The Anatomy of Single-Digit Inflation in the 1960s

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Abstract

Recently, the experience of the 1960s—when the U.S. inflation rate rose rapidly and persistently over a comparatively short period—has been invoked as a cautionary tale for the present. An analysis of this period indicates that the inflation regime that prevailed in the 1960s was different in several key regards from the one that prevailed on the eve of the pandemic. Hence, there are few useable lessons to be drawn from this experience, save that monetary policymaking remains a difficult undertaking.

There are things of which the mind understands one part, but remains ignorant of the other; and when man is able to comprehend certain things, it does not follow that he is able to comprehend everything.

Moses Maimonides, *The Guide for the Perplexed*, I:31

I Introduction

Economists—particularly economic forecasters—often try to understand current economic developments by drawing analogies to historical episodes. An episode that has received particular attention of late, especially for thinking about the outlook for inflation, is the acceleration in prices that occurred in the United States over the second half of the 1960s. Under the conventional telling, the pursuit of a "guns and butter" fiscal policy, combined with inappropriately accommodative monetary policy, caused the economy to overheat. The result was a relatively rapid and persistent increase in inflation over the second half of the 1960s that in turn laid the groundwork for the Great Inflation of the 1970s.[1]

This account of the 1960s has recently been invoked by a number of commentators to oppose expansions in government spending—in particular, the $1.9 trillion American Rescue Plan that was enacted on March 11, 2021.[2] Some have also used the experience of the 1960s to paint an especially bleak picture of the current economic outlook, arguing that in the same way that the overly expansionary fiscal and monetary policies of the 1960s left the U.S. economy susceptible to the energy and food price shocks of the 1970s, similar recent "policy errors" have once again "brought the U.S. to the brink of stagflation."[3]

In this essay, I attempt to provide an analytical description of the sources and nature of the 1960s inflation increase. I argue that there is very little that we can learn from this period that can help us to understand current inflation developments or the inflation outlook, inasmuch as the inflation regime that prevailed in the 1960s was different in several key regards from the one that has prevailed in recent decades. Moreover, we cannot really say why those features of 1960s inflation dynamics—namely, a steep tradeoff between inflation and activity, an unanchored long-run inflation trend, and strong and persistent feedback between wage and price growth—were present at that time, nor can we explain why they went away or what might lead them to reappear. Hence, while it is conceivable that a significant break (akin to a regime change) might occur that would return the inflation process to its earlier form, the experience of the 1960s provides no guidance as to the probability of such an event or what policies would prevent it from occurring.

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[1]Meltzer (2009) even goes so far as to label the second half of the 1960s "Phase I" of the Great Inflation, dating its start to 1965 "...when base velocity rose nearly 4 percent" (p. 368). However, Meltzer fails to also note that velocity growth slowed thereafter (and even turned negative in 1967), with the level of base velocity finishing the decade in line with its 1959–1964 trend.

[2]See, for example, Blanchard (2021), Mankiw (2021), and Summers (2021). (The amount cited in the text refers to the estimated cumulative 10-year effect of the plan on the federal deficit.)

[3]Summers (2022).

II What happened (to inflation) in the 1960s?

If you remember the sixties, you really weren't there.
Attributed to various[4]

Analytical studies of postwar U.S. inflation typically start in 1959, as measures of "core" inflation—which exclude changes in food and energy prices—do not exist prior to this date.[5] However, it is possible to construct a price series for the 1950s that removes the prices of food and energy *goods*; figure 1 plots the four-quarter change in this series (defined for personal consumption expenditures, or PCE) together with the corresponding change in the total PCE price index over the period 1953–1971. The figure indicates that inflation had declined noticeably coming into the 1960s; from 1957 to 1967, its path looks more like a "U" than a "J." (A comparison of the two series also reveals that price changes for food and energy goods made relatively modest contributions to overall PCE inflation over this period.) Seen over this longer span, it is the *first* half of the 1960s—when inflation was relatively low and stable—that appears somewhat anomalous.

When the pickup in inflation *did* occur, however, it was broad-based. Figure 2 plots three inflation series that are computed for the bottom and top 25 percent of the full distribution of price changes and for the remaining middle portion of the distribution.[6] Each series measures inflation as a 12-month change (using a 12-month change helps to deal with the possibility that prices might "bounce around" between different parts of the distribution at higher frequencies), with the upper panel covering all PCE prices and the lower panel covering only the core. The rise in inflation over the second half of the decade clearly appears in each portion of the distribution, including the lower tail.

The increase in inflation over this period was nearly coincident with an increase in trend unit labor cost growth—figure 3—which is measured here as the change in hourly compensation in the nonfarm sector minus an estimate of trend productivity growth.[7] This co-movement certainly hints at the presence of a two-way feedback between wage and price growth, which is the underlying mechanism of a "wage–price spiral."

We might speculate that one source of this feedback was institutional. Formal cost of living adjustments (COLAs) tied to the CPI were a feature of some labor contracts in the 1960s. If

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[4]Including Paul Kantner and Charlie Fleischer.

[5]The focus on core inflation reflects the importance of food and energy price shocks during the 1970s and early 1980s; such shocks are generally (though not universally) viewed as having resulted from factors unrelated to the stance of monetary policy or level of resource utilization.

[6]I am indebted to Erick Sager for suggesting this approach to describing the price change distribution.

[7]Details on the construction of these variables is provided in the appendix. The rate of trend productivity growth actually starts to slow around the middle of the decade—a phenomenon that was noted almost contemporaneously by Perry (1971) and Nordhaus (1972)—but the decline in my measure is relatively small, and virtually all of the variability in labor costs shown in figure 3 is attributable to nominal compensation growth.

these clauses were widespread, it would have resulted in a near-automatic dependence of wage growth on inflation. However, the number of workers covered by COLA provisions peaked around 1958–1960 and then fell back sharply over the next several years. Although the number of covered workers turned up again in the second half of the decade—partly in response to the higher consumer price inflation that had begun to emerge—it remained well below its late-1950s peak, and by 1969 represented only about 4½ percent of the private workforce.[8]

Moreover, many escalation clauses did not provide for full indexation of wages to the CPI: What evidence we have indicates that even in the two relatively high-inflation years of 1968 and 1969, a third or less of the increase in the CPI was reflected in wage increases for workers covered by these types of contracts.[9] These and other findings led one well-known study of contractual wage escalation and inflation to conclude that COLA provisions "played no part" in originating the 1960s inflation, and that their role in sustaining the inflation was likely not very great.[10] Hence, it appears that much of the dependence of wage growth on inflation in this period must reflect a mechanism that is less formal than direct (contractual) indexation.

Discussions of the 1960s often identify excessive rates of resource utilization as the proximate cause of the acceleration in wages and prices. However, conventional measures of utilization—specifically, the unemployment gap or output gap—tend to be informed in some manner by the behavior of inflation. (For example, one common way to measure the "natural" rate of unemployment involves backing it out from a Phillips curve.) As a result, it is difficult to gauge *when* utilization rates started to put significant upward pressure on inflation without simply coming full circle and stating that it was around the time that inflation started to rise.

With that caveat in mind consider figure 4, which plots the actual unemployment rate against the CBO's estimate of the natural rate.[11] The CBO measure starts the decade at about 5½ percent, which implies that the economy began moving into a sustained period of high utilization around 1963.[12] However, attempts to use the resulting unemployment gap in a price equation typically also find a role for a constant term that—if we attribute it to mismeasurement of the natural rate—implies an even higher average level of utilization over this period and a correspondingly earlier date of entry into the high-utilization period. On the lower end of the range, the estimated NAIRU in Staiger, *et al.* (2001) *declines* by more than a percentage point over the course of the

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[8]See table 1 of Douty (1975).

[9]See table 8 of Douty (1975).

[10]Douty (1975), pp. 53–54.

[11]From 1948 to 2004, the CBO's natural rate estimate is essentially a NAIRU measure with demographic adjustments (see Shackleton, 2018, appendix B). Hence, the modest increase in the CBO's natural rate estimate over the 1960s (0.4 percentage point) reflects the relative unimportance of changes in demographics during this period.

[12]By contrast, manufacturing capacity utilization moves up sharply at the end of 1964, reaches a near-record-high level in 1966, and then drops back in 1967 to a level that is not too different from the average rate over the second half of the 1950s, while the worker quit rate in manufacturing looks more like the mirror image of the aggregate unemployment rate.

1960s, ending the decade at 4½ percent.

III   Inflation dynamics in the 1960s (and now)

There was something special about the sixties. . . But if you asked me to be more specific, to pinpoint what it was about the sixties that was so special, I don't think I could do more than stammer out some trite reply.

Haruki Murakami (2006)

How might we try to make sense of these historical events in a coherent way? The approach I take here involves using a VAR model that allows for time-varying parameters and stochastic volatility, and that includes enough relevant drivers of inflation to have at least some chance of capturing and describing key features of the inflation process.[13] An approach like this one is not perfect, as it requires using a more-parsimonious dynamic specification than would be found in other types of empirical wage and price equations, such as a Phillips curve. (It also inherits the same questionable claim to being a structural model that any recursively identified VAR model does.) But by using a framework that explicitly models parameter drift and incorporates information from the full sample, the approach does have some appeal; in addition, allowing for changes in the volatility of shocks over time reduces the chances of identifing a change in the parameters of the inflation process when none is actually present.

The VAR system that I use includes a relative import price measure, trend unit labor cost growth, core market-based PCE price inflation, and the difference between actual unemployment and the CBO's current estimate of its natural rate, with that causal ordering.[14] Because most of the variation in trend unit labor cost growth reflects changes in compensation growth (rather than changes in trend productivity growth), including this variable allows us to gain some insight into how wage determination might have varied over time; more importantly, it allows the model to capture the dynamics associated with wage–price spirals in periods when they are present.

The first mildly interesting result that obtains from the VAR estimates is shown in figure 5. The dashed line in the figure plots the VAR's baseline forecast for core inflation, which moves up steadily over the decade. This rise in the model's baseline projection in turn reflects a value for

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[13]Such an approach has been used by a number of authors to analyze historical changes in U.S. inflation dynamics (Cogley and Sargent, 2005, is one well-known example). The particular model used here is similar to one used by Peneva and Rudd (2017) in their study of wage–price passthrough; that study is in turn closely based on earlier work by Clark and Terry (2010) that used a VAR model of this type to analyze whether and how the passthrough of energy price shocks to inflation has varied over time.

