the Beveridge curve relating V and U as the pandemic and recovery affected the labor market's efficiency in matching workers and jobs. We examine these underlying determinants of labor market tightness in Section 6 below.

Headline Shocks

The final factor influencing inflation in our framework is headline inflation shocks—deviations of headline from core, which arise from sharp changes in sectoral prices. These shocks influence headline inflation directly and can also pass through into future core inflation because they influence costs of production and wage demands throughout the economy, channels emphasized by economists such as Blanchard (2022) and di Giovanni and others (2022) (a relationship that we estimate in the next section).

Once again, we see a shift from inflationary forces over 2021-2022 to disinflationary forces after that. As shown above in Figure 1, the twelve-month average of headline shocks was positive from March 2021 to November 2022, peaking at 3.8 percentage points in March 2022, and then

[2] Data on vacancies are available since 2001 in the Bureau of Labor Statistics (BLS) Job Openings and Labor Turnover Survey (JOLTS). The vacancy rate back to 1951 is available thanks to Barnichon's (2010) extension of this series using the help wanted index from the Conference Board.

turned negative, with a trough of -3.1 in June 2023. It remained negative until the shocks associated with the Middle East conflict, which pushed it to 1.3 in May 2026.

Our previous paper identified three variables that explain most of the headline shocks that occurred as inflation rose: changes in the relative prices of energy and auto-related items (each measured as the monthly inflation rate in the sector minus median inflation), and a measure of backlogs of work reported by firms in a survey from IHS Markit Economics. We interpret this last variable as capturing the disruptions in supply chains that were frequently cited as a cause of shortages during the 2021-2022 inflation surge.

Figure 4 shows the paths of these three variables since 2020. The horizontal line in each panel shows the level where the contribution to inflation is neutral: zero for the two relative inflation rates, and 50 for backlogs—the level at which there is "no change in backlogs of work" (Williamson 2021). We see that all three variables fell by large amounts when the pandemic hit in April 2020, and then moved to inflationary levels from late 2020 until sometime in 2022. Then all three moved in a disinflationary direction as the previous energy and auto-price increases were partially reversed and supply chains normalized over 2023. After that, the series were generally stable until the spike in energy prices in 2026. In our econometric analysis below, we will see that this experience explains the pattern of headline inflation shocks in Figure 1.

4. Estimating an Equation for Core Inflation

The centerpiece of our 2022 paper was an equation for core (weighted median) inflation estimated over 1985-2022. We found that it fit the data well, including during the period of rising inflation over 2021-2022. Here we examine the fit when the sample is extended to include the subsequent period of falling inflation.

The Equation

Our equation seeks to explain the path of monthly core inflation. (A similar equation fits the data at the quarterly frequency.) The equation includes the three inflation drivers that we discussed in the last section:

(1) $\pi = \pi^e + f(V/U) + g(H) + \varepsilon$

where f(•) and g(•) are functions that we specify below. The variable π is annualized monthly core inflation and π^e is expected inflation from the SPF, which we assume has a one-for-one effect on actual inflation.[3] In month t, V/U is the average level of V/U over the twelve months from t-11 to t, which accounts in a parsimonious way for the lagged relationship between labor market tightness and inflation. Similarly, H is the average of the headline inflation shock (headline minus median) from t-11 to t. This variable captures the possible pass-through over time of headline shocks into core inflation, which can occur through production chains, movements in near-term inflation expectations, and wage adjustments.

Researchers have suggested a variety of reasons that the effects of both labor market tightness and past headline shocks could be asymmetric or otherwise non-linear. For example, Blanchard (2022) emphasizes the salience of large shocks; Ball and Mankiw (1994) theorize that shocks have asymmetric effects in the presence of menu costs and trend inflation; and a number of studies such as Bacon (1991) find asymmetric pass-through effects from crude oil to retail fuel prices ("rockets and feathers"). We want to allow for these possible non-linearities.

[3] A Phillips curve specification where changes in long-run inflation expectations affect current inflation one-for-one is derived by Hazell and others (2022) in a New Keynesian framework under the assumption that the persistence of shocks to slack is constant. This assumption is somewhat restrictive, but it appears realistic: rolling estimates of an AR(1) model for V/U (with a ten-year window) suggest that the coefficient on lagged V/U is stable, as does the Andrews test for a break at an unknown date. As a robustness check, we have removed the restriction on the π^e coefficient and estimated it, with the caveat that the estimate is biased downward if π^e is measured with error. The estimated coefficient is 0.81, which is significantly different from 1.0, but the fit of our equation does not improve materially (the adjusted R^2 rises from 0.60 in the baseline specification that imposes a unit coefficient to 0.61 in the specification that relaxes this restriction).

We do not, however, have strong a priori views on what kinds of non-linearities are important. We therefore agnostically make f(•) a cubic function of V/U and g(•) a cubic function of H, which can capture a variety of shapes that might be consistent with the data.

Estimated Relations with V/U and H

Table 1 presents estimates of our equation for core inflation. We present results for 1985-September 2022, the sample period in our previous paper, and for 1985-July 2026.[4]

To help us interpret the estimated cubic functions, Figure 5 shows them graphically for the two sample periods, with 95 percent confidence intervals. Panel A shows the estimated relationship between V/U and the "core inflation gap"—the deviation of core inflation, π, from expected inflation, π^e. This relationship is steepest at unusually high or low levels of V/U and flatter in between. The steep estimated slope for V/U above 1.5 reflects the high levels of core inflation when V/U was in that range in 2022-2023.

Qualitatively, the estimated relationships between V/U and inflation are similar in the full sample and in the sample ending in September 2022. However, extending the sample reduces the steepness of the relationship at high V/U by a modest amount.

Panel B of Figure 5 shows the pass-through from the headline shock H to the core inflation gap. This relationship is sharply asymmetric: positive headline shocks pass through into higher core inflation, but negative shocks do not have a significant effect. This estimated relationship does not change materially when the sample is extended to the present.[5]

[4] The observation for V in July 2026 is not available as this is written. We estimate it by simply assuming that V is the same in July as in June.

[5] To further assess the stability of the cubic relationships reported in Figure 5, we re-estimate our Phillips curve allowing all coefficients to change after September 2022 and compare the fitted functions and their 95-percent confidence intervals before and after the break. For V/U, the bands overlap across nearly the entire range of values, indicating little evidence of a change in the relationship. For headline inflation shocks, the evidence of instability is somewhat stronger, with the post-break fitted function appearing steeper at high levels of H. However, these differences are estimated imprecisely given the shortness of the post-break sample.

Fitted Values for 2020-2026

Here we address the central question of this paper: Does the core inflation equation from our 2022 paper, which was designed to explain the rise in core inflation, also explain its subsequent decline? To answer that question, we compare the actual path of core inflation since 2020 to fitted values from our estimated equation. We compute two sets of fitted values, one based on estimates for our full sample through July 2026 and the other based on the sample ending in September 2022. In the latter case, the fitted values after September 2022 are conditional forecasts: given the paths of V/U, H, and π^e, we predict core inflation using the sample period in our previous work.

Figure 6 shows the results. The left panel compares the actual path of annualized monthly core inflation to the two sets of fitted values, and the right panel shows twelve-month actual and fitted inflation rates constructed by aggregating the monthly rates.

The Figure indicates that our equation fits well. For twelve-month core inflation the actual and fitted values are close to each other during both the rise in inflation to early 2023 and the subsequent fall. Not surprisingly, the fitted values based on data ending in September 2022 are farther from actual inflation than those based on data through the present, but not by much. In the monthly graph, core inflation is somewhat volatile, although much less so than headline inflation; it trends upward and downward along with the fitted values.

If we closely examine the fitted values for twelve-month inflation, we see that they are a bit higher than actual core inflation over 2023 and a bit lower over most of 2024-2025. For our last observation, July 2026, the fitted values of 2.8 for the shorter sample and 2.9 for the longer sample are very close to actual inflation of 2.7.

A detail: our results for the sample ending in September 2022 are not identical to the results reported in our earlier paper because of data revisions. Specifically, changes in seasonal adjustment factors have made a difference for the data, especially the monthly inflation data for 2022. Fitted values for inflation after September 2022 are somewhat higher with estimates based on the original data than with revised data. Appendix A compares the results with current-vintage data that we report here to our 2022 results.

Decomposing the Path of Core Inflation

Finally, we quantify the roles of the three determinants of core inflation—expected inflation, V/U, and pass-through from headline shocks—since 2020. We do so by decomposing the fitted values of core inflation into the contributions of each variable. Figure 7 shows this decomposition based on parameter estimates for the full sample of 1985-2026.

We see that the rise in twelve-month core inflation, which peaked in February 2023 at 6.9 percent, reflected both pass-through from headline shocks (the gold bars) and rising V/U (the red bars). The former was the more important factor as core inflation started to rise in 2021, but the latter became increasingly important as the rise continued. The contribution of rising expected inflation (the blue bars) was modest.

The pass-through of headline shocks into core inflation faded away in early 2023. At that point, core inflation was still high because the influence of high levels of V/U was at its peak. The subsequent decline in core inflation was driven primarily by the fall in V/U, with a modest contribution from falling expected inflation. Notice that pass-through from headline shocks did *not* contribute materially to the fall in core inflation because of the asymmetry in pass-through: there were negative headline shocks in 2023-2025, but our estimated equation implies that negative shocks do not influence core inflation.

5. An Equation for Headline Shocks

We have seen that both the rise in headline inflation over 2021-2022 and the subsequent fall reflected headline-inflation shocks—deviations of headline from core inflation—as well as movements in core inflation. We have also seen that three factors that influence headline shocks—energy inflation, auto-related inflation, and firms' backlogs of work—all moved in an inflationary direction as headline inflation rose and then became neutral or disinflationary. Our earlier paper showed that these three factors account quantitatively for the headline shocks through September 2022. Once again, we extend our analysis through July 2026.

Table 2 reports regressions of the headline inflation shocks (not annualized) on the three factors for the sample period in the earlier paper, which runs from January 2020 through September 2022, and for the extended sample. The coefficient estimates are similar for the two samples and the adjusted R^2 statistics are high (0.95 and 0.94). As a result, the fitted values based on either sample are close to the actual headline shocks, as shown in Figure 8. Once again, an equation that we previously estimated through September 2022 yields accurate conditional predictions through the present.[6]

Figure 9 decomposes the headline shocks since 2020 into the contributions of the three factors (based on fitted values for the full sample) and a residual. We see that energy prices were the most important factor, contributing positive shocks in most months from June 2020 to June 2022—with especially large spikes after Russia's invasion of Ukraine in February 2022 raised world energy prices—and then mostly negative shocks as energy prices subsided. Energy prices also account for the positive headline shocks over March-May 2026. Auto prices contributed materially to headline

[6] The headline shock is defined as headline minus median inflation, and the energy and auto-related inflation rates are also measured relative to median inflation. A possible concern is that, because median inflation is part of both the dependent variable in our regression and two of the regressors, the fit of our equation may be partly mechanical. To address this concern, we have estimated the equation with two alternative definitions of the energy and auto variables: (i) energy and auto inflation relative to headline inflation, and (ii) energy and auto inflation without either median or headline subtracted. In both cases, the results are similar to those reported in Table 2, indicating that our findings are not driven by a mechanical fit.

shocks during the period of rising inflation, especially over April-June of 2021, which included the pandemic-induced chip shortage. The contribution of backlogs of work (after controlling for auto and energy prices) was relatively modest as backlogs rose above the neutral level of 50 and then fell below it.

The residuals in Figure 9, shown in gray, capture other sources of headline shocks. These residuals were mostly negative and dampened the total headline shocks during the period of rising inflation. They reflect a variety of idiosyncratic industry shocks in different months. For example, during the period of rising inflation, the two largest negative residuals came in February and September 2021 and reflected—in both cases—falls in airline fares and apparel prices. During the period of falling inflation, the largest negative residual came in November 2023 and reflected a fall in the relative price of food at home.

6. Robustness and Comparison to Other Work

So far we have focused on a single Phillips curve specification, the one from our 2022 paper, to see whether it has continued to fit the behavior of inflation. Many other researchers have studied the post-COVID inflation experience using a variety of approaches. Here we compare our analysis to this broader literature and explore the robustness of our results to variations in our specification.

Measuring Inflation with the PCE Deflator

While we have studied inflation in the Consumer Price Index, some researchers focus on the personal consumption expenditure (PCE) deflator, the inflation measure that the Federal Reserve targets. Our 2022 paper found that our Phillips curve broadly fits the behavior of both inflation measures, and that continues to be the case. We measure core PCE inflation with the weighted median PCE inflation rate from the Cleveland Fed.

