Inflation and Reputation

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Economists have speculated for years about the source of the apparent inflationary bias of market economies. In the 1960's the Phillips curve supplied part of an explanation: with a stable tradeoff between inflation and output, governments might reasonably choose a positive rate of inflation, even if they find inflation distasteful, in order to raise output.

Natural rate theories changed all that. If the government can only raise output with surprise inflation, then systematic expansionary policy will generate inflation but fail to raise output. If a stable price level is desirable, the only sensible policy is zero inflation. The question then is why government policy has tolerated persistent high rates of inflation over the past decade or so.

One answer is that zero inflation is not a credible policy if the government is known to care about output. This has arisen as "dynamic inconsistency" in Finn Kydland and Edward Prescott (1977) and as inferiority of Nash solutions in Robert Barro and David Gordon (1983a,b), but generally reflects the fact that noncooperative equilibria need not be Pareto optimal.

Another line of argument runs that governments, exploiting the short memories of voters, overheat the economy prior to elections. (William Nordhaus, 1975, provides such a model of "political business cycles" and Gerald Kramer, 1971, and Ray Fair, 1978, report evidence that voters seem to be shortsighted; Henry Chappell, 1983, gives a conflicting view.) This mechanism, however, only leads to an inflationary bias if the Phillips curve is nonlinear, so that high output raises inflation by more than low output reduces it.

In the following sections we extend the work of Barro and Gordon to a situation in which the public is uncertain about the preferences of the government: in particular, whether it cares about unemployment and output. Thus, when the government announces its intention to fight inflation regardless of the output cost, the public is uncertain whether this is in fact the case, or whether it is simply an attempt to manipulate their expectations. This analysis of reputation, based on David Kreps and Robert Wilson (1982b), provides a useful formalization of the credibility problem faced by macroeconomic policymakers, and stressed repeatedly by William Fellner (1982).

One feature of the model is that tight macroeconomic policy aimed at eliminating inflation will reduce output below the natural rate if the public thinks the government may inflate. Peter Howitt (1982) makes a similar point without elaborating on the source of the public's skepticism. The critical element in our model is the public's lack of information about the government: even if the government is serious about combating inflation, the public cannot know this with certainty. Completely credible noninflationary policy is generally not possible.

A second feature of the analysis is that government policy is dynamically consistent: in equilibrium the government always finds it optimal to stick to its initial plan. By treating policy as a dynamic game and applying Kreps and Wilson's (1982a) notion of sequential equilibrium, we avoid the "inconsistency of optimal plans" that has plagued studies that view policy as an optimization problem.

At the same time we explain the political business cycle without recourse to voter naivete. Even governments that care about employment will tend, at the start of their terms of office, to act as if they do not in order to keep alive in the mind of the public

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the possibility that they will fight inflation at all costs. Of course, such governments will always inflate near the end of their terms in an attempt to raise output. What is more, it will work: output rises (probabilistically) as long as the government still has a reputation for toughness. The public acts rationally throughout: it simply does not know what the government plans to do.

These ideas are developed in the rest of the paper. Section I reviews the Barro-Gordon model. The analysis of Kreps and Wilson is applied to this model in Section II. A numerical example and discussion follow. The final section contains general remarks about the strengths and limitations of the analysis.

I. The Barro-Gordon Analysis

Barro and Gordon (1983b) characterize macroeconomic policy as a game. Output is determined by a Phillips curve with the natural rate property:

$$y = y_n + (x - x^e),$$

where y is output, y_n is the natural rate, and x and x^e are actual and expected inflation. The government likes output and dislikes inflation, which we may formalize with the one-period payoff function

$$(1) \quad u_g(x, x^e) = -\tfrac{1}{2}ax^2 + b(y - y_n) = -\tfrac{1}{2}ax^2 + b(x - x^e).$$

The public, on the other hand, resists being fooled; that is, they maximize

$$(2) \quad u_p(x, x^e) = -(x - x^e)^2.$$

As Barro and Gordon (1983a) argue, these payoffs are consistent with the government and the public having identical preferences. If the natural rate of unemployment is too high, perhaps because of taxes or externalities, then everyone might agree that maximizing (1) is desirable. But for individual agents, aggregate inflation and output are givens; the best they can do is forecast inflation accurately. The game consists then of the government choosing x and the public choosing x^e, with payoffs given by equations (1) and (2).