[14]I use market-based PCE prices in the VAR because several nonmarket components of PCE are priced using input cost indexes that are in turn based on wage or compensation measures. (On average, core market-based prices account for roughly 90 percent of the overall core index.) In addition, I use PCE prices rather than the CPI because the published CPI contains methodological breaks and uses mortgage interest rates to measure housing costs in the 1960s and 1970s.

the estimated long-run mean for inflation that is above actual inflation for much of the decade, and that moves up by 1¾ percentage points from 1961 to 1967 (see the dashed line in figure 6).[15] In addition, the rise in the stochastic trend for price inflation is almost exactly mirrored by an increase in the stochastic trend for labor cost growth (the dashed line in figure 7). According to the VAR, what kept the rise in trend inflation from showing through to actual inflation over the first part of the 1960s was unusually low wage growth: As indicated by the blue dotted line in figure 5, the increasing trend was obscured by a sequence of negative (and ultimately transitory) idiosyncratic shocks to labor cost growth.[16] While this result provides additional evidence that the apparent suddenness of the rise in inflation in the second half of the 1960s was exaggerated by unusually low inflation earlier in the decade, it is the instability in the stochastic trends for inflation and labor cost growth that represents the most noteworthy feature of inflation dynamics in this period—one that seems to be completely absent in more-recent decades.[17]

One (mechanical) contributor to the rise in inflation's long-run mean over this period is worth highlighting, even though it is difficult to come up with a compelling explanation for what it is capturing. The time-varying intercept in the VAR's inflation equation is close to driftless for much of the estimation period, fluctuating in a narrow range (albeit one with a relatively wide credible set) until the late 1990s. However, over the 1960s there is a steady increase in "intrinsic" inflation persistence, as captured by the sum of the coefficients on the own lags in the inflation equation (see figure 8).[18] All else equal, higher own-persistence will increase inflation's long-run mean even if the intercept of the inflation equation remains constant. But what economic interpretation might we give to that increase?

One possible interpretation is suggested by Cogley, *et al.* (2010), who associate the stochastic trend in inflation with the Fed's inflation target. Under that telling, the own-persistence of inflation at a point in time contributes to the persistence of the "inflation gap," which they define as the deviation between actual inflation and the Fed's long-run inflation goal; a rise in the persistence of the inflation gap might then be attributed to the Fed's becoming less willing to bring actual inflation back to its target quickly.[19] Here the interpretation runs into trouble, though. As noted,

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[15]The inflation trend in figure 6 does not match the VAR baseline forecast shown in figure 5 because the latter gives the best *i*-period ahead forecast implied by the VAR starting from some initial period (and conditioning on the initial period's data), while the long-run trend is the value to which inflation would eventually converge absent any shocks (a Beveridge–Nelson trend).

[16]The model attributes virtually all of the remaining weakness in inflation to own-shocks. The high correlation between wage and price growth that existed over this period makes it hard to be too confident about this breakdown; that said, reversing the ordering of labor costs and inflation in the VAR yields a contribution of labor cost innovations to inflation that is only 0.4 percentage point smaller at the end of 1965.

[17]As discussed in Peneva and Rudd (2017) and Rudd (2022), inflation's stochastic trend has been essentially invariant to changes in economic conditions since the mid-1990s, in marked contrast to the experience of the 1970s and 1980s (and apparently the experience of the 1960s as well).

[18]In addition, an increase in the sensitivity of labor cost growth to inflation has the effect of modestly increasing the "effective" weight on lagged inflation in the price equation.

[19]This discussion is loose—the persistence of the "inflation gap" in the sense of Cogley, *et al.* (2010) and the value

even if the intercept in the inflation equation is fixed, a rise in own-persistence will raise inflation's long-run mean. But it is unclear why we should then associate the resulting increase in inflation's stochastic trend with an increase in the Fed's long-run inflation target, which seems as though it would be more naturally captured by an increase in the inflation equation's intercept. (Of course, we might be skeptical that a model such as this one would actually be capable of making this sort of distinction, which further complicates the task of giving economic—let alone structural—interpretations to the VAR's trends.)

The estimated stochastic trend for the unemployment gap over this period (not shown) is persistently negative.[20] Translating this long-run trend into unemployment-rate terms (the solid red line in figure 9) provides an estimate of the "natural" rate of unemployment in the sense of Friedman (1968)—that is, the unemployment rate that the economy tends to return to once any shocks have died out and all other variables in the system are at their long-run values. The model's estimated natural rate is relatively flat for much of the decade at around 4½ percent, and ends the decade below 5 percent.[21] Taken at face value, the model's estimate implies that the unemployment rate did not fall appreciably below the natural rate until mid-1968. However, this definition of the gap—and, by extension, the model's estimate of the natural rate—is not necessarily relevant as a gauge of wage and price pressures: The stochastic trend for the unemployment rate is trying to measure the long-run mean of the series in a way that best fits its own dynamics, not in a way that best explains wage or price inflation.[22]

Finally, price inflation appeared to be more sensitive to real activity in the 1960s. Figure 10 plots the response of inflation following a shock to the unemployment gap at various dates, together with integral multipliers (the values in parentheses) for the eight quarters following the shock.[23] These results confirm that the price Phillips curve was steeper in the 1960s than in more-recent decades, but they also suggest that this feature of the Phillips curve was already in place before the mid-1960s inflation surge occurred. A similar conclusion obtains for the responses of labor cost growth (figure 11), except that here the quantitative effect of a shock to real activity is much more similar over the entire sample period.

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of inflation's stochastic trend both depend on the full-system properties of the VAR—but it is not too misleading in the current context.

[20]Most of the overall movement in the unemployment gap over this period is "explained" by the VAR with a combination of variation in the intercept of the gap equation itself and idiosyncratic own-shocks (even though the unemployment gap is ordered last in the VAR).

[21]By way of comparison, the natural rate estimate obtained by Cogley and Sargent (2005, fig. 5) using a somewhat different specification is a little above 5 percent in 1961 and declines to 4½ percent by 1965.

[22]A similar issue attends state-space models that try to use both labor-market and inflation data to inform their estimate of the cyclical position of the economy: The resulting gap series has to balance the need to fit the dynamics of the labor market variables with the need to fit the dynamics of inflation, and it might not care all that much about how well it accomplishes the latter goal (especially if the Phillips curve is relatively flat).

[23]These integral multipliers are the ratio of the cumulated eight-quarter response of inflation to the cumulated eight-quarter response of the unemployment gap; they therefore control for any time variation in the gap's own response.

In total, these results provide a shred of evidence that the sharp acceleration in prices and wages that occurred after 1965 was probably *not* the result of a discrete break or "regime shift" in the inflation process.[24] The slope of the price Phillips curve appears to have been roughly the same on either side of the 1960s inflation breakout; more importantly, the long-run trends for labor cost growth and inflation had already moved up by a percentage point by mid-decade.[25] Likewise, wage–price spirals were certainly a feature of the inflation landscape in the 1950s, making it unsurprising that they could have emerged again in the 1960s.

If we buy into this conclusion (note the conditional), we are left with the job of coming up with a plausible explanation for why large negative shocks to wage growth (and inflation) emerged in the first half of the decade and then rapidly vanished. Since we can give unexplained residuals whatever interpretation we like, we might venture a story in which the disappearance of the negative own-shocks to labor-cost growth that we see in figure 5 reflected a newfound attentiveness to inflation on the part of households and firms, or perhaps even a shift in worker bargaining power as the labor market tightened. But it is difficult to see from the PCE price data what the precipitating factor might have been in the former case (given how low and stable actual inflation was until the mid-1960s), or why a change in worker bargaining power wouldn't have also been associated with a steepening of the wage Phillips curve (which we don't find).

On the other hand, Douty (1975) does specifically identify 1965–1966 as a watershed, arguing that a broad-based acceleration in the CPI at that time coupled with large increases in food prices meant that "...rising prices became an explicit factor in wage determination" by the middle of 1966.[26] The breadth of the price increases Douty points to is in fact evident in the PCE price data (recall figure 2). However, the contribution to overall inflation made by the mid-1960s acceleration in food prices is only really striking if we look at the CPI—see figure 12—mainly because food had a much larger weight in the CPI in this period. (Of course, during this time only the CPI

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[24]These results also call into question Reis's (2021) characterization of the 1960s inflation experience. Reis argues that inflation was "anchored" prior to 1965 thanks to the Fed's ability to control inflation after 1951 (something not immediately evident from figure 1), and constructs a series for an "expected inflation anchor" that rises more than 2 percentage points between 1967 and 1970 (the series then drops about 1½ percentage points in 1971). However, the results presented here suggest that trend inflation was increasing steadily over the first part of the 1960s, with no decline thereafter (the trend estimates continue to rise after 1971—not shown). It should also be noted that Reis's paper does not demonstrate a causal linkage in which his expectations measure influences actual inflation (as Alan Blinder's discussion of the paper notes, Reis's "anchor" appears to simply move in line with total CPI inflation). Absent such a demonstration, I would argue that Reis's measure does not provide any useful insights into the state of the inflation process during this period.

[25]We might be concerned that the steady increase in these long-run trends reflects the model's trying to smooth through a sudden shift that happened later in the decade. But stochastic trends from this type of model can actually change relatively rapidly when they want to—for instance, in the early 1980s the estimated trends for inflation and labor cost growth decline by about 3 percentage points over an eight-quarter period.

[26]Douty (1975), p. 9. Cecchetti (1987) questions Douty's conclusion, arguing that the *frequency* of wage adjustment appears unrelated to the level of inflation over this period. But Cecchetti's finding bears more directly on the slope of the wage Phillips curve (not on the dependence of wage growth on past inflation)—and as figure 11 suggests, the response of labor costs to a change in real activity was indeed quite stable in the 1960s.

would have been available as an indicator of consumer prices.)

An alternative explanation for the negative wage (and price) shocks and their subsequent reversal that seems at least equally (im)plausible is that these shocks reflect the initial success and later collapse of the Kennedy–Johnson wage–price guideposts. Regarding their timing and effect, one study (Congressional Budget Office, 1977) argued that the guideposts "...worked fairly well in moderating price and wage increases through 1965" (p. 17), breaking down in 1966 as "major labor unions' antagonism toward the policy intensified" (p. 19). But while there are certainly examples from this period where high-level intervention by Administration officials was able to enforce the guideposts in particular sectors, it is less clear whether adherence to the guideposts was widespread enough to explain aggregate wage and price developments.

IV Fiscal policy in the 1960s (and now)

A billion for this, a billion for that, a billion for something else ...
Senator Everett Dirksen (circa 1961)

The VAR model does not contain any direct measure of fiscal policy, instead capturing any change in aggregate demand from this source through its effect on the unemployment gap. It is undeniable, though, that sustained expansionary fiscal policy played a major role in pushing up overall spending in the 1960s. What quantitative statements can we make about fiscal policy actions in the 1960s, and how do those actions compare in size to the ones taken in response to the pandemic?

Figure 13 plots a measure of fiscal stance that—in contrast to measures like the actual or high-employment budget deficit—attempts to control for the differential effects that government spending and taxation have on aggregate demand. This measure, which is labelled "fiscal impetus" in the chart, gives the *first-round* contribution to Q4-over-Q4 real GDP growth from discretionary federal and state and local fiscal policies. In order to provide a rough idea of the combined effect of current and past fiscal actions in this period, the plot also shows the contribution to output growth if an expenditure multiplier is applied to the autonomous fiscal impulses.[27] The estimates in figure 13 suggest that fiscal policy did in fact turn strongly expansionary after 1964; to put these magnitudes into perspective, a simple Okun's Law relation implies that the unemployment rate would have been 2 percentage points higher at the end of 1969—so around 5½ percent—

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[27]The fiscal impetus estimates are based on Follette and Lutz (2011). For the multiplier calculation, I assume an aggregate marginal propensity to spend of 0.4 (implying an eventual expenditure multiplier of 1.7), which is obtained by weighting conventional measures of excess sensitivity in consumption and of the output elasticities of investment and import demand by 1964 nominal GDP shares. (A comparable calculation using 2019 shares yields a multiplier of 1.5, mostly because import leakages are larger now.)

had fiscal policy's contribution from 1965 to 1969 instead simply been in line with CBO's estimate of potential output growth for that period.[28]

Moreover, fiscal policy remained a contributor to aggregate demand growth well into the late phases of the 1961–1969 expansion—in sharp contrast to today. Figure 14 plots the raw fiscal impetus measure (that is, without any multiplier contribution) against the CBO output gap over a longer period; as is evident from the chart, the output gap had closed around the time that the post-1964 fiscal expansion started getting underway. More recently, the fiscal measures put into place during and after the Covid pandemic—while extremely large—are also largely temporary, implying that they will become a drag on GDP growth in later years.[29]

V   Monetary policy in the 1960s

To try effectively to wipe out hard-core inflation by squeezing the economy is possible but disproportionately costly. It is burning down the house to roast the pig.

