

# **The Great Inflation of the Seventies: What Really Happened?**

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## *Background*

Much of the literature on Great Inflation of the 1970s treats the monetary authority as aware that inflation is a monetary phenomenon, but as driven to inflation by misguided targets for real variables.

E.g.

(1) Time consistency literature (Kydland-Prescott 77, Ireland 99, etc.)—conscious central-bank manipulation of inflation to achieve positive output gap

(2) Sargent's *Conquest* story—policymakers used Phillips curve, incorporating long-run trade-off, as a guide to policy

(3) Output gap mismeasurement (Orphanides)—orthodox monetary policy driven by obsolete estimates of potential output

Also, near-exclusive focus has been on U.S. experience.

By contrast, this paper:

- treats U.K. and U.S. symmetrically
- pursues the monetary policy neglect hypothesis—which is contrary to view that policymakers used the Phillips curve as a model of inflation or a guide to policy in the 1970s.

The “real-time” views of policymakers in both countries are drawn out using contemporary newspaper coverage from each country.

In contrast to the explanations offered in much of the Great Inflation literature, Milton Friedman has noted that

politicians, economists and journalists... attribute[d] the acceleration of inflation to special events—bad weather, food shortages, labor-union intransigence, corporate greed, the OPEC cartel... (Friedman, 1978)

And he has argued that:

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. (Friedman, 2003)

Nelson and Nikolov 2002 argued for the U.K. that these factors were important in accounting for policy behavior. *Monetary policy neglect* took three planks:

- I. Aggregate demand is disconnected from monetary policy
- II. Inflation is a nonmonetary (cost-push) phenomenon.
- III. Use wage & price controls to fight inflation.

Great Inflation arose from these fallacies.

The emphasis on policymakers' nonmonetary views of inflation has also appeared in work on the U.S., including Romer and Romer 2002, Hetzel 1998, McCallum 1999.

Romer and Romer 2002 in particular document the prevalence of cost-push views in the 1970s publications of the FOMC and the Executive branch.

In this paper, I:

- document the presence of monetary policy neglect—all three planks—in both the U.S. and the U.K. in the 1970s;
- show that rival explanations are ruled out (though output gap mismeasurement does play a role);
- reconcile the evidence on policy rules with the monetary policy neglect hypothesis.

The specific archival evidence I draw upon is 1970s newspaper coverage of monetary policy and inflation.

Looking at newspaper coverage of the Great Inflation has several advantages:

- symmetric treatment of the U.S. and U.K.
  - ◆ whereas lack of CB independence, Official Secrets Act, and lack of Minutes would rule out analysis based on official U.K. records.
- the material reveals the climate of opinion behind policy actions—the stated views of the “politicians, economists and journalists” that Friedman writes about
  - ◆ Many relevant statements—both on inflation process, and on conventional wisdom about full-employment rates of  $u$  and  $\Delta y$
- Extra information: FOMC members and other relevant policymakers gave a number of speeches, interviews, etc. that were not preserved in other formats

## *Formalizing the monetary policy neglect hypothesis*

New Keynesian Phillips curve:

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

$\beta$  close to unity,  $y_t - y_t^*$  is output gap 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  $\hat{u}_t$  deviation from mean with AR(1) parameter  $\rho_u$ .

Inflation and one-period-ahead expected inflation may be written as:

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

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

Or

$$\pi_t = b_0 + b_1 E_t \sum_{i=0}^{\infty} b_2^i (y_{t+i} - y_{t+i}^*) + b_3 u_t + b_2 E_t \sum_{i=1}^{\infty} b_2^{i-1} (\mu_{u,t+i}) + b_2 \rho_u b_4 \hat{u}_t.$$

$$E_t \pi_{t+1} = b_0 + b_1 E_t \sum_{i=0}^{\infty} b_2^i (y_{t+i+1} - y_{t+i+1}^*) + E_t \sum_{i=0}^{\infty} b_2^i (\mu_{u,t+i+1}) + \rho_u b_4 \hat{u}_t.$$

**Monetary view of inflation:** Cost-push terms have mean zero ( $\mu_{u,t+i} = 0$ ) and have no effect on expected inflation ( $\rho_u = 0$ ). Excess demand dominant influence on inflation ( $b_1 > 0$ ) and  $y$  is interest-elastic.

