Finance and Economics Discussion Series

Federal Reserve Board, Washington, D.C.
ISSN 1936-2854 (Print)
ISSN 2767-3898 (Online)

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Edward Nelson

2022-037

Please cite this paper as:
Nelson, Edward (2022). "How Did It Happen?: The Great Inflation of the 1970s and Lessons for Today," Finance and Economics Discussion Series 2022-037. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2022.037.

How Did It Happen?:
The Great Inflation of the 1970s and Lessons for Today

Edward Nelson*
Federal Reserve Board
May 24, 2022

Abstract

The pickup in the U.S. inflation rate to its highest rates in forty years has led to renewed attention being given to the Great Inflation of the 1970s. This paper asks with regard to the Great Inflation: "How did it happen?" The answer offered is the fact that, in both the United Kingdom and the United States, monetary policy and other policy instruments were guided by a faulty doctrine—a nonmonetary view of inflation that perceived the concerted restraint of aggregate demand as both ineffective and unnecessary for inflation control. In the paper's analysis, the difference in the economic policy doctrine in the 1970s from that prevailing in more recent decades is represented algebraically, with this representation backed up by documentation of policymakers' views. A key conclusion implied by the analysis is that the fact that a nonmonetary perspective on inflation is no longer prevalent in policy circles provides grounds for believing that monetary policy in the modern era is well positioned to prevent the recurrence of *entrenched* high inflation rates of the kind seen in the 1970s.

* Email: Edward.Nelson@frb.gov. The views expressed in this study are those of the author alone and should not be interpreted as those of the Federal Reserve or the Board of Governors.

1. Introduction

The rise during 2021 and 2022 of U.S. inflation to its highest rate since the early 1980s, together with the pickup in inflation in many other countries, has led to renewed attention being given to the Great Inflation of the 1970s.

In these recent retrospectives on the Great Inflation, a key consideration has concerned the implications for monetary policy of the 1970s experience. The discussion takes place against the background of a considerable degree of agreement among economists that the Great Inflation can be traced to the provision, over the decade of the 1970s, of what was an excessive amount of aggregate demand (on average)—and that these aggregate demand settings are attributable to what was (again, on average) an overly easy monetary policy.[1] Against this background, an important task is to isolate *the factors that motivated the inappropriate monetary policy stance* that characterized the 1970s. Achieving this task could—by helping ensure that the factors identified do not figure into future monetary policy decisions—contribute to making monetary policy better positioned to prevent the recurrence of *entrenched* high rates of inflation of the kind seen in the 1970s.

This paper addresses the task just described. It reconsiders the experience of the United States and the United Kingdom in the 1970s by asking about the Great Inflation: "How did it happen?" The paper offers an answer to this question and gives the grounds for preferring it over a standard answer—one focused on attempted exploitation of Phillips-curve tradeoffs—that is highly prevalent in the economic literature related to the question. In addition, on the basis of the answer provided here to the question "How did it happen?," the paper draws implications from the Great Inflation experience for current discussions of monetary policy and inflation.

The posing of the question as "How did it happen?" is deliberate. The questions "Why did it happen?" and "How did it happen?" both aim to obtain broad, thematic explanations for the Great Inflation. Notably, both questions seek to discern the reasoning behind the pattern of monetary policy actions without which—by wide agreement, as indicated above—the inflation of the 1970s could not have occurred. Furthermore, irrespective of whether one is posing the question of "how" or of "why" the Great Inflation occurred, one is trying to get away from a period-by-period narrative analysis of the sequence of policy decisions that took place in the

[1] The basis for dating the U.S. Great Inflation specifically to the 1970s—and, in particular, for not including the years 1965 to 1969 as part of the same era—is discussed below. See Section 5.

1970s and, instead, seeking to extract key, recurring drivers of policymaking during that decade. But, as between the two questions, asking "how," instead of "why," amounts to demanding a deeper explanation. Compared with asking "why," asking "how" the Great Inflation happened better orients the discussion toward a study of what is encapsulated in this paper in the term *doctrine*—the underlying mindset or conceptual framework associated, on an ongoing basis, with economic policy decisions during the 1970s.[2] That is, asking "how" highlights the importance of determining the economic doctrine espoused by policymakers during the 1970s and what that doctrine implied for the analysis and control of inflation.

In the course of answering this question, the paper argues that the existing consensus of economists regarding the Great Inflation is misplaced—because it neglects key aspects of policymaker doctrine in the 1970s, while attributing to policymakers of the 1970s views that they did not possess. The problem boils down to the following: the research literature on the Great Inflation has tended to favor accounts that take for granted that the high inflation rates recorded in the 1970s were a *deliberate policy choice*—that is, policymakers *understood* that high inflation resulted from excessive monetary policy ease and that they were providing such ease. In contrast, the documentary record of U.S. and U.K. policymakers' statements makes clear that these policymakers sought *low* inflation but that, in making decisions, they were crucially inhibited by their failure to recognize that monetary policy is the decisive factor, over time, in setting a country's inflation rate. As a result, the authorities in this era put economic policy onto inappropriate settings in two distinct, but interacting, ways: they deployed nonmonetary tools against inflation in the form of incomes policy (that is, various administrative, industrial, and tax measures aimed at directly affecting prices and costs) and—confident that inflation was being taken care of by these tools—they unintentionally made monetary policy overly expansive.

The paper demonstrates the validity, and cross-country applicability, of this explanation. It documents, via an examination of U.S. and U.K. policymakers' statements on inflation during the 1970s, the *nonmonetary view of inflation* to which the authorities persistently subscribed over the course of the decade. The documentation consists primarily of vintage public statements made by officialdom on the subject of inflation. The documentary material employed in this paper complements, rather than overlaps with, the evidence on policymakers' nonmonetary view of inflation that was provided in previous studies of policymaker statements and doctrine by

[2] The use of the terminology "doctrine" to encompass policymaker views on economic behavior and the appropriate setting of policy is consistent with the use of the term "central bank doctrine" in the title of Bernanke (2011) (although Bernanke uses the term only once after employing it in the title). Because a key point of this paper is that, in the 1970s, inflation control was not specifically associated with monetary policy, the doctrine considered below will pertain to general economic policy regarding inflation, not just central bank doctrine.

Romer and Romer (2002, 2004, 2013) and Nelson (2005) in the U.S. case and by Nelson and Nikolov (2004) and Nelson (2005, 2009) in the U.K. case.[3] Like these previous studies, the analysis here emphasizes changed doctrine (or "economic ideas" in Romer and Romer's terminology) as the key to understanding the move away from Great Inflation-era policies.

In making the argument that explanations that treat inflation as a deliberate policymaker choice do *not* provide a useful way of understanding the 1970s experience, the paper confronts and refutes a specific explanation of this kind: one focused on Phillips-curve tradeoffs. The notion that policymakers in the 1970s deliberately sought inflation as a means of purchasing or securing low rates of unemployment is prevalent in the research literature, and it also pervades discussion of the Great Inflation in the news media and social media today. This explanation was crystalized by Sargent (1999), who postulated that the move on the part of policymakers from a belief in an exploitable, long-run downward-sloping version of the Phillips curve to the acceptance of a long-run-vertical version explains why U.S. monetary policy eventually (starting in 1979) featured the actions by the Paul Volcker-led Federal Reserve that would deliver "the conquest of American inflation."

Sargent's analysis amounted to a formalization of a position that was, and remains, very widely held among economists. The conviction that Phillips-curve tradeoff calculations drove pre-1979 U.S. economic policy was commonplace among economists before Sargent (1999) and remains so dominant today that it should be considered the consensus explanation regarding the Great Inflation. For example, Blanchard (2016, p. 33) refers to the "policies followed in the 1960s, [and] the painful lessons of the 1970s" and makes clear that, as he sees it, the 1970s developments resulted from policymakers previously "succumbing to temptation" by pursuing an "appealing tradeoff" in which below-normal unemployment rates were perceived as obtainable via a deliberate policy of higher inflation.[4] The position developed here, in contrast, is that tradeoff-centered explanations are not at all useful in understanding the perspective taken by policymakers during the 1970s.[5] A change in policymakers' economic model (which is part of

[3] These papers discussed the relationship of these explanations to that of Orphanides (2003), who also argued that the U.S. inflation of the 1970s was inadvertent but largely limited the errors that Federal Reserve and U.S. administration policy officials made to their reliance, in policy decisions, on poor estimates of economic slack. Further discussion of the relationship between Orphanides' explanation and that offered here appears below.
[4] Among many other endorsements of the notion that policymakers in the 1970s deliberately generated inflation with the aim of obtaining low unemployment, see Taylor (1996, pp. 184–185) and Cochrane (2021).
[5] This is a different benchmark to meet from the criterion that the explanation account for observed inflation and unemployment patterns in the 1970s. It is perfectly possible for an explanation to succeed according to the latter criterion—yet be implausible because it requires hypothesizing that 1970s policymakers adhered to particular views on economic behavior that the documentary record shows that they did not, in fact, embrace.

their doctrine, as defined in this paper) between the 1970s and later did indeed figure crucially—but, with regard to the details of this change, this paper does *not* see a shift in the assessment of the long-run slope of the Phillips curve as having been an important element.

The conclusion of this paper that a nonmonetary analysis of inflation—and not calculations of Phillips-curve tradeoffs—dominated policymaker thinking in the 1970s bears directly on the lessons for today to be drawn from the Great Inflation. In the modern era, monetary policy is much more widely accepted as responsible for the control of inflation, in both the United Kingdom and the United States. No other policy device is heavily directed toward inflation control. These arrangements reflect a change in doctrine since the 1970s, in favor of a recognition in both countries of monetary policy's particular role, and responsibility, regarding inflation. This change does not rule out the possibility of episodes in which there are deviations from price stability. But it does put monetary policy in a strong position to respond to and quell high inflation. Consequently, there is a strong basis for believing that protracted high inflation is far less likely in the modern day than in the 1970s.

This paper proceeds as follows. Section 2 elaborates on the focus on doctrine taken in this paper. Section 3 lays out the nonmonetary view of inflation that was embedded in policymaker doctrine in the 1970s. Section 4 provides documentary evidence on U.K. and U.S. policymakers' espousal during the 1970s of that doctrine. Section 5 critiques the alternative, tradeoff-based, view of policymaker behavior. Section 6 concludes by drawing some lessons for modern conditions from the experience of the Great Inflation of the 1970s.