Robert M. Solow (quoted in Mermelstein, 1979)

William McChesney Martin, the chairman of the Federal Reserve during this period, was a dedicated inflation fighter (he had pushed to tighten policy to counteract inflation in the 1950s, thereby contributing to the 1957–1958 recession).[30] Martin also put an emphasis on inflation expectations—as both a driver of actual inflation and as a contributor to the persistence of inflation—that would not be out of place in academic or policy circles today.[31] Finally, a number of FOMC members became increasingly concerned about rising inflation as the 1960s wore on.[32] So why did monetary policy fall further and further "behind the curve" over the second half of the decade?

- *Overreliance on unobservables.* As Orphanides (2003a, b, 2004) has argued, the actual federal funds rate over this period was in line with what a standard Taylor-type rule (using data available at the time) would have prescribed—in particular, the Fed's response to price de-

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[28]None of this is news, of course—see Blinder and Goldfeld (1976) for a related exercise from 50 years ago.

[29]The fiscal stance estimates for 2020 to 2023 that are shown in figure 14 are based on the Brookings Institution's Hutchins Center fiscal impact measure. As this measure is calibrated to be zero when spending and taxes are rising with potential, I adjust it using CBO's estimates of potential output growth in order to make them more comparable to the Follette–Lutz measure shown over history. (These adjustments add about 0.35 percentage point to the Brookings measure in each year.)

[30]Bremner (2004), pp. 126–129.

[31]See Bremner (2004), p. 266; also Meltzer (2009), p. 155, n. 176. Of note, Martin soundly rejected the late-1950s argument that "creeping inflation" was tolerable or an inherent feature of the U.S. economy (Bremner, 2004, pp. 127–129), which contradicts Meltzer's (2009) claim that this view kept the Federal Reserve from using monetary policy more aggressively (pp. 530–531).

[32]Bremner (2004), pp. 253–255; Meltzer (2009), p. 533.

velopments conformed to the "Taylor principle" that the nominal rate should move more than one-for-one with actual or expected inflation. Orphanides concludes that the real problem was that the Martin Fed was targeting an estimate of potential output that—with the benefit of hindsight—was too high to deliver stable inflation.[33]

- *Financial stability considerations.* The Federal Reserve started tightening in December 1965, resulting in a credit crunch in mid-1966. In contemplating another tightening cycle in 1968, Martin was apparently wary of repeating the 1966 episode by moving too abruptly.[34] In addition, over the course of the decade financial markets made increasing use of hedging and other short-run investment strategies that raised the risk of financial instability were the Fed to disappoint markets.[35]

- *Desire for a fiscal policy retrenchment.* Fed Chairman Martin viewed fiscal policy as too expansionary over this period, and started advocating for fiscal restraint (in the form of a tax increase) in mid-1965.[36] Martin pushed harder for a tax increase toward the end of 1966 when the Johnson Administration released a revised deficit projection for fiscal year 1967 and its first estimate for 1968.[37] Martin felt that additional monetary tightening would take the pressure off of Congress and the Administration to rein in fiscal policy; by the end of 1967, however, he realized he had waited too long.[38] (A surtax was finally enacted in 1968.)

- *Overreliance on model forecasts.* Once the surtax was in place, model-based forecasts implied a larger negative effect on aggregate demand than what actually occurred, leading the Fed to try to cushion the anticipated effect on real activity with monetary easing that was—in retrospect—too much. Martin admitted that "[t]he System had pulled a boner" by basing easier policy on these projections.[39]

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[33]Part of the reason involved maintaining an estimate of the "natural" rate of unemployment that was—again in retrospect—too low to deliver stable inflation (the CEA kept its estimate of the natural rate at 4 percent until 1970, when it was *lowered* to 3.8 percent). With the flattening of the empirical Phillips curve in recent decades, the uncertainty around such natural rate estimates—which was already high enough to make them basically worthless for policy purposes—has only become greater. (For different reasons, the dislocations caused by the pandemic have made this situation exponentially worse.)

[34]Bremner (2004), pp. 252, 254–255.

[35]Bremner (2004), p. 256. One of the reasons Martin saw keeping inflation expectations in check as being so vital was that he thought higher expected inflation distorted economic and financial decisionmaking and made the economy vulnerable to a boom–bust cycle (Bremner, 2004, p. 123).

[36]Bremner (2004), p. 219.

[37]Bremner (2004), pp. 224–225. Martin had evidence that President Johnson was understating the fiscal costs associated with the intensification of the U.S. war in Vietnam: As early as 1965, FOMC staff had concluded that unreported military spending was causing their econometric model to underpredict real activity, while Martin had received confidential information along these lines from friends in the Administration (Bremner, 2004, pp. 204–205). Nor were the Fed the only ones with misgivings: When Arthur Okun, a member of the President's Council of Economic Advisers, received a memo on war costs marked "For Internal Use Only" he added the note "But not to be swallowed" (Halberstam, 1993, p. 607).

[38]Bremner (2004), pp. 237–238; Meltzer (2009), pp. 521, 524.

[39]Meltzer (2009), p. 561. Staff forecasts had started to be incorporated into FOMC deliberations in 1966, and had become "an integral component in the FOMC policy-making process" by 1968 (Bremner, 2004, p. 253; also

- *Concerns over Fed independence.* The Fed faced numerous challenges to its independence over this period. In 1964, Martin had to ask President Johnson for help in dealing with Representative Wright Patman's attempts to remake the Fed into an institution that would be less autonomous (Patman was chair of the House committee that oversaw the Fed).[40] The Fed then faced pressure from the Administration to keep policy expansionary; when Martin advocated the 1965 policy tightening, he saw it as a way to reassert Fed independence, but acknowledged that it ran the risk of provoking Johnson.[41] Later (in 1968), Johnson applied less-subtle pressure by appointing a task force to consider changes to the Federal Reserve System that would effectively increase the Administration's influence on the FOMC.[42]

By 1968, however, it was clearly evident that inflation had ratcheted higher, and that the surtax had failed to cool the economy. So why didn't the Federal Reserve push against inflation more aggressively in the last part of the decade? Were the considerations described above enough to preclude greater Fed tightening even at this late date, or was there another reason that might have loomed even larger in policymakers' minds?

Probably the simplest explanation for the Martin Fed's inaction at this point is that policymakers did not want to incur the economic cost that they felt would be required in order to engineer a persistent reduction in inflation. Martin was clearly aware that inflation had become entrenched, and attributed the cause to a rise in inflation expectations.[43] At the September 1968 FOMC meeting, he stated that:

> *"The existing momentum of inflationary pressures is because both fiscal and monetary restraint have come much too late. It is asking too much of the available tools of monetary policy to expect them to deal with the inflationary psychology that resulted from the delay."* (Bremner, 2004, p. 253)

Martin was also aware that fully squeezing out this "inflationary psychology" would require a long and grueling campaign, one that he did not want to undertake without Administration support. He therefore gave a speech in May 1969 that suggested such a policy course in the hopes that President Nixon would take up the gauntlet and make a strong public commitment to fighting

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Meltzer, 2009, p. 498).

[40] Bremner (2004), pp. 190–191.

[41] Meltzer (2009), p. 456. Just prior to the December 1965 discount rate increase, a group of three Administration economists and the Federal Reserve Board's director of research produced a study that concluded that an acceleration in prices was unlikely, and that a policy tightening should therefore be deferred (Bremner, 2004, p. 206). Martin chose not to circulate the study, fearing it would reduce support for a rate increase. (One of the economists on the Administration's team was Paul Volcker, who was at that time Johnson's deputy undersecretary of the Treasury for monetary affairs.)

[42] Meltzer (2009), p. 549.

[43] A concern over rising inflation expectations had been one of Martin's justifications for the 1965 discount rate increase—see Meltzer (2009), p. 480; also Bremner (2004), p. 206.

inflation. Nixon actually did broach the idea of taking "the bad medicine now" with his economic advisers, but was dissuaded by George Shultz, his Secretary of Labor.[44]

Chairman Martin's view that a large amount of economic pain would be required to secure a persistent reduction in inflation was arguably vindicated by later events. Following the food and energy shocks of 1973–1974, core PCE inflation settled down to a 6 percent pace for the next three years.[45] A second round of supply shocks got underway in 1978 (initially for food, later for energy), resulting in another large spike in inflation that led the Fed (under Chairman Volcker) to initiate an aggressive anti-inflation policy that delivered two back-to-back recessions and a peak unemployment rate of just under 11 percent. Relative to 1975–1978, core inflation did end up falling persistently by a little more than 2 percentage points (core inflation averaged 3.8 percent from 1983:Q4 to 1990:Q4), the benefit of which should be weighed against the actual damage and potential risk to the economy that this policy entailed.[46] Moreover, trend inflation moved down *again* in the wake of the 1990–1991 recession, suggesting that Volcker's drastic approach to inflation control was not by itself sufficient to deliver an inflation regime in which inflation's long-run trend was fully anchored.

But whatever explanation one chooses for the Martin Fed's failure to rein in inflation, it is apparent from the documentary history that by 1969, monetary policymakers were basically out of ideas (see figure 15).[47]

VI   What (if anything) have we learned?

Very few people are entitled to their opinion.
Jack Douglas

Perhaps the most striking fact about the 1960s is that policymakers at the Federal Reserve held views about inflation—and faced concerns about how best to deal with it—that seem quite

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[44]See Bremner (2004), pp. 266–268. Interestingly, Meltzer (2009) makes no reference to this event, in which Shultz—who was an acolyte of Milton Friedman—used monetarist arguments to persuade Nixon that further monetary restraint was unnecessary.

[45]The average annualized log difference in the core PCE price index was 6.15 percent from 1975:Q2 to 1978:Q2.

[46]Temin (1989), p. 40, even goes so far as to argue that a second Great Depression might have resulted "[h]ad the deflationary policy been continued for another six months." A more generous assessment would attribute the full 3¼ percentage point decline in trend inflation from 1979 to 1983 to Volcker's policy actions. However, that value is likely an overstatement given that part of the reduction in inflation reflected the unwinding of the effects of the supply shocks (the relative contribution of food and energy prices to PCE price inflation becomes negative after 1981:Q1); relatedly, VAR specifications that control for the effects of the supply shocks on core inflation directly (by including relative food and energy price terms) as opposed to indirectly (through their effects on wage growth) estimate a decline in trend inflation over this period that is roughly half as large.

