The Great Inflation of the Seventies: What Really Happened?

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Abstract

This paper revisits the issue of what factors produced the macroeconomic policies that led to the Great Inflation of the 1970s. I emphasize that a satisfactory explanation should satisfy two important criteria. First, it must be consistent with the record of views on the economy, manifested in statements by policymakers and prominent financial commentators. Second, it should work for countries beside the United States. I show that the monetary policy neglect hypothesis—which claims that policymakers took a nonmonetary view of the inflation process—meets these criteria. Other explanations of the Great Inflation are ruled out, with one exception (the output gap mismeasurement hypothesis), which supplements the monetary policy neglect hypothesis. The study covers the Great Inflation in both the United Kingdom and the United States, with policymakers' views on the economy documented using 1970s news reports.

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1. Introduction

A substantial literature has developed that revisits the inflation experience of the 1970s in the United States and other countries.[1] This literature has advanced a variety of explanations for why macroeconomic outcomes were poor in this "Great Inflation" period compared to the period since around 1982, when inflation has been lower and more stable. Across all explanations, there is important common ground: monetary policy was, in retrospect, too expansionary in the 1970s, and a tighter monetary policy would have been required to produce lower growth in nominal aggregate demand and, hence, lower inflation. Differences in view emerge when accounting for the *background* to this policy: over what macroeconomic objectives and models of the economy drove the policy decisions that actually took place.

Taylor (1992, p. 13) argues that the source of the change in policy behavior is "the impact of economic research and changes in the perceptions of how the economy works." In particular, he contends that policymakers chose high inflation rates in the 1970s because they believed that there was "a permanent long-run trade-off between the level of unemployment and the level of inflation." This argument has been formalized by Sargent (1999). By the early 1980s, both economic theory and empirical evidence were unfavorable for the belief in a strong permanent trade-off; and this change in circumstances may have prompted the shift to a low-inflation monetary policy.

A different explanation of the policy mistakes in the 1970s is the *output gap mismeasurement* hypothesis, advanced by Orphanides (2003, 2004). According to this view, the key distinction between policymaking in the 1970s and afterward does not involve views about the model of the economy or the costs of inflation. Rather, 1970s policymakers overestimated the degree of productive potential in the economy. Monetary policy did not intentionally target either high inflation or a positive output gap, but nevertheless pursued what *ex post* appears to be an excessively expansionary policy, because policymakers were too optimistic about the economy's supply side. Still further explanations of the Great Inflation, such as those of Clarida, Galí, and Gertler (2000) and Chari, Christiano, and Eichenbaum (1998), emphasize policymaker accommodation of shocks to the private sector's expectations of inflation.

A weakness of all the above explanations, however, is that none of them recognize a key aspect of policymaking during this period: namely, Poole's (2000, p. 15) observation that in the 1970s, "Milton Friedman's dictum that inflation is always and everywhere a

[1] Early discussions include Taylor (1992) and DeLong (1997), while several more recent contributions are discussed below.

monetary phenomenon was by no means widely accepted."[2] Indeed, Friedman himself, writing in 1978, observed that in diagnosing the inflation problem, there were

> many factors other than money that politicians, economists and journalists write about…
>
> [They] attribut[e] the acceleration of inflation to special events—bad weather, food shortages, labor-union intransigence, corporate greed, the OPEC cartel… (*NW*, 04/24/78)[3]

Recalling this period a quarter-century later, Friedman argued:

> Central banks performed badly prior to the '80s… because they [had] a wrong theory…. Inflation, according to this vision, was produced primarily by pressures on cost that could best be restrained by direct controls on prices and wages (*WSJ*, 08/19/03).

An alternative explanation of the Great Inflation, the *monetary policy neglect hypothesis*, attributes the Great Inflation to the flawed analysis that Poole and Friedman highlight. Nelson and Nikolov (2004) advance the monetary policy neglect hypothesis as an explanation for the Great Inflation in the United Kingdom. In addition, the essential feature of the hypothesis—that policymakers believed inflation was a nonmonetary phenomenon—has been advanced by several authors for the United States, including Hetzel (1998), McCallum (1999), and Laidler (2003). The most detailed study of the U.S. record, however, and the closest antecedent to the present paper, is Romer and Romer (2002), who document the prevalence among 1970s U.S. policymakers of the view that inflation is unresponsive to aggregate demand and, therefore, to monetary policy actions.

The present paper details the monetary policy neglect hypothesis, and adds to the evidence in its favor. Relative to the existing literature, the evidence I present draws on a wider range of sources. First, in contrast to the concentration on the U.S. experience in the existing literature, I examine both the United States and the United Kingdom symmetrically. Second, for the United States, in ascertaining policymakers' views on monetary policy and the economy, I draw on a wider set of policymakers. Views of Federal Reserve officials are obviously an important part of the evidence, and are emphasized in the abovementioned papers. But views in the Federal Reserve are relatively less important over the 1970s than in other recent decades, because of the prevalence of other policymaking agencies concerned with inflation. As early as January 1970, prior to the swearing-in of Arthur Burns as Federal Reserve Chairman, the *Wall Street Journal* noted that "[t]o a degree that astonishes veterans… the Nixon team often seems oblivious

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[2] Similarly, Laidler (2003, p. 23) argues that an omission in the discussions of DeLong (1997) and Sargent (1999) of the monetary policies pursued in the 1970s is that they "had absolutely nothing to do with deliberately inducing higher inflation in order to reduce the unemployment rate."

[3] In this paper, newspaper and magazine articles are referenced by the periodical's abbreviation and date. Appendix A gives a key for the abbreviations, and Appendix B provides details for each article.

of the board's independence" (*WSJ*, 01/14/70). Consistent with this, President Nixon, observing applause for Burns at Burns' swearing-in, said on the record: "That is a standing vote of approval, in advance, for lower interest rates and more money," and noted, "I have some very strong views, and I expect to present them to Mr. Burns. I respect his independence, but I hope that he independently will conclude that my views are the right ones" (*KCS*, 02/01/70). In light of this, the views on inflation and monetary policy of the President and other Administration officials deserve special attention. Analysis of their statements supports the monetary policy neglect hypothesis, and explains why these views evolved from the Council of Economic Advisers Chairman's confident statement in 1970 that "inflations do respond to therapy" (*KCS*, 08/17/70) to the position of the director of the Cost of Living Council, John Dunlop, in 1974 that "we just don't know how to control inflation" (*DFP*, 03/18/74).

Third, this paper draws on archival evidence in the form of newspaper articles from the 1970s for both the United States and the United Kingdom. Examining contemporaneous coverage of the Great Inflation in newspaper sources brings out the statements of the "politicians, economists and journalists" that Friedman refers to above, and so gives a better picture of the climate of opinion behind policy actions. In addition, by drawing on newspaper sources, I can locate policymakers' statements that appear in interviews and speeches not always preserved in other formats. Using such source material complements Romer and Romer's (2002) use of FOMC records and the *Economic Report of the President* to ascertain U.S. policymakers' views, and I compare my findings with those of Romer and Romer at several points below.

This paper proceeds as follows. Section 2 outlines the monetary policy neglect hypothesis and its predictions regarding 1970s policy behavior. Section 3 consider some weaknesses of alternative hypotheses. Sections 4 and 5 document evidence for the monetary policy neglect hypothesis from archival sources for the United States and the United Kingdom, respectively, while Section 6 concludes.

2. The monetary policy neglect hypothesis

In this section, I state the monetary policy neglect hypothesis (Section 2.1), then discuss the predictions of the hypothesis regarding the profile of anti-inflation policies (Section 2.2). Some aspects of the model of inflation underlying the hypothesis are considered in Section 2.3.

2.1 Statement of the hypothesis

The monetary policy neglect hypothesis is based on the conflict between two alternative visions of the inflation process. According to the first vision, inflation is a monetary phenomenon—so that easy monetary policy is responsible for producing inflation, and monetary restraint can cure inflation. According to the second vision, inflation is a purely nonmonetary phenomenon: inflation is driven by special, or "cost-push," factors, and these factors dominate the behavior of inflation regardless of what course monetary policy takes. The monetary policy neglect hypothesis is the hypothesis that 1970s policymakers erroneously subscribed to the nonmonetary view of inflation, and that this view governed their behavior.

It is possible to illustrate the monetary policy neglect hypothesis using a standard new Keynesian Phillips curve, though the basic ideas generalize to alternative Phillips curve specifications. The standard new Keynesian Phillips curve is:

$$\pi_t = c + \beta E_t\pi_{t+1} + \alpha(y_t - y_t^*) + u_t\ , \tag{1}$$

where β is close to unity, $y_t - y_t^*$ is the output gap, π_t is inflation, and u_t is an exogenous disturbance. Decompose u_t as $u_t = \mu_{u,t} + \hat{u}_t$, where $\mu_{u,t}$ is the unconditional mean of u_t (which may be time-varying), and $\hat{u}_t$ the deviation from mean with AR(1) parameter ρ_u. It follows that the solution for inflation and one-period-ahead expected inflation may be written as:[4]

$$\pi_t = \gamma + \alpha E_t\Sigma_{i=0}^{\infty}\beta^i\,(y_{t+i} - y_{t+i}^{\ *}) + u_t + \beta[E_t\Sigma_{i=1}^{\infty}\beta^{i-1}(\mu_{u,t+i})] + \beta[\rho_u\hat{u}_t\,/\,(1-\beta\rho_u)]. \tag{2}$$

$$E_t\pi_{t+1} = \gamma + \alpha E_t\Sigma_{i=0}^{\infty}\beta^i\,(y_{t+i+1} - y_{t+i+1}^*) + E_t[\Sigma_{i=0}^{\infty}\beta^i(\mu_{u,t+i+1})] + [\rho_u\hat{u}_t\,/\,(1-\beta\rho_u)]. \tag{3}$$

where $\gamma = c\Sigma_{i=0}^{\infty}\beta^i$.

I define a *monetary* view of inflation as one that postulates that $\alpha > 0$; that u_t is white noise (i.e., $\rho_u = 0$) with zero mean (i.e., $\mu_{u,t} = 0$ for all t); and that (log) real aggregate demand y_t is interest-elastic. Under these restrictions, terms in square brackets vanish; expressions (2) and (3) then imply that shocks that shift the u_t disturbance but not the current or expected output gap affect the current price level and recorded inflation π_t, but not the expected future inflation rate; while the cost-push term does not enter the calculation of the mean inflation rate. Therefore, to be a "cause" of ongoing inflation, an

[4] Formally, the new Keynesian Phillips curve is an approximation of inflation behavior assuming a constant steady-state inflation rate, an assumption which is inappropriate for the 1970s. A more general specification that allowed the c, α, and β parameters to be functions of the steady-state inflation rate would maintain the fundamental distinction between monetary and nonmonetary theories of inflation described in the text.

event such as greater labor-union activism or higher world inflation must affect the path of the output gap—either by creating a sustained drop in potential GDP (in logs, y_t*) below the actual output path, or by provoking a monetary policy response that stimulates real aggregate demand. Both of these developments can be avoided by a monetary policy which keeps the path of real aggregate demand close to potential (including allowing real demand to follow potential output when the latter declines). That is the sense in which inflation is a monetary phenomenon—fluctuations in inflation are transitory in the absence of monetary accommodation.[5] I consider the sensitivity of this definition to alternative Phillips curve specifications in Section 2.3 below.

The monetary interpretation thus attributes the high inflation rates of the 1970s to positive output gaps, produced by over-expansionary monetary policy, and holds that nonmonetary or "cost-push" events did not exert any independent effect on the mean of inflation.

A purely nonmonetary view of inflation, by contrast, attributes the fluctuations in inflation over the 1970s to shifts in the value of u_t. The restriction on equation (1) that conforms to the cost-push view is the parameter setting $\alpha = 0$. Then inflation is exogenous and disconnected altogether from output-gap movements.[6] In addition, in contrast to the monetary view, the nonmonetary view of inflation claims that u_t was both persistent and frequently had a positive mean. Cost-push events then have persistent effects on both inflation and expected inflation for a given path of the output gap.[7] In practice, the position adopted by advocates of the nonmonetary view of inflation during the 1970s was that positive output gaps add to inflationary pressure, but negative output gaps exert no negative

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[5] The economic grounds for acknowledging fluctuations in u_t, but expecting them to have zero mean, is well outlined by the following quotation:

> Higher oil prices may lead people to spend more money on oil. But if so, they have less to spend on other goods, which leads to downward pressure on the prices of those goods… so that the price level in general need not be affected. However, most prices are slow to adjust. Hence, a sudden upward jump in the price of a product that is widely used… may temporarily raise the rate of inflation before the downward pressure becomes effective. That… is the element of validity in the argument that rises in particular prices cause inflation. (Friedman and Friedman, 1984, p. 84)

To match the Friedmans' claim that the "downward pressure becomes effective" only in later periods, one would have to make all terms in the Phillips curve beside the cost-push shock predetermined, which is a standard assumption in empirical applications (e.g. Rotemberg and Woodford, 1997). (See also Section 2.3 below.)

[6] This is also the restriction on the expectational Phillips curve that Friedman and Schwartz (1982, p. 61) argue corresponds to the cost-push view of inflation.

[7] Taylor (1997), discussed further below, cites as an important component of 1970s policymakers' views the position that inflation was highly inelastic with respect to excess supply. But what Taylor describes is only part of the nonmonetary view of inflation. Other things equal, a decrease in the elasticity of inflation with respect to output gaps would reduce the variance of inflation. To rationalize the rise in the mean and variability of inflation, this position must go hand-in-hand with the position that 1970s inflation patterns reflected violent fluctuations in the mean and variance of the cost-push shocks u_t.

pressure on inflation, so that the $\alpha = 0$ condition holds when the output gap is negative. Holding down aggregate demand, in other words, will not be effective at reducing inflation.

It is also possible to deny a role for monetary policy in controlling inflation by granting that α is positive, so that the output gap *does* matter for inflation, but claiming that aggregate demand is insensitive to monetary policy actions. In that case, there is no scope for monetary policy to affect y_t. Nelson and Nikolov (2004) argue that this perspective was an important component of official views on the economy in the United Kingdom during the 1950s and 1960s. But by the 1970s, as we will see, U.K. critics of monetary policy rested their case on the argument that monetary actions were ineffective in controlling inflation, not aggregate demand. We will also see, however, that skepticism about monetary policy's ability to affect aggregate demand gained a foothold among U.S. policymakers during the period 1975–78. Nevertheless, my discussion of the nonmonetary view of inflation uses the definition of that view given above, which amounts to a restriction on the Phillips curve that shuts off the output-gap channel.

The monetary and nonmonetary views thus provide very different accounts of how inflationary pressure is produced and propagated. The monetary policy neglect hypothesis rests on the conflict between these two views of inflation. The hypothesis asserts that the monetary interpretation of inflation is correct, and claims that the 1970s inflation outcomes reflect the fact that policymakers' actions were instead directed by nonmonetary interpretations of inflation.

Sections 4 and 5 will document the support for the monetary policy neglect hypothesis that emerges from my analysis of the specifics of U.S. and U.K. policy developments. But it is worth noting at this point a general observation about 1970s macroeconomic policy choices. The policy prescriptions that arise from the nonmonetary view of inflation match closely the anti-inflation policies put into effect during the 1970s.

2.2 Implications for policy prescriptions

An attractive feature of the monetary policy neglect hypothesis is that it can rationalize the reliance by policymakers in the 1970s on nonmonetary devices—essentially forms of wage and price controls—in fighting inflation. This can be seen by first considering what support exists for controls from a conventional, monetary perspective on inflation.

