The conquest of inflation – An introduction to Sargent's analysis

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During the 1960's and the 1970's the OECD countries witnessed a trend increase in inflation. The 1980's and the 1990's, on the other hand, saw a decrease in inflation, which is now back to levels common before 1960 (and even lower). Does this development mean that central bankers have learned to control inflation, or is the current situation of low and stable inflation simply a result of a series of favorable but temporary factors? Our expectations regarding the future depend in a fundamental way on the interpretation we make from the experience of the past 40–50 years.

In this issue of the Economic Review we publish a summary of Thomas Sargent's monograph *The Conquest of American Inflation* (Sargent, 1999). Sargent compares different theories of the determination of inflation, discusses their possible relevance to the development in the United States, and presents a new theory. This theory suggests that it may be too soon to discard the threat of inflation: disturbances to the economy, similar to those we have experienced before, could well trigger a new inflationary process.

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Sargent's analysis is an important and original contribution to the current debate, and it is therefore desirable to make the reasoning behind it available to a wider audience. Figures 1 and 2, which may be com-

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pared with Figure 1 in the following summary by Sargent and Söderström, show that inflation in Sweden and the United Kingdom has followed much the same development as in the United States.[1] The same broad picture applies to many industrialized countries; consequently Sargent's analysis may be relevant also to other countries than the United States. In Europe many economists seem to be convinced that high inflation is a thing of the past, so Sargent's analysis may act as an eye opener. At the same time there are important differences between the U.S. and Europe. The European Central Bank, the Bank of England and Sveriges Riksbank have recently been given clearer mandates to strive for price stability than has the Federal Reserve. European central banks have also become more independent during the last decade, although the Federal Reserve has been relatively independent for a long time.

Figure 1. Inflation (CPI) in Sweden, 1955–1998

Monthly inflation, 13-month centered moving average, percent

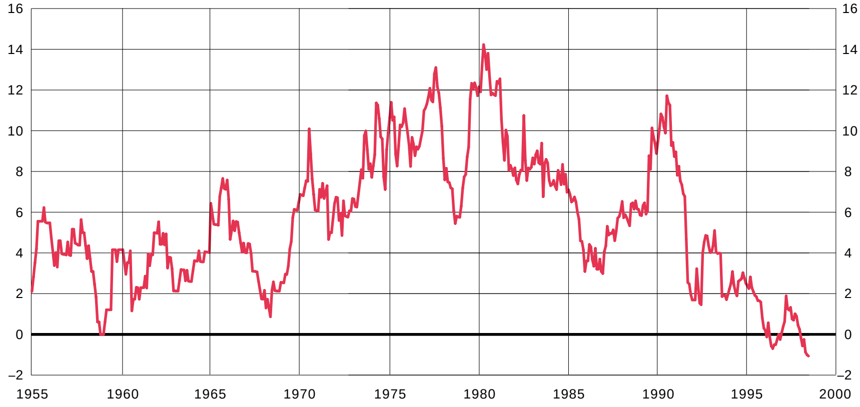
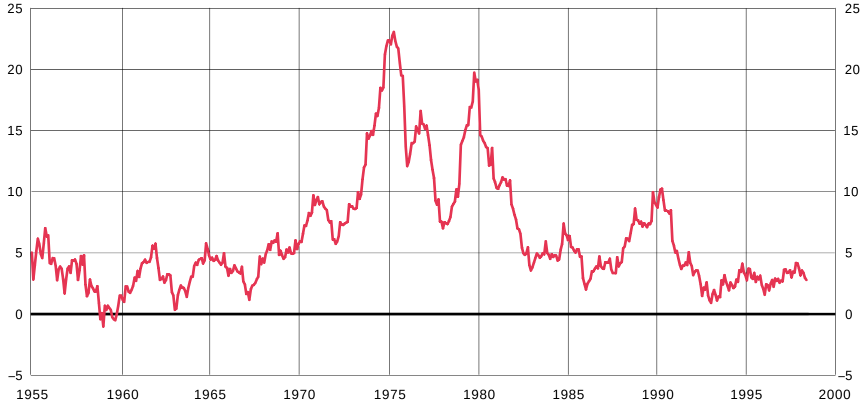


Figure 2. Inflation (RPI) in the U.K., 1955–1998

Monthly inflation, 13-month centered moving average, percent



[1] Source: See Vredin and Warne (2000).

The rise of inflation and the credibility problem of monetary policy

Many interpretations of the increase in inflation during the 1960's and 1970's stem from two influential papers by Finn Kydland and Edward Prescott (1977) and Robert Barro and David Gordon (1983). In these papers, the explanation of inflation is based on three assumptions. First, the central banks had the desire to keep unemployment low, even lower than the equilibrium (or "natural") level. The fact that the equilibrium rate of unemployment is above zero is due to frictions on the labor market. During the 1960's and 1970's, central banks were not very independent, and the fight against inflation was not a high priority. It was generally accepted that central banks should do what they could to keep unemployment low and thus counteract the effects of the labor market frictions. Whether or not such a policy is at all possible depends, among other things, on the presence of nominal wage rigidities. Once nominal wage increases have been determined, the central banks are able – by creating unexpectedly high inflation – to lower real wages and thus stimulate employment.

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The second important assumption in this inflation theory is that wages and other contracts are determined under rational expectations about the future conduct of monetary policy. Thus, households and firms understand that the central bank is tempted to create high inflation. This will be incorporated into their inflation expectations until the central bank does not wish to increase inflation further; the resulting expectations of high inflation are reflected in high nominal wage increases.