[47]However, one explanation that receives no support from the history of this period is Reis's claim that policy remained loose because Martin "inferred that the [inflation] anchor was firmly in place" based on the low levels of long-term bond yields seen over the 1965–1968 period (Reis, 2021, p. 7).

recognizable from the vantage of 2022. Perhaps the most *sobering* fact, though, is how little practical benefit six decades' worth of additional experience has provided us: Our understanding of how the economy works—as well as our ability to predict the effects of shocks and policy actions—is in my view no better today than it was in the 1960s.

Regarding inflation specifically, we have some empirical basis for claiming that during the 25-year period that preceded the Covid pandemic changes in real activity had relatively muted effects on price inflation and both wage and price inflation tended to revert to long-run means that appeared largely invariant to macroeconomic conditions. Moreover, this state of affairs represented a clear departure from the preceding three decades. But we have no deep understanding of why or how this change occurred, and so can say very little about what might cause it to change again or what sorts of actions might prevent such a change from occurring. In particular, we have no convincing evidence that this situation came to be because inflation expectations became well anchored or because the Fed won its credibility as an inflation fighter, which suggests that invoking a need to "keep expectations anchored" or to "restore inflation-fighting credibility" does not provide an especially compelling justification for a proposed policy action.

Nor does the experience of the 1960s really help us to assess likely outcomes going forward. One conclusion of this paper is that the sharp rise in inflation that took place in the mid-1960s was not the result of a regime change that was induced by "overheating" the economy: As far as a reasonably sophisticated statistical model can discern, the features of the inflation process that caused inflation to rise significantly and persistently in the face of sustained demand pressure were already in place at the start of the decade. By contrast, these features were *not* present at the onset of the Covid pandemic, and we have no evidence so far that the economic dislocations associated with the pandemic have caused them to reemerge.

The present situation also differs importantly from the 1960s in that rather than resulting from successive large boosts to aggregate demand sustained over a number of years, much of the recent rise in inflation instead reflects a set of relative price shocks that have occurred as a large and rapid realignment of demand across broad categories of consumption has run up against a temporary inability of producers and suppliers to fully meet that demand. If the inflation regime remains similar to what it was on the eve of the pandemic, this relative price shock—unlike the food and energy price shocks of the 1970s—should not be expected to yield a permanently higher inflation rate. But since we can make no credible assessment of the likelihood that a different outcome will result, or whether even a large reduction in aggregate demand would be sufficient to preclude it, the policy dilemma is especially acute at present.

Hence, perhaps the most *useful* lesson from the 1960s inflation experience is how difficult it is to successfully conduct economic policy in the real world and in real time. Policymaking unfolds

13

on a "darkling plain," and its practitioners—as well as those who seek to advocate an alternative course—will invariably be burdened by a highly imperfect understanding of how the economy works; noisy and revision-plagued data; and outcomes that cannot even be specified in advance, let alone be assigned a credible probability weight. Of course, policymakers face an additional burden that these others don't: They are the ones responsible for making consequential decisions, and they are the ones held accountable for the results.

VII Appendix

Additional details regarding the data and model used for this note are provided here.

A Data documentation

National Income and Product Accounts (NIPA) data are produced by the Bureau of Economic Analysis (BEA); data on unemployment, productivity, and compensation come from the Bureau of Labor Statistics; CBO's natural rate and potential output series come from the July 2021 update of *The Budget and Economic Outlook*. (These data were downloaded from the Haver Analytics database on January 2, 2022.)

Market-based PCE price index: Official data for the core market-based PCE price index are published from 1987 to the present. Prior to 1987, the market-based series is constructed by using detailed PCE data and a Fisher aggregation procedure routine that replicates the procedure followed by the BEA in constructing the NIPAs to strip out the prices of core nonmarket PCE components from the published overall core PCE price index, where the definition of "nonmarket" mimics the BEA's. The core inflation series used in the statistical models also subtracts out Blinder and Rudd's (2013) estimates of the effects of the Nixon-era price controls.

Relative import price term: Import price inflation is defined as the annualized log difference of the price index for imports of nonpetroleum goods excluding natural gas, computers, peripherals, and parts, which is computed using detailed NIPA series. (As the data required to construct this series only extend back to 1967:Q1, the annualized log difference of total goods imports is used prior to that date.) The relative import price inflation term used in the VAR model equals the difference between this series and core market-based price inflation (lagged one period), weighted by the two-quarter moving average of the share of nominal imports (defined consistently with the import price measure) in nominal core PCE.[48]

Trend productivity growth: Trend productivity growth is defined as the low-frequency component of the annualized log difference of nonfarm business output per hour, which is obtained from a band-pass filter with the width and cutoffs set equal to the values used by Staiger, *et al.* (2001). An ARIMA(4,1,0) model is used to pad the actual productivity growth series prior to its 1947:Q2 starting point; after its 2020:Q4 endpoint, the series is padded with CBO's forecast of average trend labor productivity growth from 2021 to 2030 (which equals 1.72 in log differences) and with the 2031 value of the CBO forecast (which equals 1.64) thereafter.

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[48]The relative import price term uses actual core market-based PCE prices (that is, unadjusted for the effect of price controls), and the nominal import share is scaled by its sample mean.

Manufacturing quit rate: Series Ba4685, *Historical Statistics of the United States*, Millenial Edition. Cambridge, U.K.: Cambridge University Press (2006).

Fiscal stance measures: Through 2019, the fiscal stance measure is based on an updated version of the fiscal impetus measure from Follette and Lutz (2011). Data and projections for 2020–2023 are derived from the Brookings Institution Hutchins Center fiscal impact measure (downloaded on February 6, 2022). To make the latter measure more comparable to the Follette–Lutz measure, I add the CBO's rate of Q4-over-Q4 potential output growth times the nominal share of government in GDP; these shares are set equal to 0.181 in 2020 and to 0.174 (the 2017–2019 average) in 2021–2023.

B Additional estimation details

The VAR system used in section III includes two lags of weighted relative core import prices, trend unit labor cost growth, core market-based PCE price inflation, and the unemployment gap (defined as the difference between the unemployment rate and the Congressional Budget Office's estimate of the natural rate), with that ordering. Data are quarterly, and the sample period runs from 1959:Q1 to 2019:Q4.

Estimation uses Clark and Terry's (2010) implementation of the Metropolis-within-Gibbs posterior sampler, which in turn follows Cogley and Sargent (2005).[49] The number of burn-in draws equals 50,000; after that, 100,000 additional draws are run with every twentieth draw kept. The priors for the initial values are computed by estimating the VAR over a training sample that starts in 1949:Q2 (for this period, the core PCE price series is set equal to the price index for total PCE less food and energy goods). Following Clark and Terry (2010), the VAR uses an uninformative prior for the degree of time variation in the VAR coefficients (equal to 0.001 times the variance-covariance matrix of the VAR coefficients estimated over the training sample, with degrees of freedom set equal to the number of coefficients in the system plus one).

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[49] In contrast to Cogley and Sargent (2005), the sampler does not truncate explosive draws with a reflecting barrier or "backstep" algorithm; in line with the recommendation of Koop and Potter (2011), therefore, the impulse response functions are median values. (The historical decomposition uses mean values in order to ensure that the sum of the baseline forecast and the contributions of all shocks will exactly equal the actual value of the variable being described.)