2. Focusing on doctrine

This section elaborates on the basis for believing that an analysis of the Great Inflation that focuses on the question "How did it happen?" goes deeper into the underpinning of monetary policy and other key economic policy settings in the 1970s than does asking "Why did it happen?" It is stressed that asking how the Great Inflation occurred involves focusing the analysis on doctrine. In addition, as detailed below, an emphasis on doctrine implies moving away from basing the analysis on a representation of the monetary policy reaction function in force during the Great Inflation or of the particular monetary policy strategy followed.

2.1 "How" versus "why"

In economic research on the Great Inflation, asking "why did it happen?" has certainly been the

preferred way of framing the discussion. In particular, in their celebrated article on historical reaction functions, Clarida, Galí, and Gertler (2000, p. 178) observed: "One important question our paper raises but does answer is… why is it that during the pre-1979 period the Federal Reserve followed a rule that… maintained persistently low short-term real [interest] rates in the face of high or rising inflation."[6]

Clarida, Galí, and Gertler's posing of this question amounted to an acknowledgment that the very important exercise that their paper carried out—establishing, by estimation over the Great Inflation period, a numerical representation of the U.S. monetary policy reaction function prevailing in the 1970s—did not provide a deep enough account of policy behavior to qualify as an answer to the question of "why" the Great Inflation occurred. The estimation of reaction functions on sample periods covering the 1970s provides details on the facts of the monetary excess in that decade and on how it was linked to key economic variables. In itself, however, that exercise does not—and is not designed to—shed light on policymakers' reasons for adhering to this reaction function.

One could, however, answer the further question Clarida, Galí, and Gertler (2000) pose of "why" and still not have a deep enough explanation of the Great Inflation. This is because an accurate answer to the question of "why" might elaborate the monetary policy *strategy* that underlay the reaction function. Yet it need not reveal what doctrine—what basic set of economic postulates prevailing among officialdom—underpinned the setting of economic policy during the 1970s and so underlay both policy strategy and the monetary authorities' reaction function.[7]

That explaining the 1970s experience in terms of policy strategy answers "why" but not "how" the Great Inflation occurred is perhaps best brought out by considering the case of a small economy under arrangements of fixed exchange rates and high capital mobility. Such a case does not describe the countries that are the main concern of this paper—the United Kingdom and the United States—but it does largely correspond to the situation Ireland experienced in the 1970s. As Ireland, until 1979, had a fixed exchange rate, along with conditions of high capital mobility, *vis a vis* a very high-inflation country—the United Kingdom—one can legitimately answer the question of why Ireland experienced the Great Inflation by pointing to its choice of monetary policy strategy: namely, a fixed exchange rate. But this answer does not—either for

[6] See also the title of Primiceri (2006).
[7] A definition of "doctrine" that roughly matches the way in which that term is used in this paper is one of those given in the online *Oxford English Dictionary*. The oed.com definition reads, in part: "A body or system of principles or tenets." In applying this definition to economic policymaking, one would need to insist that the "tenets" in question would need to include the authorities' basic model of the economy.

Ireland or other countries that pegged their exchange rates over large portions of the 1970s—explain why the choice of fixed exchange rates was not invariably judged at the time as inherently inconsistent with the national goal of domestic price stability.[8] In order to obtain such an explanation for a country, one needs instead to consider official doctrine—and so secure an understanding of policymakers' (misplaced) judgment that they had chosen an economic strategy consistent with the aim of low inflation. Furthermore, the need to ascertain the underlying policymaker doctrine during the 1970s applies not only to the fixed-exchange-rate case but also to instances of other monetary policy strategies, such as those that the United States and the United Kingdom adopted in the era.

The conclusion that neither the reaction function nor policy strategy provides the key to a really fundamental explanation of the Great Inflation is a corollary of the fact that each of them involves higher layers of monetary policy than does doctrine. In the case of an interest-rate-based policy, for example, one might decompose the monetary policy provided to an economy into operational settings (such as the use of open market operations, or of adjustments to an administered policy rate, to deliver a desired value of a market interest rate), the reaction function (linking the target value of the market interest rate to the state of the economy), strategy (such as a variant of an inflation-targeting approach), and doctrine. Each of these elements corresponds to a particular layer of monetary policy: operations implement the reaction function; the reaction function implements strategy; and strategy implements doctrine.[9] In the analysis of the Great Inflation, considering doctrine—instead of strategy or the reaction function—means going to a deeper layer of explanation and, in so doing, shifting the question from "why" to "how" the Great Inflation occurred.

3. Policymaker doctrine in the 1970s—the substance

The aim of this section is to represent 1970s policymakers' views parametrically and discuss some of the implications for the control of the inflation rate. The validity of this representation as a description of 1970s doctrine will then be documented in Section 4.

Because the view of inflation prevalent in the 1970s leaves so little room for monetary policy and aggregate demand to influence inflation, it may appear, to modern appearances, to be a

[8] For related criticisms of the practice of citing fixed exchange rates as the fundamental basis for explaining the Great Inflation in smaller countries, see Romer (2005, p. 183) (discussing the link between the Bretton Woods system and the Great Inflation) and Nelson (2008) (considering Ireland's Great Inflation experience).
[9] The dictum that "strategy implements doctrine" can be found frequently in the national-security literature. See, for example, Scott and Scott (1982, p. 8).

nihilistic view of inflation and one that cannot plausibly have once been officially subscribed to. The perspective of this paper is that this view of inflation was, indeed, badly flawed—but that it had an internal consistency that helps account for much of its resilience over the 1970s. In addition, it is important not to overlook the fact that the doctrine prevailing in the 1970s regarding inflation had some features in common with more modern views of inflation. As a means of establishing these points, this section approaches the exercise of expounding the nonmonetary view of inflation by using as a baseline the standard, latter-day perspective, in which inflation is a monetary phenomenon, and then obtaining the nonmonetary view as a deviation from this baseline.

3.1 The standard position—a monetary view of inflation

It is useful, therefore, to start with an expectational Phillips curve of the kind that informs the perspective taken on inflation in modern-day discussions in both research and policy circles. With that specification used as a starting point, it is possible to specify restrictions on this Phillips curve—restrictions that appear highly nonstandard from a modern perspective—as a means of bringing out the doctrine guiding anti-inflation policy in the 1970s.

Defining π_t as the quarterly inflation rate (the log-difference of the price level) and the output gap $\tilde{y}_t$ as the difference between log real output, y_t, and y_t^*, the log of its potential level (so $\tilde{y}_t = y_t - y_t^*$), the expectational Phillips curve is:

$$\pi_t = \pi_t^e + \alpha\tilde{y}_t + u_t \qquad (1)$$

A single parameter α—the output-gap coefficient—appears in equation (1). It is strictly positive ($\alpha > 0$) in this standard setup. This setting of α is reconsidered later when attention is turned to 1970s-vintage doctrine concerning inflation.

The expected inflation term π_t^e in equation (1) typically pertains to either the current inflation rate or the expected next-period inflation rate. When the inflation expectation pertains to the current rate, π_t^e would correspond to $E_{t-1}\pi_t$, while—in a case that would be more along the lines of a New Keynesian approach—when the expected rate is next-period inflation, π_t^e might be either the lagged expectation $E_{t-1}\pi_{t+1}$ or the current expectation $E_t\pi_{t+1}$. In what follows, it will be useful to assume that the π_t^e term is a lagged expectation (that is, it is either $E_{t-1}\pi_t$ or $E_{t-1}\pi_{t+1}$), as this will facilitate consideration of the implications of variations in the current

output gap or in the shock term u_t on π_t while holding inflation expectations fixed.[10]

The u_t term, which shifts π_t for a given output gap and is often referred to as a "cost-push shock," is a feature of specifications in both older Phillips-curve writings (see Humphrey, 1978) and the New Keynesian literature (for example, Clarida, Galí, and Gertler, 1999). The inclusion of the term in modern-day Phillips-curve analysis is not controversial: it is standard to suggest that, for given aggregate-demand/aggregate-supply balance in the economy (as captured by the output gap) and expected inflation, the recorded inflation rate at any point in time is subject to shocks that affect specific prices and that are manifested in short-run movements in the overall price index.

The cost-push shock had, however, a much more prominent status in the doctrine guiding anti-inflation policy in the 1970s. The importance of the u_t term as a driver of inflation is, in fact, what really sets 1970s policymaking thinking apart from later views. As will become clear below, 1970s policymakers placed great significance on cost-push shocks not only as a short-term influence on inflation but also as a long-term driver—and formed anti-inflation policy in that light.

In the discussion that follows, including when 1970s views regarding inflation are characterized, it is assumed for simplicity that the cost-push shock term u_t is white noise. This restriction does involve abstracting from one important aspect of the view prevailing in policy circles in the 1970s—which was that cost-push shocks were persistent. But this abstraction permits a concentration on more fundamental differences between earlier doctrine and the later position on inflation. In particular, it will be important to consider the possibility that, although white noise, the u_t term might have a positive mean rather than a zero mean, as this positive-mean setting was a central part of the 1970s view of inflation.

For now, in characterizing the standard perspective on inflation, it is worth noting features that are largely taken for granted in discussions of the modern Phillips-curve specification but that mark it out from views of inflation predominant in the 1970s. These are that the u_t process is composed wholly of exogenous private-sector forces, is not susceptible to management by the authorities, and has a zero mean.

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[10] Other than this expectations term, equation (1) does not allow for any dynamics and so differs from the more detailed Phillips-curve specifications likely to be used in practice. The discussion that follows will also abstract from lags and any other sources of imprecision in the short-run link between monetary policy actions and real aggregate demand.

In a situation in which there is a constant steady-state inflation rate, one can take means of the terms in the standard Phillips curve (1) and obtain

$$\mu_\pi = \mu_\pi + \alpha\mu_{\tilde{y}} + \mu_u \,, \qquad (2)$$

where μ_x is the unconditional mean of variable x. Expression (2) has used the fact that when inflation has a constant steady-state rate, the actual inflation rate and the conditional expectation of inflation will have the same unconditional mean, μ_π.

It has already been noted that the standard Phillips curve imposes an assumption that the mean cost-push shock term is zero: $\mu_u = 0$.[11] That being the case, the fact that π_t and π_t^e converge to the same value in the long run implies that expression (2) displays the vertical long-run Phillips curve property. Equation (2) then collapses to $\mu_\pi = \mu_\pi + \alpha\mu_{\tilde{y}}$, or, more simply, $\mu_{\tilde{y}} = 0$. Therefore, the output gap has a zero mean in these conditions. Under the standard Phillips curve, the corollary of unanticipated inflation being zero in the long run is the natural-rate result that output equals potential output in the long run.

It is common in presentations of the expectational Phillips curve to stress the fact that the natural-rate result just described depends on the imposition of a unitary coefficient on expected inflation in the Phillips curve (a long-run verticality condition). This point is an important one, and that verticality condition is indeed embedded in equation (1). For the present discussion, however, another facet of the standard natural-rate result also deserves emphasis: the result depends vitally on the assumption that the cost-push shock has a zero mean.