The case for wage and price controls in the conventional framework. A case for wage and price controls as a complement to aggregate demand restriction can be made when inflation is determined by monetary factors. Consider a situation where the monetary authorities, having run inflationary policies in the past, commit themselves to a policy of zero output gaps and a target inflation rate γ; but the private sector, wary from past policy behavior, expects a policy that implies positive output gaps from next period onward of k percent for $N > 0$ periods. The mismatch between the government's intended disinflationary policy and the private sector expectations that actually matter for inflation will mean, from equation (3), that expected inflation is $\gamma + \alpha k\Sigma_{i=1}^{N}\beta^{i}$ rather than γ; and that achievement of the inflation target of γ today will require a negative output gap today of $-k\Sigma_{i=1}^{N}\beta^{i}$ rather than a zero gap. The zero-gap, inflation-on-target policy can be achieved by the original disinflationary plan for monetary policy, combined with price and wage controls that effectively overwrite the private sector expectations embodied in wage and price contracts with an enforced expectation of an inflation rate of γ. Once the private sector accepts that monetary policy has adopted a low-inflation framework, the controls can be removed without generating an outbreak of inflation. It is this kind of idealized situation, where controls minimize the real cost of a disinflation, that led Paul Samuelson to state: "The best way to ruin the genuine contribution [wage-price] guideposts can make is to try to use them as a substitute for macroeconomic policies" (*NW*, 02/05/68).

The case for wage and price controls under monetary policy neglect. The case for wage and price controls is very different in the policymaking framework described here as "monetary policy neglect." In this framework, policymakers neglect the appearance of the output-gap term in equation (2), reflecting their belief that $\alpha = 0$. Accordingly, policymakers will not regard inflation as evidence of excessive demand, and will instead favor a cost-push view of inflation behavior. Inflation reduction will be pursued directly by controls, while aggregate demand management concentrates on targets for output and employment. Failure to reduce inflation leads to more intensive use of nonmonetary devices against inflation, not to a monetary tightening.

The monetary policy neglect hypothesis can therefore rationalize policy mixes adopted during the 1970s in a way that even closely related hypotheses cannot. One such hypothesis is that of Taylor (1997) and Primiceri (2005). They characterize U.S. policymakers in the 1970s as believing that the Phillips-curve elasticity α had shifted to a lower, but still positive, value, and adjusting policy in light of the change in the implied sacrifice ratio. According to this scenario, 1970s inflation outcomes reflect conscious acceptance by monetary policymakers of higher inflation. But since, in this account, high inflation rates are a monetary policy *choice*, this hypothesis implies that policymakers always accepted that inflation was a monetary phenomenon. They would therefore have had no grounds for departing from the standard positions that price controls are not a substitute for demand measures in controlling inflation, and that controls in the absence of demand restriction conceal but do not remove inflationary pressure. By contrast, as noted above, if policymakers believe that $\alpha = 0$ and so that inflation is a nonmonetary phenomenon, they will embrace packages that treat controls as a cure for inflation rather than as a complement to monetary measures. As we will see, actual 1970s policy practice did frequently combine controls with expansionary monetary conditions. Such a nonmonetary approach to anti-inflation policy is in line with the prediction of the monetary policy neglect hypothesis.

2.3 Interpreting the monetary view of inflation

Section 2.1 above defined the monetary view of inflation using a single Phillips curve specification, but the implications of that definition are quite general. First, the restrictions on equation (1) to (3) that deliver the monetary/nonmonetary rival views would be unchanged if the expected-inflation term $E_t\pi_{t+1}$ in equation (1) were replaced by expectations based on information sets earlier than period t—as is done in some empirical implementations of the new Keynesian Phillips curve, such as Rotemberg and Woodford (1997). By imparting inertia to expected inflation, this modification helps to rationalize transitory episodes of simultaneous high inflation and a negative output gap, even though ultimately both inflation and expected inflation respond positively to the gap. Barsky and Kilian (2001) emphasize this property of the expectational Phillips curve in explaining inflation dynamics during the 1970s, and it has also featured heavily in Milton Friedman's discussions of the period (e.g. *NW*, 04/24/78; *TT*, 03/03/80).

Second, while the arguments advanced in this paper do rest on an acceptance that the monetary view of inflation is accurate, my definition of that view is flexible enough to allow events such as oil shocks to affect inflation. Equations (2) and (3), together with the monetary view's restrictions on those equations, specify certain channels by which these shocks affect inflation. To the extent that oil shocks imply a lower path of potential output, they create a sequence of positive output gaps—and thus inflation—unless the monetary authority brings real aggregate demand down in line with the reduced potential. In addition, for given potential GDP, any shock that triggers monetary accommodation, and so a higher path of aggregate demand, will produce ongoing inflation. And any shock that affects the cost-push term u_t will produce transitory inflation even in the absence of monetary accommodation. The presence of the u_t term in equation (2) thus allows inflation to be partially a nonmonetary phenomenon in the short run, while the exclusion of u_t from expression (3) for expected future inflation ensures that inflation is solely a monetary phenomenon in the medium and long run. The implication that nonmonetary forces have only a transitory effect on inflation, in the absence of monetary accommodation, is consistent with much work in the new Keynesian literature, such as Ball and Mankiw (1995). Ball and Mankiw lay out a channel whereby oil shocks affect inflation temporarily for a given output gap—just as the u_t shocks do in my interpretation of the monetary view of inflation. As Ball and Mankiw (1999, p. 198) emphasize, this channel exists because of the absence of "immediate downward adjustments" of non-oil prices when the oil price spikes; beyond the short run, this adjustment occurs and inflation returns to being a purely monetary phenomenon.[8]

Third, the basic message that monetary policy can insulate future inflation from cost-push shocks holds up if the new Keynesian Phillips curve is augmented with a lagged-inflation term. If the forward-looking term in the Phillips-curve equation (1) is discarded altogether in favor of lagged inflation with a unit or near-unit coefficient, it is true that the distinction between shocks to the price level and to ongoing inflation fades. Cost-push shocks which shift today's price level would then affect expected future inflation at all future horizons one-for-one, even if policy kept output equal to potential at all times. But once a reasonable weight on future expectations in the Phillips curve is permitted, the distinction is restored. In the Fuhrer-Moore (1995) specification, for example, lagged inflation and expected future inflation each enter the Phillips curve with weight 0.5. For a zero output gap path, a cost-push shock of 1% today affects one-period-ahead expected inflation by 0.5%, but the effect on expected inflation a year from now is only 0.06% (i.e., 0.5^4). Thus, a generalized Phillips curve retains the essential message of the monetary view that cost-push shocks have only transitory effects on inflation.

3. Weaknesses of alternative hypotheses

Recent papers on the Great Inflation have advanced number of distinct explanations for the policy actions taken during the 1970s. A serious weakness of many of the proposed explanations is that they are inconsistent with the two criteria stressed in the present paper: that a good explanation should be consistent with the record of policymakers' views and anti-inflation strategies during the Great Inflation; and that it should work also in explaining the experience of countries beside the United States. Sections 4 and 5 below will show that the monetary policy neglect hypothesis does meet these criteria. Before proceeding, however, it is useful to consider some specific alternative hypotheses and their major shortcomings.

3.1 Belief in a long-run trade-off

The "long-run trade-off" view of 1970s developments is exemplified by Sargent (1999). It postulates that the Great Inflation reflected policymakers' belief that a permanent gain in output relative to potential could be obtained by accepting a permanently higher inflation rate. Policymakers then permitted successive increases in the inflation rate because it was believed that the long-run trade-off had deteriorated (i.e., that greater

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[8] Ball and Mankiw's framework can thus be regarded as a formalization of the adjustment process described in the Friedman and Friedman (1984) quotation above.

inflation rates were required to achieve a given excess of output over potential GDP). Only after inflation had risen to very high levels did policymakers become convinced that there was no long-run trade-off, and disinflated.

The explanation does not accord with either the empirical evidence on policy rules, or the record of policymakers' views on inflation. If the rise in inflation in the 1970s reflected a shift to a higher inflation target, it should imply an interest-rate rule with a sizable intercept term together with a greater than one-for-one response to deviations of inflation from target—showing that policymakers took vigorous actions to support the high-inflation target. Instead, interest-rate reaction functions estimated on pre-1979 data exhibit less than one-for-one responses to inflation for both the United States (Clarida, Galí, and Gertler, 2000) and the United Kingdom (Nelson and Nikolov, 2004).

In addition, U.K. policymakers did not subscribe to a Phillips curve model of inflation in either the 1960s or the 1970s,[9] while, as documented below, the cost-push view of inflation embraced by U.S. policymakers from 1970 onward also amounted to a rejection of a Phillips curve model of inflation. The long-run trade-off account is therefore not a satisfactory explanation of the Great Inflation in either the United States or the United Kingdom.

3.2 The sunspot hypothesis

Clarida, Galí, and Gertler's (CGG) (2000) account concentrates on the fact that the response to inflation in policymakers' interest-rate rule was below unity before 1979. They argue that a policy rule of this type leaves no scope for monetary policy to stop arbitrary disturbances from exerting a persistent effect on inflationary expectations and so on actual inflation. In particular, they contend that the oil shock of 1973–74 led to a burst of higher inflationary expectations by the private sector, which monetary policy effectively accommodated.

As a description of the Great Inflation, the CGG hypothesis has two key problems. First, it cannot account for the different timing of the inflation problem across countries. As CGG's explanation provides no *a priori* grounds for why inflation rose rather than fell in the 1970s, it must appeal to a positive sunspot shock hitting every country that experienced the Great Inflation. CGG nominate the oil shock as a possible sunspot, but for the United Kingdom this explanation is unsatisfactory because so much of the rise in inflation preceded the oil shock. In light of these differences in timing, the CGG explanation must explain the international rise in inflation in the 1970s in terms of different

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[9] See e.g. Laidler (2003) and Nelson (2001).

sunspot shocks across countries, all of which happened to take a positive value, which is implausible.

Second, at best, the CGG hypothesis can account for a transitory change in inflation away from a constant steady-state rate. This is because the sunspots that affect inflation in their hypothesis are stationary. CGG's hypothesis is only an appropriate explanation if the Great Inflation period is treated as one where the long-run mean of inflation underwent no shift. But this treatment is untenable for the both the United States and the United Kingdom. If the long-run inflation rate was unchanged over the course of the Great Inflation, then there should be little or no Fisher effect observed in nominal yields on long-term securities. But long-term rates rose steeply in both the United States and the United Kingdom during the Great Inflation. The CGG hypothesis can therefore be rejected, because it is contradicted by both the international evidence and the evidence on the mean of inflation.

3.3 The expectations trap hypothesis

The expectations trap hypothesis is outlined in detail in Christiano and Gust (2000). It has some similarities with the CGG hypothesis. A distinguishing characteristic of the trap hypothesis, however, is that it postulates that the U.S. Great Inflation resulted from a conscious decision by the Federal Reserve to create money growth in response to a variety of nonmonetary events, such as the 1973 commodity price explosion, that threatened the stability of output. This aspect of the hypothesis is sufficient to rule it out as a valid explanation of the Great Inflation. Money growth preceded the mid-1970s peak in CPI inflation by 22 to 25 months, depending on money definition; and the 1980 peak by 21 to 38 months (Batini and Nelson, 2001). Because money growth peaked before the key nonmonetary events, a story that relies on a sequence running from those events to monetary accommodation to inflation does not fit the facts well.[10]

3.4 Perceived costs of inflation

Taylor (1992, p. 14) suggests that one reason why the Great Inflation occurred is that policymakers saw few costs of inflation, and so were unwilling to take steps to bring it down. But the record, by contrast, suggests that 1970s policymakers believed inflation was very costly; Batten (1981, p. 20) noted that U.S. "policymakers have called it 'public enemy No. 1' at least four times in the last decade." U.K. policymakers emphasized even more the costs of inflation. Prime Minister Harold Wilson, for example, said in speeches in July 1975 that "[i]nflation is causing unemployment" and that his anti-inflation strategy

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[10] Furthermore, as documented by Darby and Lothian (1983) and Barsky and Kilian (2001), much of the 1970s commodity price explosion was itself a response to the prior monetary easing.

was “a plan to save our country” (Wilson, 1979, pp. 266–272); in February 1976, he spoke of “our determination to eliminate inflation” and claimed that the U.K. population “is more united in a national effort against inflation than ever before” (*FT*, 02/03/76; *DT*, 02/03/76). Nor were policymakers unwilling to contemplate real costs to bring down inflation: the incomes policies pursued in the 1970s usually involved planned cuts in real wages, as well as rationing and shortages of goods. Most dramatically, in 1974 the Heath Government imposed on the United Kingdom a three-day working week, in response to labor-union opposition to its anti-inflation policy (which consisted of wage and price controls). The U.S. and U.K. records suggest that policymakers believed that inflation created high costs in terms of output and employment, and were prepared to take unpopular actions to bring down inflation.

3.5 Commitment to low unemployment

DeLong (1997, pp. 257, 270–271) argues that U.S. political and legislative commitments to full employment sacrificed price stability. DeLong contends that the political debate, as well as legislation such as Humphrey-Hawkins, obliged policymakers to target unemployment at a level that they knew was incompatible with low inflation.

But the evidence suggests that policymakers were aware that the full-employment unemployment rate had risen over time; and that they incorporated this rise into their policy decisions. For example, Paul McCracken, President Nixon’s first head of the Council of Economic Advisers, said in February 1969 that “the important thing is not to calibrate [policy targets] too narrowly in terms of unemployment… I don’t think one can set this kind of target figure” (*CT*, 02/24/69). When proposing a program in 1970 intended to achieve a non-inflationary path back to full employment by mid-1972, the Nixon Administration did so in terms of real growth rates; the unemployment rate associated with this plan was shifted up in light of evidence that the natural rate had increased (*KCS*, 12/15/70). This practice continued later in the decade, with Federal Reserve Chairman Miller testifying in July 1978 that the unemployment rate was higher than in earlier expansions because of institutional changes in the labor market (Miller, 1978, p. 645).[11] It is difficult to argue that the Carter Administration’s endorsement of the Humphrey-Hawkins legislation led to a lower unemployment target than before: as a Presidential candidate, Carter’s goal for unemployment matched the Ford Administration’s estimate of the natural rate;[12] the Administration’s main target for 1977 was expressed in terms of real GDP growth, not unemployment, and the growth target was in line with pre-existing

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[11] A recognition that the natural rate had risen also took place in the United Kingdom (Nelson and Nikolov, 2003).

[12] Carter in 1976 gave his goal as “4 or 4½ percent” unemployment (Biven, 2002, p. 31); the Ford Administration associated full employment with 4 to 5 per cent unemployed (*DFP*, 01/26/76). Both sets of numbers are consistent with the 4.5% natural unemployment rate estimate that Orphanides and Williams (2003) contend was shared by successive Administrations throughout the mid-1970s.

estimates of the degree of spare capacity in the economy. Moreover, the Humphrey-Hawkins legislation was not passed until October 1978, by which time U.S. monetary policy had already begun to shift to disinflation (see Section 4.5 below). Therefore, intentional targeting of beyond-full-employment unemployment rates does not seem to be the source of the U.S. Great Inflation.

3.6 Output gap mismeasurement

The output gap mismeasurement hypothesis has been advanced by Orphanides (2003, 2004). He argues that the loose monetary policy settings observed in the United States in the 1970s can be accounted for by a monetary policy that responds strongly to the output gap. The excessive monetary expansion of the 1970s arose from the response to the gap series, which had systematic errors.