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1. PCE price inflation, 1953–1971
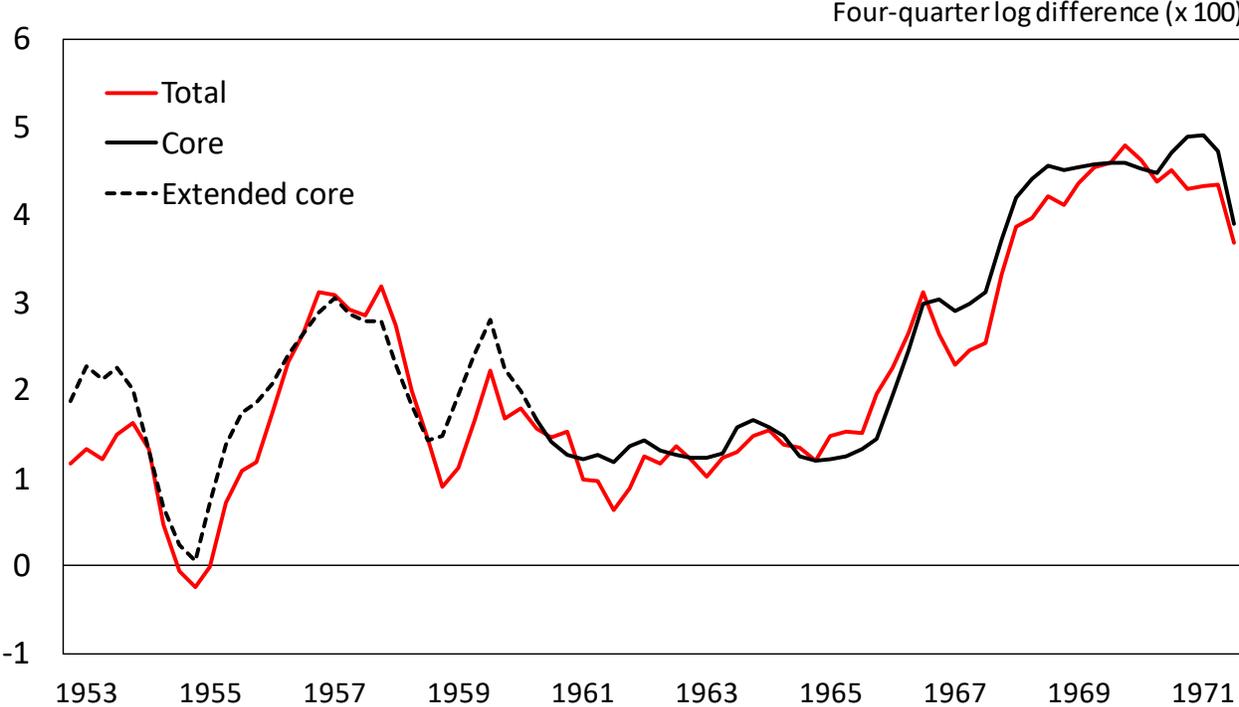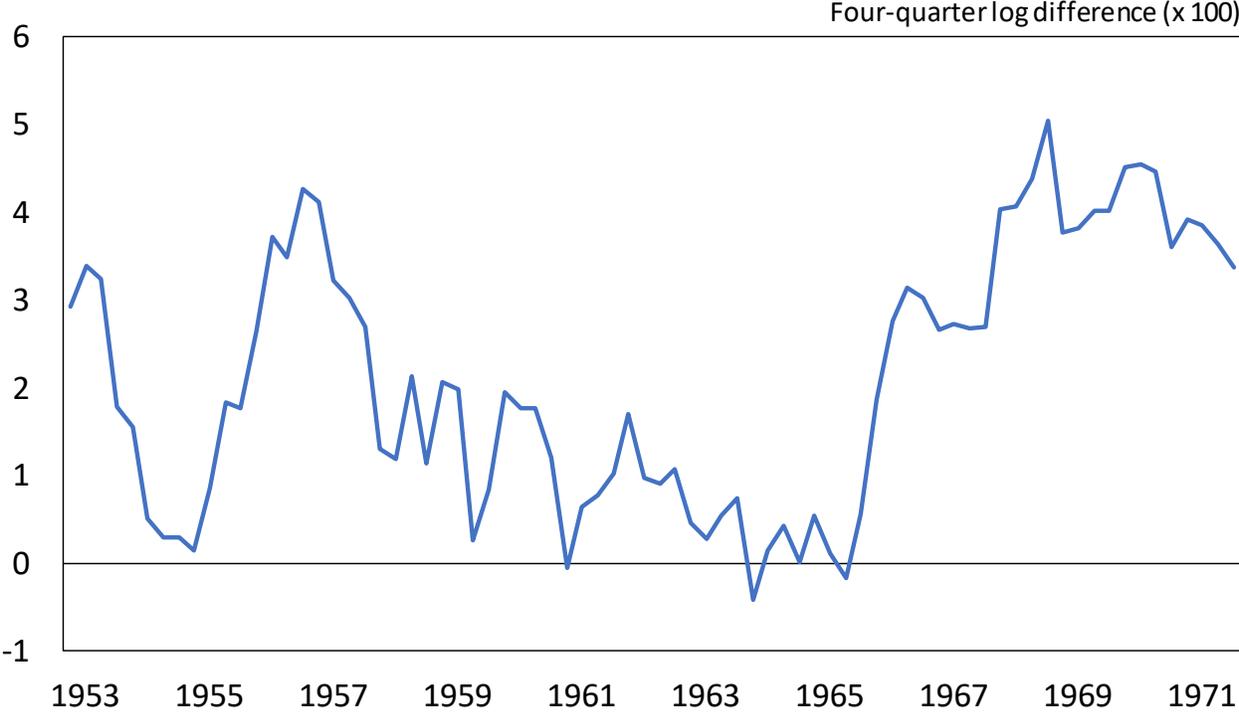
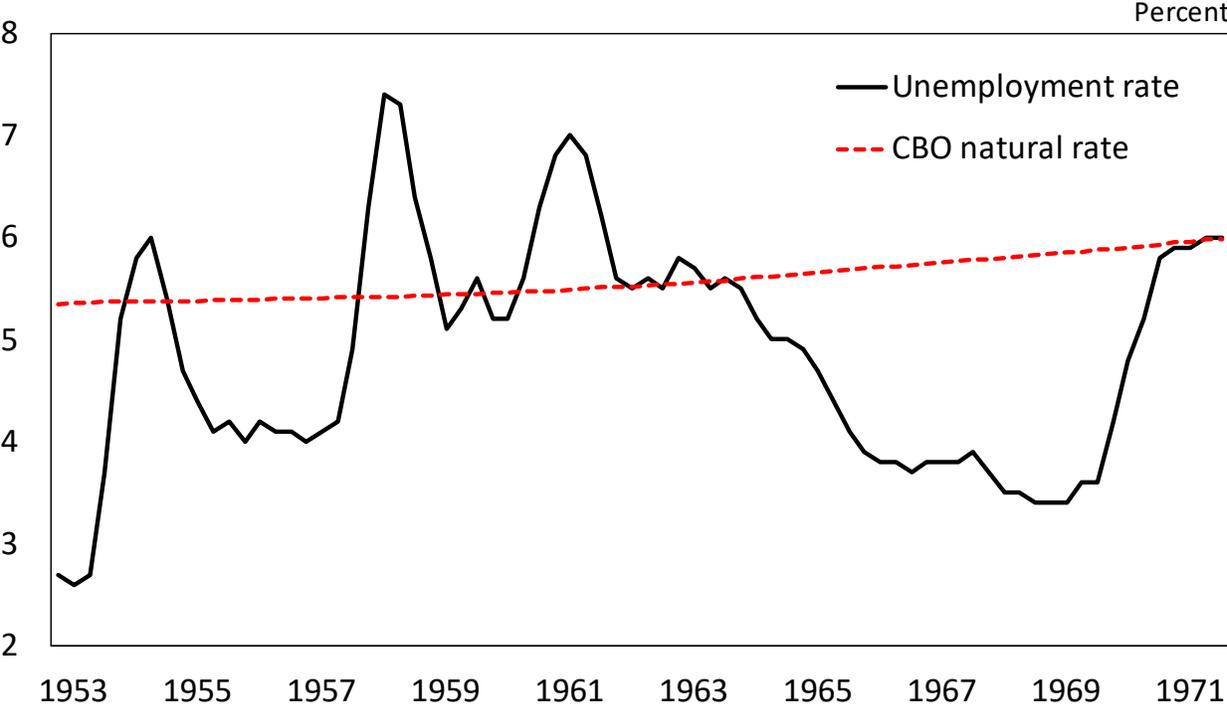## 2. Distribution of PCE price changes

A. All components

12-month log difference (x 100)

B. Core components only

12-month log difference (x 100)
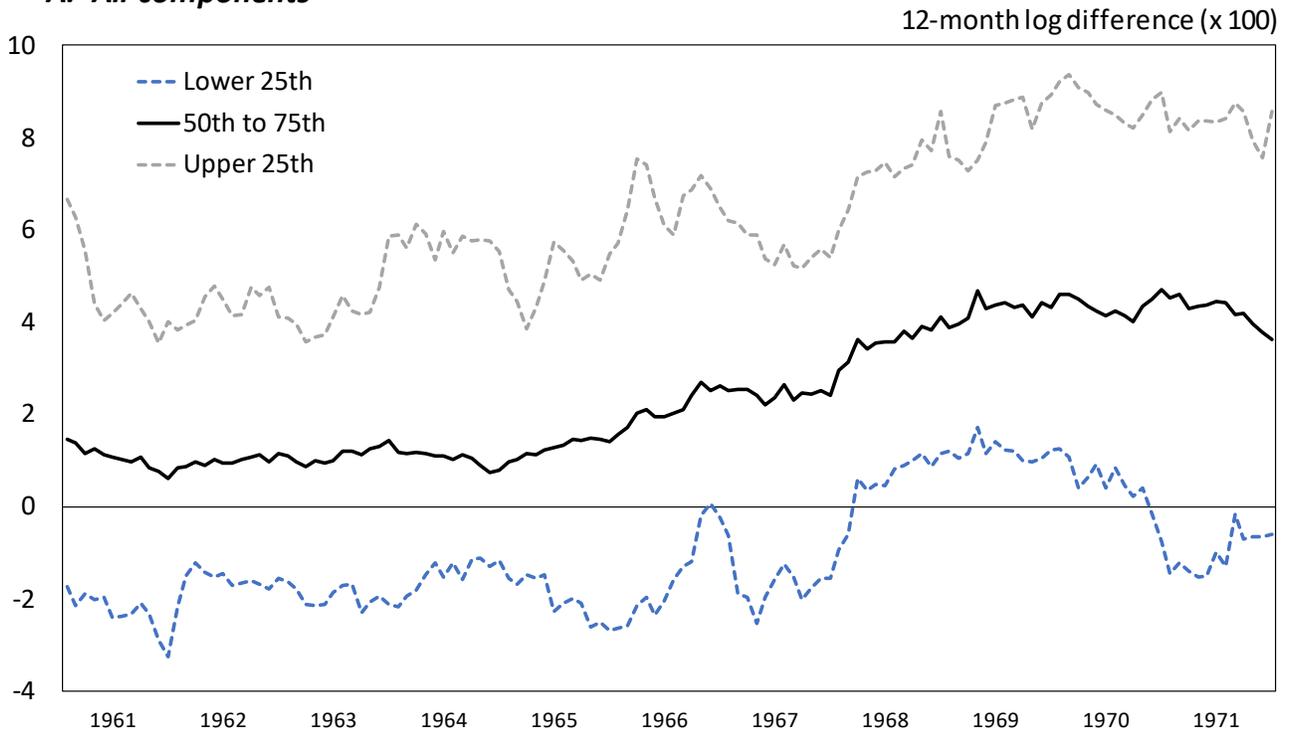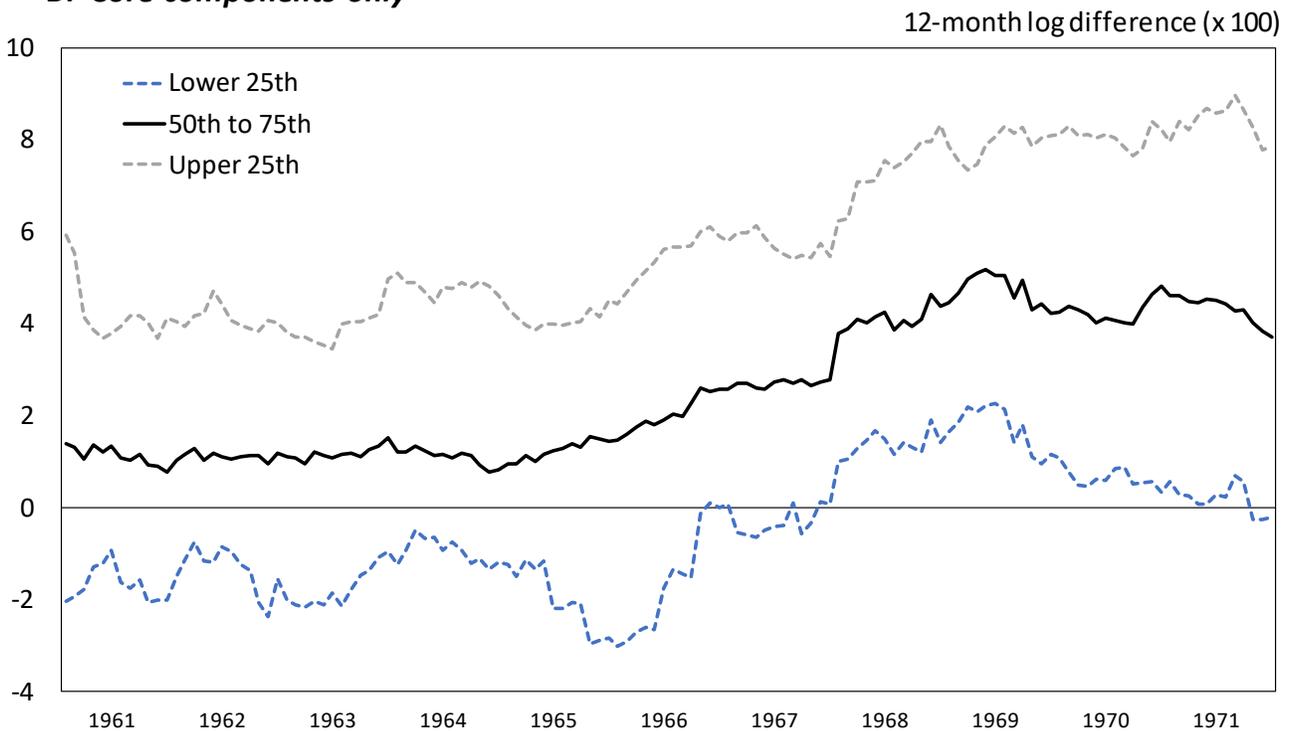
3. Trend unit labor cost growth, 1953–1971

Four-quarter log difference (x 100)