To see this, consider the situation in which the shock has a positive mean ($\mu_u > 0$). In that case, equation (2) implies the condition

$$\alpha\mu_{\tilde{y}} + \mu_u = 0. \qquad (3)$$

This equation can be regarded as describing the settings of aggregate demand that are necessary to deliver an average inflation rate of μ_π. With $\mu_u = 0$, a policy that keeps real aggregate demand on average close to potential output will secure this outcome, because, as already noted, this implies both $\mu_{\tilde{y}} = 0$ and a steady-state inflation rate of μ_π. The situation is different,

[11] This is also, in effect, the specification used by Sargent (1999, p. 21) who, in giving the model economy's true "expectations-augmented Phillips curve," goes further and implicitly sets $u_t = 0$ for all t.

however, when the cost-push shock has a positive mean: that is, $\mu_u > 0$. A positive-mean cost-push shock implies a tendency for inflation to break out persistently, and to be decoupled from a preexisting level of expected inflation, even when the output gap is zero. In terms of average behavior, as reflected in equation (3), $\mu_u > 0$ implies that an aggregate demand policy under which the output gap tends to be permanently negative is required just to deliver a constant steady-state inflation rate of μ_π. Specifically, $\mu_{\tilde{y}}$ needs to be more negative, the higher is μ_u.

The setting of $\mu_u > 0$ is therefore sufficient to make the connection between aggregate demand and inflation decidedly different from what it is in the standard, modern view of the inflation process. One could contend, nevertheless, that a positive-mean cost-push shock is otherwise associated with familiar propositions regarding monetary policy's ability to control inflation. In particular, it remains possible, when u_t in the Phillips curve (1) has a positive mean, for monetary policy's influence on aggregate demand to be the means of delivering a constant steady-state inflation rate.[12]

As will now be detailed, however, even this route by which monetary policy could manage inflation was not part of the official doctrine in the 1970s in the United States and the United Kingdom. That doctrine instead entailed additional restrictions on equation (1) that moved the specification still further away from standard results—and toward a setting in which inflation is not a monetary phenomenon, so monetary policy is denied the ability to control inflation.

3.2 Nonmonetary view of inflation

The nonmonetary view of inflation prevalent in officialdom in the United States and the United Kingdom in the 1970s held, as already indicated, that cost-push shocks are positive on average ($\mu_u > 0$) in a situation in which price- and wage-setting were left to market forces. But it went further than this, as it also implied restrictions on the specification of the demand/inflation link. In effect, these restrictions precluded the possibility that monetary policy could control inflation.

For *periods when the output gap was positive*, the 1970s doctrine was not different from the modern-day standard view other than in seeing the cost-push shock as positive in mean. That is, when $\tilde{y}_t > 0$, equation (1) prevailed but with $\mu_u > 0$ instead of the standard Phillips curve's setting of $\mu_u = 0$. Notably, as in the standard view, in this range of output-gap values, the

[12] Likewise, on a period-by-period basis, the monetary authority in these circumstances is capable of managing inflation by affecting the output gap: for example, by moving the period-t output gap in a manner that offsets the effect on period-t inflation of a positive period-t cost-push shock, u_t (taking π_t^e as being predetermined in period t).

output-gap coefficient was taken to be positive, $\alpha > 0$, so positive output gaps added to inflation.

But the 1970s doctrine also implied an asymmetry: in *periods when the output gap was negative*, it took α to be zero—a setting implying that negative output gaps did *not* remove inflationary pressure and so could not offset upward pressure on inflation arising from the cost-push term (or from the expected-inflation term). In this region, the inflation equation simply became:

$$\pi_t = \pi_t^e + u_t \,. \tag{4}$$

Inflation was therefore viewed as being a pure cost-push process when the output gap was negative. A corollary, in view of the assumption that u_t is not sensitive to aggregate-demand adjustment, is that, under this setting, inflation is a nonmonetary phenomenon.

As discussed presently, during the 1970s, policymakers and outside commentators alike rarely believed that output was above its potential value. It was seldom the case that they judged the current output gap to be positive, and they often viewed it as being deeply negative. Consequently, equation (4) was regarded as the empirically relevant one during the period, even though it formally only applied over a certain range of values (that is, negative values) of the output gap.[13] Inflation for the decade as a whole was, therefore, predominantly attributed to nonmonetary factors. And economic policy against inflation was designed in that light, in both the United States and the United Kingdom.

It is worth considering some implications of treating equation (4) as though it is the appropriate specification of inflation in considering the conditions of the 1970s.[14] Two nonstandard properties of the equation are particularly notable. First, it is an expectational difference equation for inflation that implies that inflation is driven entirely by a single forcing process: the cost-push shock (including expected values of that shock). If the cost-push shock process is simply exogenous, then, per equation (4), the behavior of inflation reflects nothing other than that exogenous process—and it is certainly not susceptible to influence by demand-management

[13] That is, the implied position taken by policymakers was that, during the Great Inflation era, equation (4) should be treated as prevailing globally.

[14] Concretely, this could be taken as entailing an assumption that a current negative output gap could be expected to be followed by more negative output gaps in coming periods and then go to zero—but never become a positive output gap. In that case, when π_t^e is a forward-looking expectation, $E_{t-1}\pi_{t+1}$ or the current expectation $E_t\pi_{t+1}$ depends on expected future values of u_t but not on future values of the output gap. The assumption that positive output gaps were not expected in the future is consistent with 1970s policymakers' wish, discussed below, to avoid conditions of overfull employment.

policy that alters the output gap, as the output gap does not appear in equation (4).

A second nonstandard aspect of equation (4) lies in its long-run implications. As stressed above, the nonmonetary view of inflation suggested that, left to itself—that is, when allowed to be determined entirely by the private sector and to reflect the free operation of wage- and price-setting—the cost-push shock term has a positive mean. In that case, inflation equals its expected value plus a positive-mean term, and inflation and expected inflation will consequently not settle down to the same number over time. Under $\mu_u > 0$, therefore, one cannot obtain a constant steady-state inflation rate when inflation is driven by equation (4).

This second property of equation (4) casts light on how 1970s doctrine saw not only the causes of inflation as nonmonetary but also its remedy. The position that the cost-push shock had a positive mean referred, as indicated, to the behavior of that shock in the *absence* of policy tools that aimed to affect the u_t term directly. The nonmonetary cure for inflation advanced by policymakers involved precisely such tools—the tools of incomes policy—that aimed to control or influence wage- and price-setting via policymaker interventions in labor and product markets. Through such policies, policymakers tried to affect the value of u_t directly each period and hence alter its mean value. In terms of equation (4), it was believed that, via incomes policy, the mean of u_t could be moved down from a positive value down to zero. With the mean of the cost-push shock made zero by incomes policy, the authorities secure control of inflation. A steady state of the inflation equation (4) is obtainable as $\mu_\pi = \mu_\pi + \mu_u$—an expression that, using $\mu_u = 0$, simply collapses to the condition that the steady-state rate of inflation, μ_π, indeed prevails.

This view of inflation was therefore internally consistent in the sense that, having offered a nonmonetary analysis of inflation, it advanced a nonmonetary means by which inflation could be controlled. Under this view of inflation, policies designed to shift the mean of u_t down from positive-valued to zero play the role that demand management performs in controlling inflation in the standard case. Thanks to the moderation of cost-push shocks induced by an incomes-policy-based attack on inflation, inflation is, according to the nonmonetary perspective, controllable by government policy even when not susceptible to influence via monetary policy.

But, of course, the fact that it was an internally consistent theory of inflation did not imply that it was not erroneous. On the contrary, it was erroneous—and, as argued below, adherence to it in the United Kingdom and the United States through the late 1970s led to entrenched inflation.

3.3 Elements of continuity

The preceding discussion highlighted the differences between latter-day positions regarding the drivers of inflation—and on the implied status of monetary policy as an influence on inflation—from those implied by the official doctrine prevailing in the 1970s. But it is also worth being explicit about two elements of continuity in thinking on inflation control across the two eras. Bringing out these elements is important because some explanations for the Great Inflation require shifts to have occurred in policymakers' views regarding matters on which official thinking did not, in fact, change significantly.

The first element of continuity is the fact that in both equation (1) and (4) there is a unitary coefficient on expected inflation. It follows that the explanation for the Great Inflation—adherence by policymakers in the 1970s to the view of inflation embedded in equation (4)—argued for here does *not* postulate that 1970s policymakers believed in a long-run-nonvertical Phillips curve or that they held that expectations of inflation only mattered for inflation's behavior with a less-than-unit weight. This point is developed further in Section 5.

The second element of continuity is in goals. In principle, changes in doctrine can involve shifts in goals over time. Nevertheless, the difference between modern views on monetary policy and inflation and doctrine concerning these matters in the 1970s does not reflect an alteration in goals. Instead, the position taken here is that there has been continuity of economic goals over time, in both the United States and the United Kingdom. The price-stability, or inflation, goal and the full-employment objective have been basically constant, even as views regarding inflation's causes and cure have shifted greatly over time.

With respect to inflation, the monetary and nonmonetary views of price determination are consistent with the pursuit of the same average inflation rate and with this inflation rate being the value judged most consistent with price stability. And with respect to real economic activity, both the monetary and nonmonetary views are in line with the pursuit of a full-employment goal—output equaling potential—rather than a more ambitious goal of overfull employment (a positive output gap).

The judgment that officialdom's national economic goals have not changed over time—and, by implication, an appeal to changing goals is not part of a valid explanation for the Great Inflation—was an explicit finding that Romer and Romer (2002) reported in their classic examination of the U.S. stabilization-policy record. They stated (pp. 11–12) that "the basic

objectives of policymakers have remained the same" since the 1950s. In the period since their paper appeared, the Federal Reserve has introduced, in 2012, an explicit longer-term inflation goal of 2 percent. In light of that development, a very strict definition of the constancy of U.S. policy goals since the 1950s would include the criterion that policymakers' aspiration regarding the long-run inflation rate has never differed from 2 percent over the past seven decades. That strict criterion would likely not be met. But, although it is beyond the scope of this paper to provide a comprehensive analysis of policymakers' indications over time of their price-stability goal, the author is not aware of statements by senior economic officials in either the United States or the United Kingdom over the 1970s (or surrounding decades) stating a wish for a longer-run inflation rate higher than 3 percent or below zero.[15] So although the longer-term inflation goal pursued by the authorities was rarely made as specific as 2 percent during the Great Inflation period, it *was* in the low-single-digit range. It follows that those explanations for the Great Inflation that require that the authorities adoptrf a much higher inflation target do not line up with the record of policymakers' views in this era.