A weakness of the output gap mismeasurement story is that it does not seem to account for the quantitative magnitude of the Great Inflation. For example, counterfactual simulations of a structural model for the United Kingdom in Nelson and Nikolov (2004, p. 314) find that an interest-rate reaction function estimated on post-Great Inflation data would have avoided over half of the rise in inflation in the 1970s, even conditioning on the actual sequence of output gap measurement errors that occurred historically.

Nevertheless, the monetary policy neglect hypothesis advocated here does provide some counterarguments to claims that the output gap mismeasurement story is *inherently* implausible. For example, Svensson (2000) argues that the official published U.S. gap estimates must *a priori* not be those used in decisions, because high inflation outcomes would have led policymakers to revise their actual estimates of the gap to more realistic values. This description of the revision process presumes that policymakers accepted a monetary view of inflation—that is, that they regarded inflation as arising from excessive monetary ease, manifested in positive output gaps. The monetary policy neglect hypothesis claims that policymakers instead took a nonmonetary or cost-push view of inflation. In that case, high inflation outcomes would *not* provoke policymakers to regard their negative output gap estimates as implausible: just as argued by Romer and Romer (2002, p. 75), gap measurement errors are not independent of policymakers' other conceptual errors.[13]

The record of 1970s debates also provides some evidence contrary to Taylor's (2000) criticism that the published output gap series—particularly the deep double-digit gap of 1975—were not representative of what was used by policymakers, because the published figures were "politicized." For one thing, it is hard to see why it would be of political benefit for the government to exaggerate how negative the output gap is.

[13] Dornbusch and Fischer (1987, p. 518) provide an early discussion of how unrecognized shifts in the aggregate supply curve caused U.S. commentators in the 1970s to embrace unorthodox views of inflation.

President Ford, for example, was attacked by Democratic candidate Jimmy Carter in a 1976 television debate for the size of the output gap, which Carter gave as minus 27 per cent, even larger than the official published estimates (*DFP*, 09/24/76). For another, analysis of major economists such as Walter Heller (*DFP*, 06/05/75) and James Tobin (1975) during the mid-1970s was clearly consistent with the belief that a double-digit output gap existed; similarly, Paul Samuelson called for 7% real growth in both 1976 and 1977 to help close the output gap (*WP*, 02/15/76). The United Kingdom had a similar experience: policymakers' real-time estimate of the output gap in 1977 was in negative double digits (see Nelson and Nikolov, 2003), and Dornbusch and Fischer's (1980, p. 25) independent estimate of the U.K. output gap also gave it at −10% in 1977.

In short, the output gap mismeasurement story does not account for the extent of the Great Inflation, and focusing on it as the source of the Great Inflation overlooks the deepest conceptual error by 1970s policymakers—their nonmonetary view of inflation. Nevertheless, those same nonmonetary views imply the absence of any automatic channel whereby inflation outcomes trigger revisions by policymakers of their output gap estimates. The monetary policy neglect hypothesis advocated in this paper therefore makes plausible the persistence of sizable gap measurement errors in the 1970s, and allows the implied monetary policy errors to account for a sizable "chunk" of the increase in inflation in the 1970s.

A feature of the preceding discussion of rival hypotheses is that each of them fails to meet the criterion of consistency with the record of policymakers' actual views on the economy during the 1970s. Let us therefore consider that record in more detail, beginning with the United States.

4. The United States

This section shows how U.S. macroeconomic policy during the 1970s conformed to the "monetary policy neglect" framework.

4.1 1969–71: Cost-push views gain ground

The coverage here begins at the end of 1969, a year during which the Nixon Administration and the Federal Reserve had pursued what Treasury Secretary David M. Kennedy described as an "objective… [of] guiding the economy from an overheated, inflationary state" (*KCS*, 09/01/70). This strategy reflected a conventional, excess-demand or monetary interpretation of the inflation that had developed in the United States since

1965,[14] to which the Administration responded with what CEA Chairman McCracken described as "policies long confidently relied upon to guide the economy's path" (*LCJ*, 09/27/69)—i.e., monetary and fiscal restriction.

On December 4, 1969, Sylvia Porter, a financial journalist whose daily column was syndicated to 350 newspapers in the United States, claimed in a column entitled "Inflation: 1970-Style" that the United States was entering an era of a new type of inflation:

> We are moving rapidly [away] from the type of inflation in which an excessive demand for goods and services pulls up prices (technical name: demand-pull)… We are swinging fast into an even worse type of inflation in which whopping wage increases will push up prices (technical name: cost-push). This type of wage-price spiral will distort our economy in 1970… This is the background for the emergence of the second type of inflation in our land (*NYP*, 12/04/69).

Cost-push views of inflation were nothing new, of course,[15] but Porter's column described an interpretation of U.S. economic developments that would become prevalent among financial commentators and policymakers alike: namely, that, while the rise in U.S. inflation in the 1960s had been due to excess demand, inflation in the 1970s had a cost-push character that it previously lacked. Porter reminded readers that she had been

> reporting to you the fears that the United States might be in the process of creating an economic nightmare—namely inflation AND recession. The nightmare well may be now approaching (*NYP*, 12/04/69).

The above quotation illustrates one reason why the cost-push view of inflation attracted adherents: it was one framework that could rationalize the "stagflation" or "slumpflation" patterns of inflation and output behavior that did indeed emerge in the 1970s. It was far from the most theoretically satisfactory way of doing so: conventional macroeconomics in the 1970s would be able to accommodate such phenomena by incorporating aggregate supply shocks and the expectational Phillips curve into the analysis. But the mechanical cost-push view of inflation was a pre-existing analysis that seemed to accord with some of the 1970s experience.

This seeming attraction of the cost-push view explains why it gained support from U.S. policymakers from early 1970, a period when inflation was continuing to rise. The

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[14] Note also that even if policymakers had a nonvertical long-run Phillips curve (β far below unity in equation (1)) in mind in 1969, that would still correspond to a monetary view of inflation, which rests instead on the belief that α is positive in (1).

[15] See Humphrey (1998) for a discussion of pre-20th century advocacy of the cost-push view. Friedman (1966, p. 101) refers to the "popularity" of cost-push theories of inflation in the United States. For the most part, however, such theories had been advanced before 1970 as an explanation for the residual behavior of inflation not accounted for by excess demand, rather than as a replacement for orthodox explanations of inflation. And while, as Romer and Romer (2002, p. 20) note, policymakers had entertained special-factor explanations of inflation earlier in the 1960s, their diagnosis of inflation had become more orthodox later in the decade, underpinning the monetary restraint in force during 1969.

support included endorsements from members of both Houses of Congress and both major political parties. Senator Barry Goldwater (R–AZ) said that “higher and higher union wage hikes” were “the unmentioned factor” behind inflation, and were frustrating Administration policies to control inflation (*KCT*, 01/15/70). Congressman Henry S. Reuss (D–WI) called for the President to organize a six-month price freeze and an agreement with labor on wages: “We should now have learned that tight money and tight fiscality alone are not enough” (*MJ*, 01/27/70). Former Federal Reserve Chairman William McChesney Martin opposed controls but called in late 1970 for the return of the previous Administration’s wage-price guidelines because, he said, “under present circumstances, fiscal and monetary policy isn’t enough” to fight inflation (*KCT*, 11/06/70).

The incumbent Federal Reserve Chairman, Arthur Burns, argued in a May 18, 1970 speech that U.S. policymakers “should not close our minds” about some form of incomes policy (in Burns, 1978, p. 99). He saw advantages for such a policy in the current situation which, in his assessment, consisted of the output gap having been made negative but “costs and prices continuing to advance.” Nevertheless, the speech did not represent a switch to a cost-push interpretation of inflation; rather, its argument falls into the conventional case for an incomes policy described in Section 2.2.[16] In particular, Burns emphasized that “primary reliance in the battle against inflation must always be placed on policies that impinge on aggregate demand” (p. 100) and that incomes policy would serve as “a supplement to overall fiscal and monetary measures” that might speed up the response of inflation to the restrictions on demand already undertaken (p. 99).

David M. Kennedy, Secretary of the Treasury, also endorsed the view that the coexistence of inflation and rising unemployment reflected delays in adjustment of inflationary expectations. He argued that as of late August 1970, the restriction of aggregate demand was “beginning to pay off” in lower inflation, showing:

> The laws of economics do work—although slowly and not perfectly. Monetary and fiscal policy have the impact we would anticipate. We have made great progress in controlling inflation… without implementing controls or in any other manner artificially restraining the free play of economic forces (*KCS*, 09/01/70).

This confidence by policymakers in conventional inflation-control devices would dissipate over the following year.

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[16] For the alternative view that Burns had a cost-push interpretation of inflation “from the beginning,” see Romer and Romer (2002, p. 25). Burns’ position from late 1970 that monetary policy was ineffective in controlling inflation came as a surprise to those who knew him, including Milton Friedman, who wrote to Burns after the imposition of wage and price controls that he never would have imagined that Burns would support such a package. Some FOMC *Minutes* do record Burns as viewing inflation as cost-push from early on (e.g. April 7, 1970, p. 50). It should be noted, however, that Burns in 1970 used the term “cost-push inflation” broadly to include inflation that was a delayed reaction to earlier monetary expansion. For example, in Tokyo in July 1970 he said that “for a time we must expect to see a continuation of cost-push inflation, with increases in wage rates and prices reflecting excess demand, the effects of which have not yet fully worked their way through” (*MST*, 07/02/70).

By the end of 1970, Burns had switched to a cost-push, nonmonetary view of inflation. The continuation of high inflation beyond mid-1970 had convinced him that "[t]he inflation we are still experiencing is no longer due to excess demand" (December 7, 1970 speech, in Burns, 1978, p. 112). He explicitly rejected the ability of restrictive monetary policy, even if employed over long periods, to eliminate this type of inflation:

> monetary and fiscal tools are inadequate for dealing with sources of price inflation such as are plaguing us now—that is, pressures on costs arising from excessive wage increases (December 7, 1970 speech, in Burns, 1978, p. 113).

> A year or two ago it was generally expected that extensive slack… would lead to significant moderation in the inflationary spiral. This has not happened, either here or abroad… Despite much idle industrial capacity, commodity prices continue to rise rapidly. And the experience of other industrial countries, particularly Canada and Great Britain, shouts warnings that even a long stretch of high and rising unemployment may not suffice to check the inflationary process (July 23, 1971, testimony, in Burns, 1978, p. 118).

These quotations are at variance with the interpretation of Chari, Christiano, and Eichenbaum (CCE) (1998) that the Federal Reserve in the 1970s understood the monetary nature of inflation, and that it consciously accommodated the pressure on inflationary expectations arising from real shocks. To support this argument, CCE quote later speeches of Burns that acknowledge the role of monetary restraint in preventing inflation. But to the extent that this was also Burns' view in 1970–71, the above quotes establish that he denied the relevance of the observation for the inflation observed in the 1970s.[17] Absence of monetary accommodation here amounts to the creation of negative output gaps. But Burns clearly stated his view that inflation could occur and even go on rising for prolonged periods—in the 1970 speech he indicated that such periods could be five years or more[18]—alongside substantial negative output gaps, and (as his 1971 observations on Canada and the United Kingdom indicate) could continue even if still larger output gaps were created.

4.2 1971–74: Nonmonetary strategies against inflation

Despite Chairman Burns' recommendation, the Nixon Administration was initially reported as firmly against a formal incomes policy, and hopeful that inflation would still exhibit a delayed response to the slowdown (*KCS*, 12/10/70; *KCS*, 12/31/70). Indeed, inflation did begin to fall over this period, with the six-month annualized growth of the CPI

[17] In fact, as shown in Sections 4.3 and 4.4 below, even Burns' later statements stressed an important role for cost-push factors in producing inflation. When he referred to the role of monetary restraint in later speeches, it was as only one condition for eliminating inflation (see e.g. his August 13, 1977 remarks in Burns, 1978, pp. 418–419).

[18] Note that, since the output gap tends to respond to monetary policy actions with a delay, Burns' belief that simultaneous negative output gaps and high inflation could prevail for more than five years implies an even longer period where contractionary monetary policy and high inflation could coexist.

falling below 5% in the first quarter of 1971 (from a peak of 6.6% in February 1970). The progress was too slow, however, to prevent commentators such as Joseph Kraft from claiming that "the country is experiencing a relatively unfamiliar and poorly understood set of troubles—stagflation" (*WP*, 02/25/71). Real performance in the first half of 1971 does not now seem unusually poor—current CBO estimates give the output gap in the first half of 1971 at roughly zero, while four-quarter growth in real GDP in early 1971 is now estimated to have been about 3%. But as Orphanides (2004, p. 169) notes, it is exactly this period when output gap mismeasurement became more serious: initial estimates of GDP and potential gave the gap at around –6%. President Nixon introduced compulsory price and wage controls, beginning with a three-month freeze, in August 1971. His Administration was already committed to restoring full employment by mid-1972, so the policy combination was now one of controls to manage inflation alongside expansionary aggregate demand policy—the very combination described by the monetary policy neglect hypothesis.

Chairman Burns would subsequently characterize the Federal Reserve's role in this expansionary phase as feeling obliged to monetize the Federal Government's higher deficits, as "the Federal Reserve, among other things, is the Government's banker" (February 26, 1974, testimony, in Joint Economic Committee, 1974, p. 746). This position, however, understates the Federal Reserve's contribution to 1971–72 macroeconomic policy. For one thing, the monetary easing that occurred was larger than can be rationalized by accommodation of deficits. Monetary accommodation of deficits is intended to offset the upward pressure on real interest rates; it cannot account for why monetary policy permitted real rates to fall drastically.

In addition, Burns' endorsement of nonmonetary views of inflation was important in promoting the policy combination in force from 1971. A Fed tightening in 1970 would likely have been politically infeasible, as the quotation from President Nixon in Section 1 indicates; but as of early 1970, it was expected that inflation would recede. Had the cost-push interpretation of inflation not found favor, the continued inflation of 1970–71 would have been an argument against easing monetary policy. But with cost-push views of inflation now accepted, the traditional views that inflation control required demand restriction, and that price controls were no substitute for this, were discarded. There was no longer a perceived conflict between monetary easing and the control of inflation, and the latter was seen as best assigned to nonmonetary devices.

The controls, coupled with the fact that inflation tends to respond less rapidly than output to monetary stimulus, were effective in disguising the degree of inflationary pressure generated by the new policy combination. President Nixon in late 1972 said that "we have a good chance to reduce the overall rate of inflation to 2.5 percent by the end of

1973" (quoted in *DFP*, 03/18/74). By October 1972, with four-quarter CPI inflation below 3.5%, so few ill-effects of the 1971–72 expansion had appeared that Milton Friedman concluded that recent money growth rates "are higher than I myself favored but, *for this period*, they have not been dangerously high" (*NW*, 10/16/72).