Now consider, as do Barro and Gordon, the Nash solution to the game in which both players move simultaneously. With both government and public maximizing given the other's decision, the solution is

$$x = b/a \quad \text{and} \quad x^e = b/a.$$

The model explains inflation as the Nash equilibrium to a policy game. The payoffs are $u_g = -(1/2)b^2/a$ and $u_p = 0$, which is Pareto inferior to the zero-inflation solution ($x = x^e = 0$) in which $u_g = u_p = 0$.

Barro and Gordon argue persuasively that the inefficiency stems from the government's inability to commit itself to a noninflationary policy. Suppose, for example, that the government were able to move first, committing itself to a particular rate of inflation. Then an intelligent government would choose x taking into account the public's response (namely, $x^e = x$) and pick zero inflation.

But when the government cannot make prior commitments, it faces a problem in convincing the public that it will, in fact, choose zero inflation. For if the public believes this, the government has an incentive to inflate at rate $x = b/a$, thereby raising output and the government's payoff. Using the normalization $a = b = 2$, we can represent policy as a matrix game with two strategies ($x, x^e = 0$ or 1), and payoffs

		public	
		$x^e = 0$	$x^e = 1$
government	$x = 0$	0,0	$-2, -1$
	$x = 1$	$1, -1$	$-1, 0$.

(In each ordered pair the government's payoffs are listed first.) The problem from this point of view is that $x = 1$ is a dominant strategy for the government: the payoffs are larger regardless of what the public does. The public, therefore, sensibly expects the government to inflate. The result is the Pareto-inferior solution $x = x^e = 1$.

Barro and Gordon then consider the possibility that the government can establish a reputation for avoiding inflation if the game is repeated infinitely many times. Let the government's payoff for the repeated game be

$$J_g = \sum_{t=0}^{\infty} c^t u_g(x_t, x_t^e), \qquad 0 < c < 1,$$

with c a discount factor. Then Barro and Gordon (1983b), applying results similar to James Friedman (1971; 1977, ch. 8), show that the strategies

$$x_t^e = \begin{cases} x^* & \text{if } x_{t-1} = x^* \\ 1 & \text{otherwise} \end{cases}$$

$$x_t = x^*$$

do *not* constitute a Nash equilibrium when $x^* = 0$. The problem is that the government's benefit from cheating (the extra payoff of $+1$ when $x = 1$ and $x^e = 0$) is equal to its cost (the loss of 1 when $x^e = 1$ and the government returns to zero inflation). But since the latter comes later, the discount factor ensures that cheating is a superior strategy and $x^* = 0$ is therefore not a Nash equilibrium with the given "punishment" strategy. They go on to argue that some positive rates of inflation x^* can be sustained as Nash equilibria, and it seems clear that even zero could be sustained with a longer punishment interval if c is not too small.

A weakness of this analysis is that the punishment strategy played by the private sector (punish the government by playing x_t^e equal to 1 if x_{t-1} is not zero) is essentially arbitrary. Further, the equilibrium which is sustained depends critically on the form this punishment strategy takes. The infinite horizon game has multiple Nash equilibria, with no mechanism for choosing among them. The Kreps-Wilson (1982b) analysis of reputation, to which we now turn, avoids these problems and illuminates a number of other issues as well.

II. Reputational Equilibrium

Consider now the possibility that the government may behave in one of two ways: it may behave as if it is rationally attempting to maximize the utility function (1) (a "wet" government); or it may behave as if it is committed irrevocably to pursuing a zero-inflation policy (a "hard-nosed" (H-N) government). Wet governments therefore have payoffs

	public $x^e = 0$	public $x^e = 1$
wet government $x = 0$	0	-2
$x = 1$	1	-1,

as in the previous section. Hard-nosed governments, however, behave as if their payoffs are

	public $x^e = 0$	public $x^e = 1$
H-N government $x = 0$	0	0
$x = 1$	-1	-1,

which we might derive by setting $b = 0$ in the government payoff function (1). They therefore have no incentive to inflate, regardless of expectations. The public's payoffs are given by equation (2):

	public $x^e = 0$	public $x^e = 1$
government $x = 0$	0	-1
$x = 1$	-1	0.