Figure 10 shows the paths of headline and core inflation in the PCE. As with the CPI, the run-up in inflation over 2021-2022 reflected both rising core inflation and positive headline shocks, and both falling core and negative shocks contributed to the subsequent disinflation. Figure 11 compares the path of core PCE inflation since 2020 to the fitted values from our Phillips curve based on data through September 2022 and through the present. Once again our equation generally fits well, although the differences between actual and fitted inflation are somewhat larger than for the CPI. Appendix B presents other results for PCE inflation, including estimates of the Phillips curve and decompositions of headline and core inflation into their various drivers.

Alternative Measures of Inflation Expectations

While most economists agree that expected inflation influences actual inflation, there is no consensus about *which* expectations are relevant. We follow studies such as Hazell and others in measuring expectations with long-term (10-year) forecasts from the Survey of Professional Forecasters. But researchers such as Coibion and Gorodnichenko (2025) and Beaudry and others (forthcoming) argue that the relevant variable is short-term expectations, specifically expected inflation over the next year. These researchers also argue that the expectations that matter are those of price setters, which are better proxied by expectations in the Michigan Survey of Consumers than by professional forecasts.

These distinctions matter because different measures of expectations have behaved differently. Figure 12 shows the paths since 2020 of four expectations measures: short-term (1-year) expectations from the Survey of Professional Forecasters and the Michigan Survey (SPF1 and Mich1, respectively), and long-term expectations from the same two sources (10-year expectations from the SPF and 5-year expectations from the Michigan Survey—SPF10 and Mich5, respectively). Our preferred expectations measure, SPF10, has been fairly stable since 2020, and so have SPF1 and Mich5. But Mich1—the measure favored by Coibion and Gorodnichenko and Beaudry and others—has been more volatile.

A focus on short-term Michigan expectations leads these other researchers to explain the post-COVID inflation spurt differently than we do. According to Coibion and Gorodnichenko and Beaudry and others, shocks such as high oil prices raised short-term expected inflation, which in turn raised actual inflation. This narrative deemphasizes the role of labor market tightness, which plays a central role in our account of post-COVID inflation.

Motivated by this work, we estimate our baseline Phillips curve for core inflation with alternative measures of expectations. Table 3 shows the results for the sample period from 1985 through July 2026. For each measure of expected inflation, π^e, the Table shows two versions of the adjusted R^2 statistic: one from a regression with $\pi - \pi^e$ on the left side and another computed after moving π^e with a unit coefficient to the right. The latter version of adjusted R^2 measures the explanatory power of our equation for the level of core inflation.[7]

We see that the equation's fit when expectations are measured by SPF1 or Mich5 is similar to the fit with our preferred SPF10 measure, which reflects high correlations among these variables. However, when expectations are measured by Mich1, as advocated by Coibion and Gorodnichenko and Beaudry and others, the fit deteriorates: the adjusted R^2 for core inflation is 0.47, compared to 0.65 with SPF10.

Figure 13 compares actual core inflation over 2020-2026 to the fitted values from our equation with the SPF10 measure of expected inflation and with Mich1 (based on the full sample through July 2026). Both sets of fitted values track actual inflation well until early 2025, but then the fitted values with Mich1 diverge. Starting in April 2025, the consumer expectations captured by Mich1

[7] If we write R^2 as 1 – (SSR/SST), SSR is the same sum of squared residuals in the two versions of the statistic. SST is the sum of squares of $\pi - \pi^e$ in the first version and the sum of squares of π in the second.

spiked upwards, possibly reflecting the perceived effects of tariff increases, among other factors (see Andrade and Wicklein 2025). That produced a sharp rise in the level of inflation predicted by Mich1, while actual core inflation remained relatively stable.

The Nature of Nonlinearities

We have allowed for non-linearities in the Phillips curve by letting core inflation depend on cubic functions of V/U and headline shocks. Benigno and Eggertsson (2023) propose an alternative specification in which inflation depends on a piecewise-linear function of ln(V/U), with a kink at V/U = 1. To examine the robustness of our results, we estimate a version of our core-inflation equation that replaces the cubic in V/U with the Benigno and Eggertsson function. We also replace the cubic in the headline-shock term H with a piecewise-linear function with a kink at H = 0.

Table 4 shows the results for our full sample period. Once again we see strong evidence of non-linearity: V/U has a larger effect on inflation for V/U > 1 and H has a larger effect for H > 0. The adjusted R^2 is close to the adjusted R^2 of our baseline Phillips curve (both round to 0.60). Figure 14 compares the effects of ln(V/U) and H with the piecewise-linear functional forms and with our baseline specification (where we derive a function of ln(V/U) from the cubic function of V/U). We view the shapes arising from the alternative functional forms as broadly similar. All in all, there is robust evidence of non-linearity, but it is not obvious which non-linear specification is best.

Another prominent study, Bernanke and Blanchard (2024), also estimates an effect of V/U on inflation but assumes it is linear. Compared to our work and Benigno-Eggertsson, Bernanke and Blanchard attribute less of the post-pandemic inflation surge to V/U and more to supply shortages and sectoral price increases. Dao and others (2024) and Osten (2026) suggest that these differences arise partly from Bernanke and Blanchard's choice of a linear specification. In addition, Bernanke and Blanchard assume that V/U affects price inflation only through wage inflation, while we and Benigno-Eggertsson allow V/U—as a broad measure of macroeconomic conditions—to affect price inflation directly.

The Beveridge Curve Debate

We find that the sharp rise and then fall in the V/U ratio has been a central driver of post-pandemic inflation. Underlying the behavior of V/U are large shifts in the Beveridge curve relating vacancies and unemployment. These shifts help explain aspects of the post-pandemic experience that surprised many economists, particularly the large movements in inflation with relatively stable unemployment. The behavior of the Beveridge curve was hotly debated during the inflation surge, and it may be useful to revisit this debate and see what we have learned.

Figure 15 shows the evolution of the vacancy and unemployment rates (V and U as fractions of the labor force) since 2009. We see there was a stable Beveridge curve from 2009 through March 2020, and then a dramatic outward shift at the start of the pandemic, indicating that the labor market became less efficient at matching workers and jobs. Starting in late 2022, falling vacancies moved the economy downward in the Beveridge space, and by the end of 2024 the economy was back on the pre-pandemic Beveridge curve. The reasons for the shifting Beveridge curve are not entirely clear, but possible factors include an effect of the pandemic on sectoral reallocation (Blanchard, Domash, and Summers 2022; Bagga and others 2025); a temporary decrease in job search due to expanded unemployment benefits (Briggs 2022); and an increase in quits due to real wage declines or changing preferences for work (Afrouzi and others 2026; Barlevy, and others 2024).

Inflation peaked in 2022, when the Beveridge curve had shifted out.[8] At the time, economists debated whether reducing inflation would require a substantial rise in unemployment, or whether a "soft landing" without higher unemployment was possible. Blanchard, Domash, and Summers were pessimistic: they argued that disinflation would require a decrease in V/U, which would occur through a southeast movement along the Beveridge curve, with higher U as well as lower V. The Federal Reserve's Figura and Waller (2022) disputed this view: they argued that V could fall, reducing V/U and inflation, while U remained stable. The experience over 2022-2024 vindicated Figura and Waller, because V *did* fall with little change in U as the economy shifted back to the pre-pandemic Beveridge curve. In retrospect, the pessimism of some about the costs of disinflation rested on an incorrect belief that the outward Beveridge-curve shift would persist.[9]

The Supply vs. Demand Debate

Studies of the post-pandemic inflation often decompose its causes into demand shocks (e.g., expansionary fiscal and monetary policy) and supply shocks (e.g., energy prices and disruptions of supply chains) and debate the relative importance of the two. For example, Shapiro (2024) and Giannone and Primiceri (2024) identify supply and demand shocks from the comovements of output and inflation, with the former finding that both kinds of shocks were important and the latter finding a dominant role for demand shocks. Other studies include Gagliardone and Gertler (2024) and Harding and others (2023), who find that supply shocks were most important.[10]

In our view, a supply-demand decomposition is not the most fruitful framework for analyzing inflation. We take a different approach in which the inflation drivers that we measure are labor

[8] At a twelve-month rate, headline CPI inflation peaked in June 2022, while core (median) CPI inflation peaked in February 2023.
[9] In our earlier work (Ball, Leigh, and Mishra 2022), we constructed six simulations of future inflation, three based on the pessimistic assumption that the Beveridge curve would not revert to its pre-pandemic position, and three based on the more optimistic assumption that it would.
[10] Other relevant work includes Comin and others (2024), Crump and others (2024), Dynan and Elmendorf (2024), Levy (2024), and Chen and others (2024).

market tightness and headline inflation shocks caused by relative price changes. Both of these inflation drivers reflect a mix of supply and demand factors. For example, while headline inflation shocks often result from supply events such as disruptions in oil markets, they can also reflect demand surges that cause backlogs in orders for goods (Summers 2021). Decreases in demand surely contributed to the negative headline shocks at the start of the pandemic, when prices plunged in sectors such as air travel and hotels.

Changes in labor market tightness can also reflect both supply and demand. The sharp rise in V/U over 2021-2022 plausibly reflected strong demand for goods and services (due in part to fiscal stimulus and the release of pent-up demand as the economy reopened). However, the rise in V/U might also have reflected reduced labor supply due to the expansion of unemployment benefits or changing preferences of workers. Moreover, labor market tightness is influenced by changes in the matching frictions underlying the Beveridge curve, which do not fit neatly in the categories of supply and demand shocks.

7. Conclusion

This paper seeks to explain the path of US inflation since 2020. Our central findings are summarized in Figure 16, which decomposes headline inflation into core inflation and headline shocks, with core inflation further decomposed into contributions from inflation expectations, the vacancy-to-unemployment ratio (V/U), and pass-through from headline shocks.

We see that the rise in twelve-month inflation from late 2020 to the peak in June 2022 is explained primarily by positive headline shocks, which raised inflation both directly and by passing through into core inflation. By early 2023, however, the effects of these shocks had faded away and inflation remained high because of extremely high levels of V/U. After that, inflation declined because of falling V/U and negative headline shocks, until an uptick due to shocks in Spring 2026. We have also seen that, throughout the period since 2020, movements in energy and auto-related prices have been the most important sources of headline shocks.

These findings come from a framework developed in our 2022 paper to explain the rise in inflation over 2021-2022. Critics of that paper have suggested that aspects of our specification, such as the cubic function of V/U in the Phillips curve, were chosen to fit a particular episode and questioned whether they would fit the data in future periods. In our view, the good fit of the framework since 2022—even when its parameters are estimated with data ending in 2022—strengthens the credibility of our approach.[11]

This good fit suggests that our Phillips curve might be useful for forecasting inflation. To be clear, this paper only examines *conditional* forecasts: we predict inflation since 2022 given the realized paths of V/U, expected inflation, and headline shocks. It remains to be seen whether our approach is useful for unconditional, real-time inflation forecasting. We are currently researching this question.

[11] For comments on our 2022 paper, see the discussion summary in the Brookings Papers on Economic Activity-Fall 2022 volume where it was published. For example, "Justin Wolfers expressed skepticism of the paper's results, given the small number of data points corresponding to the large number of degrees of freedom available for curve-fitting. Wolfers listed a number of such degrees of freedom available to researchers, including the type of inflation metric, the type and time horizon of inflation expectation, the choice of survey data source, the measure of labor market slack, the time variance of model coefficients, the model lag structure and nonlinearities, and the inclusion of supply shocks and regime shifts. He argued that given such a large number of degrees of freedom, any Phillips curve could be plausibly claimed to account for the observed path of inflation."

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Appendix A. The Effects of Data Revisions

In the main text of this paper, we compare results for the sample period in Ball, Leigh, and Mishra (2022), which ends in September 2022, to results when the sample is extended through July 2026. The extended sample is not, however, the only difference from the earlier paper; our results are also influenced by revisions in the data, especially the CPI data. Because of these revisions, our current results differ somewhat from the previous paper even for the same sample period.

Non-seasonally-adjusted CPI data are not revised after their initial release. However, seasonal adjustment factors are revised annually, causing changes in seasonally adjusted CPI inflation. The revisions in 2023 made an unusually large difference for inflation over 2022, reflecting the difficulty of seasonal adjustment in the volatile COVID period. In particular, as shown in Figure A1, the revisions reduced the average core (weighted median) inflation rate over June-September 2022 from 8.3 to 7.6.