It is clear also that policymakers in both the United States and the United Kingdom have long used, as the economy's appropriate baseline, a potential-output concept corresponding to full employment (involving a sustainable or normal level of real economic activity) and have distinguished that state from an overheated economy (in which the output gap is positive). The evidence suggests that their objective in the 1970s was an output gap of zero—not a positive output gap.[16] For real economic activity, therefore, as for inflation, there was continuity in objectives across the Great Inflation era and more recent decades.

The fact that the real economic objective during the Great Inflation era consisted of a zero output gap raises a seeming tension in the explanation—centered on a policymaker nonmonetary approach to inflation control—being offered here for that era's inflation record. Section 1 noted that excessive aggregate demand—and so a recurrent tendency for the output gap to be positive—is widely recognized as characterizing the 1970s, while Section 3 indicated that even the 1970s viewpoint on inflation suggested that positive output gaps add to inflation and so warrant monetary policy tightening. Why, then, is this 1970s doctrine being argued here to have *discouraged* substantial monetary policy responses to inflation?

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[15] For example, Federal Reserve chair Arthur Burns stated in October 1977 that the long-run goal "must be zero inflation" (quoted in Meyer, 1977, p. 20A). His successor in 1978–1979, G. William Miller, stated (Miller, 1978b, p. 6): "There is a universal accord that our objectives should be full employment and price stability." In the case of the United Kingdom, see Nelson (2009) for relevant policymaker statements.

[16] For evidence on this matter in the case of the United States, see Romer and Romer (2002), Orphanides (2003), and Orphanides and Williams (2005).

The answer to this question is found in the fact that an explanation centered on the nonmonetary view of inflation is largely compatible with, and draws upon, Orphanides' (2003) pioneering account of output-gap measurement during the Great Inflation.

Orphanides showed that the U.S. output gap was predominantly negative when estimated in real time over the course of the 1970s—often severely so—even though retrospective estimates suggest positive gaps or negative gaps closer to zero. This pattern is also seen in the United Kingdom over the same period (see Nelson and Nikolov, 2004). Orphanides argued that output-gap mismeasurement could account for key U.S. economic outcomes over the 1970s, even under the assumption that monetary policy was otherwise formulated largely along modern-day lines.[17]

Clearly, an explanation, of the kind favored in this paper, that focuses on a flawed doctrine does not give output-gap mismeasurement pride of place in explaining the Great Inflation. On the contrary, it is contended here that policymakers' framework regarding inflation analysis and control was fundamentally misconceived and would have given rise to serious errors even in conditions of accurate gap measurement. But this doctrine-focused explanation does imply that output-gap mismeasurement could well have played a significant role. Furthermore, in doing so it bolsters the Orphanides account by providing arguments against a key criticism of that account. That criticism, advanced by Svensson (2000, 2013), is that high inflation in the 1970s should have led, via the use of an equation like (1), policymakers to realize that their output-gap estimates were implausibly negative and to revise them promptly.[18] When, however, policymakers view inflation as literally disconnected from the output gap, as in the nonmonetary view of inflation embedded in equation (4), there is no automatic link between the accrual of high inflation readings and the recognition that the output gap is less negative. It therefore becomes much more plausible that policymakers could have accepted large negative output-gap estimates alongside high inflation for long stretches of time.[19]

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[17] That said, Orphanides' account, like that favored in this paper and unlike numerous other explanations for the Great Inflation, implies that the authorities were not being intentionally overexpansive in setting monetary policy during the 1970s.

[18] Such a process would be unlikely to result in the complete correction of gap estimates because it is the potential-output component of the output-gap estimate that, being an unobservable series, is likely most susceptible to reassessment in light of incoming inflation readings. Orphanides (2003) did indeed find that U.S. potential output was very substantially overestimated in the Great Inflation period. But it is also true that a major portion of the output-gap mismeasurement in the 1970s documented by Orphanides (2003) reflected actual output being underestimated in real time. Such underestimation also characterized real-time output data in the U.K. national accounts of that era.

[19] Laidler (1978) was an early discussion noting that output-gap estimates in several major countries were hardly ever positive during the 1970s and that the plausibility of these estimates rested on interpretations of high inflation that disconnected inflation from the gap. Retrospectives on the Great Inflation that have stressed how a nonmonetary approach to inflation analysis seemed to validate the coexistence of high inflation and deeply negative

4. Policymaker doctrine in the 1970s—documentation

This section gives the basis for the characterization of policymaker doctrine in the 1970s that was laid out in Section 3. The evidence provided consists of statements made by senior officials in the United Kingdom and the United States during the pre-1979 period. These quotations bring out the nonmonetary perspective on inflation to which policymakers subscribed during the Great Inflation.

As indicated previously, a number of previous studies of the Great Inflation have provided evidence on this matter by offering vintage policymaker statements in which cost-push views of inflation were espoused. The documentation provided here complements that work by restricting the quotations considered to those not used in the earlier studies. In addition, the analysis here uses as a frame of reference equations (1) and (4) of the previous section. The policymaker statements are shown to imply restrictions on the standard Phillips curve (1) that move that specification away from a monetary view of inflation and deliver what is, from a modern-day perspective, a nonstandard view of inflation: the nonmonetary view encapsulated in equation (4). The analysis below also highlights how the doctrine revealed by the quotations is inconsistent with some explanations of the Great Inflation—as it does not correspond to the policymaker framework that was, according to those explanations, in force during the 1970s.

4.1 Background on U.K. policy doctrine

When characterizing official views during the Great Inflation period, the United Kingdom, rather than the United States, provides the best starting point. This is the case because the nonmonetary perspective on inflation had a long head start in the United Kingdom.[20] That perspective was already embedded in U.K. official doctrine well before the 1970s began—whereas it only became favored by the Federal Reserve leadership from the second half of 1970 onward.

A related reason for starting with the U.K. case is that—consistent with the nonmonetary doctrine having taken hold earlier—policy settings associated with the nonmonetary approach to inflation showed up clearly at an earlier point in the United Kingdom. Correspondingly, the United Kingdom from the start of the decade had notably higher inflation than the United States

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output-gap estimates include Romer and Romer (2002) in the case of the United States and Nelson (2001, p. 7) in the case of the United Kingdom. See also Bernanke (2013) for a policymaker discussion of the matter.

[20] For further discussion, see Nelson (2009) and DiCecio and Nelson (2013). Recent discussions that emphasize the role of nonmonetary views of inflation in this era include Romer (2017) and Broadbent (2020).

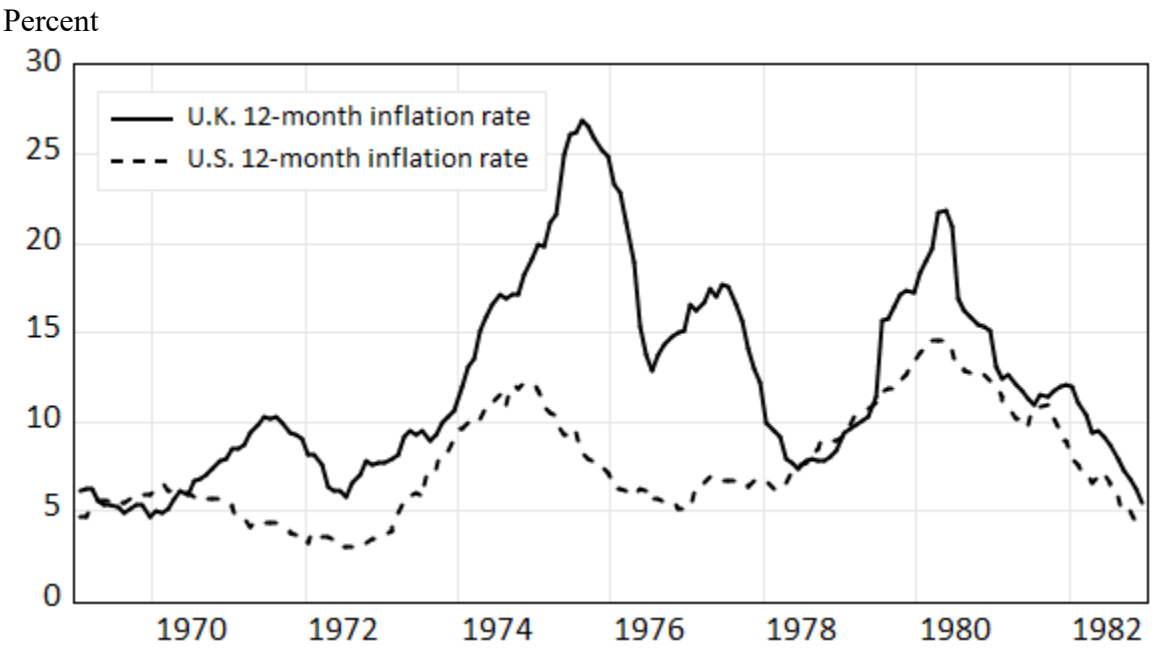

Figure 1. U.K. and U.S. consumer price inflation rates, January 1969–December 1982.
Source: Computed from monthly series in FRED portal on the U.S. consumer price index (seasonally adjusted) and the U.K. retail price index.

did (the highest 12-month consumer price inflation in 1970 being 6.4 percent for the U.S. rate, but 7.9 percent in the U.K. case—see Figure 1) and its inflation rate usually remained higher than—and was often far above—the U.S. rate over the course of the decade.

If, as is being argued here, nonmonetary views on inflation had many years' head start in the United Kingdom, why did very high inflation only have only a few years' head start in that country? An important reason is that, although nonmonetary views of inflation had long prevailed in the United Kingdom—including in policy circles—the country's postwar bouts of inflation through 1966 tended to give rise to a substantial response on the part of aggregate demand policy. Policymakers were prone to attribute inflation in the pre-1966 period to cost-push forces, but an excess-demand element was still recognized during the key inflation episodes. In addition, these episodes tended to be associated with downward pressure on the U.K. exchange rate—a factor that reinforced the tendency for inflation outbreaks to prompt monetary policy tightening. In 1961 and 1966, for example, although policymakers responded to somewhat elevated inflation rates by instituting a national incomes policy, they also raised short-term interest rates.