The crux of the analysis is that the public does not know which type of government behavior it faces. As a result, even a wet government may choose not to inflate. By resisting inflation it develops a reputation for being hard nosed which it hopes will discourage expectations of inflation in the future. In this section we examine such a reputational equilibrium in a finitely repeated version of the Barro-Gordon policy game when the public is uncertain about the government's behavior. The analysis is identical to Kreps and Wilson (1982b, Sec. 3) in all essential respects. The solution concept is Kreps and Wilson's (1982a) sequential equilibrium, which enables us to find the solution recursively, starting with the final period.

The central feature of the model is the government's ability to manipulate its reputation. The government enters period t, say, with a reputation p_t equal to the public's probability that the government is hard nosed. By assumption both the government and the public know p_t. Both players then choose their best strategies, given the other's strategy and the impact of current behavior on the next period's reputation. The probability p_t is then revised in light of observed behavior according to Bayes' rule.

Each player's strategy is usefully characterized as a probability of playing zero in a mixed strategy: denoted z_t for the public and y_t for the government. Then the government's reputation next period, p_{t+1}, is zero if it inflates this period (or has ever inflated in the past) since H-N governments never inflate. Given no inflation, Bayes' rule gives the probability as

$$\begin{aligned} p_{t+1} &= \mathrm{prob}(H\text{-}N \mid x_t = 0), \\ &= \mathrm{prob}(H\text{-}N \text{ and } x_t = 0)/\mathrm{prob}(x_t = 0), \\ &= \mathrm{prob}(x_t = 0 \mid H\text{-}N)\mathrm{prob}(H\text{-}N) \\ &\qquad /\big[\mathrm{prob}(x_t = 0 \mid H\text{-}N)\mathrm{prob}(H\text{-}N) \\ &\qquad + \mathrm{prob}(x_t = 0 \mid \mathrm{wet})\mathrm{prob}(\mathrm{wet})\big], \end{aligned}$$

or

$$p_{t+1} = p_t/[p_t + (1-p_t)y_t]. \tag{3}$$

In this game, as in the version of the chain store paradox analyzed by Kreps and Wilson (1982b, Sec. 2), the probability p_t is a sufficient statistic for past play and contains all the relevant information needed by the players to make optimal decisions.

Consider now the solution of the game. In the final period, T, a H-N government will always play $x_T = 0$. The expected return for a wet government is

$$\begin{aligned} J_g(T, p_T) &= z_T[y_T(0) + (1-y_T)(1)] \\ &\quad + (1-z_T)[y_T(-2) + (1-y_T)(-1)] \\ &= (2z_T - 1) - y_T. \end{aligned} \tag{4}$$

Since this is declining in y_T, a wet government will always inflate in the last period: $y_T = 0$. Similarly, the public's expected payoff is

$$\begin{aligned} J_p(T, p_T) &= z_T[p_T(0) + (1-p_T)(-1)] \\ &\quad + (1-z_T)[p_T(-1) + (1-p_T)(0)] \\ &= z_T(2p_T - 1) - p_T. \end{aligned}$$

Thus if $p_T > 1/2$ the public plays $z_T = 1(x_T^e = 0)$, if $p_T < 1/2$ it plays $z_T = 0$, and if $p_T = 1/2$ the public is completely indifferent about z_T. The equilibrium strategy in this case ($z_T = 1/2$ when $p_T = 1/2$) will be derived below from the equilibrium conditions for the preceding period. The value to the government to playing the game in the last period is therefore

$$v_g(T, p_T) = \begin{cases} 1 & \text{if } p_T > 1/2, \\ 0 & \text{if } p_T = 1/2, \\ -1 & \text{if } p_T < 1/2. \end{cases}$$

The value to the public is

$$v_p(T, p_T) = \max(-p_T, p_T - 1).$$

In period $T-1$, the government must consider the impact of its behavior on its reputation in the final period. The expected two-period payoff is

$$\begin{aligned} &J_g(T-1, p_{T-1}) \\ &\quad = z_{T-1}[y_{T-1}(0) + (1-y_{T-1})(1)] \\ &\quad + (1-z_{T-1})[y_{T-1}(-2) + (1-y_{T-1})(-1)] \\ &\quad + y_{T-1}v_g(T, p_T) + (1-y_{T-1})(-1). \end{aligned}$$

The last term reflects the fact that if the government inflates in period $T-1$, which it does with probability $(1-y_{T-1})$, then its reputation is blown; the public will expect inflation in the final period and the government's payoff in that period is -1. The penultimate term is the probability of playing zero actual inflation in $T-1$, and then collecting the payoff in T associated with a reputation p_T, where p_T is given by equation (3). The expression reduces to

$$(5)\quad J_g(T-1, p_{T-1}) = 2z_{T-1} - 2 + y_{T-1}v_g(T, p_T).$$

The public's two-period payoff is

$$J_p(T-1, p_{T-1}) = z_{T-1}(2q_{T-1}-1) - q_{T-1} + q_{t-1}, v_p(T, p_T),$$

where $q_{t-1} = p_{T-1} + (1-p_{T-1})y_{T-1}$.