These data revisions have a non-negligible effect on the estimated relationship between core inflation and the V/U ratio. Figure A2 compares the cubic relationships shown in Figure 6 of the main text, based on current-vintage data through September 2022 and through July 2026, to the relationship estimated with the data from our earlier paper. This third relationship is identical to the one shown in Figure 6 of the earlier paper.

As discussed in the text, the relationship between V/U and core inflation is somewhat steeper at high levels of V/U when estimated with current-vintage data through September 2022 than with data through the present. The relationship is steeper still when we use the data from our earlier paper; indeed, updating the data through September 2022 makes a larger difference than extending the sample period to the present. This result reflects the fact that data revisions reduced core inflation rates in the summer of 2022, suggesting a smaller effect of high levels of V/U.

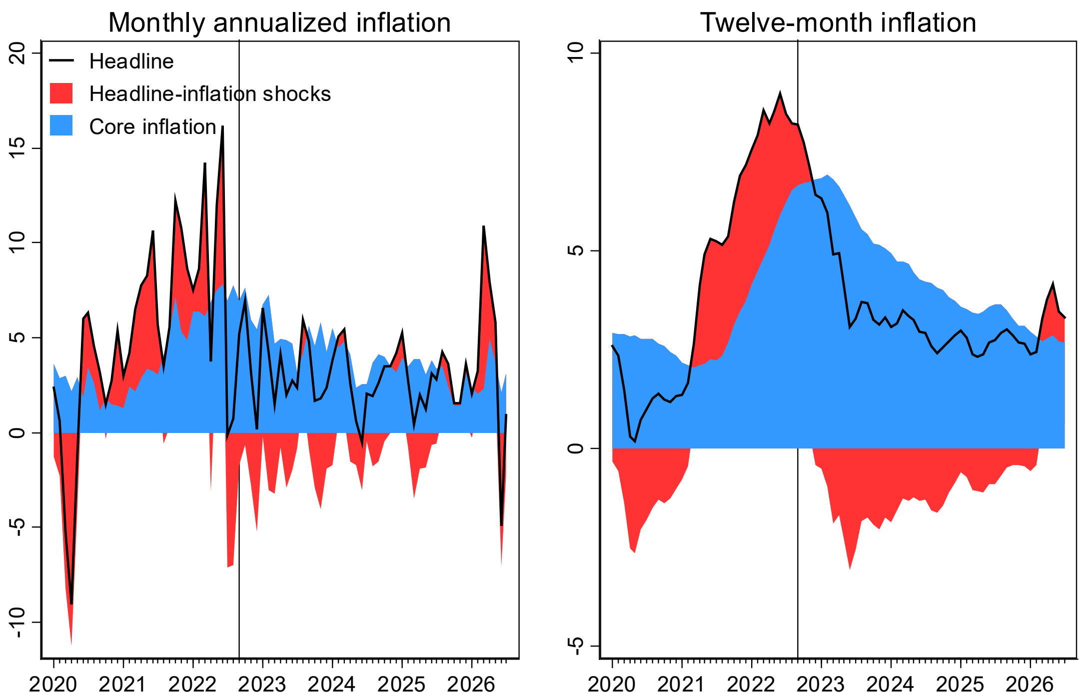
Figure A3 compares the fitted values for core inflation in Figure 6 of the text to fitted values based on the older data from our previous paper. Once again, we see that the vintage of the data makes a bigger difference than the sample period. Because the older data imply a steeper relationship at high levels of V/U, they yield higher fitted values for core inflation in late 2022 and 2023.

Appendix B. Additional Results for the PCE Deflator

This paper focuses primarily on inflation in the consumer price index (CPI), but also presents results for inflation in the personal consumption expenditure (PCE) deflator. In the main text, Figure 10 decomposes headline PCE deflator inflation into core inflation (measured by median PCE inflation) and headline shocks, and Figure 11 compares the path of core PCE inflation since 2020 to fitted values from our Phillips curve.

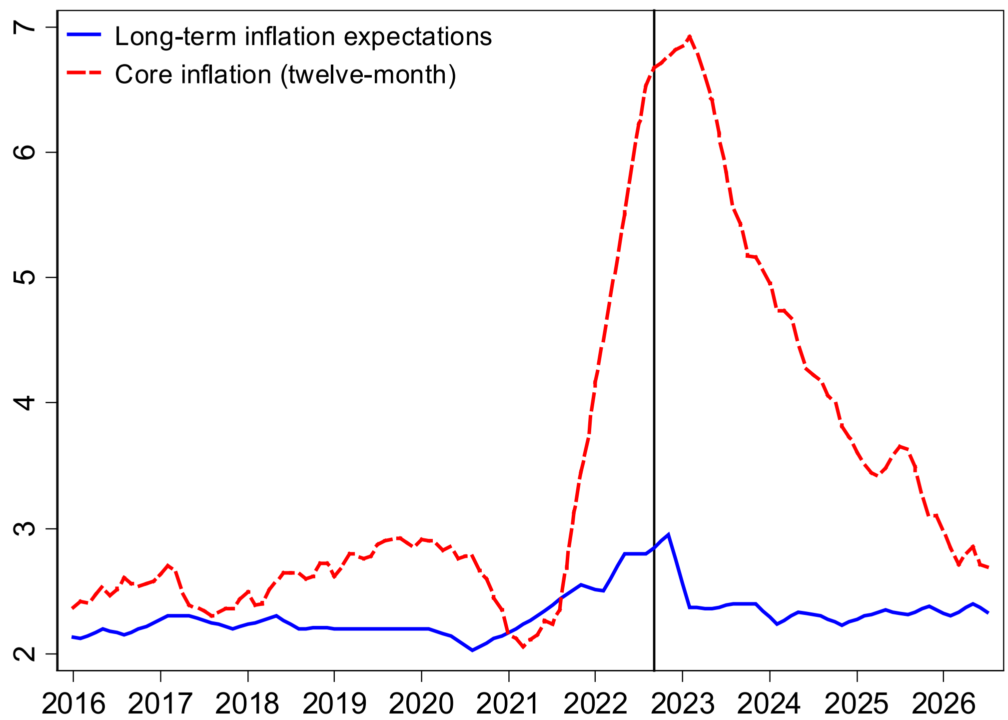
Table B1 and Figures B1-B3 present other exercises with PCE deflator inflation, which parallel the analysis of CPI inflation in the main text. We report estimates of our equation for core inflation; decompose core inflation into contributions from expected inflation, V/U, and pass-through from headline shocks; and present the full decomposition of headline inflation. These results for PCE inflation are generally similar to those for CPI inflation.

Figure 1. CPI Inflation: Headline, Core, and Headline Inflation Shocks, 2020–2026
(percent)



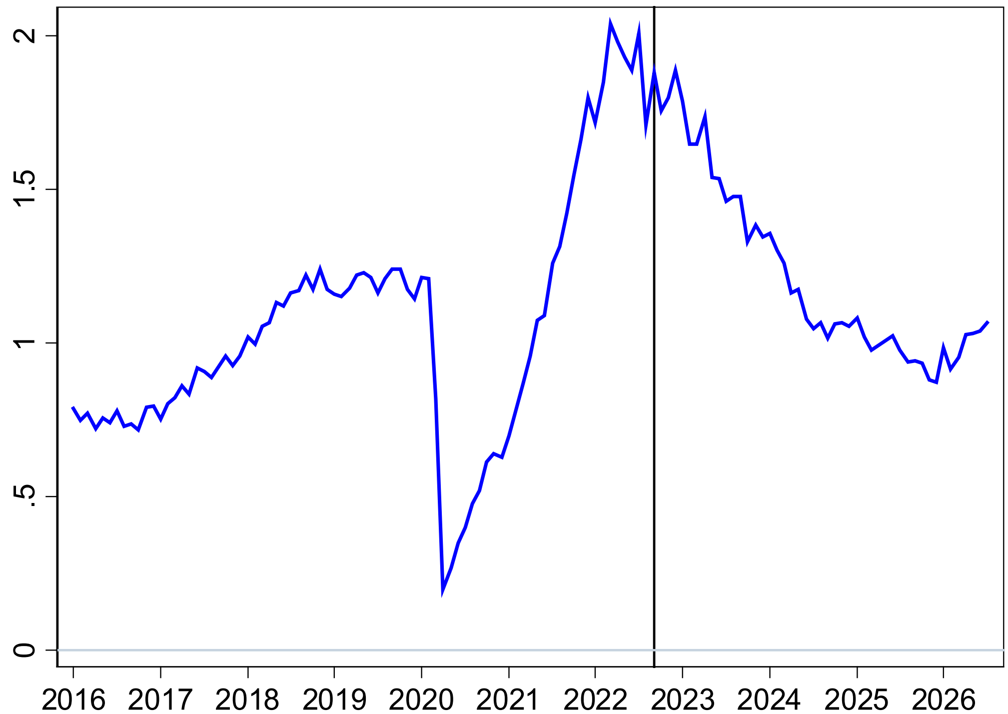
Sources: Federal Reserve Bank of Cleveland; authors' calculations.
Note: Core inflation is the weighted median CPI inflation rate from the Federal Reserve Bank of Cleveland. Vertical line indicates September 2022. Sample endpoint is July 2026.

Figure 2. Long-Term CPI Inflation Expectations and Core Inflation, 2000–2026
(percent)



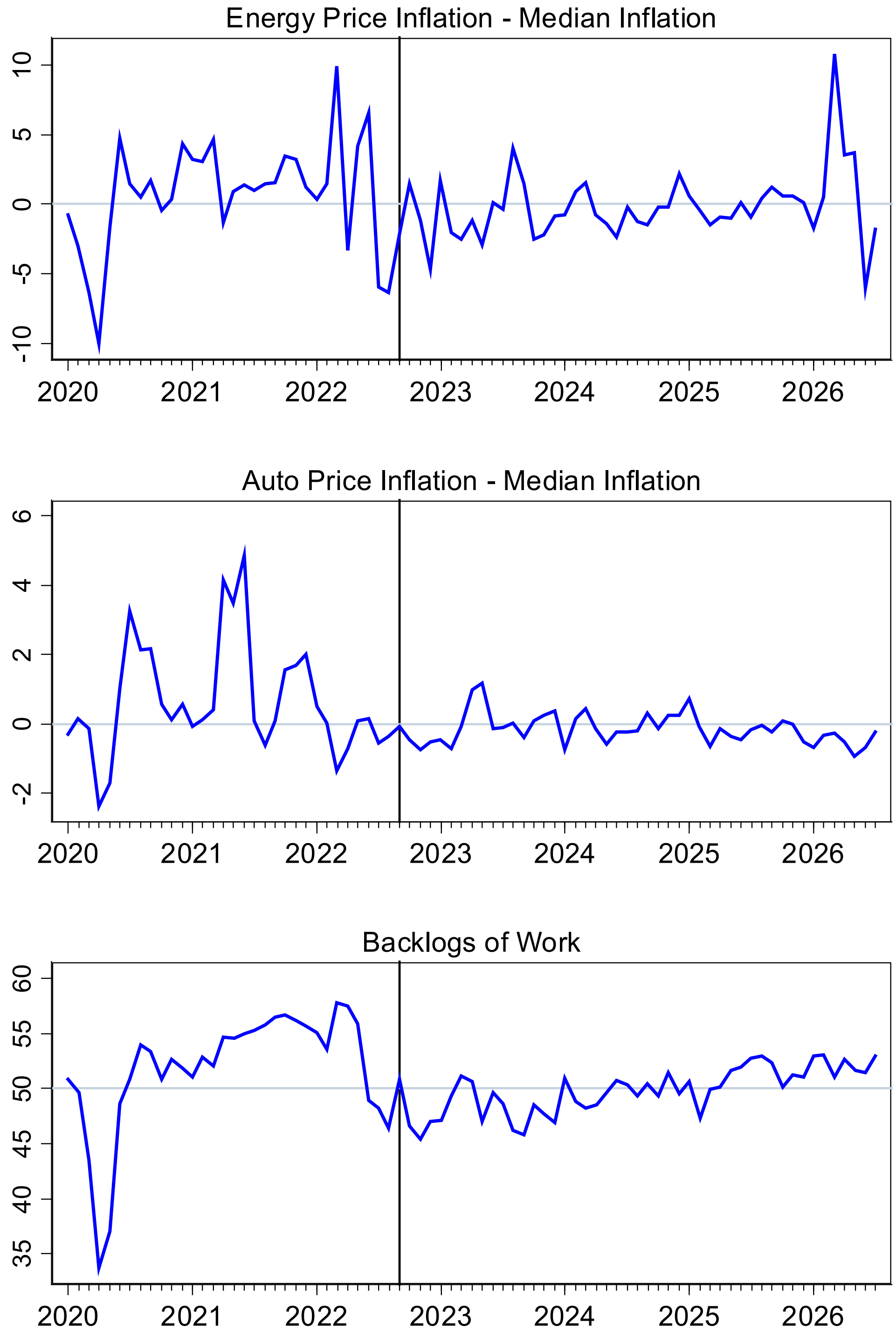
Sources: Federal Reserve Bank of Cleveland; Survey of Professional Forecasters; authors' calculations.
Note: Long-term inflation expectations denote ten-year-ahead CPI inflation forecasts. Vertical line indicates September 2022. Sample endpoint is July 2026.