After the mid-1960s, however, there was an increased tendency for the U.K. authorities to continue to use incomes policy against inflation but to eschew measures directed at restraint of total spending—and even to expand aggregate demand while measures aimed directly at wages and prices were instituted. An attitude of permitting more exchange-rate flexibility after 1966 no doubt played a role in this change in the policymaking environment after 1966. But the relevance of the exchange-rate regime in explaining the U.K. Great Inflation is limited by the fact that some of the exchange-rate declines in the 1960s and 1970s followed, rather than paved the way for, monetary ease. Furthermore, as discussed further below, large depreciations of the pound sterling during the 1970s typically prompted some monetary tightening. A more fundamental reason for the greater monetary ease after 1966 is that a major, but initially underappreciated, rise in the natural rate of unemployment in the mid-1960s increased U.K. policymakers' propensity to misdiagnose demand-generated inflation as being cost-push in character and to form economic policy in that light.

Consistent with this set of developments was the manner in which, in early 1971, the U.K. Treasury justified its view of current inflation as a wage-push problem. The Treasury's analysis contrasted developments since 1967 with those prior to 1967, with the latter (alone) being seen as featuring inflation variations that partly stemmed from "the pressure of demand."[21]

Interpretations of U.K. events like those that the Treasury articulated are, in retrospect, widely accepted in retrospect as having been flawed. But they received official U.S. endorsement at the time. When Arthur Burns propounded cost-push interpretations of U.S. inflation as the head of the Federal Reserve, he cited the U.K. economy's experience as a precedent.[22]

4.2. Doctrine in the United Kingdom in the 1970s

In characterizing U.K. economic policy doctrine during the Great Inflation, it is useful to concentrate on the executive branch of government. U.K. government ministers' views are especially relevant in understanding anti-inflation policy during the Great Inflation because the 1970s long predated the conferring of operational independence to the Bank of England.

In what follows, a very limited number of quotations are used, in order to concentrate on a few statements that are especially self-contained and representative of policymaker doctrine in the

[21] HM Treasury (1971, p. 4).
[22] See Nelson (2005) and DiCecio and Nelson (2013).

1970s. Many other quotations over the period could have been provided that would have led to the same characterization of policymaker doctrine.

The U.K. tradition of viewing inflation in cost-push terms was brought out in a parliamentary speech that William Rodgers, Under Secretary of State for Economic Affairs, gave in August 1966 in support of a wage- and price-control bill that the government had introduced. Rodgers (1966, p.1718) stated: "There has been a growing awareness over the past decade or more—not merely in this country but in most parts of the world—that some positive policy is required if a proper relationship is to be secured between movements of incomes and movements of national productivity and if inflation is to be avoided. This is not to suggest that there is no longer any need, by the proper use of fiscal and monetary weapons, to regulate the level of demand in the economy. The important point is that this alone is not enough. A policy bearing more directly on negotiated increases in pay and on movements in prices is now widely accepted to be necessary in partnership with a fiscal and monetary policy."

Rodgers' statement brings out the key features of the Great Inflation-era view of inflation described in the previous section. First, it recognizes the deployment of aggregate demand tools ("fiscal and monetary weapons") as a *necessary* part of inflation control. That perspective sees equation (1), with $\alpha > 0$, as prevailing when the output gap is positive, in which case positive output gaps add to inflation—so they need to be avoided, via policies trying to keep output equal to potential. Second, the "important point" Rodgers articulated was that demand management was not *sufficient* to contain inflation. Because, on this view, cost-push forces, left unchecked, have a positive mean ($\mu_u > 0$) irrespective of what is happening to aggregate demand, they tend to raise inflation in both positive-gap conditions and negative-gap conditions (the latter conditions being described, according to the nonmonetary view of inflation, by equation (4)). Furthermore, starting from a state of a zero output gap, aggregate-demand restriction cannot, on this view, be used to engineer constant inflation in the event of a positive cost-push shock, because, according to equation (4), economic slack does not lower inflation. Direct measures (such as controls, voluntary pay agreements, and measures in the areas of industrial policy or tax policy) would appear to be necessary, in order to manage u_t directly and so make $\mu_u = 0$. In terms of Rodgers' casting of the problem, there needs to be a permanent incomes "policy bearing more directly on negotiated increases in pay and on movements in prices."

Rodgers' statement was not fully explicit in articulating the position that slack does not reduce inflation (that is, α is zero in $\tilde{y}_t < 0$ region, so equation (1) devolves to equation (4)) than it was on the other propositions connected to the nonmonetary view of inflation. But others with whom

Rodgers served in the U.K. governments of the 1960s and 1970s, and who held senior economic-policy positions in those administrations, were decidedly more forthright on this point. Harold Wilson, prime minister in 1964–1970 and 1974–1976, observed in 1972 that, since the 1950s, he had publicly criticized the position (which, of course, is common to both traditional and expectations-augmented Phillips-curve analysis) that there was an unemployment rate that once exceeded would set off disinflationary forces: "There is no [unemployment] figure" at which inflation pressures abate in response, Wilson (1972) observed. He added in an October 1974 address to the nation: "We reject a lurch into heavy unemployment as a means of fighting inflation—… the history of these postwar years in one country and another has shown that it does not work."[23] And Denis Healey, Chancellor of the Exchequer from 1974 to 1979, remarked in early 1977: "It will not be *possible* to master inflation unless there is a satisfactory agreement on pay policy for the coming year."[24]

It is worth stressing the distinction between these statements endorsing a *zero* response of inflation to negative output gaps and the position that the response is merely *low*. For the United States, Taylor (1997) argues that segments of the 1970s inflation are explicable in terms of policymaker acceptance of the standard inflation equation (1) (including a zero mean of the cost-push shock: that is, $\mu_u = 0$) but with a *low but positive* output-gap slope α.[25] On this interpretation, an assessment that very large short-run real-output costs would be associated with disinflation discouraged policymakers from restricting aggregate demand. Taylor contends that, in fact, policymakers were wrong to think that the sacrifice ratio was so adverse—but that equation (1) with a low α was, indeed, their position and accounts for why high inflation was allowed to continue over the decade of the 1970s.

If, as argued here, U.K. policymakers in the 1960s through 1979 believed that equation (4) held when the gap was negative, their views do not correspond to the Taylor (1997) characterization of 1970s official thinking. And neither do the views of U.S. policymakers in 1970–1979 if, as the present paper also argues, they, too, adhered to a nonmonetary view of inflation.

To gain further appreciation of this point, note that policymaker thinking as characterized by

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[23] Wilson (1974).
[24] Quoted in *Financial Times* (1977). Emphasis added.
[25] Primiceri (2006) also argues this but does so in a context in which he assumes that 1970s policymakers also took the coefficient on expected inflation in the inflation equation to be below 1.0, rather than the unity value imposed in equation (1). Consequently, his interpretation of the Great Inflation is vulnerable to both the criticisms of the Taylor (1997) account given here and the challenge laid out in Section 5 to tradeoff-based explanations for the 1970s inflation.

Taylor (1997) clearly does not constitute a nonmonetary view of inflation. On the contrary, with low α, inflation is still continuously related to the output gap (and, in particular, to aggregate demand) and manageable by monetary policy, irrespective of whether u_t is positive in mean in equation (1).[26] And if u_t has a zero mean in equation (1), the disinflation problem faced by policymakers using equation (1) in the low-α case is algebraically identical to a large-α case—the difference being only qualitative—and corresponds to standard Phillips-curve analysis.

The matter can be cast in terms of the optimal-control exercises available to the monetary authority. Clarida, Galí, and Gertler (1999) use a forward-looking version of Phillips curve (1) (incorporating the standard settings of a mean-zero shock, $\mu_u = 0$, and, of course, $\alpha > 0$). They are able to treat the output gap and inflation as central-bank choice variables in their exercises. There is a fundamental discontinuity between this situation and the $\alpha = 0$ case imposed in equation (4). In the latter case, inflation can no longer be treated as a choice variable by the central bank. It follows that the low-but-positive-α case is *not* revealing about the choices a central bank has when inflation is a nonmonetary phenomenon—and does not accurately describe how policymakers saw matters during the Great Inflation.

The low-but-positive-α (high-sacrifice-ratio) interpretation of 1970s policymakers' views must be rejected. With regard to U.K. economic policy specifically, it clearly does not correspond to the policy problem as characterized in the authoritative Rodgers statement given above. A low-α setting of equation (1) would not imply that a permanent incomes policy would be appropriate: such a policy would produce an artificial suppression of inflation readings, burying price signals and—with $\mu_u = 0$ in equation (1)—would make no genuine contribution to the removal of inflationary pressures. Aggregate demand policy would remain the sufficient, and the only effective, tool in the control of inflation if $\mu_u = 0$ and $\alpha > 0$, even when α is low. In contrast, the Rodgers statement is explicit in suggesting that aggregate demand is not a sufficient anti-inflation device and that cost-push forces impart to inflation systematic upward pressure that has to be dissipated through the deployment of incomes policy.

Furthermore, as the output gap was usually perceived as negative in the 1970s, the prevailing judgment that restraint of total spending was not a sufficient—nor, in the conditions believed to be in force, even an effective—tool against inflation also helps explains why, in anti-inflation

[26] That is, inflation and the output gap remain dynamically related at all values of the output gap. In addition, with equation (1) describing the global behavior of inflation (and with $\mu_u = 0$, as in the standard case), that equation under a low α would imply a more negative output gap in the period during which inflation moves from one steady-state rate to another—but the steady-state output gap would still be zero, according to equation (2).

policy in the United Kingdom, monetary policy or other aggregate demand tools did not have pride of place. Instead, alternative, non-demand instruments—perceived by the authorities as bearing more directly on the wage and price-setting process—were given far more prominence.

4.3 Doctrine in the United States in the 1970s

With the United Kingdom's longstanding doctrine on inflation's behavior having been outlined, it will now be shown that, *in the United States* from 1970 onward, policymakers also embraced this nonmonetary doctrine. The analysis will focus on views expressed by the Federal Reserve leadership of the era.