**Nonmonetary view of inflation:** Cost-push terms have nonzero mean and are dominant source of fluctuations in 70s inflation. Excess demand unimportant ( $b_1 \approx 0$ ), esp. when  $y < y^*$ . Also, skepticism about interest elasticity of  $y$ .

Monetary policy neglect hypothesis: The 70s policy mistakes arose from policymakers' rejection of monetary view of inflation process, in favor of the nonmonetary view.

9 key points that illustrate the success of the monetary policy neglect hypothesis and the weaknesses of other explanations.

Then reconsider estimates of policy rules in light of this analysis.

## **1. Policymakers regarded inflation as not a function of their own actions**

U.K.: consistently so throughout 1959–79—nonmonetary tradition to inflation analysis.

U.S.: from second half of 1970 through 1979. Financial commentary in 1969, Congressional members in 1970 had regarded inflation as of a “new” cost-push type. Key policymakers then accepted this diagnosis as inflation continued.

E.g.

(1) U.S.

- ◆ Burns Dec 7, 1970: “monetary and fiscal tools are inadequate for dealing with sources of price inflation such as plaguing us now—that is, pressures on costs arising from excessive wage increases”
- ◆ Cost of Living Council Director 1974: “we just don’t know how to control inflation”

(2) U.K.

- ◆ Treasury in 1971 concluded that “orthodox deflationary techniques” were “neither appropriate nor adequate to stop inflation,” and successive governments accepted this conclusion.
- ◆ Heath (PM 1970–74): “There is no justification for the argument that M1... was the cause of inflation...”

## Special factors cited by policymakers throughout

### In U.S.:

- (i) Burns Dec 1970: wage increases
- (ii) Burns Jan 1973: union-firm abuses of market power
- (iii) Burns Aug 1973: commodity prices, devaluation, environmental regulation
- (iv) Ford 1974: food & oil
- (v) Burns Nov 1977: Congress “legislating inflation” via minimum-wage increases
- (vi) Miller July 1978: devaluation, minimum-wage increases

- Also, frequent warnings of wage-price spirals triggered by oil shock or dollar depreciation.
- Denial (e.g. Burns in 73) of importance of monetary accommodation.

### In U.K.:

- Wage inflation blamed 71–72 and 75–78; oil 73–74
- Heath: 72–74 commodity price explosion would have had identical effect on  $\pi$  regardless of monetary policy

## 2. Not an intentional targeting of $u < u^*$ .

While rejecting time consistency arguments, DeLong (1997) nevertheless argues that political pressure made it inevitable that policymakers would knowingly target a  $u$  below  $u^*$ .

But policymakers were:

- Not confident in real targets expressed in terms of  $u$ 
  - ◆ McCracken (CEA Chmn.): “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” (*Chicago Tribune*, 02/24/69).
- Aware in 70s that  $u^* > 4\%$ 
  - ◆ Connally (July 71):  $u = 4\%$  “has never happened save in wartime”, “myth” that  $u^* = 4\%$
- Aware that  $u^*$  grew over 70s
  - ◆ Chairman Miller testified July 78 that  $u$  was higher than in earlier expansions because of institutional changes in the labor market
  - ◆ 70, 77 targets for obtaining full employment expressed in GDP growth, not  $u$

Same true of U.K.

### **3. Stagflation/slumpflation did not lead to convergence to vertical Phillips curve model**

To cost-push advocates, this experience proved that inflation and gap were disconnected—*not* that PC should be augmented with 1.0 expectations term.

E.g. U.S.:

- Hobart Rowen (Nov 77): “economists who contend that a low unemployment rate guarantees a high inflation rate ignore the history lessons of the past decade, which has proved the ‘trade-off’ theory a failure”
- Burns (July 71): “The experience of other industrial countries... shouts warnings that even a long stretch of high and rising unemployment may not suffice to check the inflationary process.”

U.K.

- Sir Kenneth Berrill, the Chief Economic Adviser to U.K. Treasury: “I would say that we do not believe the Phillips curve over quite a large band... [At  $u < u^*$ ] there is a large flat band” (July 74 testimony).
- 1975 govt. report on inflation: “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”

Policymakers did not learn from a repeatedly reestimated Phillips curve:

- in the U.K. because they'd never used Phillips curve as model of inflation
- in the U.S. because they believed "inflation, 1970-style" was new phenomenon (therefore relations estimated including pre-70 data not germane to understanding it)

#### **4. Nonmonetary views on inflation rationalized low monetary policy response to inflation**

Wage-price controls advanced instead.

U.S.