Figure 3. Ratio of Vacancies to Unemployed, 2016–2026



Sources: Haver analytics; authors' calculations.
Note: Vertical line indicates September 2022. Sample endpoint is June 2026.

Figure 4. Factors Associated with Headline Inflation Shocks
(non-annualized inflation rates, percentage points; index)



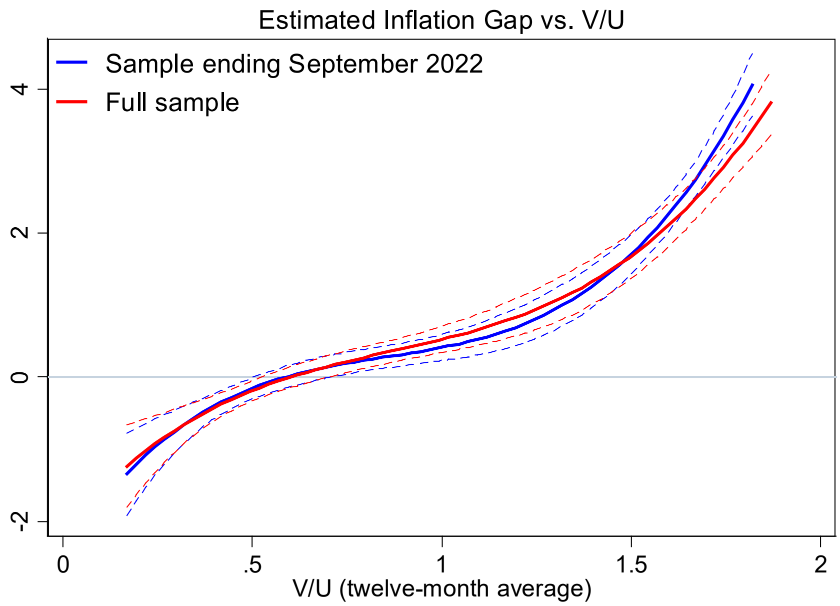
Sources: Haver analytics; IHS Markit Economics; authors' calculations.
Note: Vertical line indicates September 2022. Sample endpoint is July 2026.

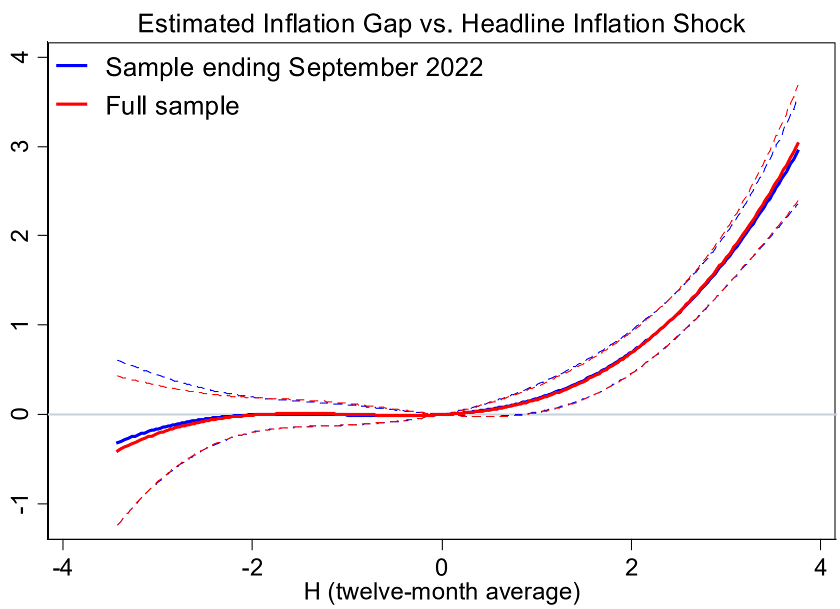
Table 1. Phillips Curve Estimates: Median CPI Inflation

	(1)	(2)
	1985-2022	1985-2026
V/U	8.053***	6.240***
	(2.246)	(2.167)
V/U-squared	-8.480***	-5.825**
	(2.528)	(2.376)
V/U-cubed	3.313***	2.241***
	(0.839)	(0.765)
H	0.064	0.051
	(0.076)	(0.077)
H-squared	0.087***	0.086***
	(0.020)	(0.019)
H-cubed	0.028**	0.031***
	(0.012)	(0.012)
Constant	-2.473***	-2.131***
	(0.592)	(0.585)
Observations	453	499
R^2	0.548	0.607
Adjusted R^2	0.542	0.603

Notes: Dependent variable is monthly annualized median CPI inflation minus long-term inflation expectations. "V/U" denotes ratio of vacancies to unemployed (12-month average). "H" denotes headline-inflation shock (12-month average). Columns 1 and 2 are based on the samples from January 1985-September 2022, and January 1985-July 2026 respectively. Newey-West standard errors with 12 lags in parentheses. ***, **, and * denote statistical significance at the 1,5, and 10 percent level, respectively.

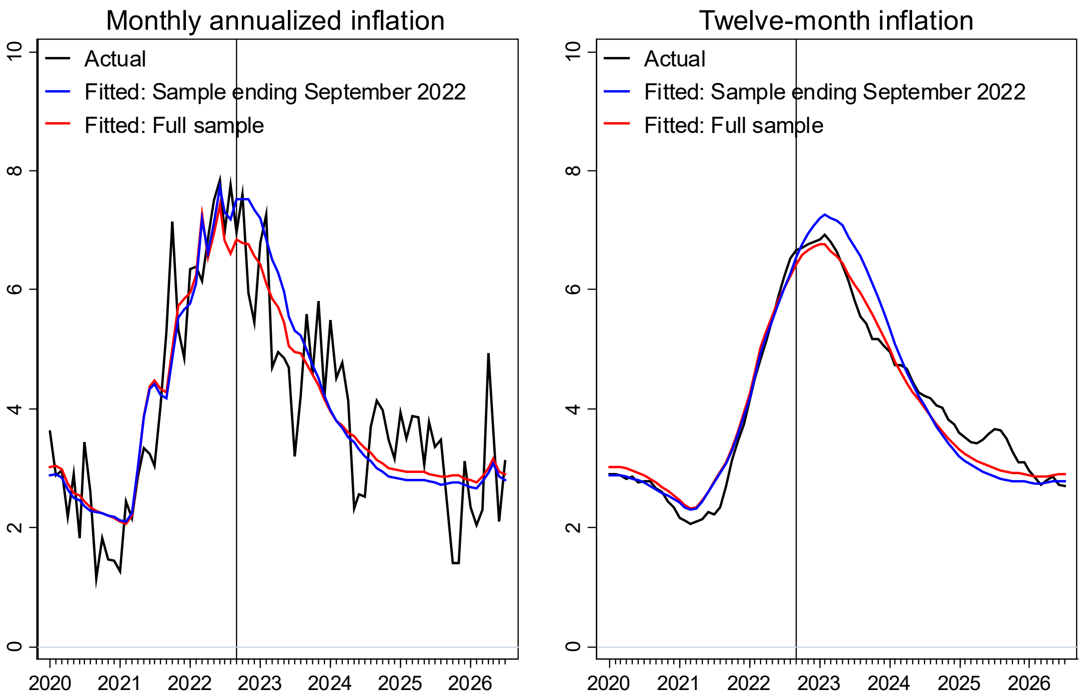
Figure 5. Estimated Inflation Gap as a Function of Slack and Headline Inflation Shocks
(percentage points)





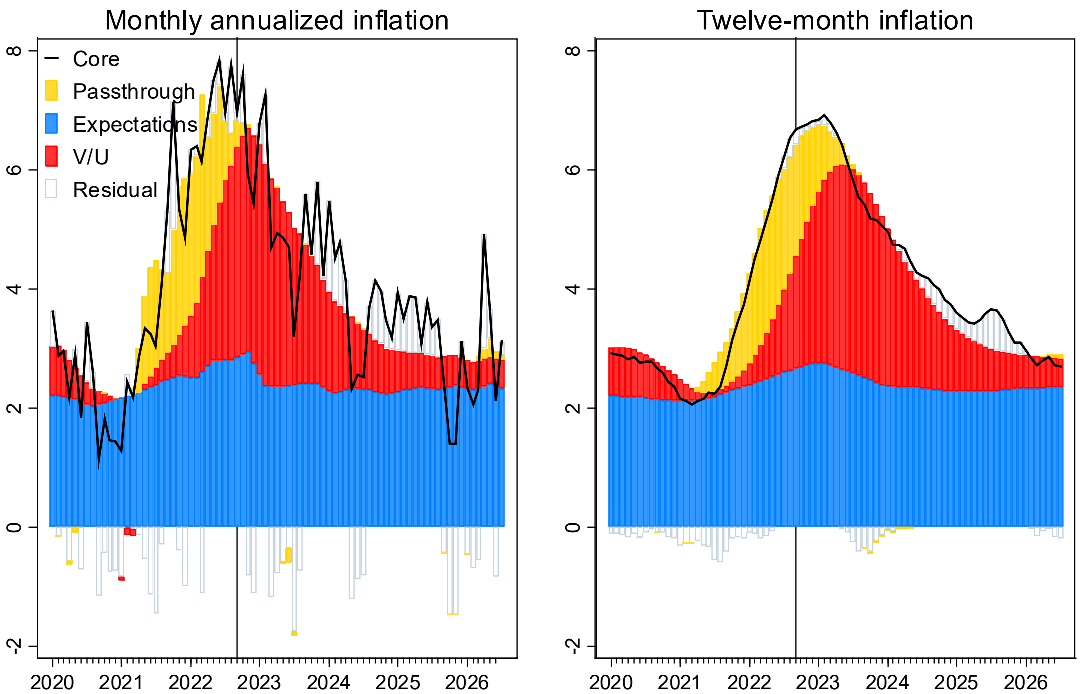
Sources: Haver analytics; Survey of Professional Forecasters; authors' calculations.
Note: Panel A reports fitted values for constant term and V/U terms from equation estimates reported in Table 1. Panel B reports fitted values for headline inflation shock (H) terms. Dotted lines indicate 95 percent confidence intervals. "Inflation gap" denotes monthly annualized median CPI inflation minus long-term inflation expectations. For full sample, endpoint is July 2026.

Figure 6. Predictions for Median CPI Inflation Since the Pandemic: Comparison Across Sample Periods
(percent)



Source: Authors' calculations.
Note: Figure reports predicted values based on monthly equation estimated for January 1985 - September 2022 (Table 1, Column 1) and for January 1985-July 2026 (Table 1, Column 2).