Arthur Burns, Federal Reserve chair from 1970 to 1978, pointed to incomes policy in mid-1970 as something that would likely be a helpful aid to demand restriction in instilling disinflation. But over the second half of 1970, his views hardened to the purely nonmonetary view of inflation represented by equation (4) above. This evolution was evident in the contrast between Burns' remarks in July 1970, when he stated that "we must remember that success in our efforts to regain full employment without inflation will depend principally on the conduct of monetary and fiscal policies," and October 1970, when he took the nonmonetary line: "The increases of wages called for in new collective bargaining settlements are not moderating; on the contrary, despite the increase in unemployment, they are accelerating… I am therefore deeply concerned about the violent cost-push that is now in process."[27]

Burns maintained these views through the end of his tenure at the Federal Reserve. For example, in October 1977 he stated that the advent of a climate in which the normal expectation was of 6 percent would, before long, be associated with inflation moving above 6 percent (Meyer, 1977, p. 20A). This line of thinking is consistent with equation (4), which implies that inflation equals its preexisting expected value plus a positive-mean term (the cost-push shock term, as specified by the nonmonetary view of inflation). In January 1978, Burns affirmed that the United States' deviation from price stability in the 1960s had been launched by overstimulation of aggregate demand but that, in the 1970s, the environment had become one dominated by cost-push elements: the country had "first created enormous upward pressures on the price structure, and we then devised elaborate arrangements that tend to perpetuate those pressures even under

[27] The quotations are respectively from Burns (1970a, p. 9) (part of Burns' testimony of July 23, 1970, and also in Joint Economic Committee, U.S. Congress, 1970, p. 580) and his remarks of October 17, 1970, as summarized in Burns (1970b, p. 8).

conditions of economic slack."[28]

In such circumstances, Burns saw monetary policy as having played a noninflationary role, with the Federal Reserve's contribution consisting of preventing excess demand that would add to inflation. In late 1977, therefore, he contrasted what he saw as the current policy of preventing the Federal Reserve from being an "engine of inflation" with a policy of intentional provision of excess demand by the monetary authorities. The latter course, he suggested, "would have practically destroyed any remaining hope of achieving mastery over the inflationary forces that now move our society."[29]

Likewise, Burns' successor, G. William Miller, stated in mid-1978 that the U.S. economy was subject to "underlying inflationary forces," cited numerous factors boosting costs and the prices of particular products, and cast the Federal Reserve's role as one of not superimposing excess demand on the cost-push forces keeping up inflation. In this way, he suggested, the Federal Reserve could "ensure that excessive money and credit supplies do not *add to* powerful inflationary forces evident in our economy."[30]

4.4 Why tighten at all under a nonmonetary view of inflation?

For a "pre-Volcker" sample period consisting mostly of 1970s data, Clarida, Galí, and Gertler (2000, p. 157) find that the federal funds rate was raised by 83 basis points for every 1 percentage point increase in the expected inflation rate. Although this was substantially lower than the response of 215 basis points that the authors reported for the post-1979 period, the "pre-Volcker" reaction of interest rates to inflation was obviously numerically well above zero. In contrast, it might seem that the nonmonetary view of inflation that was argued above to have prevailed among U.K. and U.S. policymakers in the 1970s would imply a *zero* policy response to inflation, not just a low response. As will be now outlined, however, there are several grounds for believing that a nonmonetary perspective on inflation's causes will be associated with a modestly positive response of policy interest rates to inflation.[31]

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[28] Burns (1978a, p. 6). Also printed in Burns (1978b, p. 256).
[29] From Burns' testimony of November 9, 1977, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1977, p. 12).
[30] Miller (1978a, p. 4) (part of Miller's testimony of June 29, 1978, and also in Joint Economic Committee, U.S. Congress, 1978, p. 96). Emphasis added.
[31] As the nonmonetary view of inflation is perfectly consistent with a policymaker wish to stabilize the output gap, it is also consistent with the sizable responses to the gap that were found by Clarida, Galí, and Gertler (2000) and Orphanides (2004) to characterize pre-1979 U.S. monetary policy.

The first of these grounds is that, although the nonmonetary view of inflation implies that inflationary pressure can occur without excess demand, it does acknowledge that *if* there is excess demand then that, too, will be a factor generating inflationary pressure. Inflation that occurs when policymakers *accept* that there is excess demand in the economy would therefore give rise even to tightening of aggregate-demand settings, including firming of monetary policy, even when policymakers take the nonmonetary perspective on inflation. This factor played a part in the setting of monetary policy in the United States and the United Kingdom during the period 1973–1974. This period was, with the possible exception of 1979, the only one in the 1970s when the authorities recognized in real time that a positive output gap was present. That period indeed saw increases in short-term interest rates in both countries.

Second, inflationary periods that are associated with exchange-rate depreciations are likely to give rise to monetary policy tightenings under a nonmonetary view of inflation, owing to policymakers' association of such depreciations with upward pressure on import prices. For example, exchange-rate depreciation helped prompt monetary policy tightening in the United Kingdom during 1976 and the United States in 1978.

A third reason why inflation and monetary policy tightening should be expected to be associated with one another, even when the authorities see inflation as nonmonetary in nature, lies in 1970s policymakers' willingness to engage in what might be called stopgap monetary policy responses. Policymakers in the 1970s had a couple of grounds for seeing tightening of aggregate demand as a short-run substitute for, but not permanent alternative to, incomes policy as an anti-inflation measure. One of these grounds related to real interest rates. The Federal Reserve in the 1970s did recognize the real-rate/nominal-rate relationship and granted that, in principle, in the event of higher inflation, it would be destabilizing to maintaining nominal interest rates unchanged.[32] When incomes policy was not immediately forthcoming to—as policymakers saw it—bring expected inflation back down, they accepted that the default means of maintaining real interest rates was to raise nominal rates. But the flipside of this was that Arthur Burns saw the United States' introduction of wage and price controls in 1971 as a valid reason for lowering interest rates—his position being that the controls had lowered expected inflation (see DiCecio and Nelson, 2013, p. 407).[33]

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[32] See Burns' remarks criticizing nominal interest-rate pegging in his testimony of November 9, 1977, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1977, p. 12). The U.K. authorities of the same era also recognized the real-rate/nominal-rate distinction.

[33] Just as William Rodgers, in the 1966 quotation given above, envisioned incomes policy as necessary to enforce the "proper relationship" between wages and prices to one another and to the national economy, policymakers in the

The other kind of stopgap response related to the economy's speed of expansion. Even in the 1970s, when U.K. and U.S. policymakers contended that the level of the output gap mattered for inflation only when the gap was positive, they tended to grant that the *first difference* of the gap mattered for inflation—through a speed-limit mechanism, as well as a reverse speed-limit process as inflation fell during periods in which the economy was moving to a lower (including a more negative) gap level. This facet of their views still left them denying that the absolute level of slack mattered for inflation adjustment—so it did not alter their conviction that a permanent incomes policy was needed in order to contain inflation. But it did imply an acceptance that there was a short-run response of inflation to the *emergence* of more slack. This implies that a fuller representation of policymakers' views than that provided in the previous section would entail adding a term in $\Delta\tilde{y}_t$ (this term having a positive coefficient) to equation (1), with this gap-change term still being present in conditions in which the level of the gap is negative—so it appears in equation (4), too.

In terms of policy responses, the belief in a speed-limit term as a driver of inflation worked in the direction of adding to the U.K. and U.S. monetary policy responses to inflation in the 1970s. On the one hand, this belief implied that above-potential growth added to inflation. Consequently, it implied some caution in 1970s policymakers' willingness to allow rapid closing of economic slack and made them inclined to raise rates when output was rising strongly while the output gap was perceived as negative. Arthur Burns' willingness to raise interest rates in 1977 exemplified this phenomenon.[34] On the other hand, the notion that the gap change mattered for inflation meant that aggregate-demand restriction constituted a short-run substitute for incomes policy—though not a lasting substitute—as a means of fighting inflation. Policymakers could consequently regard demand restriction as a stopgap measure against inflationary pressures that could be used until a permanent incomes policy was agreed on or imposed. For example, in February 1974, the Chancellor of the Exchequer contrasted the U.K. government's current imposition of wage and price controls with the restriction of demand that "would undoubtedly be necessary" if an incomes policy was not in force (Barber, 1974, p. 1231).

For the various reasons outlined above, the ascension of a nonmonetary perspective on inflation

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United States and the United Kingdom during the Great Inflation era saw the management of expected inflation via incomes policy as helping secure the proper relationship between interest rates and inflation.

[34] For example, Burns remarked in October 1977: "If unemployment would drop and business and capacity utilization pick up, then I think inflation would be significantly higher than it is." (Quoted in Meyer, 1977, p. 20A.) Romer and Romer (2004, p. 141) instead conjectured that Burns' willingness to tighten in 1977 reflected a judgment that the output gap was already positive. Burns, however, made clear on the record that he believed that there was still slack in the economy in 1977 (see DiCecio and Nelson, 2013, p. 411).

in policymaking carries the implication that the monetary policy response to inflation will rarely be preferred—but that it is unlikely to be zero.

5. The Great Inflation did not result from "succumbing to temptation"

It was mentioned in the introduction that the explanation for the Great Inflation of the 1970s that enjoys the strongest support in the research literature is not the one favored here. The leading explanation is instead the one formalized by Sargent (1999), in which 1970s inflation developments in the United States were a natural progression from the smaller deviation from price stability that began in 1965. Inflation from 1965 to the end of the 1970s can, according to this account, be understood as the outcome of a misguided attempt to obtain, on a lasting basis, super-normal levels of output (and unemployment rates correspondingly below the natural rate) through a deliberate policy of inflation. Likewise, the end of the period of inflation is seen as resulting from an empirical judgment on the part of policymakers that no long-run unemployment/inflation tradeoff existed.

This section argues, in contrast, that pursuit of a perceived long-run tradeoff does not account for the Great Inflation in the 1970s in either the United States or the United Kingdom—and that economic policy in the United States in the 1960s was not guided by the pursuit of a tradeoff either. The section concludes by making the case that the change in U.S. policymaking in 1970 to a nonmonetary perspective on inflation means that it is better to treat the 1970s inflation experience in the United States as distinct from the smaller-scale inflation experience that the U.S. economy experienced during the 1960s.

5.1 Proponents of a tradeoff-based account

The position that a significant part of the high-inflation experience of the United States and the United Kingdom is accounted for by policymakers' pursuit of a perceived long-run Phillips-curve tradeoff has been articulated over the years not just by researchers but also by policymakers. In the latter connection, it is notable that Margaret Thatcher—who, on becoming U.K. prime minister in 1979, was associated with a regime change that saw a monetary view of inflation become official doctrine—and Paul Volcker—who led a shift away from a nonmonetary approach to inflation in U.S. policy circles when he became Federal Reserve chair in 1979—both endorsed a tradeoff-focused account of the inflationary outcomes that had been seen *in the past*.

As will now be detailed, however, neither Thatcher nor Volcker was speaking from firsthand experience in giving their retrospectives. And, as it happens, neither of them was giving a factually accurate account in attributing Philips-curve-tradeoff pursuit to their predecessors.