4. One gauge of resource utilization

Percent

— Unemployment rate

- - - CBO natural rate

5. VAR decomposition of core market-based inflation
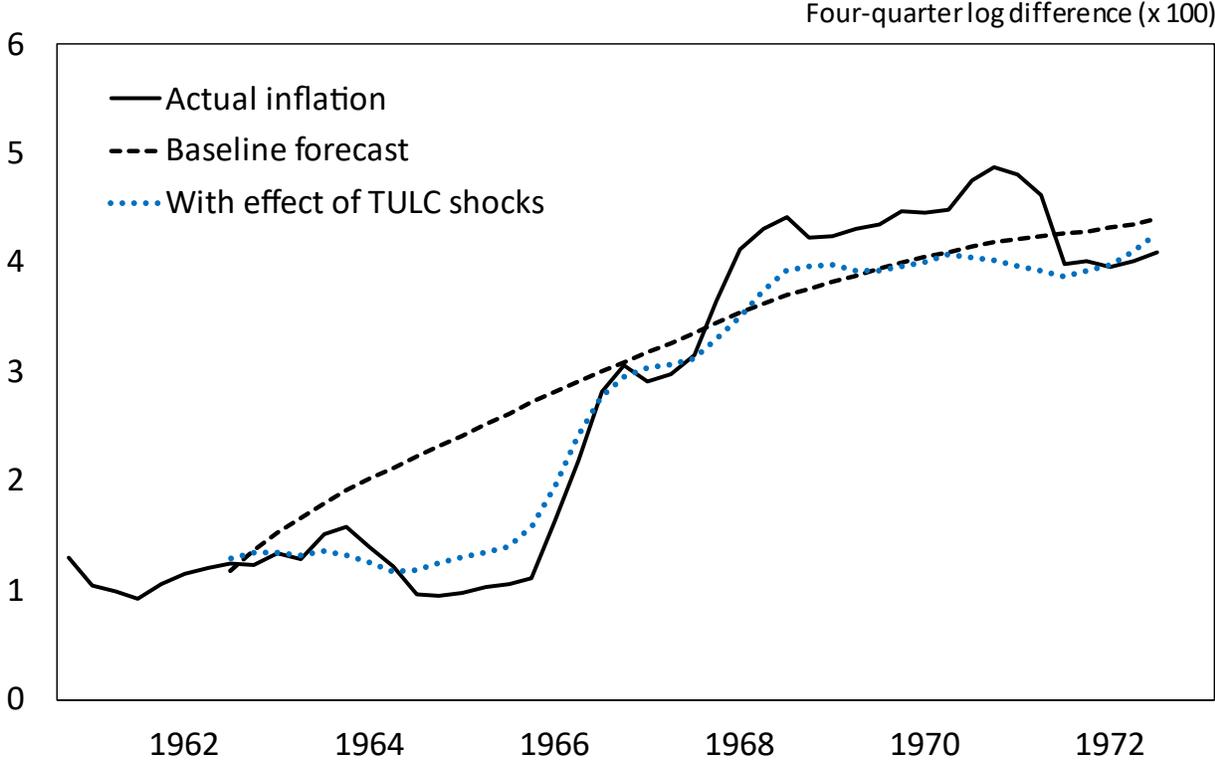
Four-quarter log difference (x 100)

Legend:
- Actual inflation
- Baseline forecast
- With effect of TULC shocks

6. Stochastic trend for price inflation

Four-quarter log difference (x 100)

- Core PCE inflation
- Long-run trend

7. Stochastic trend for labor cost growth

Four-quarter log difference (x 100)
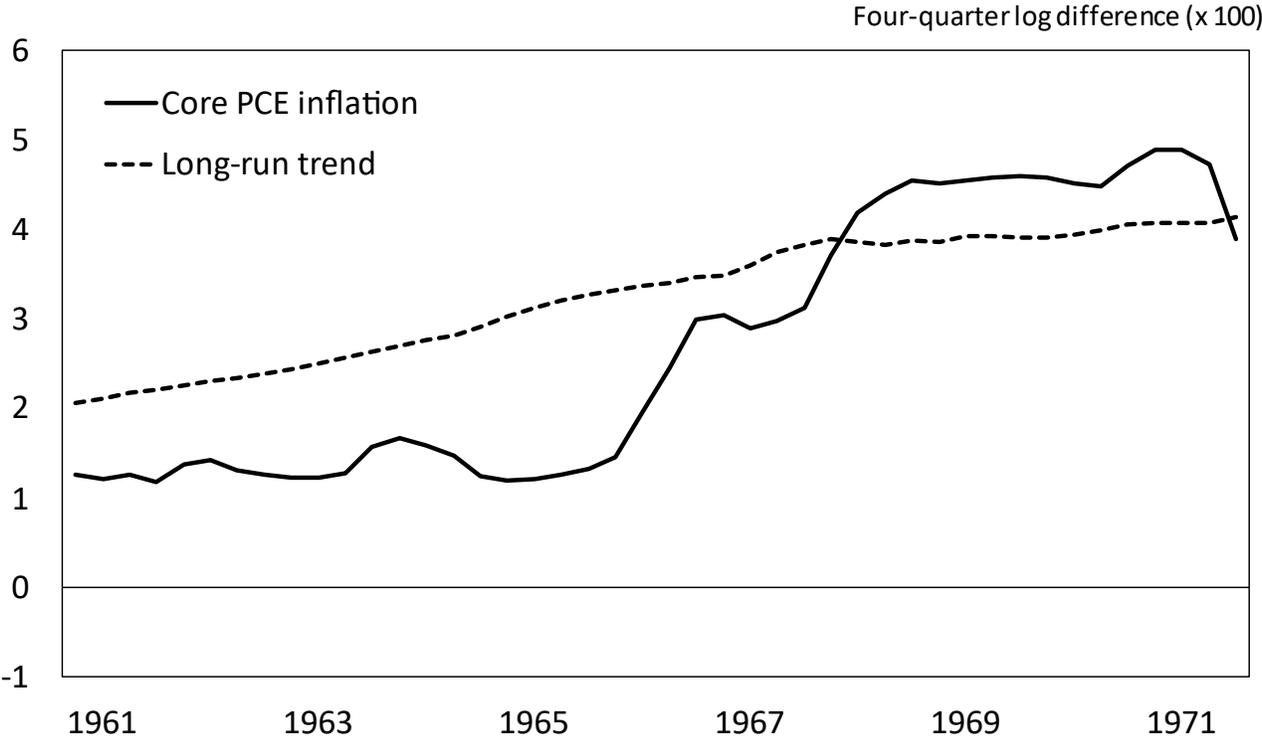
- Labor cost growth
- Long-run trend
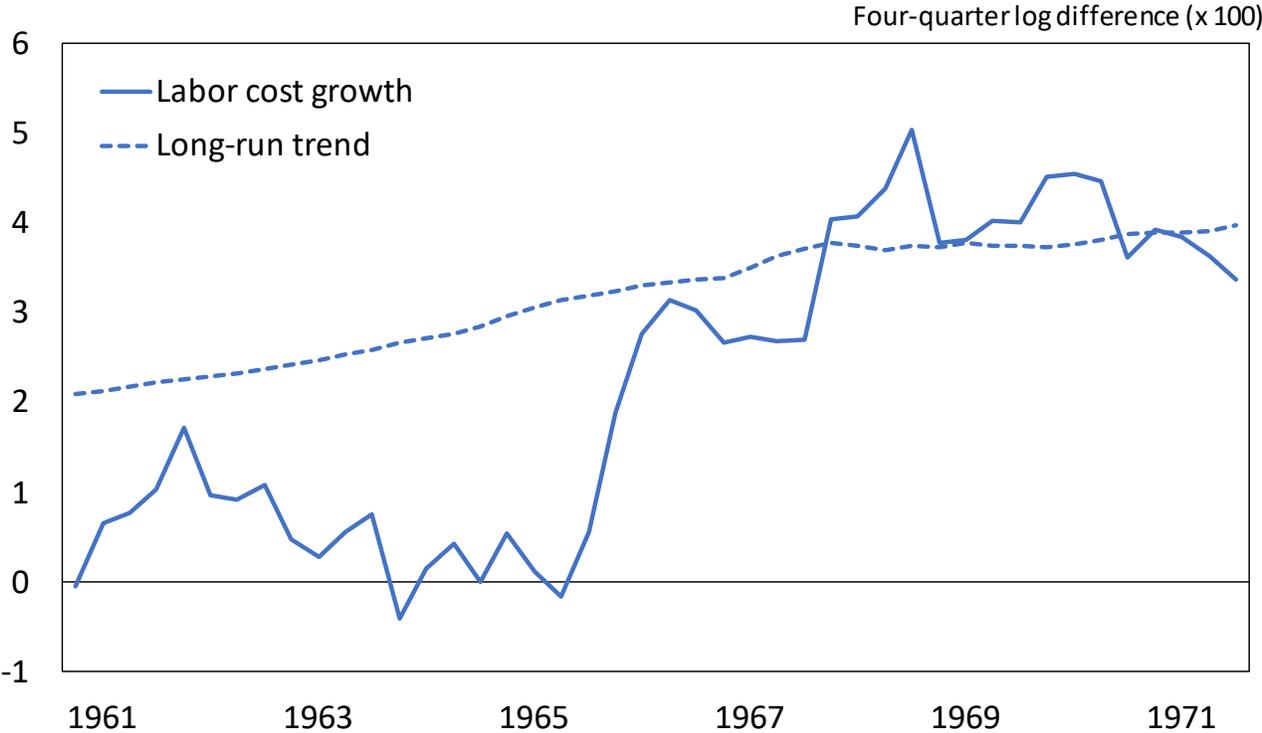
8. Sum of inflation lag coefficients from inflation equation

Dashed lines denote 70 percent credible set.
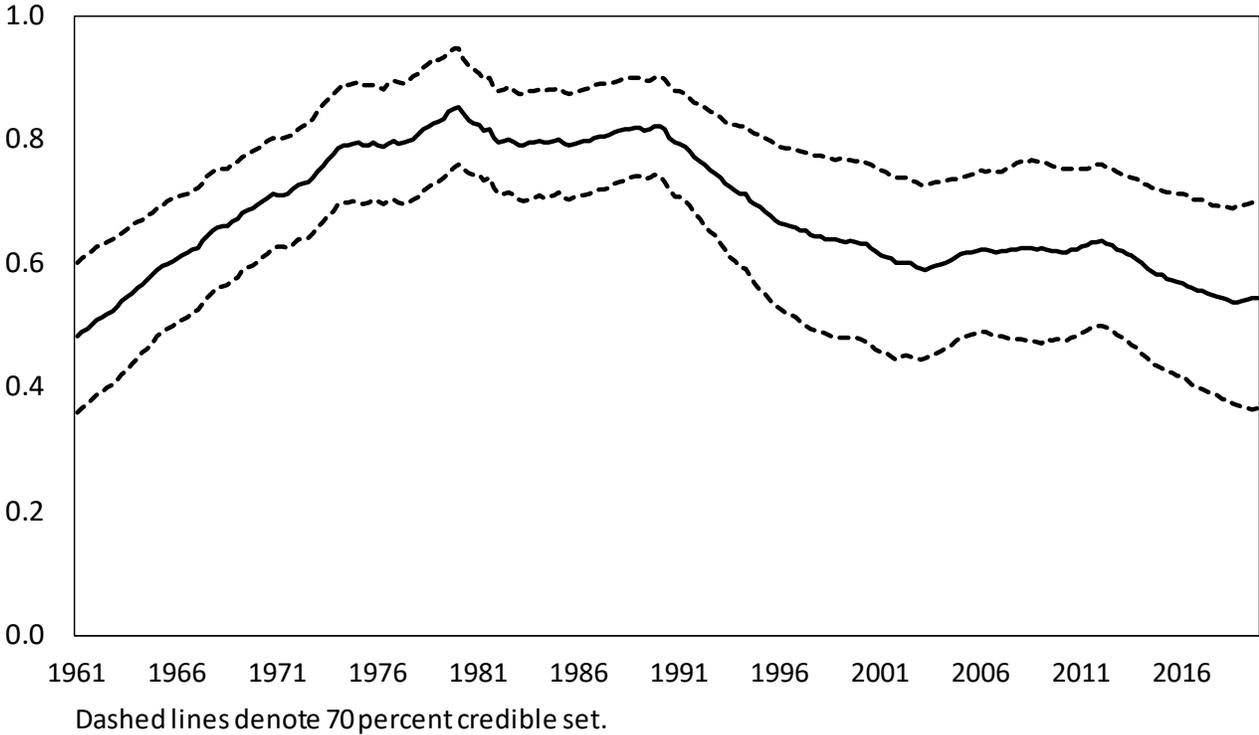
9. Model-implied natural rate