Figure 7. Accounting for the Rise and Retreat of Core Inflation
(percentage points)



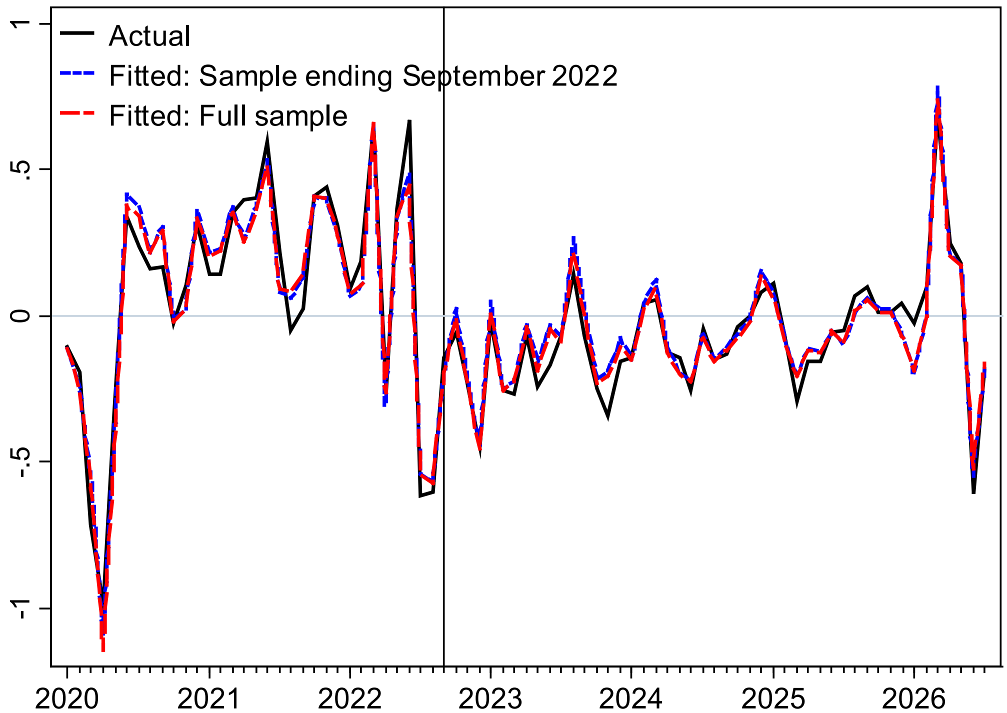
Source: Authors' calculations.
Note: "Pass-through" denotes pass-through of headline shocks to core inflation. "Expectations" denotes contribution of long-term (SPF) inflation expectations to core inflation. "V/U" denotes contribution of ratio of vacancies to unemployed. Vertical line indicates September 2022.

Table 2. Explaining Headline Inflation Shocks, 2020-2026
(Dependent variable: Headline – Median CPI inflation; monthly non-annualized rate)

	(1) 2020-2022	(2) 2020-2026
Energy price inflation	0.077***	0.074***
	(0.006)	(0.004)
Weighted average of car inflation rates	0.088***	0.082***
	(0.012)	(0.010)
Backlogs of work	0.005	0.011***
	(0.004)	(0.003)
Constant	-0.029*	-0.042***
	(0.017)	(0.009)
Observations	33	79
R^2	0.954	0.946
Adjusted R^2	0.949	0.943

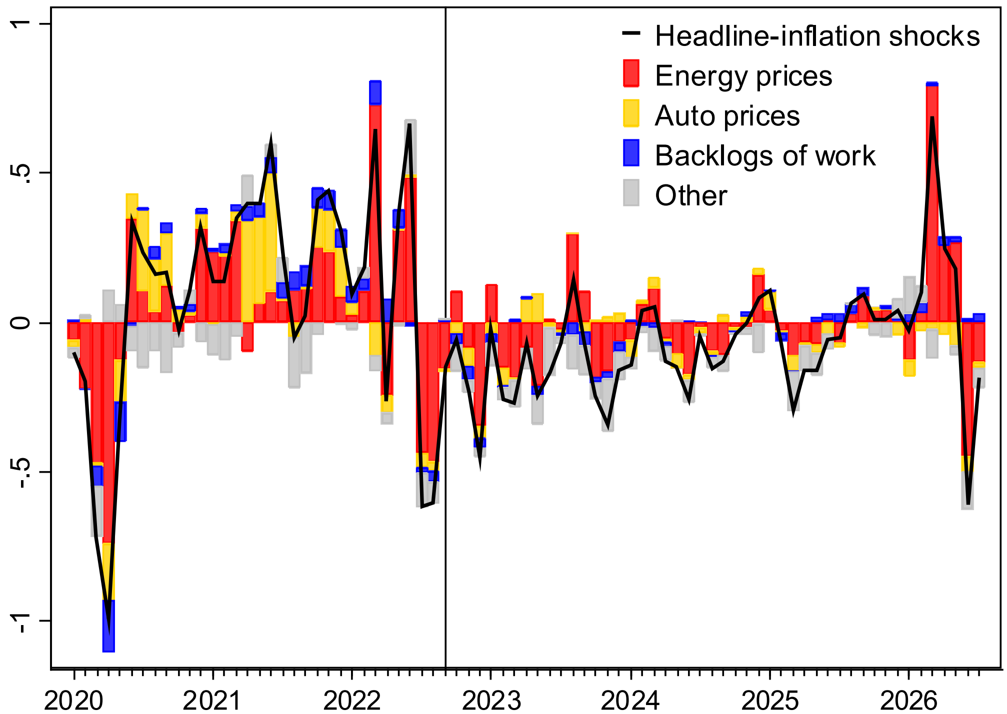
Sources: Haver analytics; IHS Markit Economics; authors' calculations.
Note: Relative energy and auto-related inflation variables are created by subtracting median inflation from energy and auto-related inflation respectively. Backlogs of work variable is taken from IHS Markit Economics, with the neutral value of 50 subtracted. Columns 1 and 2 are based on the samples from January 2020-September 2022, and January 2020-July 2026, respectively. Huber-White standard errors in parentheses. ***, **, and * denote statistical significance at the 1,5, and 10 percent level, respectively.

Figure 8: Headline Inflation Shocks: Actual vs. Fitted Values
(non-annualized monthly rate, percent)



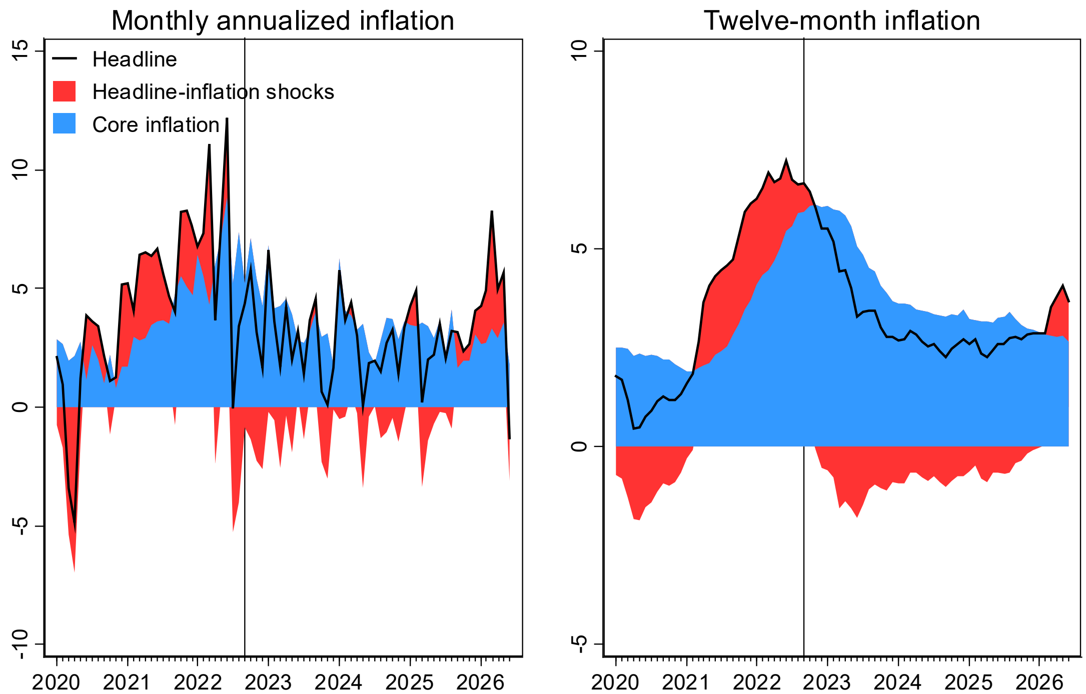
Sources: Haver analytics; IHS Markit Economics; authors' calculations.
Note: Headline inflation shocks denote the difference between headline and core inflation (non-annualized). Fitted values are based on estimation results in Table 2. Vertical line indicates September 2022. For full sample, endpoint is July 2026.

Figure 9. Decomposition of Headline Inflation Shocks
(monthly non-annualized rate, percentage points)



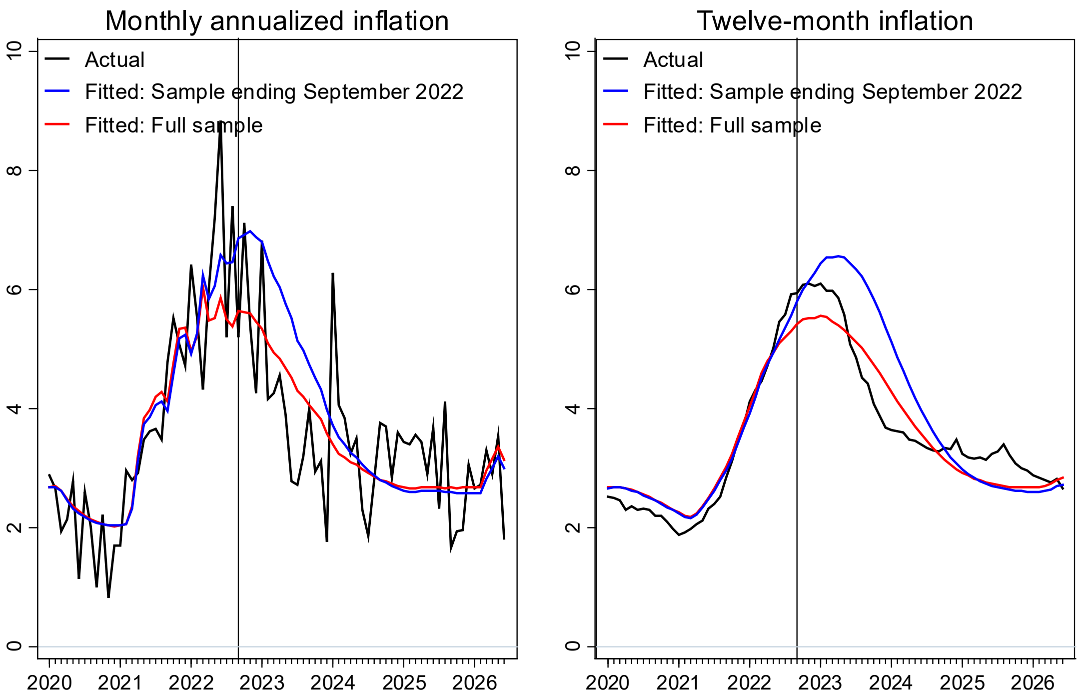
Sources: Haver analytics; IHS Markit Economics; authors' calculations. Vertical line indicates September 2022. Sample endpoint is July 2026.

Figure 10. PCE Inflation: Headline, Core, and Headline Inflation Shocks, 2020–2026
(percent)



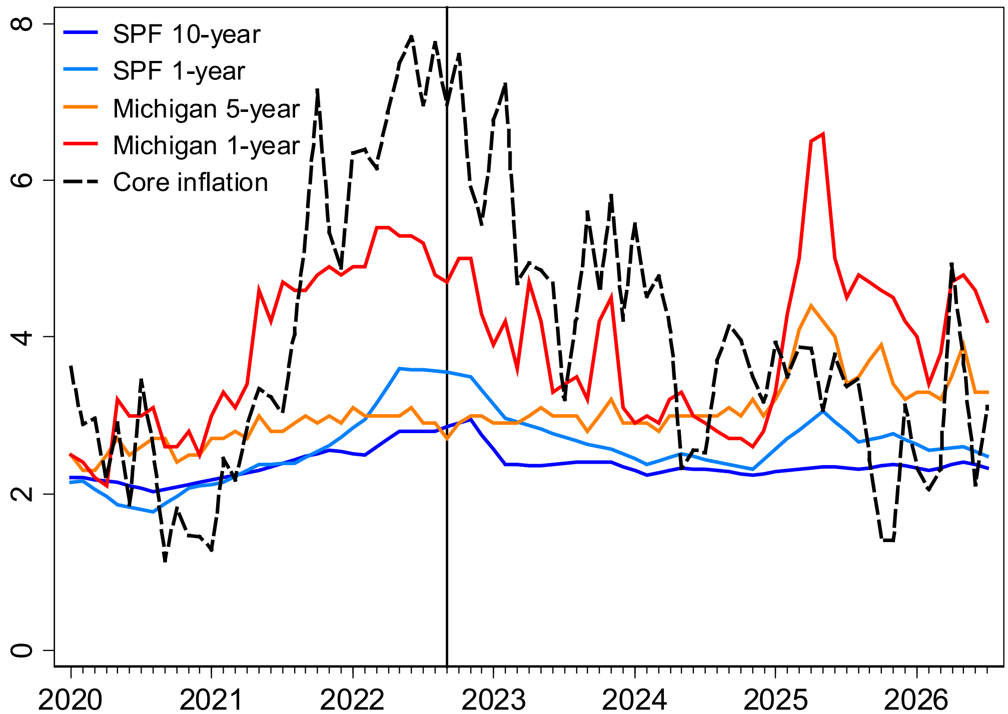
Sources: Federal Reserve Bank of Cleveland; authors' calculations.
Note: Core inflation is the weighted median PCE inflation rate from the Federal Reserve Bank of Cleveland. Vertical line indicates September 2022. Sample endpoint is June 2026.