In separate sets of public remarks in February 1981, Thatcher and Volcker each characterized past policy in tradeoff-pursuit terms. In a speech in parliament, Thatcher (1981, p. 415) stated: "For years there was a widespread belief that we could have inflation and a high level of employment at the same time. For years there was a belief that we could secure more jobs if we were prepared to put up with a little more inflation—always a little more, it was thought. However, the experience of the past 25 years has taught us on the Government Benches that those beliefs were a most damaging illusion. Inflation and unemployment, instead of moving in opposite directions, rose inexorably together." In the United States, Volcker remarked in February 1981 testimony: "I don't think we have the choice in current circumstances—the old tradeoff analysis—of buying full employment with a little more inflation. We found out that doesn't work…"[35] In testimony a couple of years later, he reaffirmed his view that a tradeoff pursuit was once official policy: "that used to be a nice theory—for a while, it may have been the practice—that a little bit of inflation was a tolerable price for other things… I think that was, stated or not, the kind of prevailing sense of policy for many years."[36]

Thatcher and Volcker both served in public office before 1979. A process of elimination shows, however, that their accounts of past practice, just quoted, did not refer primarily to the periods in which they served in government. Thatcher was a member of the U.K. Cabinet from 1970 to 1974, and Volcker was at the Treasury from 1969 to 1974 and at the Federal Reserve from 1975. But their remarks were evidently not in reference to the 1970s because, by the early 1970s, the advent of stagflation had led policymakers in both countries to be outspokenly critical of tradeoff-based ideas.[37] Indeed, the fact that inflation and unemployment moved up together in the 1970s was a key reason for leading U.K. and U.S. policymakers' embrace during that decade of the nonmonetary perspective on inflation. For all its other flaws, that perspective did imply that there is no long-run unemployment/inflation tradeoff.

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[35] From Volcker's testimony of February 25, 1981, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1981, p. 28).
[36] From Volcker's testimony of February 24, 1983, in Committee on the Budget, U.S. Senate (1983, p. 676).
[37] One example in the U.S. case was the statement of Miller (1978b, p. 7): "I personally reject the proposition that full employment causes inflation. Quite the contrary: inflation causes unemployment, and the only chance we have for full employment with price stability is to curb the inflationary forces that threaten to destroy us." For corresponding examples in the U.K. case, see Nelson (2009).

Thatcher and Volcker's statements therefore must have been in reference to the 1960s. With regard to U.K. policymaking, however, as discussed in the previous section, the 1960s authorities held a nonmonetary view of inflation, so it is counterfactual to attribute inflation-seeking aggregate demand policies to those policymakers. It must therefore be concluded that Thatcher's 1981 assessment was drawing on what had become a popular—but not well informed—*ex post* explanation for past events and did not stem primarily from firsthand knowledge of, or documentary evidence on, 1960s policy developments. With regard to U.S. policymaking, Volcker served as U.S. Treasury official both from 1962 to 1965 and from 1969 to 1974.[38] It is evident, however, that his criticism of policymakers for deliberately seeking inflation was evidently in reference to the period in which he was *out of office*—that is, late 1965 to early 1969.[39] Volcker's attribution of tradeoff-exploiting motives to U.S. policymakers was, therefore, not really founded on firsthand experience.

Nor, as will now be discussed, is the attribution of tradeoff-exploitation to policymakers accurate. Blanchard (2016) treats it as established fact that, in an environment of initially stable inflation expectations, the U.S. policymakers of the 1960s deliberately inflated to obtain a perceived permanent reduction in unemployment below the natural rate. But it is worth stressing that such a conclusion is not supported by one of the key modern references on U.S. policymaker thinking in the 1960s, Romer and Romer (2002). Indeed, at the time of the delivery of that paper, David Romer remarked, "on Samuelson and Solow [1960]… we don't give them a dramatic role… We don't claim to have studied that part of the intellectual history and the link between what Samuelson and Solow did and subsequent policy carefully enough to have a view on whether their role was dramatic or not."[40] The discussion of Blanchard (2016) nevertheless has the implicit premise that such an intellectual history has been carried out and that it is a

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[38] Volcker served as director of the U.S. Treasury's Office of Financial Analysis from January 1962 to November 1963 and then as Deputy Under Secretary for Monetary Affairs. His successor in the latter post was sworn in on November 24, 1965 (U.S. Treasury, 1965).

[39] This inference stems from various other statements by Volcker and from the chronology of policy developments in the 1960s. First, Volcker (1976, p. 151) referred to the 1960s in which "widely held views" included the position that "in the last analysis, prosperity could be maintained at the expense of inflation—certainly an evil, but a lesser one [than unemployment]." Second, Volcker saw economic policy through 1965—years when he was mostly in office—as having been on a sound setting that delivered price stability. For example, in testimony of May 11, 1970, he referred to the first half of the 1960s as "a period of orderly growth with price stability over an extended period of time" (in Committee on Ways and Means, U.S. House of Representatives, 1970, p. 537) and in testimony of February 22, 1972, he added: "the United States has by and large over a long number of years had a more satisfactory performance with respect to price stability than our foreign competitors. This was not true in the latter part of the 1960s. But that was an exception to the record." (In Committee on Banking, Housing, and Urban Affairs, U.S. Senate, 1972, p. 75.) Third, 1969 (when Volcker was back in office) could not have been the period to which he was referring, as U.S. economic-stabilization policy was seeking lower inflation at that time (and, as discussed below, was also predicated on there being no long-run unemployment/inflation tradeoff).

[40] In Federal Reserve Bank of Kansas City (2002, p. 95).

settled part of the interpretation of the record that 1960s policymakers deliberately raised the inflation rate with a long-run Phillips-curve tradeoff as their motivation. Blanchard (2016, p. 33) consequently characterizes the increase in U.S. inflation during the later 1960s as having been a case of policymakers "succumbing to temptation." In fact, however, the record abounds with evidence against this interpretation of U.S. policymakers' behavior, as will now be illustrated.

5.2 U.S. official doctrine on inflation in the 1960s

The validity of the position that U.S. policymakers in the 1960s deliberately inflated in order to exploit a perceived permanent unemployment/inflation tradeoff requires two conditions to have been met during that decade: (*i*) The model of inflation underlying U.S. economic policy decisions implied that such deliberate inflation was *a possible policy option*. (*ii*) Policymakers actually undertook such a deliberate policy of inflation.[41]

It is argued here that condition (*i*) was likely met in the 1960s in the United States but (*ii*) was not. Indeed, U.S. policy officials of the era explicitly eschewed policies of deliberate inflation.

The analysis that follows gives the basis for this finding. In view of the wide acceptance that the executive branch of government was a prime mover in setting the tone of U.S. economic policy in the 1960s, the statements considered will be those of officials connected with the Kennedy and Johnson Administrations rather than with the Federal Reserve.[42]

The likelihood that 1960s policymakers' specification of inflation behavior was one that allowed for the *possibility* of a long-run conflict between the goals of full employment and price stability is supported by the fact that Walter Heller—who had been chair of the Council of Economic Advisers (CEA) until 1964 and thereafter continued to have formal and informal links with the Johnson Administration—endorsed 1960s-vintage Phillips-curve analysis in Heller (1966, p. 5). This and much other evidence suggests that a model specification implying the *possibility* of a long-run unemployment/inflation tradeoff did guide U.S. economic policy in the 1960s. But it will be suggested that policymakers in this period sought an aggregate-demand/incomes-policy

[41] Not that these are both empirical propositions about how actual policy was formulated. Empirical demonstrations that inflation and unemployment data behave "as if" the conditions were met do not constitute a valid substitute for ascertaining directly whether these conditions were met.

[42] See, however, Rotemberg (2013) on the lack of interest on the part of Federal Reserve Chairman Martin in approaches that would encourage inflation as part of a policy of stimulating economic activity.

mix intended to generate *both* a zero output gap *and* price stability.[43]

A Phillips-curve equation implying a possible long-run tradeoff would, of course, be of the form

$$\pi_t = \phi_0 + \phi_1 \pi_t^e + \alpha \tilde{y}_t + u_t \,, \tag{5}$$

in which $0 \leq \phi_1 < 1$, so the Phillips curve is not vertical in the long run.[44] Taking means of equation (5), and assuming that expected inflation and its actual rate converge to the same value, one obtains $\mu_\pi = \phi_0 + \phi_1 \mu_\pi + \alpha \mu_{\tilde{y}} + \mu_u$ or, on rearrangement,

$$\mu_\pi = (\phi_0 / (1 - \phi_1)) + (\alpha / (1 - \phi_1)) \mu_{\tilde{y}} + \mu_u / (1 - \phi_1). \tag{6}$$

In what follows, $(\phi_0 / (1 - \phi_1))$ is taken to be an inflation rate consistent with price stability.

Proponents of the view that 1960s policymakers, for tradeoff-exploitation reasons, *deliberately* moved inflation above its price-stability-consistent rate typically take those policymakers as assuming (as the modern consensus does) that the cost-push shock's mean can be taken as inherently zero (that is, $\mu_u = 0$), so expression (6) becomes:

$$\mu_\pi = (\phi_0 / (1 - \phi_1)) + (\alpha / (1 - \phi_1)) \mu_{\tilde{y}} \,. \tag{7}$$

Equation (7) indicates that the mean inflation rate is increasing in the steady-state output gap. The position by Sargent (1999), Blanchard (2016), and others is that 1960s policymakers consciously inflated because they believed that they could thereby make output permanently higher than the potential level: that is, that $\mu_{\tilde{y}} > 0$ could be secured by raising the mean inflation rate, μ_π. The inflationary policy postulated amounted to one of deliberately seeking a positive output gap (a condition of overfull employment) on a lasting basis.

This narrative therefore implies a particular specification of policymakers' real goals. On that dimension, the tradeoff-exploitation account flies in the face of the fact that, as noted in Section 3.3 above, U.S. policymakers across time have framed economic-stabilization goals for the real sector in terms of a normal sustainable level of employment rather than a super-normal level of

[43] See DiCecio and Nelson (2013, pp. 427–432) for a related discussion, using a simpler expression for inflation's behavior, of 1960s doctrine.

[44] The $\phi_1 = 0$ setting encompasses both the case in which inflation expectations do not matter for inflation behavior and that in which they can be taken to be rigidly constant over time (and so are part of the intercept in equation (5)).

employment or output. With regard to economic policy in the 1960s specifically, James Tobin (1982, p. 305), on the basis of both his own 1960s CEA membership and the documentary record, argued that the real-economy target used by the CEA was not an intentionally below-normal rate but instead in effect an estimate of what "would now be called the 'natural rate.'" Tobin's contention is consistent with the CEA's release at the start of the Kennedy-Johnson years with a chart of actual and potential output. This chart (printed in Joint Economic Committee, U.S. Congress, 1961, p. 5), like the similar one in Okun (1962), indicated that historical movements in U.S. output had been both above and below the potential level.