- Burns in 71: high inflation could prevail alongside monetary restriction for 5 years or more
- Burns 74 reaffirmed his 70–71 statement that rules had changed re influence of excess demand on  $\pi$
- Miller July 78: monetary policy should not be “main bulwark” against inflation
- Hobart Rowen (July 77) “We are never going to cure inflation” until private wage & price decisions regulated

U.K.

- Chancellor of Exchequer 71: inflation’s causes and solutions “outside the monetary sphere”
- Apr 71 cut in rates as anti-inflationary measure

## 5. Policymakers did believe in their gap estimates

### U.S.

- Taylor (2000) disputes that “serious economists” accepted the reported gap estimates in the U.S.
- But Heller, Tobin, Samuelson all endorsed existence of double-digit gap in 75–76.
  - ◆ Carter (76 TV debate): even larger gap.
- Two core ingredients of gap estimates— $u^*$  of about 4.5% and 4%  $\Delta y^*$ —continued to be widely accepted.
  - ◆ 4 to 5% number for  $u^*$  confirmed on *Face the Nation* by CEA’s Greenspan in January 1976.
  - ◆ 4% potential-growth estimate endorsed in 1975 by Burns, Okun, Samuelson.

### U.K.

- U.K. govt. continued to maintain assumption of  $\Delta y^* = 3\%$  until 79 (vs. actual growth 74–78 < 2%)
- Thought gap was in double digits in '77
- 1980 study by Dornbusch & Fischer also had no trend-break and estimated U.K. '77 gap at –10%.

## **6. Cost-push views and output gap mismeasurement reinforced one another**

Cost-push views magnified the implications of output gap errors for inflation in two ways.

First, cost-push perspective suggested monetary policy was an inappropriate instrument against inflation, and so promoted the low  $\pi$  response in interest-rate rules.

- E.g. Tom Wicker (*New York Times*, 1977) govt. “needs to pull back from reliance on indirect fiscal and monetary policies that haven’t succeeded, and launch a direct, simultaneous attack on both economic slack and inflation”

So excessive easings produced by responses to faulty gap measures, did not produce tightenings as  $\pi$  rose.

Second, cost-push views slowed down the correction of errors in estimates of potential GDP.

Monetary view of inflation insists that high inflation is *ipso facto* evidence of excessive demand.

→ Output-gap estimates that did not reflect this would have been corrected.

By contrast, cost-push view of inflation rationalized arbitrary inflation/gap combinations; therefore, no automatic mechanism for gap estimates to be revised.

- E.g. Sylvia Porter said that cost-push inflation was consistent with “an economic nightmare—namely inflation AND recession” (*NYP*, 12/04/69).

## 7. Plank I also important in U.S. from 1975

As Romer & Romer 02 document, Fed came in 1974 to greater acceptance of the role of the output gap in producing inflation.

But at the same time, Fed came to embrace Plank I of monetary policy neglect—inability of CB to affect gap.

- E.g. Burns: long-term interest rate matters and FR has “negligible” influence on it (07/24/75 testimony).
- Miller: Private sector had developed “antibodies that resist the impact of higher interest rates” (WP, 07/30/78).

Outside commentary in 1975 lent credence to the Fed’s claim of negligible influence—e.g. *New York Times* in ’75 wondered if U.S. was in liquidity trap.

At this time FR, and other commentators, also played down its influence on  $M$ : commercial bank activity, govt. deficits invoked instead.

- Characterized the government's contribution to inflation as its creation of budget deficits. Burns claimed that "our Federal deficits have been a major cause of the inflation we have had,"
- Former California Governor Ronald Reagan stated (1975): "Inflation has one cause and one cause alone: government spending more than government takes in"

Overemphasis in both U.S. and U.K. on deficits/ $M$  link. This misconception understated scope for Fed actions alone to bring down inflation.

And by 75 policymakers were backtracking from their acceptance of  $gap \rightarrow \pi$ , and going back to the position that these factors mattered only when output gap was positive.

- E.g. Burns (Dec 75) said a "worrisome" development was that "inflation once again may be accelerating... [despite] the large degree of slack"

## 8. Continuity in views across administrations, political parties

Senator Barry Goldwater (R–AZ) said that “higher and higher union wage hikes” were “the unmentioned factor” behind inflation, and supported 1971 controls.