That judgment was to be revised when a surge in the CPI in early 1973 brought the inflation out into the open. Many other commentators, however, blamed cost-push factors rather than the prior monetary expansion for the outbreak. The Federal Reserve Chairman was among those taking this position. In January 1973, the six-month annualized CPI inflation rate rose to 4.4%, above the level prevailing when controls were introduced; in August 1973, it stood at 9.5%. Burns blamed the initial rise on "abuses of economic power by both business firms and trade unions" (*WP*, 02/21/73); and in September 1973, he offered a detailed account of the upturn in inflation since January. There, he rejected arguments that expansionary Fed policy in 1972 bore the blame for the rise in inflation, contending that the "severe rate of inflation that we have experienced in 1973 cannot responsibly be attributed to monetary management" and that, while boom conditions were one factor behind the inflation, a "more restrictive [monetary] policy" before 1973 would have had real costs "without limiting to any significant degree this year's upsurge of the price level" (Burns, 1973, p. 21). A newspaper report would later summarize Burns' view of inflation as "a worldwide disease caused by complex forces" (*CPD*, 05/05/74), and the list of causes of inflation provided by Burns in September 1973 reflected this: crop failures, environmental regulation, the depreciation of the U.S. dollar, and "critical shortages of basic materials." Burns also cited the fact that "fuel prices spurted upward," a factor that would gain much greater prominence in cost-push analyses of inflation following the OPEC oil price increases from October 1973. Though the remedy for inflation proposed by cost-push analysts—direct wage and price controls—collapsed in 1973–74, the cost-push analysis of inflation was more popular than ever.

A typical cost-push analysis of the OPEC oil shock was that by *Washington Post* economics columnist Hobart Rowen, who noted (correctly) that oil-price increases exerted an excess-demand impact on inflation due to the reduction in potential output, but insisted that the oil shock had a "double-barreled inflationary impact" because "higher gasoline, fuel oil and electricity prices will have a 'cost-push' effect, making other products more expensive" (*WP*, 11/08/73). By contrast, a monetary perspective on inflation would emphasize that, for a given level of real aggregate demand relative to potential, higher energy prices tend to make other products *less* expensive, and so an oil shock affects relative prices but has no permanent impact on the CPI.

The nonmonetary interpretation of the inflation process also led to several "nightmare scenarios" about the response of the U.S. economy to the commodity price shocks. Cost of Living Council director John Dunlop portrayed a state of affairs where the food and energy price increases of 1973 were embedded into cost-of-living wage agreements for 1974, thus turning "potentially reversible" commodity price increases into a permanent general inflation (*DMN*, 05/12/74). Similarly, Federal Reserve Governor Andrew Brimmer said that a "very serious problem is posed by the lag in wages behind price increases during the past year," because it foreshadowed a wage-price spiral due to catch-up wage demands (*CPD*, 06/02/74). A monetary perspective on inflation would instead emphasize the ability of monetary policy to exhaust any such spiral. According to this view, if the monetary authority fails to allow money growth to rise in response to the commodity price increases, it precludes a necessary condition for a permanent shift to higher inflation. The drain on aggregate demand from the non-accommodative policy puts downward pressure on wage growth and inflation. This prediction of the monetary view appears to have been borne out by the events of 1973–74: money growth was lowered substantially in these years, so that monetary policy did not provide conditions that would sustain the rise in inflation. In March 1975, Walter Heller observed that the wage explosion feared for 1975 was not occurring (*DFP*, 03/21/75).

4.3 1974–75: The Fed still denies responsibility for inflation

Despite the cost-push analysis in his 1973 letter, and his contention that wage and price controls had delivered "benefits" in 1971–72, Burns affirmed that "[p]rimary reliance in dealing with inflation… will have to be placed on fiscal and monetary policies" (1973, p. 21). This shift was consistent with his recognition that boom conditions now prevailed: advocates of the cost-push view of inflation, both in the United States and the United Kingdom, typically accepted that pushing output above potential contributes to inflation, while denying scope for monetary factors to influence inflation under other circumstances. Burns' acknowledgement, combined with changes of personnel in the Administration, produced a limited retreat in 1974–75 from the nonmonetary approaches to inflation that had prevailed in 1971–73. Alan Greenspan, who became Chairman of the CEA in 1974, was reported as regarding "jawboning" to influence wage and price outcomes as "irrelevant" for inflation control (*DFP*, 08/19/74), while President Ford made it clear soon after taking office that he would not use compulsory wage and price controls to fight inflation, stating that "the real weapons against inflation are the old-time virtues—a sound budget and a sound monetary policy" (*NYP*, 08/13/74). As Romer and Romer (2002, p. 26) document, 1974 also witnessed a move in Federal Reserve deliberations towards "more conventional" views of inflation.

Notwithstanding these breakthroughs, by 1975 the Federal Reserve was again denying responsibility for inflation. A key part of this denial was new doubt cast by Burns on monetary policy's influence on private aggregate demand. In July 1975 Burns, having noted that the "interest rate that really counts in the economy" is the long-term interest rate, claimed that "all of us recognize that the influence that the Federal Reserve has on long-term interest rates is negligible" (July 24, 1975 testimony, in House of Representatives, 1975, p. 152). While this statement was given in the context of a discussion of the Fed's ability to stimulate aggregate demand, the way Burns cast the problem implies a more broad-based skepticism about monetary policy's effects. In the month of his statement, July 1975, the Federal funds rate averaged 6.1%. If policymakers had "negligible" scope to lower bond rates when they started from a funds rate of 6.1%, there was necessarily less scope for monetary policy to lower bond rates when the funds rate stood below 6%—as it did *throughout* 1971 and 1972. Burns' 1975 position suggests a hardening during this period of his contention that it was budget deficits, not Fed stimulus to private aggregate demand via the funds rate, that triggered excessive monetary and aggregate demand expansion in 1971–72.

Consistent with this hardening, Burns claimed that "our Federal deficits have been a major cause of the inflation we have had" (July 30, 1974, testimony, in House of Representatives, 1974a, p. 278), and conjectured that "there ultimately may be little anyone can do to prevent galloping inflation" without budget reform (*DMN*, 05/11/75). Burns thus severely misjudged the extent to which monetary policy could control inflation in a period of fiscal ease.

These developments illustrate that, while policymakers no longer relied on price controls, and also acknowledged an influence of aggregate demand on inflation, an acceptance by them of the importance of monetary policy was still missing. Furthermore, cost-push views on inflation still had an important influence both on official actions and outside commentary. A September 1974 summit on inflation held by President Ford was dominated by cost-push analysis of inflation. In the leadup to the conference, *Newsweek* claimed that "the old rules of supply and demand no longer seem to apply as far as wages and prices are concerned," and quoted Wassily Leontief as saying: "The long-standing claim of economists that they knew how to control inflation is an empty pretense" (*NW*, 09/30/74). Garry Wills summarized the message of the economic summit as that U.S. inflation was not due to excessive demand (*DFP*, 10/17/74). A *Los Angeles Times* news item in May 1974 described tight monetary policy as an "old inflation cure… When it was last tried in 1969 and 1970, it failed" (*LAT*, 05/06/74).

Following the summit, President Ford himself embraced several aspects of the cost-push position, claiming that "[f]ood prices and petroleum prices in the United States are primary inflationary factors." His anti-inflation program consisted largely of measures to affect prices of particular products, including increasing U.S. food output, a "vigorous enforcement of antitrust laws," and an effort to reduce "inflationary effects of [government] regulatory activities." He also announced that "Miss Sylvia Porter, the well-known financial writer, [will] help me organize an all-out nationwide volunteer mobilization" against inflation. This campaign asked members of the public to sign a coupon which was headed "WIN" (Whip Inflation Now) and read: "Dear President Ford: I enlist as an Inflation Fighter and Energy Saver for the duration…" (*DMN*, 10/09/74).

The principal aggregate demand measure announced by President Ford in his October 1974 program was a proposed tax increase; this was withdrawn, and in early 1975 Ford proposed a tax cut. Sylvia Porter praised the tax-cut proposal as an "under-the-surface anti-inflation move" because the "spiral we are now into is not demand-pull inflation, in which excessive demand pulls up prices. It is cost-push inflation, in which rising costs push up prices. Any catch-up in pay outside of wage hikes themselves is an automatic curb on that type of inflation" (*DFP*, 01/17/75). This tax/wage-push view of inflation and disinflation had already featured prominently in cost-push analysis in the United Kingdom (see Section 5).

And indeed, Burns himself did not renounce cost-push as an important source of U.S. inflation. In February 1974, he testified that the 1970–71 inflation was evidence that "the laws of economics were not working as they once had" (February 6, 1974, testimony, in House of Representatives, 1974b, p. 668), in effect reaffirming his July 1971 judgment that "[t]he rules of economics are not working in quite the way they used to" (in Burns, 1978, p. 118). In the second half of 1975, Burns applied this diagnosis to the United States' continuing inflation problem. In an August 1975 television interview, Burns remarked: "A certain inclination seems to have developed in the business world [and] in the labor world to keep pushing prices up, wages up" (*PHI*, 08/25/75). In September 1975, he said that "inflation once again may be accelerating" to double digits despite what he thought was a deep negative output gap (September 19, 1975, speech in Burns, 1978, p. 217), and in December 1975 he cited discouraging inflation/gap combinations as evidence that "our economic system is no longer working as we once supposed" and that "competition has become less intense in many of our private markets" (*TDN*, 12/15/75). Around the same time, Philip Jackson, the newest member of the Federal Reserve Board, stated in an interview: "Inflation is caused by other than fiscal or monetary policies" (*KCS*, 11/20/75).

Wage-push also continued to be cited during 1974–75 as an independent source of inflation. The *Detroit News*, for example, said that "the UAW union… was itself a contributing factor to the inflationary spiral" because "it is obvious that wages have an important impact on prices and that wage hikes of the size won by the UAW in the auto industry also encouraged higher demands and bigger settlements in other industries" (*TDN*, 06/10/74). Burns gave credence to wage-push views when he said in 1975 that that there was “a conspiracy of silence” about wage increases, which were making inflation “inevitable” (*TCT*, 10/23/75).

As noted, Burns had recognized over 1973–74 the contribution of excess demand pressure to inflation, but his statements over 1974–75 indicate he regarded such pressure as *in addition* to major cost-push factors, rather than overturning his cost-push diagnosis. And when it seemed that inflation and severely negative output gaps were coexisting in 1975, he returned to his 1970–73 emphasis on cost-push as the culprit.

4.4 1975–78: Intensified monetary policy neglect

By the end of the 1970s, U.S. inflation was matching or surpassing its peaks of earlier in the decade, which suggests that the policy mistakes of the earlier 1970s were being repeated. Other accounts such as DeLong (1997) and Romer and Romer (2002, pp. 29–32), specify 1977 or 1978 as the year that U.S. macroeconomic policy shifted back to the erroneous framework of earlier in the decade, dates that match up with the onset of the Carter Administration and a new Federal Reserve Chairman.

As shown above, however, the reversion to more orthodox views on inflation in the mid-1970s was extremely limited, and still left the Federal Reserve denying the significance of its actions for inflation. Furthermore, while inflation did not start rising until early 1977, money growth picked up markedly in 1975–76, consistent with the inflation upturn being a lagged reaction to monetary developments. This evidence, together with that in the preceding discussion of developments in 1975, suggests that the shift back to monetary policy neglect occurred in 1975, rather than 1977; and that it reflected a comeback of cost-push views of inflation that occurred well before the change in administration.

An examination of policymakers’ statements and economic commentary in newspapers from mid-1975 confirms this conjecture. On the surface, it appears puzzling that the 1975–76 period, characterized by a substantial decline in inflation (see Figure 1) alongside prolonged unemployment, would be a period where cost-push views of inflation underwent resurgence. Three key factors explain this puzzle.

First, since much of the slowing in inflation in 1975 was arithmetically attributable to slower food and fuel price inflation, the downturn in inflation did not contradict the view that the driving force for inflation was the behavior of certain key specific prices, rather than the balance of aggregate demand and potential output. It was occasionally acknowledged that the downward pressure on food and energy prices was coming from weaker aggregate demand (e.g. *DFP*, 01/13/75). But more often, the downturn in these prices (and so, in popular analysis, inflation) was seen as resting on “hair trigger” events that could easily be reversed. For example, George Perry of the Brookings Institution opposed President Ford's proposed oil price tax on the grounds that it would "undo most of the expected improvement in the inflation rate" (*DFP*, 01/31/75); a spike in commodity and materials prices in mid-1975 triggered fears of revived double-digit inflation (*DFP*, 09/02/75); while in mid-1976 columnist Hobart Rowen said that the progress on inflation could not "last very long" because "raw materials prices have been creeping upward" (*WP*, 05/13/76).

Figure 1. Consumer price inflation, 1969–80 (annual data)

Second, substantial price increases in the steel, aluminum, and automobile industries in the second half of 1975 seemed to contradict the claim that the downturn was having a braking effect on prices.   A Sylvia Porter column in this period said that "the eruption of price hikes in industries still operating far below capacity is frightening. 'Has the law of supply and demand been repealed?' is a question heard with mounting emphasis" (*NYP*, 10/08/75). Walter Heller answered the question in the affirmative, being quoted as saying: "Concentrated industries and powerful labor unions are able to raise prices and wages in woefully weak markets. They have decided to repeal the law of supply and demand" (*DFP*, 09/02/75). A related article claimed that the wave of price increases "has heated up an old debate about… 'administered price inflation'" (*DFP*, 09/09/75). A dissenting opinion was offered by Phillip Cagan, who said that the industrial price increases reflected the once-and-for-all restoration of profit margins that typically occurs early in an expansion (*DFP*, 09/02/75); in retrospect, this more sanguine interpretation of the episode appears more appropriate than the better-publicized cost-push analysis.

The third factor is that output gap mismeasurement at this time was in a direction that seemed to confirm the absence of a connection between inflation and economic slack. The reported output gap series stood beyond –12% in late 1975, beside which the fall in inflation may have seemed modest. Sylvia Porter's columns during 1975 relayed this message repeatedly, maintaining that "while real GNP has been falling, our potential has been continuing to climb" (*DFP*, 06/05/75) and that "the traditional 'slump' weapon is obviously inadequate to deal with the inflation spirals now cursing economies around the globe" (*DFP*, 10/09/75). Two core ingredients of the large negative gap estimates—a natural unemployment rate estimate of about 4.5% and a continued belief in 4% potential output growth—continued to be widely accepted. A 4 to 5% number for the full-employment unemployment rate was confirmed on the CBS television program *Face the Nation* by CEA Chairman Greenspan in January 1976 (*DFP*, 01/26/76), while prominent economists who continued to affirm the 4% potential-growth estimate included Arthur Burns (July 24, 1975 testimony, in House of Representatives, 1975, p. 158), Arthur Okun (July 23, 1975 testimony, in House of Representatives, 1975, p. 77), and Paul Samuelson (*NW*, 07/28/75). The Ford Administration itself did not substantially reduce its estimate of potential until January 1977 (Orphanides, 2003). In the face of such perceived gaps, therefore, the decline in recorded inflation seemed unimpressively small. In light of this, it is less surprising that economists inside and outside government continued to rely largely on cost-push or special-factors explanations of inflation.

The Carter Administration also had a cost-push outlook on inflation, reflected in what columnist Joseph Kraft called "a long-standing commitment by the Carter [A]dministration to take direct action against inflation" (*SFC*, 01/17/78). Aggregate demand policies, on the other hand, were directed toward the full-employment goal. Accordingly, Carter and Burns agreed on a 6% target for real growth in 1977 (*NW*, 01/10/77), while Carter announced in April 1977 a separate program designed to reduce inflation to 4% by the end of 1979. This program consisted of what a *Newsweek* report described as "a laundry list of contributions the government itself could make to keep prices down" (*NW*, 04/25/77), including a commodity stockpile program. Carter rejected restriction of aggregate demand as an anti-inflationary tool, and characterized his package as one that "directly addresses the roots of inflation and, at the same time, permit[s] us to have expansion in our economy and a simultaneous reduction in unemployment" (*WP*, 04/16/77). By July 1977, the 4% goal for inflation had been deferred to 1980, with an Administration senior official adding that "we'll never get" 4% inflation unless business and labor cooperated on wage-price restraint (*CST*, 07/28/77).