The government now chooses y_{T-1} to maximize (5) subject to (3). For $p_{T-1} > 1/2$, this implies $y_{T-1} = 1$, hence $p_T = p_{T-1} > 1/2$, $v_g(T, p_T) = 1$, and $z_T = 1$. That is, the government plays $x_{T-1} = 0$ with certainty; its reputation does not change, but it is already sufficient to ensure that the public does not expect inflation in the last period. For $0 < p_{T-1} < 1/2$, the government plays zero inflation with probability

$$y_{T-1} = p_{T-1}/[1-p_{T-1}].$$

If by chance it fails to inflate, its reputation for being hard nosed rises in the next period to $1/2$. Since $p_{T-1} < 1/2$ it is clear that y_{T-1} is strictly less than one. But since y_{T-1} maximizes (5), this can only be true if $v_g(T, p_T) = 0$. From (4) we see then that z_T must be $1/2$, as we claimed earlier.

If p_{T-1} is exactly $1/2$ then y_{T-1} is one and it appears that any value of z_T between one-half and one is consistent with equilibrium. We assume in this case that $z_T = 1/2$. This assumption is analogous to one made by Kreps and Wilson and has no material effect on the results.

The solution of the game as described has the property that both (x_T, y_T) and $(x_{T-1}, y_{T-1}, x_T, y_T)$ are Nash equilibria. This recursive structure, which Kreps and Wilson (1982a) have labeled "sequential equilibrium," imposes a condition on the solution analogous to the principle of optimality. In period $T-1$, we only consider period T strategies which are themselves Nash equilibria. As a result, the equilibrium is dynamically consistent by construction.

With similar reasoning the solution can be extended to earlier periods. Equilibrium behavior is conveniently summarized as follows. (i) In period t, the private sector plays zero expected inflation with probability z_t given by

$$z_t = \begin{cases} 1 & \text{if } p_t > (1/2)^{T-t+1}, \\ 1/2 & \text{if } p_t = (1/2)^{T-t+1}, \\ 0 & \text{if } p_t < (1/2)^{T-t+1}. \end{cases}$$

(ii) A wet government plays actual inflation equal to zero with probability y_t given by

$$y_t = \begin{cases} 1 & \text{if } p_t > (1/2)^{T-t}, \\ \dfrac{p_t}{1-p_t}\dfrac{1-(1/2)^{T-t}}{(1/2)^{T-t}} & \text{if } 0 < p_t \le (1/2)^{T-t}, \\ 0 & \text{if } p_t = 0. \end{cases}$$

(iii) The probability of the government being hard nosed is revised in accordance with Bayes' rule:

$$p_{t+1} = \begin{cases} \dfrac{p_t}{p_t + (1-p_t)y_t} & \text{if } x_t = 0, \\ 0 & \text{if } x_t = 1 \\ & \text{or } p_t = 0. \end{cases}$$

(iv) The expected payoff to a wet government on entering stage t of the game with reputation p_t is given by

$$J_g(t, p_t) = 2z_t - (T-t+1) + y_t\left[\left(v_g(t+1, p_{t+1}) + (T-t-1)\right)\right],$$

where $v_g(t+1, p_{t+1})$ is the value of the game next period conditional on not inflating in period t. In equilibrium the value function for a wet government is therefore

$$v_g(t, p_t) = \begin{cases} t-T-1 & \text{if } 0 < p_t < (1/2)^{T-t+1}, \\ t-T & \text{if } p_t = (1/2)^{T-t+1}, \\ t-T+1 & \text{if } (1/2)^{T-t+1} < p_t \le (1/2)^{T-t}, \\ t-T+2+i & \text{if } (1/2)^{T-t-i} < p_t \le (1/2)^{T-t-i-1}, \end{cases}$$

$$\text{for } i = 0,1,\ldots,T-t-1, \text{ and } t = 1,2,\ldots,T-1.$$

III. Reputation and Dynamically Consistent Policy: An Example

To get an idea as to what kinds of behavior are implied by the theory, let us look at an example. Suppose a wet government comes to power with a five-year term ($T = 5$, with no possibility of reelection) and that at the beginning of its term it is strongly suspected of being wet. To be specific, let us say that it is believed to be hard nosed with probability lying somewhere between $1/16$ and $1/32$, although none of the qualitative conclusions depend on these values.