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This situation would not arise if the central bank could commit itself to keep inflation low. However, the third assumption is that it is not possible to make such binding commitments. When nothing stops the central bank from reneging on its promises, the only credible inflation target is the rate of inflation at which the central bank has no incentive to create further inflation. This is the credibility problem of monetary policy.

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The outcome from this analysis is that inflation on average will be inefficiently high, without any gains in the form of lower unemployment – what Sargent calls the "Nash outcome". An appealing feature of this theory is that it fits well

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with the experiences of the 1960's and 1970's. Inflation in the U.S. began to rise soon after the Federal Reserve had been recommended to lower unemployment by accepting higher inflation.

The fall of inflation: two "traditional" interpretations

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The theory about the credibility problem admits several interpretations of why the increase in inflation eventually was reversed. (For a more detailed survey, see, for example, Apel and Viotti, 1998.) One interpretation is that there was a *complete reorientation of monetary policy*: politicians and central bankers learned from experience (and from economic theory), and decided that monetary policy should concentrate on keeping average inflation low rather than trying to affect unemployment. To accomplish such a reorientation, the goals for monetary policy must be reformulated. For example, the central bank's target for unemployment could be set to the natural rate of unemployment. Alternatively, a central bank governing board could be appointed that is both independent and "conservative", in the sense that it gives a larger weight to fighting inflation (relative to unemployment) than does society as a whole. Introducing such an imperfection would counteract other imperfections, such as the labor market frictions or the lack of a commitment mechanism, a point made by Kenneth Rogoff (1985). A third possibility to lower inflation is through institutional changes, either directly aimed at the labor market imperfections or at ways to enforce central bank commitments.

In principle, such radical changes of the conditions underlying the Kydland-Prescott and Barro-Gordon analysis should make it possible to reach lower inflation at no cost in terms of higher unemployment. This outcome is what Sargent refers to as the "Ramsey outcome": politicians desert the erroneous belief that monetary policy can affect unemployment in the long run, and therefore reorient policy ("the triumph of the natural rate").

Such a complete reorientation of policy seems to be a reasonable interpretation of the developments, at least in Europe, where a number of institutional changes have been carried through. In the U.S. such reforms have not been made to the same extent – although one could claim that the Federal Reserve has been independent and conservative nonetheless. Alternative explanations to the fall in U.S. inflation have therefore been proposed.

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One explanation is that the natural rate of unemployment has fallen. Peter Ireland (1999) maintains that the fall in U.S. inflation during the 1980's and 1990's can be explained without any reorientation of monetary policy, if one assumes that the economy has been hit by favorable shocks which have lowered the natural rate of unemployment. Thus, Ireland's explanation is that the basic assumptions behind the Kydland-Prescott and Barro-Gordon story are still valid. Just as inflation increased when the economy was hit by negative shocks and a trend increase in unemployment during the 1960's and 1970's, inflation has subsequently fallen as a result of a series of favorable shocks during the 1980's and 1990's. But monetary policy, according to Ireland, has in principle remained unaltered.

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At first glance, it seems more likely that the fall of inflation in Europe is due to a reorientation of monetary policy rather than to a fall in the natural rate of unemployment. On the contrary, the natural rate seemed to rise even during the 1990's. In the case of the U.S. the issue seems to be less clear.

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A third interpretation: Sargent's theory

Sargent (1999) launches and tests a separate explanation of the behavior of U.S. inflation. In Sargent's model the central bank and the public are assumed to behave more or less according to the same assumptions made by Kydland-Prescott and Barro-Gordon. In this sense Sargent's analysis is consistent with that of Ireland. However, a key element in Sargent's reasoning is that the central bank has incomplete knowledge about the true relationship between inflation and unemployment, that is, the "Phillips curve". The central bank updates its beliefs about the Phillips curve relationship as new information about unemployment and inflation arrives, but puts a larger

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weight on more recent information, and is less influenced by experiences from the past. Such behavior could be motivated by the fact that the central bank does not believe in a stable Phillips curve, but rather suspects that this relationship changes over time. By its very behavior, the central bank makes these beliefs self-fulfilling: the relationship between inflation and unemployment depends on the conduct of monetary policy, and as policy changes, so does the estimated Phillips curve.

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According to Sargent's theory, the Fed has reduced inflation, not because of a conviction that unemployment can not be affected, but rather because the trade-off between inflation and unemployment has recently been so "unfavorable" – a fall in unemployment is associated with a large increase in inflation – that the Fed has abstained from trying to lower unemployment. However, as the economy is hit by new disturbances and the Phillips curve seems to change, this view will be revised, and inflation may well increase again.

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It should be stressed that Sargent does not claim that his theory is the correct description of Federal Reserve behavior and that there has been no reorientation of U.S. monetary policy. Rather, his fundamental point is that both interpretations are consistent with economic theory, and both seem realistic. Depending on our view of the reasoning of economic policy makers, we may thus either believe that the present situation with low inflation will endure, or that a process of rising inflation may well reappear. As we have indicated, Sargent's warnings may be more relevant for the U.S. than for Europe. The importance of explicit targets for inflation and a clear mandate for monetary policy has been more heavily emphasized in Europe (as in Australia, Canada and New Zealand) than in the United States. Nonetheless, the "Keynesian" view of economic policymaking is still very influential among economists and politicians around the world. Therefore the analysis in Sargent's book should be taken seriously. Hopefully, the summary published in this issue will contribute to the spreading of Sargent's ideas to a wider audience.

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