Figure 11. Predictions for Median PCE Inflation Since the Pandemic: Comparison Across Sample Periods
(percent)



Source: Authors' calculations.
Note: Figure reports predicted values based on monthly equation estimated for January 1985-September 2022 (Table B1, Column 1) and January 1985-June 2026 (Table B1, Column 2).

Figure 12. Alternative Measures of Inflation Expectations, 2020–2026 (percent)



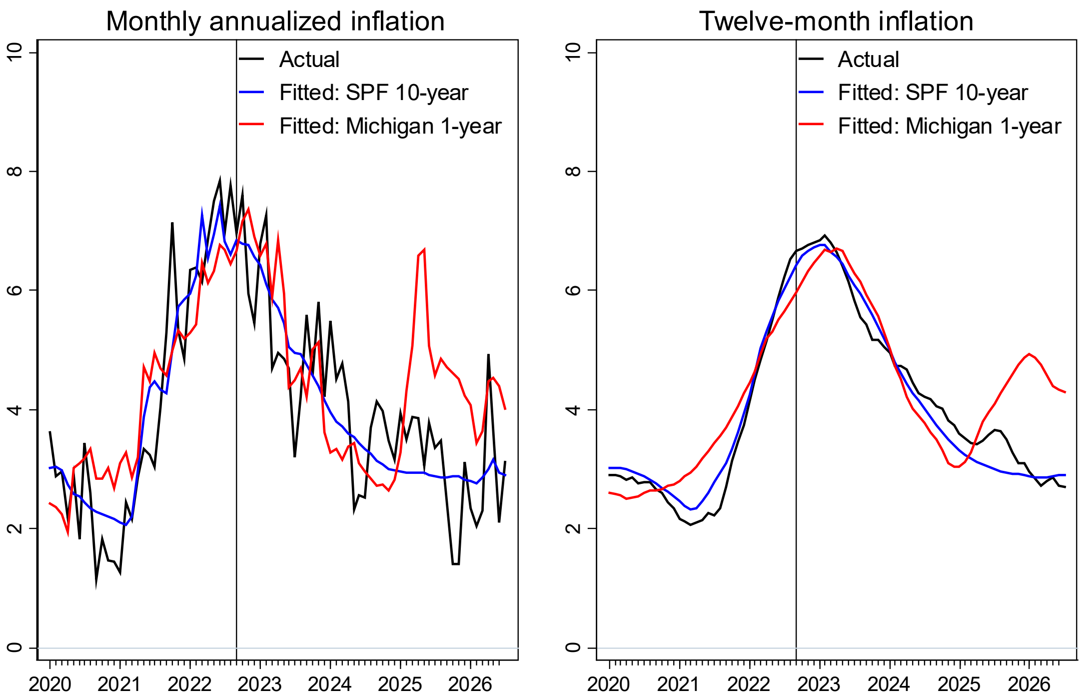
Sources: Federal Reserve Bank of Cleveland; Survey of Professional Forecasters (SPF); University of Michigan; authors' calculations.
Notes: "Core inflation" indicates monthly annualized median CPI inflation. Sample endpoint is July 2026. Vertical line indicates September 2022.

Table 3. Alternative Measures of Expectations: Phillips Curve Estimates

	(1)	(2)	(3)	(4)
	SPF 10-year	SPF 1-year	Michigan 5-year	Michigan 1-year
V/U	6.240***	3.465*	9.030***	11.272***
	(2.167)	(2.086)	(2.050)	(2.464)
V/U-squared	-5.825**	-3.574	-9.517***	-12.414***
	(2.376)	(2.284)	(2.349)	(3.118)
V/U-cubed	2.241***	1.560**	3.532***	4.298***
	(0.765)	(0.735)	(0.785)	(1.085)
H	0.051	-0.027	0.044	-0.215**
	(0.077)	(0.077)	(0.064)	(0.105)
H-squared	0.086***	0.102***	0.070***	-0.009
	(0.019)	(0.019)	(0.020)	(0.033)
H-cubed	0.031***	0.031**	0.034***	0.034**
	(0.012)	(0.012)	(0.010)	(0.014)
Constant	-2.131***	-1.086*	-2.973***	-3.225***
	(0.585)	(0.556)	(0.535)	(0.549)
Observations	499	499	499	499
R^2	0.607	0.486	0.587	0.300
Adjusted R^2	0.603	0.480	0.582	0.292
R^2 (core inflation)	0.656	0.656	0.652	0.476
Adjusted R^2 (core inflation)	0.652	0.651	0.648	0.469

Notes: Dependent variable is monthly annualized median CPI inflation minus inflation expectations measure indicated in column title. "V/U" denotes ratio of vacancies to unemployed (12-month average). "H" denotes headline-inflation shock (12-month average). Estimates based on samples from January 1985-July 2026. "R^2 (core inflation)" rescales residual sum of squares by the total variation in Median CPI inflation and is therefore comparable across columns. Newey-West standard errors with 12 lags in parentheses. ***, **, and * denote statistical significance at the 1,5, and 10 percent level, respectively.

Figure 13. Alternative Measures of Expectations: Predictions for Median CPI Inflation
(percent)



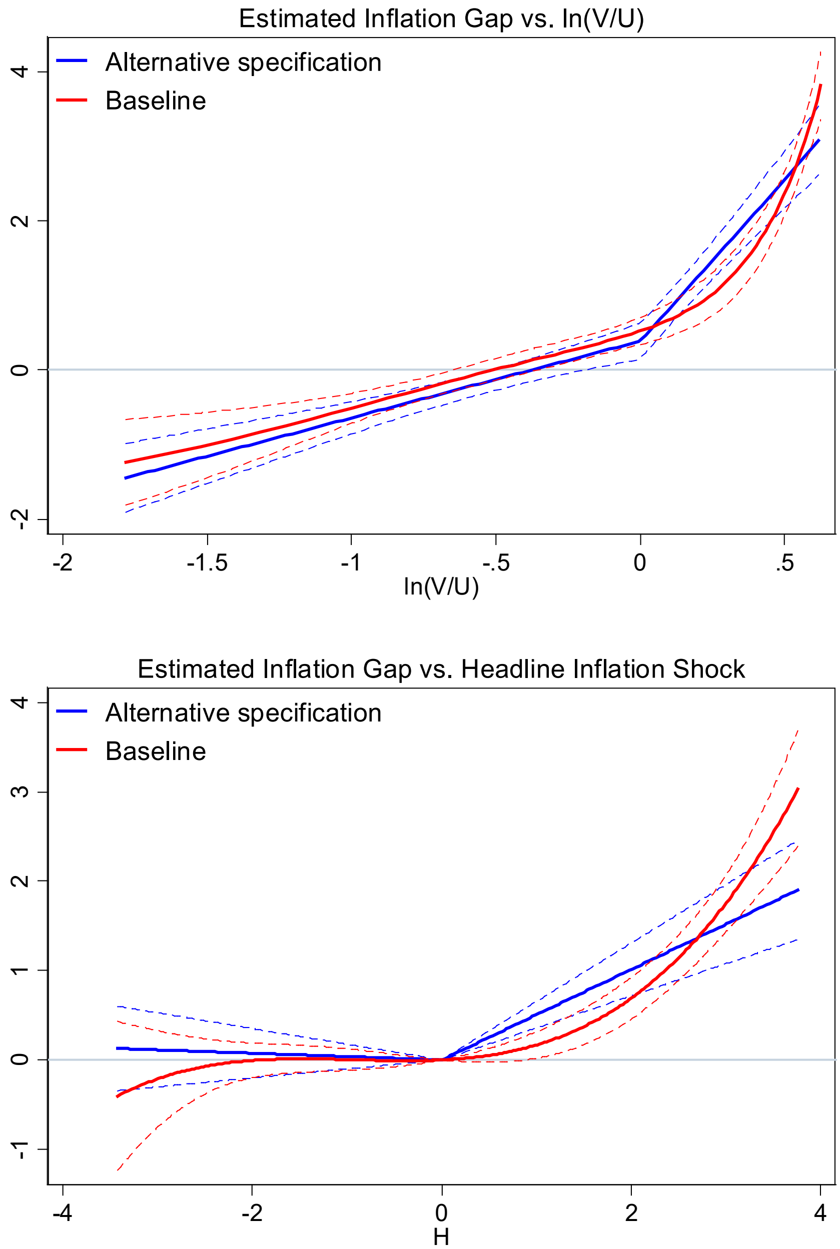
Source: Authors' calculations.
Note: Figure reports predicted values based on monthly equations estimated for January 1985-July 2026 (Table 3). Vertical line indicates September 2022. Sample endpoint is July 2026.

Table 4. Nature of Nonlinearities: Phillips Curve Estimates

ln(V/U)	1.029***
	(0.180)
D(V/U) × ln(V/U)	3.311***
	(0.502)
H	-0.037
	(0.070)
D(H) × H	0.544***
	(0.123)
Constant	0.389***
	(0.123)
Observations	499
R^2	0.602
Adjusted R^2	0.599

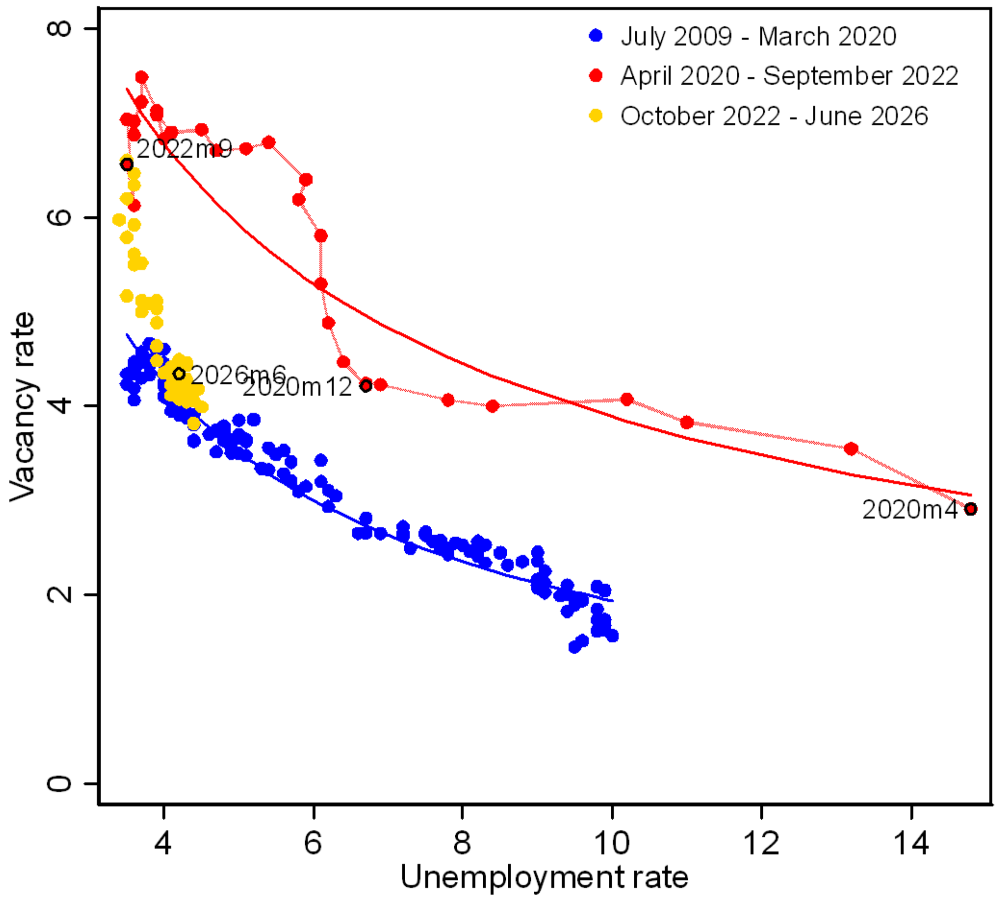
Notes: Dependent variable is monthly annualized median CPI inflation minus long-term inflation expectations. "V/U" denotes ratio of vacancies to unemployed (12-month average). "H" denotes headline-inflation shock (12-month average). D(V/U) = 1 when V/U ≥ 1 and 0 otherwise. D(H) = 1 when H ≥ 0 and 0 otherwise. Estimation based on the sample from January 1985-July 2026. Newey-West standard errors with 12 lags in parentheses. ***, **, and * denote statistical significance at the 1,5, and 10 percent level, respectively.