Percent

Dashed lines denote 70 percent credible set.
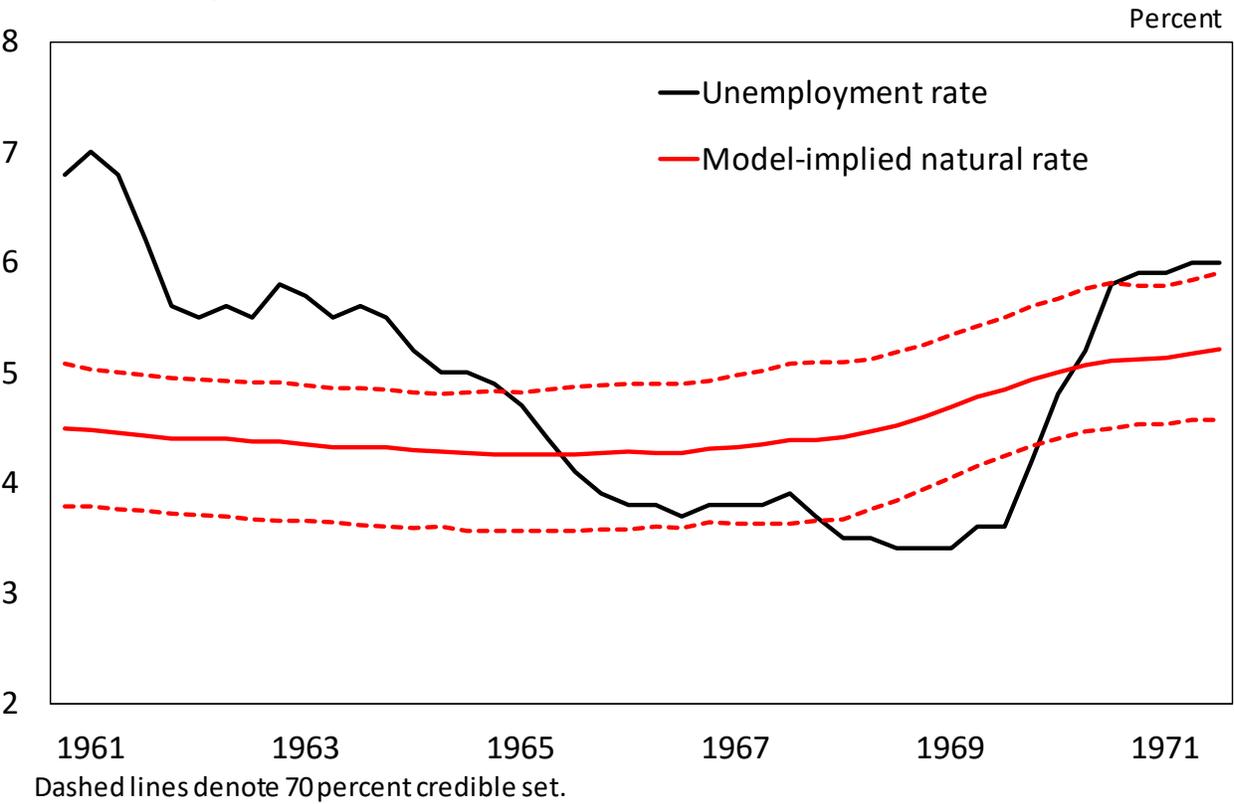
10. Response of core inflation to an unemployment gap shock

Percentage point deviation from baseline

(−0.31)   (−0.35)   (−0.18)   (−0.16)

—— 1965   – – 1969   – – – 1995   ····· 2015

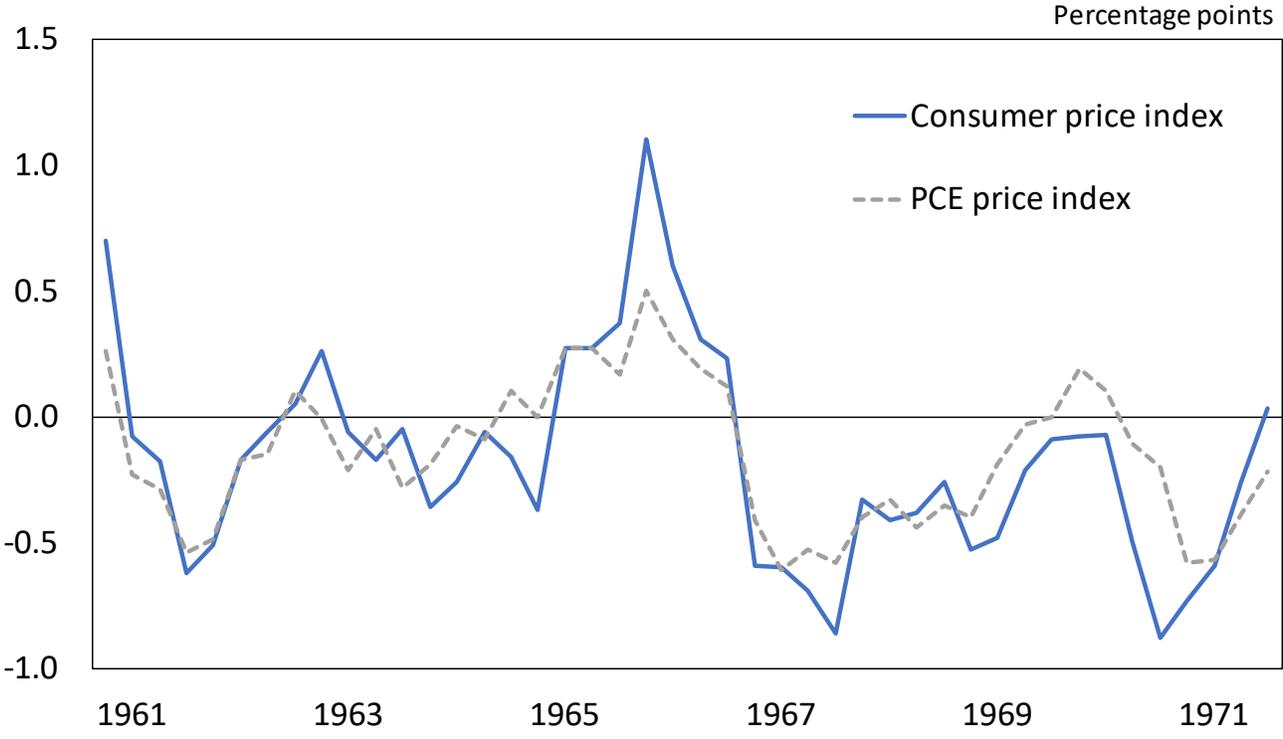Quarter following shock
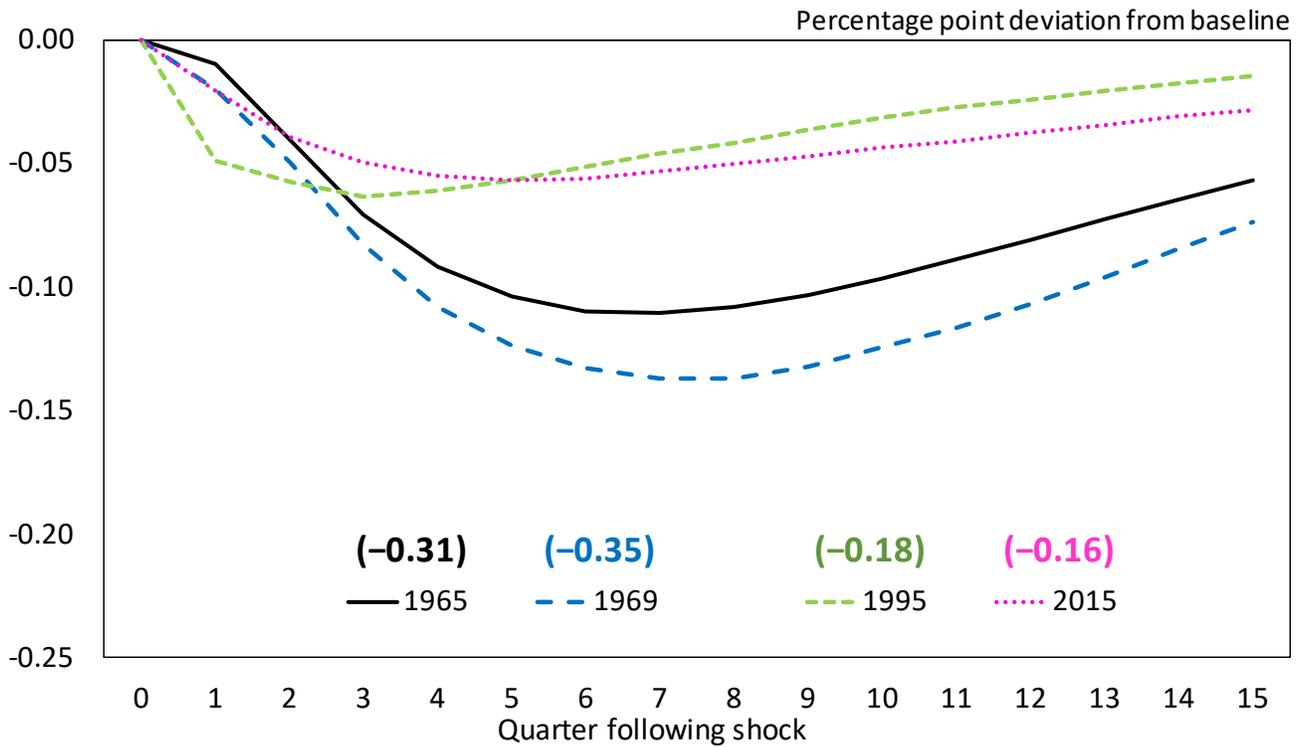
Note: Eight-quarter integral multipliers in parentheses.