The play progresses as follows. In period 1, the public chooses $x_1^e = 0$ with certainty and the government chooses $x_1 = 0$ with probability $15p_1/(1-p_1) < 1$. If $x_1 = 0$ is actually played, the game continues with the government's reputation enhanced ($p_2 = 1/2^4 = 1/16$). If the government inflates, its reputation is ruined, and the equilibrium is $x = x^e = 1$ for the rest of the game.

In later periods, if the government has not yet inflated, its reputation rises just enough to induce the public to choose zero expected inflation with probability $1/2$. Three points are noteworthy. (*i*) Reputation is only enhanced ($p_t > p_{t-1}$ given that $x_{t-1} = 0$) if the government plays $x_{t-1} = 0$ with probability less than one. Acquiring a reputation thus involves taking a risk. (*ii*) In each period after the first, given that actual inflation was zero in the preceding period, the public randomizes with a constant probability of $1/2$. Thus there is a positive probability of getting $x^e = 1$, $x = 0$ and therefore a recession. The revised estimates that the government is hard nosed are not enough to discourage the public completely from playing $x^e = 1$. (*iii*) The probability that a wet government survives until the last period without ruining its reputation is just equal to $p_1/(1-p_1)$, so it pays to have a good reputation.

Let us consider now the problem of dynamic inconsistency and the definition of optimal policy. As Kydland and Prescott showed, the *ex ante* optimal policy is typically dynamically inconsistent, and therefore not credible. But the outcome of the best consistent policy is frequently worse than the *ex ante* optimal policy if the latter is credible.

Our own solution is, by construction, dynamically consistent and credibility is conveniently summarized by the reputation, p. It is easy to see that the sequential equilibrium is the best credible policy. In our example, the payoff to the government of following the consistent sequential equilibrium policy is $v_g(1, p_1) = -3$. Alternatively, suppose the government played $x = 1$ in every period. The public, given $1/16 < p_1 < 1/32$, would play $x_1^e = 0$ and $x_t^e = 1$ ($t = 2,\ldots,5$), giving the government a payoff of -4. The outcome involves actual inflation in every period, which is a surprise only in period 1. (If the private sector anticipated $x_1 = 1$, the government payoff would be -5.) Finally, if the government announced that it would never inflate, the outcome depends on whether it is believed or not. If p_1 truly captures the public's beliefs, then the outcome is zero actual inflation in each period, but zero expected inflation with certainty in period 1 and with probability $1/2$ thereafter, giving the government an expected payoff of -4. If the announced zero-inflation policy were believed (because of an associated constitutional amendment, for example), then the government's payoff would be zero.

It is clear, then, that the sequential equilibrium is dominated only by the fully believed zero-inflation commitment, given the behavior of the public and their beliefs about the government. It is always at least as good as pursuing a zero-inflation policy "come what may," in the face of a poor reputation. Thus, in the presence of public skepticism ($p_1 < 1$), and in the absence of irrevocable commitments, the sequential equilibrium is at least as good as (and usually better than) the time-inconsistent *ex ante* optimal policy of setting $x_t = 0$ in all periods. The concept of sequential equilibrium removes the ambiguity from the definition of optimal policy.

The analysis also sheds light on the results of Barro and Gordon. If a government is optimizing over a long time horizon (T), and its initial reputation is "good" in the sense that p_1 is much larger than $(1/2)^T$, then the solution will have the following property. There will be an initial period in which zero inflation is expected, and zero actual inflation occurs. The first period in which there is a departure from this pattern is period n, where n is the smallest integer for which $(1/2)^{T-n} > p_1 > (1/2)^{T-n+1}$. In this period the government will begin to create inflation with some nonzero probability. In subsequent periods, conditional on having observed zero inflation, the private sector will expect zero inflation with probability 1/2.