At the Federal Reserve, Burns continued to adhere to cost-push views in his last year in office. He criticized the Administration for talking down the U.S. exchange rate, complaining that "better price performance in our country is obviously not being helped by the recent depreciation" (*TDN*, 11/09/77). In addition, he attacked extensions of farm-price support as inflationary (*NW*, 01/09/78) and said that Congress was "legislating inflation" through minimum-wage and payroll tax increases (*DFP*, 11/10/77).

Incomes policies became a prominent part of the Carter Administration's anti-inflation packages, a position reflected in the statement by Barry Bosworth, an economist affiliated with the Administration, that the "real problem is that fiscal and monetary policies don't work" (*DFP*, 06/06/77). Carter announced incomes policy arrangements in the form of guideposts in April 1978. The April 1978 measures consisted of restrictions on wage growth for Federal Government employees: with these, Carter said, "I am asking American workers to follow the example of Federal workers and accept a lower rate of wage increase. In return, they have a right to expect a comparable restraint in price increases" (*LAT*, 04/12/78). The scheme therefore worked on a wage-push view of inflation, with no role for monetary and aggregate demand restraint. In fact, it was reported that Carter "pledged not to let unemployment rise while attempting to control wages and prices" (*WP*, 04/12/78), with the President claiming that inflation "resisted the most severe recession in a generation… [and] persists because all of us—business and labor, farmers and consumers—are caught on a treadmill" (*LAT*, 04/12/78). Similarly, Romer and Romer (2002, pp. 31–32, 62) show that the *Economic Report of the President* during this period argued against demand policies as either the cause of or solution for inflation.

A second incomes policy program was announced in October 1978. Referring to this program in his 1979 State of the Union address, President Carter described it as "a balanced anti-inflation program that couples responsible government restraint with responsible wage and price restraint... It's imperative that we in government do our part. We must stop excessive government growth, and we must control government spending habits… This budget is a clear message that, with the help of you and the American people, I am determined, as President, to bring inflation under control" (*NYT*, 01/24/79). It was reported that Carter's view was that fiscal tightening mattered not in any effect it had in reducing the government's contribution to aggregate demand or money growth, but through a "psychological effect on Americans because it would show the government is serious about cutting its own spending… set[ting] an example others might follow" (*TST*, 03/14/80). In his October 1978 address, Carter reaffirmed that a strategy against inflation of "a deliberate recession… would not work," and instead sought favorable tax treatment for wage-earners who adhered to the new guidelines (*NYT*, 10/25/78).

G. William Miller became Federal Reserve Chairman in March 1978. In an interview in July 1978, he endorsed several aspects of the cost-push view of inflation, contending that announced increases in payroll taxes and the minimum wage "will contribute substantially to inflation," and applauding the April 1978 incomes policy as a “process [that] has to continue.” As well as embracing a nonmonetary view of inflation with these statements, Miller endorsed the idea that monetary policy was becoming ineffective at restraining demand: “the public has built up some sort of antibodies that resist the impact of higher interest rates” (*WP*, 07/30/78). Although, in principle, this perspective might mean pushing interest rates up further than otherwise in fighting inflation, Miller said he expected interest rates to peak soon and to begin declining in 1979, with no recession.

4.5 The disinflation begins

During 1978, both policymakers and the financial press placed special emphasis on the exchange rate in their cost-push interpretation of inflation. Columnist Sylvia Porter continued to argue that “[f]or many, many years… we have been in the clutch of cost-push inflation in the United States” (*WST*, 10/31/78); to her, exchange-rate depreciation was the latest source of cost-push pressure, with the dollar’s fall “a prime factor in fueling the speedup of inflation in 1978” (*NYDN*, 11/07/78). Chairman Miller took a similar view of the relationship between dollar depreciation and inflation. In July 1978 testimony, Miller (1978, p. 644) said that “[m]onetary policy has been—and will continue to be—designed to restrain inflation. But monetary policy cannot do the job alone.” As measures against the “structural problem of inflation,” along with familiar proposals for deficit reduction and lower government regulation, Miller named “steps as well to bolster our position in international trade and thereby to strengthen the dollar” (1978, p. 646).

There was a fundamental difference, however, between the weakness of the dollar in 1978 and earlier events cited as cost-push sources of inflation. Oil- or wage-push interpretations of inflation did not lend support to a tightening of monetary policy as a countermeasure. By contrast, because the link between international interest differentials and the exchange rate was widely accepted, monetary policy tightening did appear an appropriate action to arrest dollar depreciation. The FOMC cited dollar weakness as a reason for its shift to tighter policy during 1978. Financial columnist Hobart Rowen rationalized the Fed’s tightening in August 1978 in cost-push terms: not only would depreciation raise import prices but “a plunging dollar… would force OPEC to raise prices—or worse, price oil in some currency other than dollars” (*WP*, 08/31/78). He argued that this was why the White House had supported the Fed’s tightening with its own statement that “the Administration fully understands the reason for this action.” Further pressure on the dollar led to President Carter announcing new measures in November, on the grounds that the dollar’s decline “threatens… our anti-inflation program” (*LAT*, 11/02/78*a*). Carter’s announcement, coordinated with increases in interest rates by the Fed, was interpreted as an acceptance that a recession should be risked as part of the fight against inflation, reversing his earlier position (*LAT*, 11/02/78*b*).

The perceived channel by which policymakers saw their actions as anti-inflationary—policy tightening producing a stronger dollar, and so lower import price inflation, and so a fall in inflation—was misconceived, and neglected the fact that exchange-rate depreciation can occur in conditions of price stability. But the depreciation did act as a circuit-breaker that brought forth tightenings of monetary policy—and thus the contractions in aggregate demand that the cost-push view of inflation had previously ruled out. By November 1978, Porter noted that "the Federal Reserve System recently has been aggressively trying to slow the spiral by tightening credit and boosting interest rates to double-digit ranges" (*WST*, 11/02/78). This tightening is reflected in the fact that the rise in nominal interest rates during 1978 exceeded the rise in inflation (Figure 2). A lasting decline in M2 growth also began in 1978. This evidence supports the contention by Friedman and Friedman (1984, p. 89) and Romer and Romer (1990, p. 161) that the turnaround in monetary policy that produced the early 1980s disinflation began in 1978.

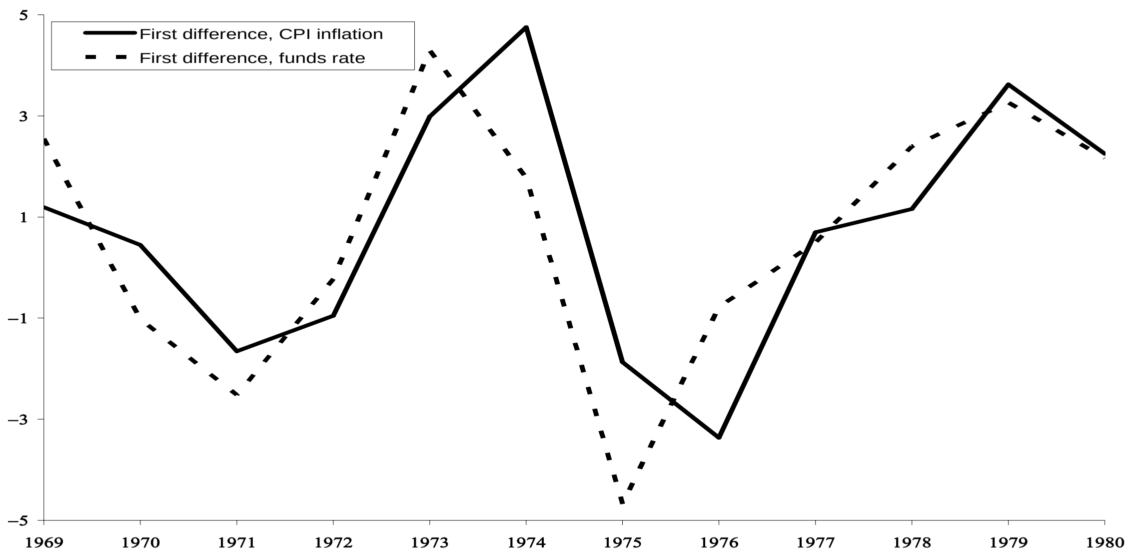

Figure 2. Changes in CPI inflation and Federal funds rate, 1969–80, annual data

These measures took place alongside continued espousal of cost-push views of inflation, and pursuit of wage-price guidelines, by Administration officials. A turning point had nevertheless been reached, in that monetary policy had moved in the direction of restraint, with the support of the Administration.

Acceptance of the *central* role of monetary policy for inflation control took longer. In April 1978, Miller had said, "I believe the national interest is best served with an oil policy or an anti-inflation policy rather than relying on monetary policy" (*TDN*, 04/11/78), and in August continued to insist there were "limitations of monetary policy as the main bulwark against inflation" (Miller, 1978, p. 646). Again, during a visit to Cleveland in

September 1978, it was reported that "as he has said in the past, Miller emphasized [that] the Federal Reserve should not bear too much responsibility for inflation" (*CPD*, 09/14/78). Similarly, in an October 1978 interview, Federal Reserve Governor Teeters cited an incomes policy arrangement between government and unions as the best prospect for fighting inflation. "Everybody is now trying to recoup their positions relative to one another. We just haven't found a way to bring them all together" (*BSN*, 10/08/78).

Although the United States turned the corner on monetary policy in 1978, the lag of inflation behind monetary developments meant that inflation deteriorated throughout 1979, leading to pressure on the Federal Reserve to improve its monetary control. This produced the new operating procedures announced in October 1979, a better-known watershed than the shift to tightening in 1978. Reaction to the 1979 policy change reflected the continuing, though receding, influence of cost-push views on economic commentary. The Monday after the new operating procedures were announced, a *New York Post* article stated: "It's nail-biting time in the economics business… it's time to find out if tight money stops inflation" (*NYP*, 10/08/79). The article said that the rise in interest rates over the preceding two years "hasn't put any dents in inflation," but conceded that until recently the interest-rate increases had been inadequate to keep the real interest rate positive. Jim Sasser (D–TN) of the Senate Budget Committee criticized the Fed's move because "we appear to be in a new ball game. We have higher and higher interest rates with no discernible impact [o]n the inflation rate" (*COM*, 10/08/79). Skepticism about monetary policy as an anti-inflationary weapon was also manifested in a November 1979 *New York Times* article by James Tobin entitled "Why the Fed's Cure Won't Work," which restated doubts about the output-gap channel to inflation ("If five years of 8 percent unemployment lower domestic wage-price inflation by 4 points, we will be lucky") and praised President Carter's "unfairly maligned guideposts" for holding down wage inflation (*NYT*, 11/11/79). Several months later, J.A. Livingston reported that "modern economists" accepted that "[i]nflation has become recession-resistant, and America inflation-prone" (*PHI*, 04/23/80). The sustained decline in U.S. inflation after 1980, however, settled the debate on whether monetary policy was an effective weapon against inflation.

5. The United Kingdom

This section considers the evolution of economic policy and commentary during the United Kingdom's Great Inflation. The United Kingdom had sharply different "initial conditions" in 1970 from the United States, due to a different 1960s macroeconomic consensus, so the situation as of 1970 is considered first.

5.1 The United Kingdom in 1970: A cost-push consensus

The case of the United Kingdom is different from that of the United States in one critical area: policymaker skepticism about monetary policy was prevalent throughout the 1960s, with widespread acceptance of cost-push views of inflation. Brittan (1977, p. 8) observes that U.K. macroeconomic policy for most of the postwar period was "managed by people most of whom do not at heart believe that inflation is a monetary phenomenon," while Alan Walters, economic adviser to Margaret Thatcher in the 1980s, recalled: "For three decades… [i]nflation was blamed on trade unions, greedy businessmen, property speculators, import prices, taxes, government regulations…" (*TE*, 05/04/85). The United Kingdom's adherence to a fixed exchange rate nevertheless put a brake on periods of expansionary monetary policy, and when price and wage controls were employed in the 1960s, they served to supplement restrictive aggregate demand policies.

The reduced priority given to exchange-rate stability after 1966 gave greater scope for macroeconomic policy to be directed by domestic views—which, at that time, were concentrated on the wage-push variant of the cost-push explanation of inflation. Increases in nominal wage inflation in the late 1960s—which in retrospect do not appear out of line with the pickup in U.K. monetary growth—led to renewed emphasis on cost-push. The London *Sunday Times* financial columnist claimed in early 1968 that "the whole structure of wage bargaining has become much more inflationary in the 1960s than the 1950s" (*ST*, 03/17/68), while *The Economist* argued that "incomes policy is an indispensable weapon for managing the British economy" (*TE,* 01/18/69). When the *Daily Mail* provided its readers with a glossary of economic terms, it felt it had to define "inflation" as follows:

> *Inflation*: rising prices, or a decrease in the value of money. This is caused by the excess of demand over supply (demand inflation) and some economists believe that it may originate, independently of demand inflation, in an excessive rise in wage rates (*DML*, 09/24/69).

The wage-push view of inflation formed the basis for the diagnosis of inflation by Roy Jenkins who, as Chancellor of the Exchequer, had responsibility for both fiscal and monetary policy.[19] In February 1970, Jenkins stated: "In my view what this country needs at the present time is a respite from the inevitably steep [rise in] prices which we have had in the two years following devaluation" (*TS*, 02/09/70). He argued that union wage demands were responsible for the continuation of inflation following the 1967 devaluation. This diagnosis is notable for its acceptance of three aspects of the cost-push view: (i) the belief that devaluation "inevitably" raises the aggregate price level—in effect, extrapolating from particular prices (import prices) to the total price index; (ii) the role assigned to wage-push in propagating inflation; (iii) the absence of a role for monetary policy in determining whether devaluation and wage-push have a lasting impact on inflation. By contrast, a monetary view of inflation contends that, even when a fall in the nominal exchange rate occurs, an aggregate CPI response is not inevitable, and neither is any subsequent wage-

[19] The Bank of England did not become independent of the U.K. Treasury until 1997.

price spiral. Both can be contained if monetary policy puts a lid on nominal spending and, therefore, allows the exchange-rate movement to create a shift in relative prices rather than aggregate prices.[20]

In early 1971, Woodrow Wyatt, a former Labour Party politician and a figure associated with the political center, laid out the case against demand measures: "unemployment does not work as a weapon to bring down costs and wages in modern society… powerful unions in key industries see to it that it doesn't" (*DMR*, 02/26/71). Arguments such as this, while receiving new prominence in the United States during 1970–71, were long-established doctrine in U.K. official circles.

5.2 1970–76: Easy money, tough incomes policies

The Conservative Government of Edward Heath that was elected in June 1970 also subscribed to a nonmonetary view of inflation. The new Chancellor of the Exchequer, Iain Macleod, had been reported as describing the United Kingdom as "in the grip of the worst cost-push inflation since 1951" (*TT*, 04/20/70), while the Conservative Party's election platform stated: "Britain now faces the worst inflation for twenty years. This is mainly the result of tax increases and devaluation" (1970, p. 116). This diagnosis saw inflation as arising from wage-push triggered by the reduction in real disposable income from tax increases. Continuing this theme, a *Sunday Times* analysis of an economic statement Heath had given just before the election concluded: "Heath's diagnosis of the present inflation is not that there is too much money chasing too few goods, but rather, 'too much taxation chasing too little income'" (*ST*, 06/21/70). The new Government's views were reflected in several nonmonetary measures taken against inflation in 1970–71, including tax cuts, restrictions on the increases in prices of government-sector output, and limitations on the wage increases given public employees.