Presidents:

- Nixon controls: Republican Administration using legislation of Democratic Congress
- From Oct. 1974, President Ford endorsed cost-push factors & proposed nonmonetary measures including “WIN” program
- Like A. Burns, President Carter subscribed to view that monetary policy could push output above potential and so raise  $\pi$ , but saw fluctuations of inflation at  $y < y^*$  as nonmonetary phenomenon
- Carter blamed 73 inflation on Burns-Nixon overstimulation—but not harmful to stimulate  $y$  to  $y^*$  (1976 Presidential debate), and not helpful to push  $y$  below  $y^*$  (1977/78 speeches— $\pi$  “resisted two recessions”)

Consensus across FR Chairmen too:

- Beside Burns & Miller, McChesney Martin in 1970: “under present circumstances, fiscal and monetary policy isn’t enough” to fight inflation (*KCT*, 11/06/70).

In U.K., nonmonetary view of inflation taken governments of both parties in 1970s.

## **9. Different circuit-breakers in each country**

M2 growth slowed sharply and fed funds rate rose relative to rise in inflation in 1978, year before New Operating Procedures.

This occurred despite continuing cost-push views.

Policy tightened in response to an event—\$ depreciation—that justifies tightening in cost-push view (to avoid “import price-wage-price spiral”)

So disinflation preceded repudiation of cost-push views.

By contrast, in U.K., move to restriction reflected embrace of monetary view of inflation by new Govt.

## *Reconciling policy neglect with policy-rule estimates*

While U.K. evidence supports idea that policy in 70s neglected monetary actions in acting against inflation, U.S. evidence is inconsistent in one respect:

Orphanides 2001 finds Fed 70s policy well-characterized by strong ( $>1$ ) response to internal inflation forecast and to real-time estimate of gap.

In absence of knowing how forecast was formed, one can deduce the importance of this from the following:

Estimated Taylor rules post-79 are similar whether actual past inflation, rational expectation of inflation, or CB forecasts of inflation are used.

Intuition for this: inflation is a monetary phenomenon and policymakers realize this, so:

- ◆  $\pi_{t-1}$  driven by  $E_{t-1}\{(y_{t-1} - y_{t-1}^*), (y_t - y_t^*), (y_{t+1} - y_{t+1}^*), \dots\}$
- ◆  $E_t\pi_{t+1}$  driven by  $E_t\{(y_{t+1} - y_{t+1}^*), (y_{t+2} - y_{t+2}^*), \dots\}$
- ◆ Fed forecast of  $\pi_{t+1}$  driven by  $E_t\{(y_{t+1} - y_{t+1}^*), (y_{t+2} - y_{t+2}^*), \dots\}$

Common terms drive  $\pi_{t-1}$  and forecasts of future inflation.

But in 70s:

- ◆  $\pi_{t-1}$  driven by  $E_{t-1}\{(y_{t-1} - y_{t-1}^*), (y_t - y_t^*), (y_{t+1} - y_{t+1}^*), \dots\}$
  - ◆  $E_t\pi_{t+1}$  driven by  $E_t\{(y_{t+1} - y_{t+1}^*), (y_{t+2} - y_{t+2}^*), \dots\}$
  - ◆ Fed forecast of  $\pi_{t+1}$  driven by exogenous factors—  
not gap estimates.
- 
- So in 70s, strong policy response to expected future inflation no guarantee of strong response to actual inflation.
  - Also, response to expectation is “strong” because inflation goes back to target on its own (without monetary actions).
  - Consistent with this, I find Fed response to actual inflation in 70s is low (0.85) even when the real variable in the rule is the real-time output gap.

## Conclusion

- Monetary policy neglect: policymakers thought inflation was a nonmonetary phenomenon, so inflation control was delegated to other devices.
- A hypothesis that rules out other Great Inflation explanations (other than gap errors).
- Works both for U.S. and U.K.
- Alternative policy of embrace of monetary view & monetary control of inflation: lower peaks in output, higher real rates. But not a cost if welfare targets zero output gap.

From Dornbusch and Fischer 1987  
(*Macroeconomics: International Edition*)

p. 518: “It often occurs in practice and is widely believed not to be consistent with accepted macroeconomics. This is *stagflation*.”

“...it is not only changes in expectations, but any supply shock, such as an increase in oil prices, that shifts the aggregate supply curve that can produce stagflation. Nonetheless, during periods of stagflation, such as 1973–1974 and 1980, there are articles in the newspapers that the laws of economics are not working as they should because inflation is high or rising even as output is falling.”