The fact that 1960s policymakers had a zero-gap goal still leaves it likely that the decade's policies aimed at real economic stabilization did, in the event, generate a positive output gap and related inflation. Because—as emphasized and documented by Orphanides (2003)—the potential-output path was likely seriously overestimated from an early stage, such overstimulation of demand very likely did occur in the 1960s. But such unintentional overstimulation due to the reliance on overestimates of potential output does *not* fit the Phillips-curve tradeoff-pursuit scenario. That scenario requires that policymakers *consciously* targeted a positive output gap.[45]

By going back to equation (6), it might appear possible to salvage the hypothesis that policymakers in the 1960s deliberately sought inflation for employment-related reasons even though, as argued above, a zero output-gap target ($\mu_{\tilde{y}} = 0$) is the only tenable description of 1960s policymakers' intentions. Equation (6) suggests that achievement of a zero gap means $\mu_{\pi} = (\phi_0/(1-\phi_1)) + \mu_u/(1-\phi_1)$. This condition implies that if policymakers seek a zero output gap, they will (according to the model they are using) have to accept an inflation rate above the price-stability rate, so long as μ_u, the mean of the cost-push shock, is positive.

Like their 1970–1979 successors, and in contrast to the modern consensus, policy officials in the 1960s did give credence to the proposition that, left to themselves, cost-push shocks would have a positive mean. For example, in a Congressional hearing held on February 5, 1968, CEA chair Gardner Ackley stated that there were "many sources of inflationary bias which tend to push prices up even when total demand does not strain the supply capabilities of the economy," while fellow CEA member James Duesenberry remarked that "we all agree that there is a so-called

[45] This does not preclude the possibility (advanced by King and Watson, 1994, for example) that U.S. e*conomic research* of the period featured considerable policy analysis that implied exploiting long-run tradeoffs. Forder (2014) argues, in contrast, that the era's research did not actually feature much work of this kind. On the policy side, Forder (2014) explicitly endorses the finding in Nelson (2005, 2009) that U.S. and U.K. economic policy strategies did not involve consciously promoting inflation.

cost-push element" in inflation.[46] It would, nevertheless, be incorrect to suggest that they consequently accepted or sought deviations from price stability. Rather, wage and price guideposts—that era's version of incomes policy—were advanced by the Kennedy and Johnson Administrations as a means of reconciling price stability and full employment. That is, like incomes policy in the 1970s, these were interventions that sought to make μ_u equal to zero, in contrast to what policymakers believed would be the positive value that would prevail under fully free wage- and price-setting.

The rationale for this policy, and the rejection of a policy of deliberate inflation, were brought out in remarks that Walter Heller made in an appearance on *Meet the Press* on November 7, 1965 (NBC, 1965, p. 3):

> *Mr. Rowen* [interviewer]. Dr. Heller, price stability has been a major, if not the major, objective of the government for the last three or four years—four or five, I should say. Has the time come when we should accept a certain measure of creeping inflation in order to assure full employment? Should these goals be equalized?
> *Dr. Heller*. I don't think we need to. In other words, sure, it is true that there are more businessmen with their fingers on the price trigger today, and it is also true that we have a diminishing margin of unused resources. But we have a lot of defense against inflation, too. We have an enormous growth of good productive capacity… As far as cost-push is concerned, we have had virtually stable unit costs.

Shortly earlier in the interview, Heller noted that low inflation required a "winning combination" of demand management and "moderation in prices" on the part of the private sector—with such moderation facilitated by guideposts (NBC, 1965, p. 2).

Along the same lines, in Congressional testimony of February 3, 1966, U.S. Secretary of the Treasury Henry Fowler stated: "This administration includes price stability as a goal to be sought along with these more particularized objectives of full employment and a healthy rate of growth. It believes that there is a fundamental compatibility of these three objectives and that, in seeking one of them, it is unwise to sacrifice the others."[47] And in his remarks of February 5, 1968, CEA chair Ackley observed that "our objective is, and ought to be, to obtain the highest possible degree of growth and employment consistent with reasonable stability of prices."[48]

These statements brought out the distinction between *having a framework for analyzing inflation* that implied a lasting full-employment/price-stability tradeoff in the absence of incomes policy

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[46] See, respectively, pages 16 and 47 of Joint Economic Committee, U.S. Congress (1968).
[47] In Joint Economic Committee, U.S. Congress (1966, p. 180).
[48] In Joint Economic Committee, U.S. Congress (1968, p. 55).

and *actually seeking inflation* in light of that perceived tradeoff. Those in policy circles in the 1960s did not judge it appropriate to lose price stability. They sought to forestall the need to do this, or to face any other tradeoff, by using incomes policy as a means of reconciling low inflation with a zero output gap. In this vein, Heller (1966, p. 43) saw the role of guideposts as promoting "noninflationary wage and price behavior."

The economic-policy doctrine prevailing in the 1960s in the United States therefore resembled that of the 1970s in having recourse to incomes policy as an anti-inflation device. An important difference, however, from that in the 1970s was that during the 1960s policymakers *did* see the creation of a negative output gap as an effective device for reducing inflationary pressure—albeit a device that was not regarded as desirable to use, provided that incomes policy was available as an alternative.[49] An element common to the U.S. policy doctrines of the 1960s and 1970s—and a sharp contrast with the manner in which tradeoff-centered accounts have characterized policymaking in those decades—was that inflation was *not* a deliberately engineered policy.

In sum, although it is plausible that U.S. economic policy under the Kennedy and Johnson Administrations used a long-run nonvertical Phillips-curve framework, this framework was *not* employed in a manner that involved deliberately promoting higher inflation.

5.3 U.S. official doctrine: the 1969–1970 interregnum

The advent of a new U.S. administration in January 1969 saw a major shift in the implied model of inflation used in officialdom. Herbert Stein (1988, pp. 141–142) noted that the disinflation strategy pursued in the United States in 1969–1970 was grounded in natural-rate-hypothesis thinking, with restriction of aggregate demand perceived as implying temporarily elevated unemployment and, in time, permanently lower inflation.[50] Monetary policy doctrine had not only shifted from that in the 1960s—it was also vastly different from, and more enlightened than, the nonmonetary perspective on inflation that took hold in the United States in 1970.

Actual monetary policy in 1969 was also most unlike the typical pattern in the 1970s. Whereas

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[49] That is, starting from a state of the output gap being zero and inflation being higher than desired, demand restriction and incomes policy were each seen during this era as devices available to lower inflation. But, of the two, incomes policy was preferable because it made full employment and price stability compatible by suppressing the u_t shock that was creating a conflict between the two goals.

[50] As a CEA member during this period, Stein could base this characterization on his personal experience in 1969. Public statements emanating from the Nixon Administration in this period also support Stein's characterization. For examples, see Romer and Romer (2002, p. 58) and DiCecio and Nelson (2013, pp. 395, 413).

the 1970s were characterized, in the words of Clarida, Galí, and Gertler (2000) given earlier, by "persistently low short-term real rates in the face of high or rising inflation," in 1969 the federal funds rate moved above 9 percent—clearly in excess of the inflation rate of the time. It is likely that the U.S. economy would have returned to lasting price stability if this posture had been maintained for longer than it, in fact, was. Instead, official doctrine was drastically shifted in 1970 as Arthur Burns' diagnosed inflation as a pure cost-push phenomenon, and by the end of the summer of 1971 a major policy U-turn had been instituted—with the restrictive stance of 1969 superseded by major demand stimulation alongside wage and price controls.

It is appropriate to regard the United States as having a Great Inflation of the 1970s, rather than a homogeneous Great Inflation that covered 1965 though the 1970s. Clearly, the 1965–1969 and 1970–1979 experiences were distinct, being separated by the interregnum of 1969–1970. This interregnum featured a demand-focused disinflation strategy, actual monetary policy settings very different from those predominant in the 1970s, and an official doctrine that was distinct both from that prevailing before 1969 and from that in 1970–1979—consisting, as already indicated, of an enlightened view of the Phillips curve. The high inflation of the 1970s was not a natural outgrowth of developments in the 1960s. Rather, it flowed from the breakthrough that a nonmonetary approach to inflation made in U.S. policy circles in 1970, and this nonmonetary doctrine remained in the ascendancy in the United States until 1979.

6. Lessons for today

This paper asked with regard to the Great Inflation of the 1970s, "How did it happen?," and argued that the same answer is valid for both the United Kingdom and the United States: The embrace at the official level of a faulty doctrine that saw the analysis and control of inflation in nonmonetary terms. This doctrine was already in force in the United Kingdom in 1970 and took hold in the United States during that year. The doctrine implied a view of inflation that is highly unorthodox from a modern-day perspective. Disinflationary policies were adopted in both countries in 1979, as U.K. and U.S. authorities alike abandoned the nonmonetary doctrine concerning inflation.

A key lesson from this experience concerns the link between extended years of inflation and a nonmonetary approach to inflation. Monetary policy in the modern era is centered on inflation control, and no other policy device is centered on this control. This situation is reflected in policymaker statements: for example, Governor Lael Brainard of the Federal Reserve Board testified on January 13, 2022, "I think, over the medium term, inflation is a monetary

phenomenon," while Federal Reserve chair Jerome Powell stated on May 4, 2022: "You know, it's really the Fed that has responsibility for price stability."[51] See also Broadbent (2020) in the U.K. case.

The fact that the nonmonetary doctrine prevalent in U.S. and U.K. policy circles in the 1970s is widely eschewed today does not mean that deviations from price stability cannot occur. But it does imply that monetary policy is much more likely to react strongly to, and so rein in, excessive inflation than was the case during the 1970s. This difference from the 1970s provides grounds for believing that extended periods of inflation are much less likely than in that decade.

A further point that arose from the analysis of this paper is that policymakers' knowledge of the means of controlling inflation makes them inclined to instill price stability and not any other policy. Notably, policymakers have not, either before or after 1979, shown a wish to generate high inflation deliberately. In particular, an element of continuity over the decades is that both before 1979 and afterward, U.S. and U.K. policymakers made clear that they did *not* believe that a lower steady-state unemployment rate could be purchased by promoting a higher steady-state inflation rate. The inflation of the 1970s did *not* result from U.K. and U.S. policymakers consciously seeking above-normal targets for economic activity or from their deliberately boosting inflation with the aim of securing favorable real outcomes. Instead, it stemmed from unintentionally overexpansive policy settings associated with the nonmonetary approach to inflation. And in neither the United Kingdom nor the United States did the high rates of inflation of the 1970s arise from policymakers being "tempted" to exploit a stable Phillips curve. It follows that a state of stable inflation expectations should not be regarded as taking the U.S. economy "back to the '60s," in the sense of making an inflation experience like the 1970s more likely to occur.

[51] For the quotations, see respectively CSPAN (2022) and Federal Reserve Board (2022, p. 16).

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