Figure 14. Nature of Nonlinearities: Estimated Inflation Gap as a Function of Slack and Headline Inflation Shocks
(percentage points)



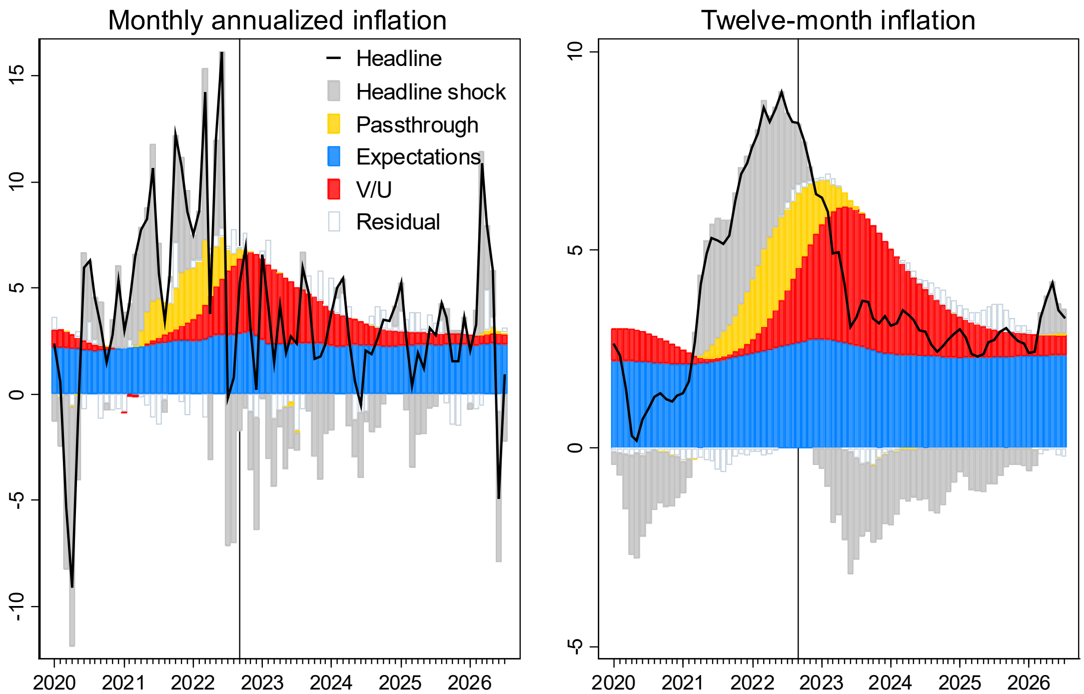
Sources: Haver analytics; Survey of Professional Forecasters; authors' calculations.
Note: "Alternative specification" indicates, in panel A, fitted values for constant term and V/U terms from equation estimates reported in Table 4, and, in panel B, fitted values for headline inflation shock (H) terms. "Baseline" indicates the corresponding fitted values based on Table 1. Dotted lines indicate 95 percent confidence intervals. Inflation gap denotes monthly annualized median CPI inflation minus long-term inflation expectations. "Inflation gap" denotes monthly annualized median CPI inflation minus long-term inflation expectations. "ln(V/U)" denotes natural logarithm of twelve-month average of vacancy-unemployment ratio. "H" denotes twelve-month average of headline-inflation shock.

Figure 15. The Behavior of the Beveridge Curve, 2009–2026
(percent of the labor force)



Source: Bureau of Labor Statistics.
Note: July 2009 to March 2020 covers the pre-COVID-19 expansion, based on National Bureau of Economic Research (NBER) business cycle dates, and the first month of the COVID-19 era. The figure reports log-linear curves fitted to each period. Sample endpoint is June 2026.

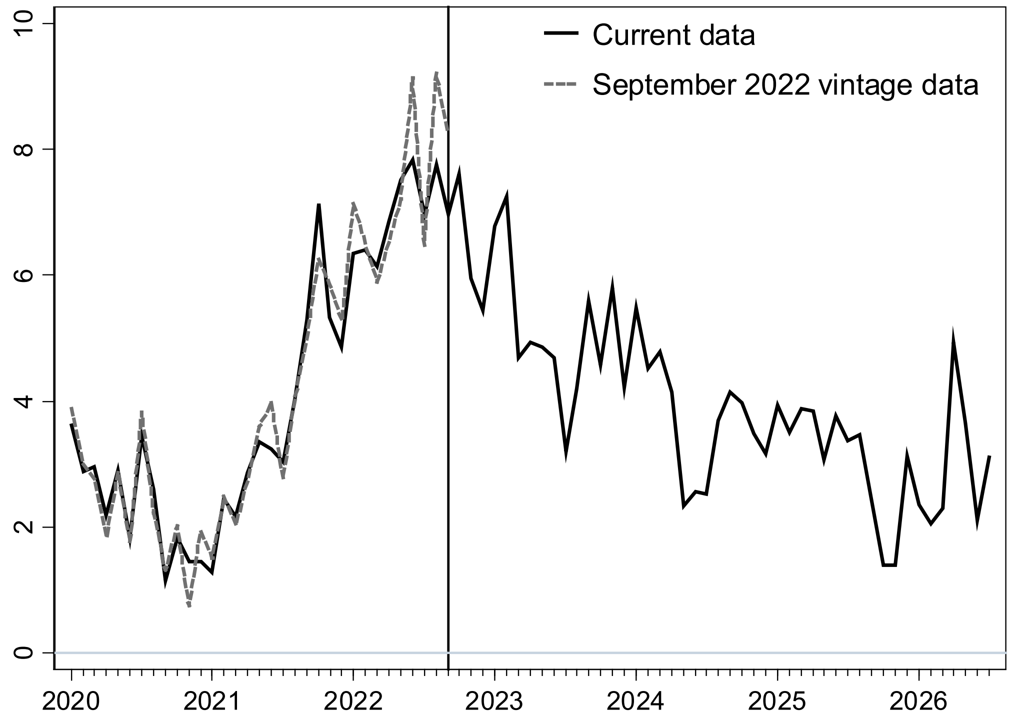
Figure 16. Accounting for the Rise and Retreat of Headline Inflation
(percentage points)



Source: Authors' calculations.
Note: "Pass-through" denotes pass-through of headline shocks to core inflation. "Expectations" denotes contribution of long-term (SPF) inflation expectations to core inflation. "V/U" denotes contribution of ratio of vacancies to unemployed. Vertical line indicates September 2022. Sample endpoint is July 2026.

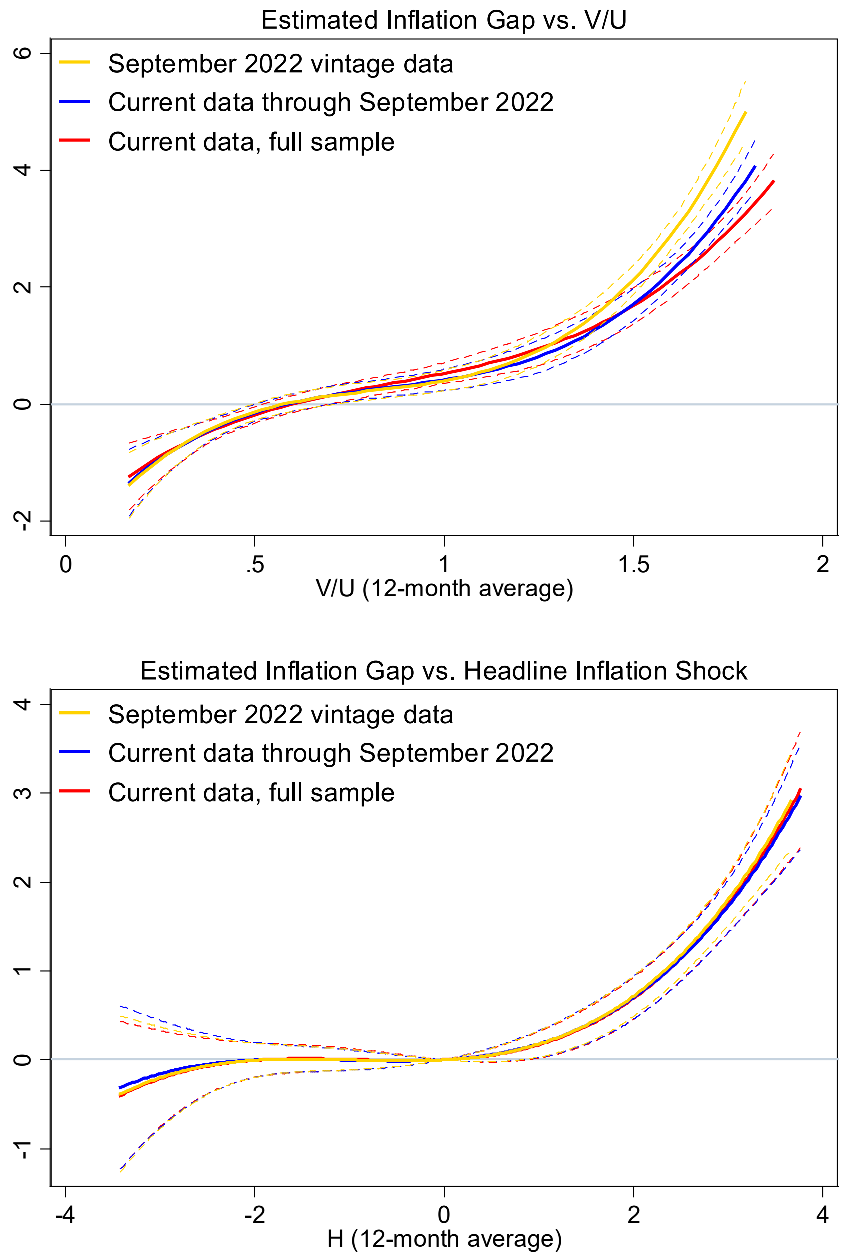
Appendix A: Data Vintages

Figure A1. Median CPI Inflation: Current Data and September 2022 Vintage Data
(monthly annualized rate, percent)



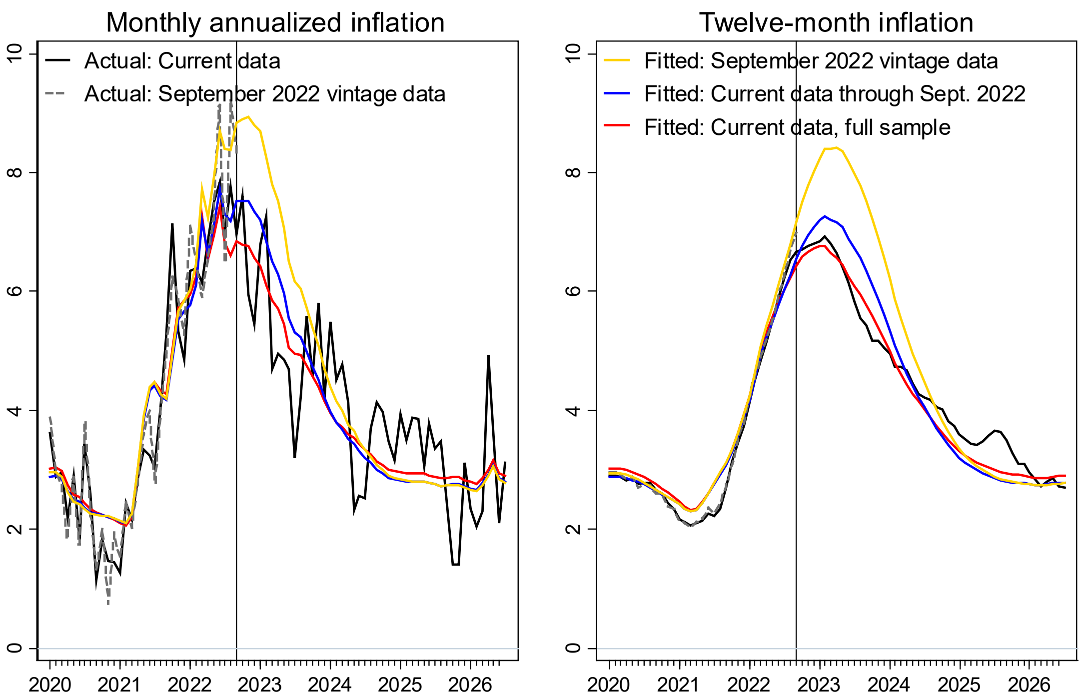
Sources: Federal Reserve Bank of Cleveland; authors' calculations.
Note: Vertical line indicates September 2022. Sample endpoint is July 2026.