11. Response of TULC growth to an unemployment gap shock

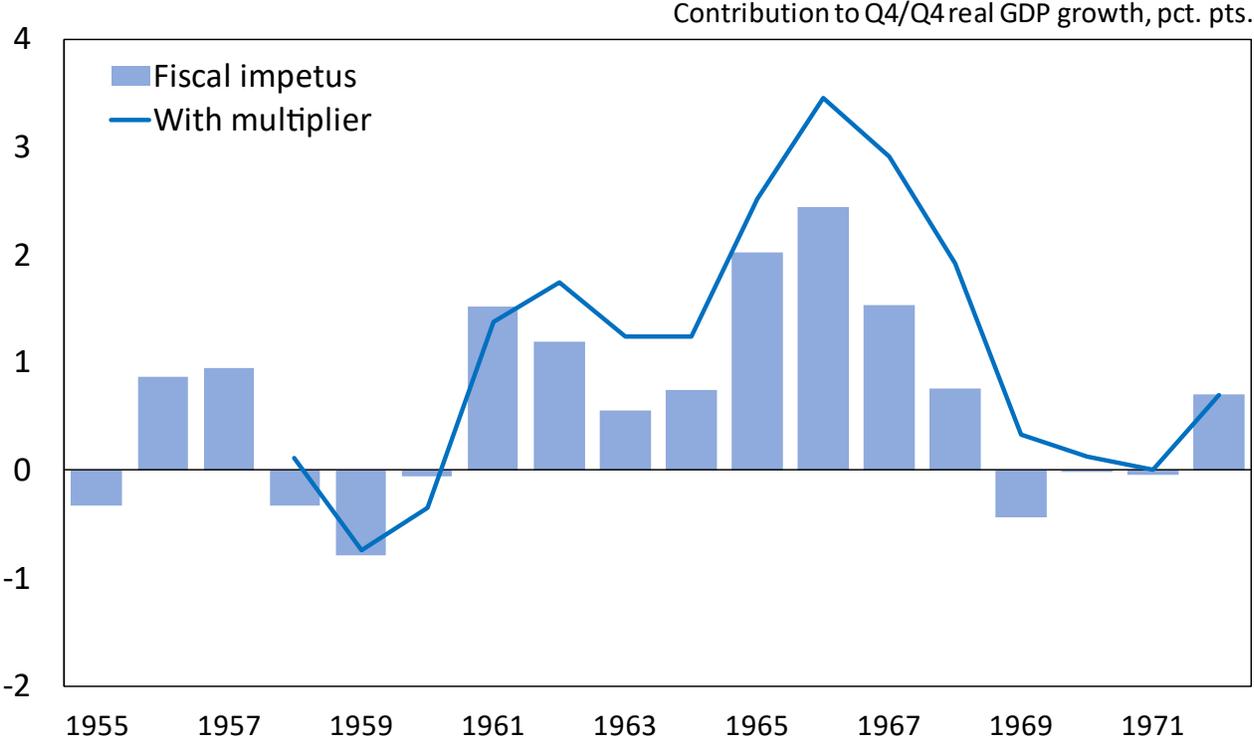Percentage point deviation from baseline

(−0.43)   (−0.44)   (−0.47)   (−0.40)

—— 1965   – – 1969   – – – 1995   ····· 2015

Quarter following shock
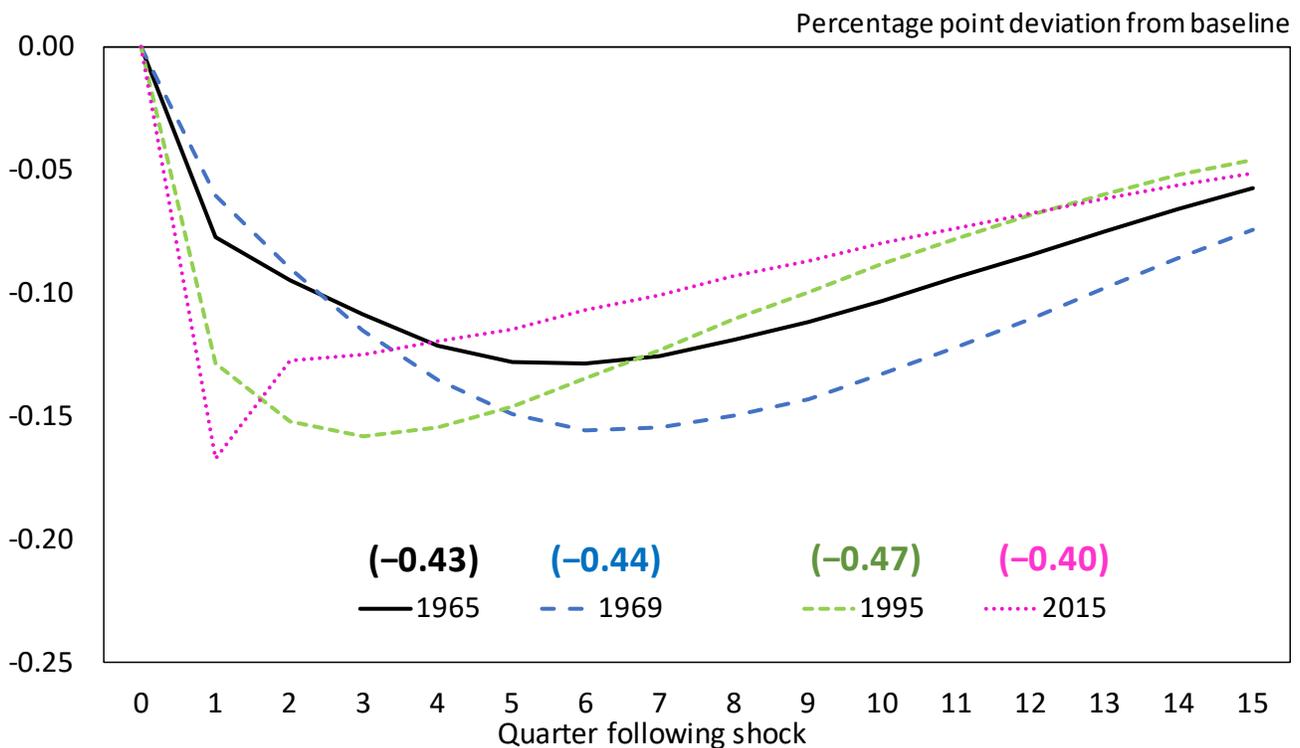
Note: Eight-quarter integral multipliers in parentheses.

12. Relative contribution of food and energy prices

Percentage points

13. A summary measure of fiscal policy in the 1960s

Contribution to Q4/Q4 real GDP growth, pct. pts.

Legend:
- Fiscal impetus (bars)
- With multiplier (line)

14. Fiscal policy and the output gap

Percentage points (fiscal impetus) or percent (output gap)
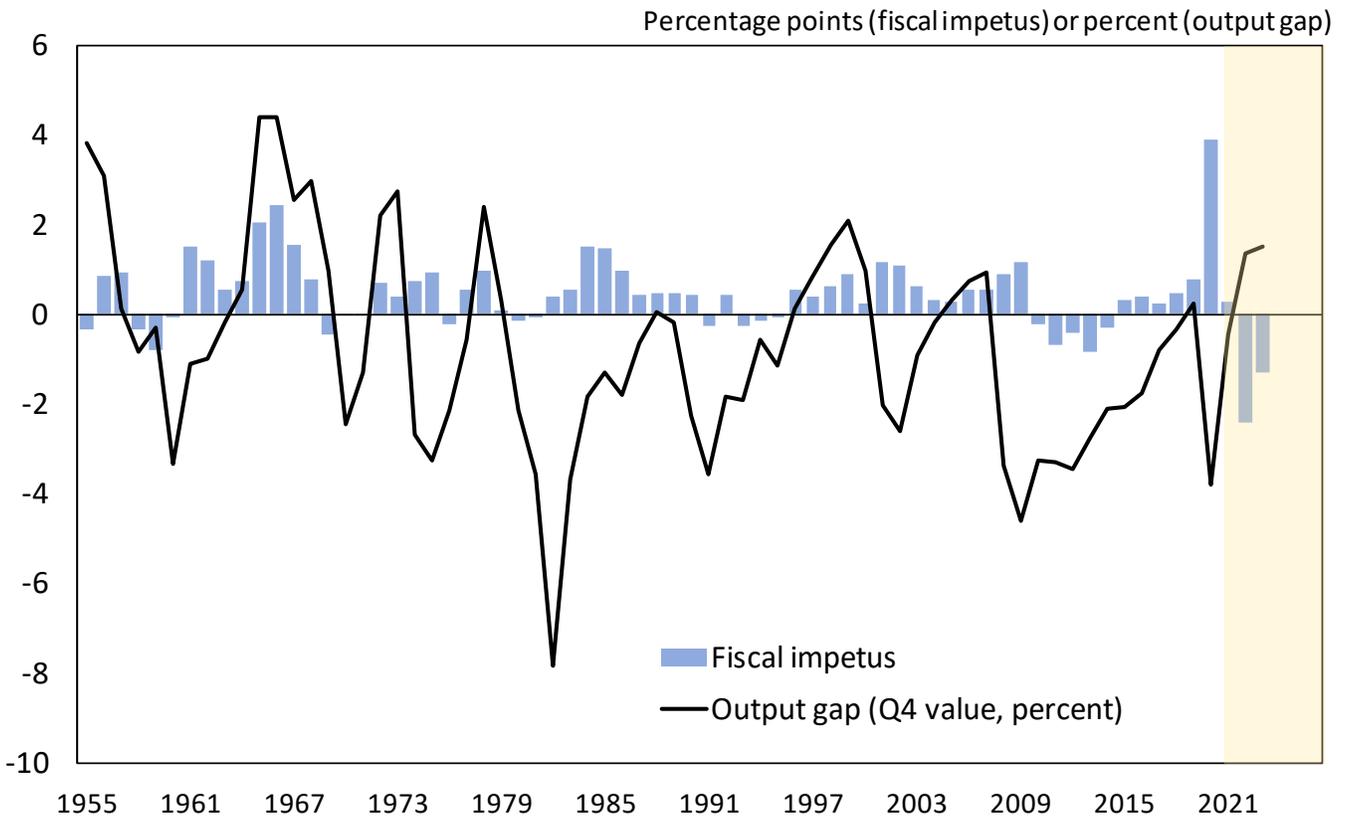
Notes: Shaded region denotes forecast. Output gap forecast uses July 2021 CBO potential output projection and December 2021 median FOMC SEP projection for real GDP. Fiscal impulse for 2020–2023 is derived from Brookings Hutchins Center fiscal impact measure (downloaded 2/6/2022), adjusted using CBO potential output growth. (See Appendix for additional details.)

15. Today this building is known as the *Martin* Building...

FEDERAL RESERVE

press release

REC'D IN RECORDS SECTION

APR 9 1969

For immediate release.   April 9, 1969

The Board of Governors of the Federal Reserve System
announced today it has postponed indefinitely the construction on
a more than $30 million annex to be situated immediately north of
its present building on Constitution Avenue in Washington. This has
been done to minimize competition for scarce goods and services during
the current inflationary period.

At the same time, the Board said it was requesting the
Federal Reserve Banks and Branches throughout the country to defer
or reduce construction programs to the maximum extent practicable.

The Board's annex will eventually be built on a site between
20th and 21st Streets directly across C Street from the present building.
The annex has already been approved by the Fine Arts Commission and the
National Capital Planning Commission. Construction had been scheduled
to begin this year with completion in 1971.