As T increases for given p_1, n increases also. In contrast to Barro and Gordon, in a game with a sufficiently long time horizon this analysis leads to the conclusion that for any nonzero initial reputation ($p_1 > 0$) there will be an initial period (which tends to infinity as the horizon tends to infinity) in which zero inflation is the equilibrium outcome. This is supported by the "punishment strategy" for the private sector which makes $x_t^e = 1$ for all $t > s$ if $x_s = 1$. This strategy is rational if the government's behavior is used to draw inferences about its preferences. By contrast, Barro and Gordon (1983b) assume that the public "punishes" a deviant government for one period, without rationalizing this assumption, and argue that zero inflation cannot be supported in an infinite-horizon game except by the use of rules to lend credibility to policy announcements. Our analysis would change somewhat if we introduced a discount factor. As in Barro and Gordon, a small discount factor makes it harder to sustain low inflation.

IV. Final Remarks

The Kreps-Wilson analysis fits many of the observed features of macroeconomic policy quite well. First, it is commonplace to hear politicians reassure us that they are serious about beating inflation. These statements are correctly regarded with skepticism, since both hard-nosed and wet governments have an incentive to establish reputations for being tough—that is, raise p. Conversely, governments frequently complain that their actions are thwarted by the "mistaken" expectations of labor unions, big business, and the gnomes of Zurich. Note, for example, that even a hard-nosed government will suffer persistent output losses half the time as the public randomizes, if its initial reputation is bad (p is small). Wet governments will also induce recessions until, by chance, they reveal themselves to be wet. From then on the inflationary equilibrium ($x = x^e = 1$) results.

Second, the model provides an account of the political business cycle without relying on voter myopia. At the same time it explains the inflationary bias of policy without recourse to nonlinearities in the Phillips curve. In the Nordhaus model, governments deflate early in their terms and inflate later since voters place more weight on events immediately preceding the next election. The strategy successfully raises output because the public is doubly myopic: they forget the low output early in the term and they fail to predict the inflation later. In the Kreps-Wilson framework, inflation at the end of the term is the rational response of a government that cares about employment. It works, on average, because the public is uncertain about the government's true character. Voters are not myopic; they simply do not have all the information.

The logic is just the opposite of conventional theory of the political business cycle. Instead of having a government create a pre-election boom in order to increase its chance of reelection, our analysis generates a pre-election boom as the solution to a game with a wet lame-duck government. In fact, if there were a chance of reelection, the incentive to preserve reputation may actually restrain the spending spree.

Third, the analysis suggests that governments may try to appoint central bankers with reputations for fighting inflation, even if their own preferences place positive weight on employment. By doing so they minimize the costs associated with uncertainty about policy (v_p is highest when p is zero or one) and with the credibility problem wet governments have with noninflationary policies. Autonomous central banks thus act as a precommitment device which may help to make noninflationary policies more credible and less costly.

Despite these apparent strengths of the analysis, a few caveats are in order. On the technical side, the assumptions that there are only two choices for inflation may be undesirably restrictive. The lack of dynamics relating inflation and output to their past values is also troublesome. The possibility of an intransigent public sector is discussed in our earlier paper (1984).

We also have some doubt that the model explains why we have had relatively high inflation during the past fifteen years, but not before. James Tobin, for one, disagrees that inflation was a policy choice derived from a desire to raise employment.

> Today a widespread version of recent history is that governments deliberately sought higher inflation in order to reduce unemployment....As an explanation of recent inflation in the United States this account is enormously exaggerated....The 1966–69 ride up the Phillips curve was not a conscious choice of novel macroeconomic strategy but a timeworn political decision about wartime finance. Against the advice of his Keynesian advisors, President Johnson chose for his own reasons of domestic and international politics not to ask Congress for increased taxes to finance his ill-starred escalation of the conflict in Indochina.
>
> [1981, pp. 21–22]

But whatever the origin of the inflation, we think the model helps to explain why disinflation took so long and was so painful. By the mid-1970's, the public was highly skeptical of each new attempt to fight inflation, since so many attempts had been abandoned in the past. Presumably even tough-minded policymakers faced a doubtful public. As a result, governments who cared about employment were often forced (probabilistically) to continue inflationary policies. Governments who wished only to stop inflation could not easily persuade the public of this fact, and therefore induced severe protracted recessions when they tried.

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