While the Government did not attribute inflation to excess demand, some commentators expected that contractionary policies would be imposed, in the absence of better tools to attack union wage-push (*DML*, 06/16/70). Certain restrictive measures were introduced in the second half of 1970 with the arrival of the Government's second Chancellor of the Exchequer, Tony Barber. Barber during this period conceded some role for monetary policy in controlling inflation, while emphasizing wage-push as the fundamental cause (*BKR*, 02/71). His restrictive actions in 1970–71, however, principally took the form of fiscal contraction; the monetary steps consisted of an increase in reserve requirements and a call for less commercial bank lending (*TT*, 10/30/70). Short rates were held constant at their pre-election levels. This ensured that the measures were ineffective

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[20] A non-inflationary monetary policy is also, of course, likely to be helpful in avoiding or reversing exchange-rate depreciations.

in restraining money growth: higher reserve requirements could be met by greater reserve provision by the Bank of England at the pre-existing nominal interest rate, while commercial banks could respond to the lending restriction by switching to greater investment in government securities, without needing to contract total balance sheets.

From early 1971, U.K. policymakers adopted a stricter cost-push interpretation of the inflation problem, according to which restrictions on aggregate demand were inappropriate. To contemporary observers, the 1970 inflation seemed to be proceeding in spite of an exceptionally weak economy. One financial columnist before the election observed, "we are drifting into the worst of states—stagnation and inflation" (*DML*, 06/16/70), while a businessman, Lord Shawcross, was reported a month later urging a correction of the two problems of "the present economic stagnation and unprecedented inflation" (*DE*, 07/16/70). The same day, a *Daily Mail* column observed, "stagflation is a deadly bug," the first known case of the word "stagflation" appearing in a newspaper article (*DML,* 07/16/70). As it is now known that U.K. real growth proceeded at an annualized rate of over 2.5% in the first half of 1970, the talk of "stagflation" seems overdone. But initial estimates gave this rate at only 0.4%, and the apparent coincidence of inflation and stagnation undermined the Government's remaining confidence in monetary policy as a means of fighting inflation.

In December 1970 it was reported that the Government "is not so sure now, as it once was, that inflation is sensitive to total demand" (*ST*, 12/20/70). Early in 1971, it was further reported that Treasury officials had made a "firm recommendation… that the only way [to] bring a quick halt to Britain's dangerous inflation is to impose a prices and incomes freeze. Officials have warned that orthodox deflationary techniques still favored by the Government are neither appropriate nor adequate to stop inflation" (*ST*, 01/10/71). In April, Chancellor Barber himself said, "I cannot accept that excessive wage claims are not the cause for inflation" (*DE*, 04/06/71), while Prime Minister Heath observed: "Surely there can be no doubt in anyone's mind that wage inflation has been the main reason for both higher prices and higher unemployment" (*DMR*, 04/20/71).

The restoration of pure cost-push views produced a new policy package: the Government followed a policy of boosting aggregate demand while assigning the control of inflation completely to nonmonetary devices. The Government's March 1971 Budget shifted to fiscal expansion, and this was accompanied by a cut in interest rates. The policy shift was not seen as acquiescence to high inflation: Chancellor Barber said "the first priority must be to defeat cost inflation" (*UKPD*, 03/30/71, p. 1361), while press coverage of the interest-rate cut argued that it was anti-inflationary for cost-push reasons: "High interest rates have been one of the factors fuelling inflation so a reduction… will exert a cooling effect on prices" (*EN*, 04/01/71). Further cuts in interest rates followed (and, in

June 1972, the floating of the exchange rate). Policy became still more expansionary in the first quarter of 1972 as rising unemployment and high productivity growth persuaded the Government that the potential growth rate had risen from 3% per year in the 1960s to 3.5% in the 1970s, and that the output gap as of early 1972 was around −5%—though, in retrospect, it appears to have been close to zero (Nelson and Nikolov, 2003).

It may appear surprising that the effect of rising inflation in 1971 was to undermine confidence in demand-based cures for inflation, but not in nonmonetary approaches, which had already been deployed heavily. But because cost-push views of inflation emphasize so many different sources of inflationary pressure, it was easy to stay within the cost-push framework, yet acknowledge the failure of the various direct interventions in price and wage setting that the Government had thus far attempted. The financial editor of the *Daily Mirror*, for example, pointed to "supra-national" corporations as undermining the Government's incomes policy, claiming that "while Ted Heath's Government sternly resists 'inflationary demands' by postmen and electricity workers, American-owned firms blandly contemplate or grant big increases for their British employees" (*DMR*, 01/27/71). More generally, a widespread criticism of the Government during 1971–72 was that it should be pursuing an even more vigorous incomes policy, one legally binding on the private sector. The London *Times*, for example, editorialized in favor of "a new effort to create an effective incomes policy" (*TT*, 04/20/71), while Roy Jenkins, now an economics spokesman for the Opposition Labour Party, advocated a combination of "price control and an expansionary economic policy" (*UKPD*, 07/20/71, p. 1281). Bad news on inflation thus had an asymmetric effect on the attitudes to alternative inflation-fighting policies: high inflation alongside perceived demand restriction was seen as grounds for abandoning the restraint on demand; while high inflation in the face of incomes policies led to advice to make the incomes policies tighter.

The Heath Government ultimately followed this advice, introducing compulsory wage and price controls in November 1972. The compulsory controls formalized the regime in force since early 1971: nonmonetary measures against inflation alongside monetary expansion—that is, the policy combination predicted by the monetary policy neglect hypothesis.

Goodhart (2003, p. 27) recalls: "The Prime Minister, Ted Heath, had sought to rely on incomes policy in 1973 to hold the line on inflation." Heath regarded the commodity price increases of 1972–73 as an additional source of cost-push inflation which, together with labor-union resistance, prevented the success of his wage and price control program. He denied that a slower monetary growth path could have contained the rise in inflation that followed the commodity shocks; indeed, Heath believed that his expansionary monetary policy was anti-inflationary because it added to total output (Heath, 1998, p.

405). Endorsing Heath's position, the *Daily Express* editorialized: "this newspaper holds that the way to beat inflation is to overwhelm it in a flood of efficiently produced goods" (*DE*, 09/14/72). The problem with this position was that it neglected the distinction between additions to demand and additions to supply.

The Opposition Labour Party in 1973 had announced plans for "a wide-ranging and permanent system of price controls" (*TT*, 03/01/73), and when the party returned to office in 1974, it pursued nonmonetary initiatives against inflation, including agricultural subsidies and cuts in indirect taxes. "We have set out to tackle inflation at the price end," Prime Minister Harold Wilson explained in a television interview in August 1974. "By the rents freeze. By holding mortgages down. By food subsidies. By a much tighter control over food prices in the shops."[21] To the extent that these measures had an aggregate effect, it could only be expected to be one-time downward pressure on the price level, and so ineffective against ongoing inflation; in any case, a rising budget deficit in 1975 forced the Government to withdraw many of its earlier subsidies. Another nonmonetary tool used by the Government was a wages agreement with labor unions.

On the aggregate demand side, the Government pursued expansionary policies, so that U.K. anti-inflation strategy and demand management policies continued to be in conflict. The Government did take one important step that shifted monetary policy in a less expansionary direction, when in early 1974 it revised estimates of potential GDP growth down from 3.5% per year to 3%. This measure alone implied that nominal interest rates at the start of 1975 were about 125 basis points higher than they would have been had the Government not revised the estimates.[22]

The peak of inflation at over 25% in 1975, which the Government blamed on union wage-push rather than the preceding years of monetary expansion, prompted moves to make the wages agreement more legally binding. The Government's paper on inflation in July 1975 announcing the change made it clear that demand restriction would not accompany the incomes policy: "there can be no solution to the problem of inflation which relies on… under-utilization… The direct and sensible solution is to reduce our rate of increase in wages and salaries" (*TT*, 07/12/75). An illustration of how commentators believed inflation had a life of its own, disconnected from monetary policy, is an article in the *Birmingham Evening Mail* at the time of the new incomes policy, which suggested that the United Kingdom might shift into hyperinflation with a new shock such as "if the pound collapses next year" (*BEM*, 07/02/75). In the event, a pound collapse *did* occur—the sterling/dollar exchange rate did fall by 30% in the following 15 months—but inflation fell

[21] Quoted in Day (1993, p. 115).
[22] My estimate of the effect of the output-gap revision on the setting of the interest rate is based on the U.K. interest-rate rule estimates in Nelson and Nikolov (2004, p. 309).

by over 15 percentage points from 1975 to 1978, in line with the withdrawal since 1973 of some of the monetary stimulus.

5.3 1976–77: The turnaround that didn't last

In 1976, there was some movement away from monetary policy neglect in the United Kingdom, manifested in a public acknowledgement by Prime Minister Callaghan of the links between aggregate demand and inflation (*TT*, 09/29/76), as well as the announcement of targets for broad money growth. On this basis, Chancellor of the Exchequer Healey said in 1978 that the Labour Government was "perhaps the first in Britain for very many years which has given monetary policy the importance it deserves" (*TT*, 10/20/78). But strong elements of the earlier analysis remained: in particular, the Government continued to deploy incomes policy (aimed at wage growth) in its anti-inflation strategy.

The renewed emphasis on monetary policy did not, in fact, signal that the Government was now willing to use conventional monetary tightening—downward pressure on money base growth and upward pressure on nominal rates—to rein in inflation. With the exchange rate no longer depreciating by early 1977, the Government cut interest rates aggressively, and it concentrated on quantitative regulations to control money growth. The failure of interest-rate increases to be a major part of the monetary targeting framework did not simply reflect technical errors in the Government's monetary control methods, but rather indicated continued adherence to nonmonetary views of inflation. By the mid-1970s the U.K. authorities were aware that the negative real interest rates that had emerged were abnormal, and that positive real rates would need to be restored. Yet so long as incomes policies were regarded as a separate policy instrument capable of manipulating inflation and inflationary expectations, there was no presumption that restoration of positive real rates required higher nominal rates. Rather, it was believed that for a given nominal rate, nonmonetary measures could be deployed to reduce the expected-inflation component of the Fisher equation.

Even the more enlightened late-1970s statements by U.K. policymakers reflected the continuing influence of cost-push views. For example, when in 1978 Prime Minister Callaghan said: "If inflation starts to move up, then the Government will take offsetting action to keep inflation down through monetary and fiscal measures" (*SUN*, 10/04/78), he was describing the Government's planned response in the event of a collapse in the official wages agreement. He regarded as preferable and feasible the alternative scenario of using incomes policy to reduce inflation without restraint on aggregate demand. And his description of his policy reaction did not permit the possibility that monetary policy could block a rise in inflation from taking place at all. Indeed, in 1977 Callaghan said that there was “nothing the Government can do” to prevent a return to 25% price inflation in the event of a wage spiral (*TG*, 09/07/77), while Chancellor Healey similarly contended that “a wage explosion would send prices rocketing” (*SUN*, 03/30/77).

And while monetary policy did receive more attention in U.K. commentary than previously, a substantial body of opinion favoring incomes policy persisted. For example, the *Oxford Mail* editorialized that “the basic thesis behind incomes policy remains true… the best hope of getting inflation down to single figures is still restraint on wage claims” (*OXM*, 06/27/77), while the influential National Institute of Economic and Social Research said that lower inflation in 1977 was “largely due to the pay policy and the decline in world prices” (*SUN*, 11/30/77).

The shortcomings of the macroeconomic arrangements in this period were compounded by failure to recognize the post-1973 productivity slowdown. Throughout 1974–79, policymakers assumed potential GDP growth of 3%, whereas after 1973 an assumption of 2% growth would have been more realistic. The outcome was that the estimated output gap, which interest rates responded to strongly during this period, was overstated by approximately 10% by late 1977 (Nelson and Nikolov, 2003).

5.4 1977–79: Back to monetary policy neglect

From 1977 to early 1979, U.K. policy reverted to monetary policy neglect, with the Government pursuing a stricter incomes policy alongside a strong rebound in money growth and cuts in nominal interest rates. Prime Minister Callaghan stated in January 1978 that he was aiming for 5% price inflation in 1979 (*DE*, 01/03/78), and the Government attempted to limit wage increases to 5% over 1978–79 in pursuit of this goal. The wage goal was inconsistent with the upward pressure on wage and price inflation in the pipeline from prior monetary easings, and heavy strike activity resulted. Following a Parliamentary defeat, the Government announced an election for May 1979.

The Conservative Party under Margaret Thatcher ran during the election campaign on a program to reject wage and price controls in favor of monetary control for fighting inflation. The discussion during the campaign, however, reflected the continuing faith in incomes policy by elements of both sides of politics. Former Prime Minister Edward Heath was quoted as describing the idea of using monetary policy to fight inflation as “intellectually bogus,” and it was reported that he “believed and continues to believe that incomes policy is the basic tool to combat inflation” (*TST*, 04/08/79). The Labour Government’s policy document for the election had a three-point program to reduce inflation to 5% by 1982. All three points of the program consisted of nonmonetary measures: strengthening the Price Commission; reform of agricultural supplies; and a new wage agreement with the unions (*DT*, 04/07/79). The Government also indicated that it would "aim at a rate of growth of 3 per cent or more" to restore full employment, indicating both that the incomes policy would be accompanied by expansionary demand policies, and that the Government still viewed potential growth as around 3% per annum, an estimate out of line with the post-1973 experience. These promises amounted to a continuation of the nonmonetary approach to inflation control in force for most of the preceding eight years. In a television interview the night before the election, Prime Minister Callaghan reaffirmed his confidence in incomes policies: "We had three years of success with them—that is why we got inflation down" (*SUN*, 05/03/79).

With the election of the Thatcher Government, the remaining price and wage control machinery was abandoned. On monetary policy, the Government differed from its predecessors in concentrating on a more non-inflationary setting of the interest-rate rule, with Margaret Thatcher acknowledging that it was "necessary to raise interest rates to conquer inflation" (*UKPD*, 11/15/79, p. 1498). Another major step the Government took in 1979–80 was a sharp downward revision of potential growth to reflect the post-1973 slowdown, eliminating a key source of inflationary policy errors. After the usual two-year lag in the effect of monetary policy actions, the tighter setting of monetary policy implied by the stronger response to inflation and reliance on a more realistic gap series were manifested in much lower inflation rates from 1982.

6. Conclusion

This paper has looked at the record of policymakers' views and economic commentary during the Great Inflation, focusing especially on a source not employed in the existing literature—newspaper coverage. This examination lends considerable support to what Nelson and Nikolov (2004) label the monetary policy neglect hypothesis. Not only, as McCallum (1999, p. 176) notes, "[i]n the United States and the United Kingdom there was a tendency for central banks to deny their own behavior was an essential ingredient to the inflation process," but policy in both countries up to 1978 focused on nonmonetary strategies for dealing with inflation. These concluding remarks discuss the relation of this finding to the existing literature on the Great Inflation, then make some general points about how policies that did not feature monetary policy neglect would have fared in the 1970s.

The analysis here suggests that several accounts of the Great Inflation do not accord with either the international evidence or the record of economic views, manifested in statements by policymakers and prominent financial commentators. The argument by Taylor (1992) and Sargent (1999) that policymakers pursued a long-run trade-off is inconsistent with the fact that neither U.K. nor U.S. policymakers viewed inflation through a Phillips curve (whether of a vertical or nonvertical variety) over the 1970s. The expectations trap hypothesis is also inconsistent with policymakers' views regarding the inflation process, and has difficulty in accounting for the timing of the monetary expansion in the 1970s.