Figure A2. Estimated Inflation Gap as a Function of Slack and Headline Inflation Shocks: Comparison Across Data Vintages (percentage points)



Sources: Haver analytics; Survey of Professional Forecasters; authors' calculations.
Note: "Inflation gap" denotes monthly annualized median CPI inflation minus long-term inflation expectations. Panel A reports fitted values for constant term and V/U terms based on monthly equation estimated with current data for January 1985-September 2022 (Table 1, Column 1) and for January 1985-July 2026 (Table 1, Column 2), and based on monthly equation estimated for January 1985-September 2022 using the vintage dataset of Ball, Leigh, and Mishra (2022). Panel B reports fitted values for headline inflation shock (H) terms. Dotted lines indicate 95 percent confidence intervals.

Figure A3. Predictions for Median CPI Inflation: Comparison Across Data Vintages
(percent)



Source: Authors' calculations.
Note: Figure reports predicted values based on monthly equation estimated with current data for January 1985-September 2022 (Table 1, Column 1) and for January 1985-July 2026 (Table 1, Column 2), and based on monthly equation estimated for January 1985-September 2022 using the vintage dataset of Ball, Leigh, and Mishra (2022). Vertical line indicates September 2022.

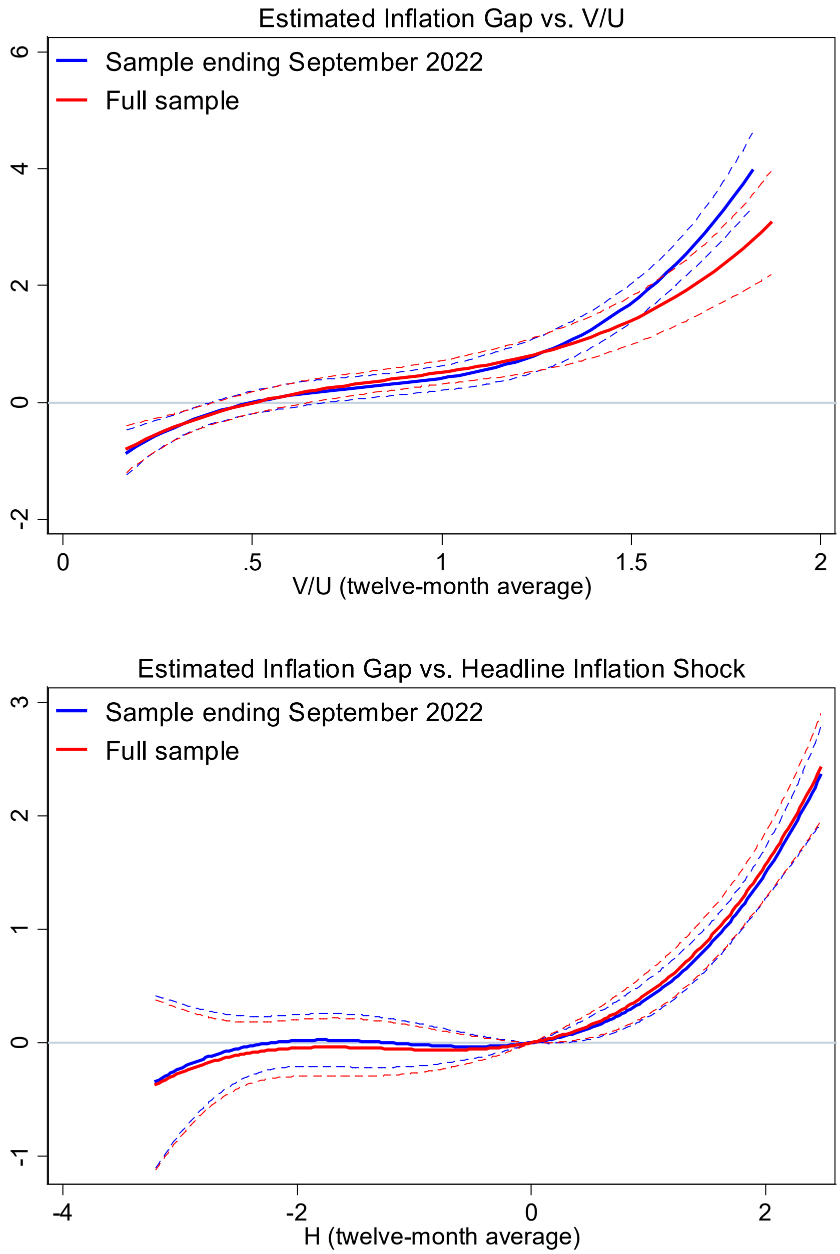
Appendix B: PCE Inflation

Table B1. Phillips Curve Estimates: Median PCE Inflation

	(1)	(2)
	1985-2022	1985-2026
V/U	6.147***	4.773***
	(1.826)	(1.693)
V/U-squared	-6.902***	-4.539**
	(2.186)	(1.940)
V/U-cubed	2.880***	1.759***
	(0.756)	(0.653)
H	0.150	0.199*
	(0.109)	(0.119)
H-squared	0.189***	0.190***
	(0.022)	(0.024)
H-cubed	0.055**	0.051**
	(0.023)	(0.023)
Constant	-1.711***	-1.481***
	(0.429)	(0.422)
Observations	453	498
R^2	0.464	0.483
Adjusted R^2	0.457	0.477

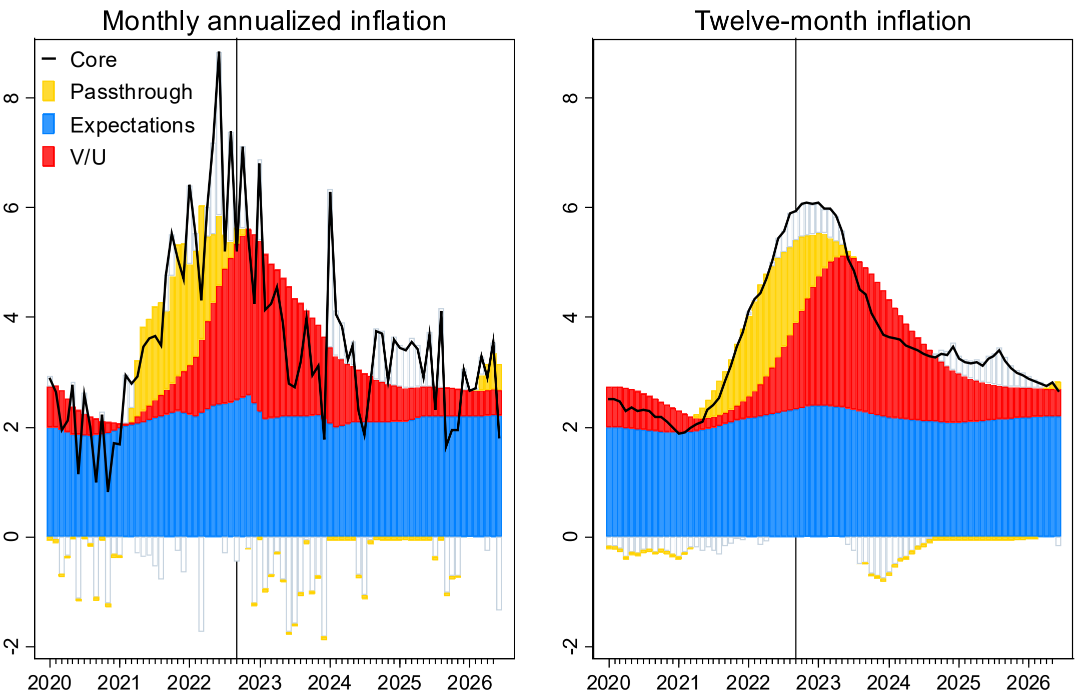
Notes: Dependent variable is monthly annualized median PCE inflation minus long-term PCE inflation expectations. "V/U" denotes ratio of vacancies to unemployed (twelve-month average). "H" denotes headline-inflation shock (twelve-month average). Columns (1) and (2) are based on the samples from January 1985-September 2022, and January 1985-June 2026 respectively. Newey-West standard errors with 12 lags in parentheses. ***, **, and * denote statistical significance at the 1,5, and 10 percent level, respectively.

Figure B1: Estimated PCE Inflation Gap as a Function of Slack and Headline Inflation Shocks
(percentage points)



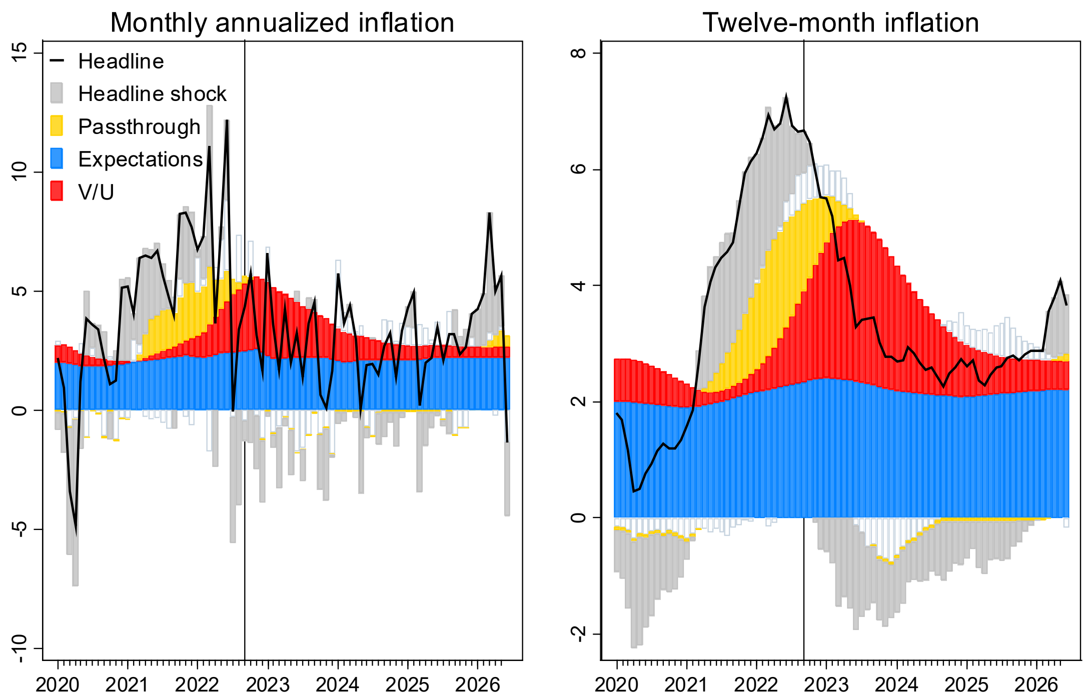
Sources: Haver analytics; Survey of Professional Forecasters; authors' calculations.
Note: "Inflation gap" denotes monthly annualized median PCE inflation minus long-term inflation expectations. Panel A reports fitted values for constant term and V/U terms from equation estimates reported in Table B1. Panel B reports fitted values for headline inflation shock (H) terms. Dotted lines indicate 95 percent confidence intervals.

Figure B2. Accounting for the Rise and Retreat of Core PCE Inflation
(percent)



Source: Authors' calculations.
Note: "Pass-through" denotes pass-through of headline shocks to core inflation. "Expectations" denotes contribution of long-term (SPF) inflation expectations to core inflation. "V/U" denotes contribution of ratio of vacancies to unemployed. Sample endpoint is June 2026.

Figure B3. Accounting for the Rise and Retreat of Headline PCE Inflation
(percent)



Source: Authors' calculations.
Note: "Pass-through" denotes pass-through of headline shocks to core inflation. "Expectations" denotes contribution of long-term (SPF) inflation expectations to core (weighted median) inflation. "V/U" denotes contribution of ratio of vacancies to unemployed. Sample endpoint is June 2026.