Differences with other studies are more in details. Orphanides' (2003) emphasis on output gap mismeasurement has been affirmed, although I have argued that this was not the principal 1970s policy mistake. That mistake instead was the prevalence of cost-push views of inflation. The claim that adherence to nonmonetary views of inflation produced major policy mistakes has been advanced for the United Kingdom by Nelson and Nikolov (2004), and for the United States in detail by Romer and Romer (2002). The additional evidence in this paper supports this claim for both countries. The analysis here also supports Romer and Romer's (2002) contention that U.S. policymakers' support for cost-push views temporarily receded around 1974. However, their dating of the reversion to cost-push views of inflation to 1977 is too late (given the lags in effect of monetary policy) to account for the policies that produced the sharp pickup of inflation from 1977. According to the alternative analysis here, the lack of confidence by U.S. policymakers in monetary policy was reversed only briefly, in 1974–75; and then only to a limited degree—so limited that the *Los Angeles Times* referred to monetary policy as an "old inflation cure that failed," and Federal Reserve Board members, including Chairman Burns, continued to deny responsibility for inflation. The United Kingdom, too, had a brief move away from nonmonetary views of inflation, in 1976–77. Significantly, in both countries, the reversion to nonmonetary views (the United States in 1975, the United Kingdom in 1977) occurred during periods of apparently double-digit negative output gaps and continuing high inflation. Far from this phenomenon promoting revisions of gap series, it led to an embrace of cost-push views that seemed to resolve the anomaly.

Cost-push views magnified the implications of output gap errors for inflation in two ways. First, the cost-push perspective suggested that monetary policy was an inappropriate instrument against inflation, and so promoted a low inflation response in interest-rate rules. This implied that excessive easings produced by policy responses to faulty gap measures, did not produce subsequent tightenings as inflation turned up. Second, cost-push views slowed down the correction of errors in estimates of potential GDP. The monetary view of inflation insists that high inflation is evidence of excessive aggregate demand. Output-gap estimates that did not reflect this would have been corrected. By contrast, the cost-push view of inflation rationalized arbitrary inflation/gap combinations, and therefore provided no automatic mechanism for gap estimates to be revised.

The circuit-breaker that led to the U.S. disinflation was not a conversion to monetary views of inflation, but an event (exchange rate depreciation) in 1978 that legitimized monetary tightening as an appropriate response to inflation even from a cost-push perspective. Conversion to a monetary interpretation of inflation only came later. In the United Kingdom, the 1976 depreciation also started to trigger a tightening, but when downward pressure on the pound dissipated in 1977, the rationale for a monetary tightening was lost, and monetary policy neglect resumed. When disinflation began in 1979, it was under a new government that did accept a monetary view of inflation.

If policymakers had adhered to a monetary view of inflation in the 1970s, and therefore used monetary policy vigorously, there are strong grounds for believing that both inflation outcomes and real outcomes would have been superior. Because real interest rates were so negative in the 1970s—especially in the United Kingdom—it is difficult to avoid the conclusion that real rates would have been higher on average in both countries under a more inflation-vigilant monetary policy, and so the peaks in output would have been lower. This, however, should not be interpreted as a *cost* of a more orthodox policy, even leaving aside the likelihood that high inflation had negative supply-side effects on potential GDP. The lower peaks of *output* under the alternative policy would have been with the intention of eliminating positive *output gaps*. If, as has become the mainstream view, monetary policy should stabilize output around potential, then a policy that avoided the negative real rates of the 1970s would have been welfare-enhancing.

Appendix A. Abbreviations for periodicals cited in the text

U.S. periodicals

BSN—The Evening Sun (Baltimore, MD); *COM—The Commercial Appeal* (Memphis, TN); *CPD—Cleveland Plain Dealer* (Cleveland, OH); *CST—Chicago Sun-Times* (Chicago, IL); *CT—Chicago Tribune* (Chicago, IL); *DFP—Detroit Free Press* (Detroit, MI); *DMN—Dallas Morning News* (Dallas, TX); *KCS—Kansas City Star* (Kansas City, MO); *KCT—Kansas City Times* (Kansas City, MO); *LAT—Los Angeles Times* (Los Angeles, CA); *LCJ—Louisville Courier-Journal* (Louisville, KY); *MJ—Milwaukee Journal* (Milwaukee, WI); *NW—Newsweek* (U.S.); *NYDN—New York Daily News* (New York, NY); *NYP—New York Post* (New York, NY); *NYT—New York Times* (New York, NY); *PHI—Philadelphia Inquirer* (Philadelphia, PA); *SFC—San Francisco Chronicle* (San Francisco, CA); *TCT—The Chronicle-Telegram* (Elyria, OH); *TDN—The Detroit News* (Detroit, MI); *WP—Washington Post* (Washington, DC); *WSJ—Wall Street Journal* (New York, NY); *WST—Washington Star* (Washington, DC).

U.K. periodicals

BEM—Birmingham Evening Mail (Birmingham); *BKR—The Banker* (London); *DE—Daily Express* (London); *DML—Daily Mail* (London); *DMR—Daily Mirror* (London); *DT—Daily Telegraph* (London); *EN—Evening News* (London); *FT—Financial Times* (London); *OXM—Oxford Mail* (Oxfordshire); *ST—Sunday Times* (London); *SUN—The Sun* (London); *TE—The Economist* (London); *TG—The Guardian* (London); *TS—The Scotsman* (Edinburgh); *TT—The Times* (London); *UKPD—U.K. Parliamentary Debates* (*House of Commons*).

Periodicals from other countries

MST—Montreal Star (Montreal, Quebec, Canada); *TST—Toronto Star* (Toronto, Ontario, Canada).

Appendix B. Chronological list of newspaper articles cited in the text

I. United States

Paul Samuelson, "Upside-Down Economics," *Newsweek*, February 5, 1968, page 71.

Glen Elsasser, "[McCracken] Prefers Slow Inflation Fight," *Chicago Tribune*, February 24, 1969, page 16.

Murray Seeger, "Nixon Attacks 'Inflationary Psychology,'" *Louisville Courier-Journal*, September 27, 1969, pages A1 and A16.

Sylvia Porter, "Inflation: 1970-Style," *New York Post*, December 4, 1969, page 83.

Richard F. Janssen, "Economic 'Chicken': Nixon Willing to Steer Close to a Recession in a Bid to Slow Inflation," *Wall Street Journal*, January 14, 1970, pages 1 and 20.

"Wage Hikes Are Lashed: Goldwater Says Labor Demands Add to Inflation," *Kansas City Times*, January 15, 1970, page 1C.

"Lid on Wages, Prices, Incomes Urged," *Milwaukee Journal*, January 27, 1970, page 17.

"Burns Sworn in as 'Fed' Chairman," *Kansas City Star*, February 1, 1970, page 2A.

Joseph R. Slevin, "An End to Inflation Not Always Certain," *Kansas City Star*, August 17, 1970, page 12.

David M. Kennedy, "Key Economic Lessons from 19-Month Ordeal," *Kansas City Star*, September 1, 1970, page 9.

Associated Press, "Guidelines and 'Jawboning,'" *Kansas City Times*, November 6, 1970, page 2.

Newhouse News Service, "Harder Line Expected in Price Spiral Policy," *Kansas City Star*, December 10, 1970, page 38.

Joseph R. Slevin, "Nixon Quietly Changes Goals on Unemployment," *Kansas City Star*, December 15, 1970, page 14.

Joseph R. Slevin, "Rein on Inflation an Elusive Goal," *Kansas City Star*, December 31, 1970, page 7.

Joseph Kraft, "The Battle: Stagflation," *Washington Post*, February 25, 1971, page A21.

Milton Friedman, "The Fed on the Spot," *Newsweek*, October 16, 1972, page 98.

James L. Rowe Jr., "Tough Trust Laws Proposed by Burns," *Washington Post*, February 21, 1973, pages A1 and A9.

Hobart Rowen, "Economics of War and Energy," *Washington Post*, November 8, 1973, page A31.

Clayton Fritchey, “President and Advisers Wait for Inflation to Cure Itself,” *Detroit Free Press*, March 18, 1974, page 7A.

Bill Nelkirk, “Dr. Burns and the Fed: Controlling Inflation by Controlling Money—Maybe,” *Cleveland Plain Dealer*, May 5, 1974, pages 1B and 8B.

John F. Lawrence, “Old Inflation Cure That Failed in ’70 Is Revived—Tight Money,” *Los Angeles Times*, May 6, 1974, pages 1 and 16–17.

Al Altwegg, “Experts See Inflation Easing, Then Turning Up,” *Dallas Morning News*, May 12, 1974, page 15B.

Joseph R. Slevin, “Inflation: Trouble Ahead,” *Cleveland Plain Dealer*, June 2, 1974, page 8B.

Editorial, “UAW Contributed to Inflation,” *The Detroit News*, June 10, 1974, page B10.

Sylvia Porter, “President Ford and Your Pocketbook: III,” *New York Post*, August 13, 1974.

Clark Hoyt, “CEA’s Greenspan a Strict Free-Market Man,” *Detroit Free Press*, August 19, 1974, page 10C.

Clem Morgello *et al*, “The World’s Economic Ills: Any Rx?,” *Newsweek*, September 30, 1974, pages 62–68.

“Text of President’s Economy Address” and “WIN Coupon,” *Dallas Morning News*, October 9, 1974, pages 8A–10A.

Garry Wills, “President’s ‘Grand Design’ Falls Short on Economic Ills,” *Detroit Free Press*, October 17, 1974, page 7A.

Sylvia Porter, “ ’75 Outlook: Better End Seen for Bad Beginning,” *Detroit Free Press*, January 13, 1975, page 9B.

Sylvia Porter, “Tax Cuts: How Ford’s Proposals Affect You,” *Detroit Free Press*, January 17, 1975, page 5B.

Clark Hoyt, “Oil Tax Gets It from All Sides,” *Detroit Free Press*, January 31, 1975, pages 1A and 12A.

Clark Hoyt, “Easing Food Prices Slow Inflation,” *Detroit Free Press*, March 21, 1975, pages 1A and 14A.

Al Altwegg, “Needed: A Meany-Burns Détente,” *Dallas Morning News*, May 11, 1975, page 13B.

Sylvia Porter, “Terminology: A Look at Depression, Recession,” *Detroit Free Press*, June 5, 1975, page 13B.

Paul Samuelson, “The New Recovery,” *Newsweek*, July 28, 1975, page 55.

Inquirer Wire Services, “Inflation Still Threat, Burns Says,” *Philadelphia Inquirer*, August 25, 1975, pages 1A and 8A.

Clark Hoyt, “Does ‘Supply and Demand’ Still Work?,” *Detroit Free Press*, September 2, 1975, page 4C.

New York Times News Service, “If Prices Rise in Downturn, Are Firms Fanning Inflation?,” *Detroit Free Press*, September 9, 1975, page 5B.

Sylvia Porter, “The Basic Evil,” *New York Post*, October 8, 1975.

Sylvia Porter, “Recovery: Here Are Some Ways to Boost Economy,” *Detroit Free Press*, October 9, 1975, page 13B.

Robert S. Morrison, “Burns Was Right about Inflation,” *The Chronicle-Telegram*, October 23, 1975.

Ben. B. Schifman, “New Fed Governor: Inflation His Prime Concern,” *Kansas City Star*, November 20, 1975, page 16.

Associated Press, “Economy Not Right—Burns,” *The Detroit News*, December 15, 1975, page A4.

Associated Press, “Ford to Report Slow Gains in Drive for Full Recovery,” *Detroit Free Press*, January 26, 1976, page 5B.

Hobart Rowen, “Samuelson Asks [for] Higher Economic Aim,” *Washington Post*, February 15, 1976, pages L1 and L2.

Hobart Rowen, “The Coming Problem of Inflation,” *Washington Post*, May 13, 1976, page A23.

Robert S. Boyd, “Ford, Carter Get Personal,” *Detroit Free Press*, September 24, 1976, pages 1A and 7A.

Paul A. Samuelson, “What Jimmy Should Do,” *Newsweek*, January 10, 1977, pages 58–59.

“Excerpt from President Carter’s News Conference,” *Washington Post*, April 16, 1977, page A6.

Alan J. Mayer, Rich Thomas and Eleanor Clift, “The Anti-Inflation Gospel,” *Newsweek*, April 25, 1977, pages 63–64.

Hobart Rowen, “Inflation: Coming Thing,” *Detroit Free Press*, June 6, 1977, page 11A.

Lisa Myers, “Carter Inflation-Cut Goal Slips,” *Chicago Sun-Times*, July 28, 1977, page 4.

“Inflation Fight an Uphill One, Burns Says,” *The Detroit News*, November 9, 1977, page B10.

William J. Eaton, “Carter, Congress Blamed for Inflation,” *Detroit Free Press*, November 10, 1977, pages 1A and 5A.

Michael Ruby *et al*, “The Economy: New Look?,” *Newsweek*, January 9, 1978, pages 48–56.

Joseph Kraft, “Economic Prospects,” *San Francisco Chronicle*, January 17, 1978, page 39.

Associated Press, “Price Rises Peril Jobs—Fed Chief,” *The Detroit News*, April 11, 1978, page A1.

Edward Walsh, “Carter Vows Wider Fight against Inflation,” *Washington Post*, April 12, 1978, pages A1 and A4.

William Eaton, “Carter Pledges Veto to Control Federal Deficit,” *Los Angeles Times*, April 12, 1978, Part I, pages 1 and 7.

Milton Friedman, “Inflationary Recession,” *Newsweek*, April 24, 1978, page 81.

Art Pine and James L. Rowe Jr., “Miller Doesn’t Foresee a Recession in U.S.: Says Interest Rate Rise Should Peak Soon,” *Washington Post*, July 30, 1978, pages G1 and G3.

Hobart Rowen, “What Will They Do about Inflation?,” *Washington Post*, August 31, 1978, page A15.

Julie Wiernik, “Delay in Social Security Hike Is Asked: Move Would Ease Inflation Rate, Fed Chairman Says Here,” *Cleveland Plain Dealer*, September 14, 1978.

James A. Rousmaniere, “Fed ‘Governess’ Steps into Credit Fray,” *Baltimore Sun*, October 8, 1978, pages K7 and K9.

Associated Press, “Text of President Carter’s Anti-Inflation Speech Tuesday [October 24],” *New York Times*, October 25, 1978, supplement pages 114–117.

Sylvia Porter, “Inflation Rate Is Intolerable,” *Washington Star*, October 31, 1978.

Sylvia Porter, “Inflation Fight Can Work, If…,” *Washington Star*, November 2, 1978, page E10.

Robert A. Rosenblatt and Don Irwin, “Carter Bolsters the Dollar; Stocks Set 1-Day Record: Action Will Force Higher Interest Rates,” *Los Angeles Times*, November 2, 1978a, pages 1 and 6.

Paul E. Steiger, “Potential Gain May Outweigh Recession Risk,” *Los Angeles Times*, November 2, 1978b, pages 1 and 9.

Sylvia Porter, “Trade and Dollar Spur Inflation Spiral,” *New York Daily News*, November 7, 1978.

“Transcript of President’s State of Union Address to a Joint Session of Congress,” *New York Times*, January 24, 1979, page A13.

Philip Greer and Myron Kandel, “Tension Grows as Tight Money Fails to Check Soaring Inflation,” *New York Post*, October 8, 1979, page 34.

Associated Press, “Sasser Requests Study of Interest Rate Effect,” *Commercial Appeal*, October 8, 1979, page 3.

James Tobin, “Why the Fed’s Cure Won’t Work,” *New York Times*, November 11, 1979, page F18.

J.A. Livingston, “New Economic Lore: Inflation Now Resists Recession,” *Philadelphia Inquirer*, April 23, 1980, page 6B.

Milton Friedman, “The Fed’s Thermostat,” *Wall Street Journal*, August 19, 2003, page A8.

II. United Kingdom

Charles Raw, “Wages and Prices Clamp: Harsh But Necessary,” *Sunday Times*, March 17, 1968, page 35.

Editorial, “Preparing for Tory Reform,” *The Economist*, January 18, 1969, pages 9–11.

“Money Talk,” *Daily Mail*, September 24, 1969.

“Mr. Jenkins Warns of Too-High Wage Claims,” *The Scotsman*, February 9, 1970, page 3.

“Heath Blames Labour for ‘Price Explosion,’” *The Times*, April 20, 1970, page 2.

Malcolm Crawford, “A Recipe for Rising Prices,” *Sunday Times*, June 21, 1970, page 57.

Patrick Sergeant, “When Shall We Grow Again?,” *Daily Mail*, June 16, 1970, page 9.

“CBI Chief Urges Stronger Line on Wage Bargaining,” *Daily Express*, July 16, 1970, page 3.

Patrick Sergeant, “Courtalds Catch Stagflation,” *Daily Mail*, July 16, 1970, page 9.

Ian Morison, “Special Deposits Raised by £100m to Record Level: New Warning to Banks,” *The Times*, October 30, 1970, page 21.

Malcolm Crawford, “Brakes off Economy to Start 1971,” *Sunday Times*, December 20, 1970, page 33.

Malcolm Crawford, “Treasury Calls for Wage-Price Freeze,” *Sunday Times*, January 10, 1971, page 53.

Robert Head, “Hot Money, Cold Comfort,” *Daily Mirror*, January 27, 1971, page 11.

Anthony Barber, “The Chancellor on Monetary Policy,” *The Banker*, February 1971, pages 202–204.

Woodrow Wyatt, “It Just Won’t Work,” *Daily Mirror*, February 26, 1971, page 6.

David Malbert, “Barber Clips Bank Rate,” *Evening News*, April 1, 1971, page 1.

George Lochhead, “Barber Pledges a Further Boost—If It’s Needed,” *Daily Express*, April 6, 1971, page 9.

Editorial, “2,000 Jobs Destroyed Each Day,” *The Times*, April 20, 1971, page 15.

Victor Knight, “Pay: Heath Warns,” *Daily Mirror*, April 20, 1971, page 28.

Editorial, “The Freeze and the Facts,” *Daily Express*, September 14, 1972, page 10.

“TUC-Labour Pledge to Control Food Prices,” *The Times*, March 1, 1973, page 4.

Jack Foster, “Why Dr. Healey’s Tonic HAS to Work,” *Birmingham Evening Mail*, July 2, 1975, page 4.

“White Paper Explains Reasons for £6 Limit on Pay Rises,” *The Times*, July 12, 1975, page 4.

William Keegan, “Anti-Inflation Fight Will Not Slacken, Promises Wilson,” *Financial Times*, February 3, 1976, page 1.

H.B. Boyne, “Voluntary Pay Policy to Stay,” *Daily Telegraph*, February 3, 1976, pages 1 and 6.

Editorial, “Telling Them How It Is,” *The Times*, September 29, 1976, page 17.

David Kemp, and Christopher Potter, “My Road to Brighter Days—But Cautious Denis Warns: Only If We Beat Inflation,” *The Sun*, March 30, 1977, pages 16–17.

Editorial, “Election Test,” *Oxford Mail*, June 27, 1977.

Rosemary Collins, Tom Sharratt, and John Ardill, “Closest Cooperation Still Crucial, P.M. Stresses,” *The Guardian*, September 7, 1977, page 6.

Eamonn Fingleton, “IMF ‘Hit Britain’s Hopes,’” *The Sun*, November 30, 1977, page 6.

John Warden, “Mr. 5%: P.M. in Row over New Pay Target,” *Daily Express*, January 3, 1978, page 2.

Walter Terry, “The Squeeze: Jim Pledges War on the Wage Hogs,” *The Sun*, October 4, 1978, pages 4–5.

Denis Healey, “The Bankers’ Dinner: Extracts from Speeches,” *The Times*, October 20, 1978, page 22.

Tony Conyers, “Labour Manifesto Target Is Inflation Down to 5pc by 1982,” *Daily Telegraph*, April 7, 1979, page 8.

George Lynn, “Jim Admits: The Union Deal Is Only Paper Thin,” *The Sun*, May 3, 1979, page 7.

Milton Friedman, “Monetarism: A Reply to the Critics,” *The Times*, March 3, 1980, page 19.

Alan Walters, “Monetarism: The Right Stuff,” *The Economist*, May 4, 1985, pages 19–23.

III. Canadian newspaper articles on the United States and United Kingdom

Dow Jones Service, “Burns Optimistic,” *Montreal Star*, July 2, 1970, page 26.

Daniel Yergin, “Mrs. Thatcher Has a Simple Answer But It May Not Work,” *Toronto Star*, April 8, 1979, page A8.

“Policymakers Watch Carter,” *Toronto Star*, March 14, 1980, page B9.

References

Ball, Laurence, and N. Gregory Mankiw (1995). "Relative Prices as Aggregate Supply Shocks," *Quarterly Journal of Economics*, Vol. 110(1), 161–193.

Ball, Laurence, and N. Gregory Mankiw (1999). "Interpreting the Correlation Between Inflation and the Skewness of Relative Prices: A Comment on Bryan and Cecchetti," *Review of Economics and Statistics*, Vol. 81(2), 197–198.

Barsky, Robert B., and Lutz Kilian (2001). "Do We Really Know That Oil Caused the Great Stagflation? A Monetary Alternative," *NBER Macroeconomics Annual*, Vol. 16(1), 137–183.

Batini, Nicoletta, and Edward Nelson (2001). "The Lag from Monetary Policy Actions to Inflation: Friedman Revisited," *International Finance*, Vol. 4(3), 381–400.

Batten, Dallas S. (1981). "Inflation: The Cost-Push Myth," *Federal Reserve Bank of St. Louis Review*, Vol. 63(6), 20–26.

Biven, W. Carl (2002). *Jimmy Carter's Economy: Policy in an Age of Limits*. Chapel Hill: North Carolina Press.

Brittan, Samuel (1977). *The Economic Consequences of Democracy*. London: Temple Smith.

Burns, Arthur F. (1973). "Letter on Monetary Policy," *Federal Reserve Bank of St. Louis Review*, Vol. 55(11), 15–22.

Burns, Arthur F. (1978). *Reflections of an Economic Policy Maker*. Washington, DC: American Enterprise Institute.

Chari, V.V., Lawrence J. Christiano, and Martin Eichenbaum (1998). "Expectation Traps and Discretion," *Journal of Economic Theory*, Vol. 81(2), 462–492.

Christiano, Lawrence J., and Christopher J. Gust (2000). "The Expectations Trap Hypothesis," *Federal Reserve Bank of Chicago Economic Perspectives*, Vol. 24(2), 21–39.

Clarida, Richard, Jordi Galí, and Mark Gertler (2000). "Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory," *Quarterly Journal of Economics*, Vol. 115(1), 147–180.

Conservative Party (United Kingdom) (1970). "General Election Manifesto 1970." London. Reprinted in F.W.S. Craig (ed.), *British General Election Manifestos 1959–1987*. Aldershot, U.K.: Dartmouth. 113–132.

Darby, Michael R., and James R. Lothian (1983). 'Conclusions on the International Transmission of Inflation.' In M.R. Darby *et al*, *The International Transmission of Inflation*. University of Chicago Press. 493–523.

Day, Robin (1993). *But with Respect*. London: Weidenfeld and Nicolson.

DeLong, J. Bradford (1997). "America's Peacetime Inflation: the 1970s." In C.D. Romer and D.H. Romer (eds.), *Reducing Inflation: Motivation and Strategy*. Chicago: University of Chicago Press. 247–276.

Dornbusch, Rudiger, and Stanley Fischer (1980). "Sterling and the Exchange Rate." In R.E. Caves and L.B. Krause (ed.), *Britain's Economic Performance*. Washington, DC: Brookings Institution. 21–72.

Dornbusch, Rudiger, and Stanley Fischer (1987). *Macroeconomics: International Edition*. New York: McGraw Hill.

FOMC (1970). *Minutes, April 7, 1970*. Washington, DC: Federal Reserve Board.

Friedman, Milton (1966). "What Price Guideposts?" In G.P. Shultz and R.Z. Aliber (eds.), *Guidelines, Informal Controls and the Market Place*. Chicago: University of Chicago Press. 17–39. Reprinted in M. Friedman, *Dollars and Deficits*. Eaglewood, N.J.: Prentice Hall, 1968. 97–121.

Friedman, Milton, and Rose Friedman (1984). *The Tyranny of the Status Quo*. New York: Harcourt Brace Jovanich.

Friedman, Milton, and Anna J. Schwartz (1982). *Monetary Trends in the United States and the United Kingdom: Their Relation to Income, Prices, and Interest Rates, 1867–1975*. Chicago: University of Chicago Press.

Fuhrer, Jeffrey C., and George R. Moore (1995). "Inflation Persistence," *Quarterly Journal of Economics*, Vol. 110(1), 127–159.

Goodhart, Charles A.E. (2003). "A Central Bank Economist." In P. Mizen (ed.), *Central Banking, Monetary Theory and Practice: Essays in Honour of Charles Goodhart, Volume One*. Cheltenham, U.K.: Edward Elgar. 13–61.

Heath, Edward (1998). *The Course of My Life: The Autobiography of Edward Heath*. London: Hodder and Stoughton.

Hetzel, Robert L. (1998). "Arthur Burns and Inflation," *Federal Reserve Bank of Richmond Economic Quarterly*, Vol. 84(1), 21–44.

House of Representatives (1974a). *Federal Reserve Policy and Inflation and High Interest Rates: Hearings before the Committee on Banking and Currency*. Washington, DC: Government Printing Office.

House of Representatives (1974b). *Renewal and Suggested Modifications of the Economic Stabilization Act: Hearings before the Subcommittee on Production and Stabilization*. Washington, DC: Government Printing Office.

House of Representatives (1975). *Federal Reserve Consultations and the Conduct of Monetary Policy: Hearings before the Committee on Banking, Currency and Housing*. Washington, DC: Government Printing Office.

Humphrey, Thomas M. (1998). "Historical Origins of the Cost-Push Fallacy," *Federal Reserve Bank of Richmond Economic Quarterly*, Vol. 84(3), 53–74.

Joint Economic Committee (1974). *The 1974 Economic Report of the President: Hearings Before the Joint Economic Committee*. Washington, DC: Government Printing Office.

Laidler, David (2003). "The Role of the History of Economic Thought in Modern Macroeconomics." In P. Mizen (ed.), *Monetary History, Exchange Rates and Financial Markets: Essays in Honour of Charles Goodhart, Volume Two*. Cheltenham, U.K.: Edward Elgar. 12–29.

McCallum, Bennett T. (1999). "Recent Developments in Monetary Policy Analysis: The Roles of Theory and Evidence," *Journal of Economic Methodology*, Vol. 6(2), 171–198.

Miller, G. William (1978). "Statement to Committee on Banking, Finance, and Urban Affairs, July 28, 1978," *Federal Reserve Bulletin* 64 (August), 642–647.

Nelson, Edward (2001). "What Does the U.K.'s Monetary Policy and Inflation Experience Tell Us about the Transmission Mechanism?" CEPR Discussion Paper No. 3047.

Nelson, Edward, and Kalin Nikolov (2003). "U.K. Inflation in the 1970s and 1980s: The Role of Output Gap Mismeasurement," *Journal of Economics and Business*, Vol. 55(4), 353–370.

Nelson, Edward, and Kalin Nikolov (2004). "Monetary Policy and Stagflation in the U.K.," *Journal of Money, Credit, and Banking*, Vol. 36(3), 293–318.

Orphanides, Athanasios (2003). "The Quest for Prosperity without Inflation," *Journal of Monetary Economics*, Vol. 50(3), 633–663.

Orphanides, Athanasios (2004). "Monetary Policy Rules, Macroeconomic Stability and Inflation: a View from the Trenches," *Journal of Money, Credit, and Banking*, Vol. 36(2), 151–175.

Orphanides, Athanasios, and John C. Williams (2003). "The Decline of Activist Stabilization Policy: Natural Rate Misperceptions, Learning, and Expectations." Manuscript, Federal Reserve Board.

Poole, William (2000). "Monetary Aggregates and Monetary Policy in the Twenty-First Century." In R.W. Kopcke and L.E. Browne (eds.), *The Evolution of Monetary Policy and the Federal Reserve System over the Past Twenty-Five Years: A Conference in Honor of Frank E. Morris*. Boston: Federal Reserve Bank of Boston. 13–24.

Primiceri, Giorgio (2005). "Why Inflation Rose and Fell: Policymakers' Beliefs and U.S. Postwar Stabilization Policy." NBER Working Paper No. 11147.

Romer, Christina D., and David H. Romer (1990). "New Evidence on the Monetary Transmission Mechanism," *Brookings Papers on Economic Activity*, Vol. 21(1), 149–198.

Romer, Christina D., and David H. Romer (2002). "The Evolution of Economic Understanding and Postwar Stabilization Policy." In *Rethinking Stabilization Policy: Proceedings of a Symposium Sponsored by the Federal Reserve Bank of Kansas City*. Federal Reserve Bank of Kansas City. 11–78.

Rotemberg, Julio J., and Michael Woodford (1997). "An Optimization-Based Econometric Framework for the Evaluation of Monetary Policy," *NBER Macroeconomics Annual*, Vol. 12(1), 297–346.

Sargent, Thomas J. (1999). *The Conquest of American Inflation*. Princeton: Princeton University Press.

Svensson, Lars E.O. (2000). "Comments on Athanasios Orphanides' 'The Quest for Prosperity without Inflation.'" Manuscript, Princeton University.

Taylor, John B. (1992). "The Great Inflation, the Great Disinflation, and Policies for Future Price Stability." In A. Blundell-Wignall (ed.), *Inflation, Disinflation and Monetary Policy*. Sydney: Ambassador Press. 9–34.

Taylor, John B. (1997). "America's Peacetime Inflation: The 1970s: Comment." In C.D. Romer and D.H. Romer (eds.), *Reducing Inflation: Motivation and Strategy*. Chicago: University of Chicago Press. 276–280.

Taylor, John B. (2000). "Comments on Athanasios Orphanides' 'The Quest for Prosperity without Inflation.'" Manuscript, Stanford University.

Tobin, James (1975). "Monetary Policy, Inflation, and Unemployment." In A.T. Sommers (ed.), *Answers to Inflation and Recession: Economic Policies for a Modern Society*. New York: Conference Board. 2–19. Reprinted in J. Tobin, *Essays in Economics: Theory and Policy, The Papers of James Tobin, Volume 3*. Cambridge, MA: MIT Press, 1982. 14–31.

Wilson, Harold (1979). *Final Term: The Labour Government 1974–1976*. London: Weidenfeld and Nicolson.