

Implications of the
policy ineffectiveness
proposition
economics essay



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The Phillips Curve states that inflation depends on expected inflation, cyclical unemployment and supply shocks. It is given by the following equation: The inflation expectations can be either adaptive or rational. Early New Classical Economics was largely based the assumption of adaptive expectations, which assumes that people form their expectations of future inflation based on recently observed inflation. This assumption implies that in absence of cyclical unemployment or supply shocks, inflation will continue indefinitely at its current rate. It also implies that past inflation influences the current wages and prices that people set.

If we suppose that the stock of money in the economy increases, the adjustment towards the long run equilibrium takes time. In each period that agents find their expectations of inflation to be wrong a certain proportion of their forecasting error would be incorporated into expectations. This means that the long run equilibrium in the economy would only be reached asymptotically. The government would then be able to maintain employment above its natural level.

Rational Expectations:

However, many economists disagree with the assumption of adaptive expectations. New Classical Theory replaced the assumption of adaptive expectations with that of rational expectations.

Under this assumption, anticipated monetary policy would have no effect on economic activity. However, stochastic shocks to the economy could have short run effects on economic activity. This theory known as the Policy Ineffectiveness Proposition was proposed in 1976 by Thomas J. Sargent and

Neil Wallace. According to the proposition monetary authorities cannot affect the output if the changes are anticipated. Under this proposition, the only way monetary authorities can affect the real economy is by making monetary policy less predictable. However, this would increase the variability of output around its natural rate and is hence not a desirable policy aim.

Policy Ineffectiveness Proposition and the Sacrifice Ratio:

An important implication of the Policy Ineffectiveness Proposition is that the monetary authorities can reduce inflation without any output or employment cost. If policymakers announce a reduction in money growth, rational agents will lower their inflation expectations proportionately. This is known as the Costless Disinflation Proposition. This in turn implies that the sacrifice ratio, which is basically the loss in output for a reduction in inflation by one percentage point, should be equal to zero.

Empirical Evidence:

Estimates of the cost of disinflation vary widely. These estimates measured in terms of the sacrifice ratio have extreme values. While some economists argue that a sound monetary policy can reduce inflation without any costs, others estimate that sometimes the sacrifice ratio may have very high values.

Sargent (1982) examined the measures that brought extreme inflation under control in several European countries in the 1920s including Austria, Hungary, Germany, and Poland. According to him, in each case the inflation stopped abruptly rather than gradually. He studied these countries because of “ the dramatic change in their fiscal policy regime, which in each instance

was associated with the end of a hyperinflation.” He also noted the rapid rise in the “ high-powered” money supply in the months and years after the rapid inflation had ended.

For Austria he suggested that currency stabilization was achieved very suddenly, and with a cost in increased unemployment and foregone output that was comparatively minor. From the data for Hungary, he inferred that immediately after the stabilization, unemployment was not any higher than it was one or two years later. He posited that this could be because the stabilization process had little adverse effect on unemployment. For Poland, he noted that the stabilization of the price level in January 1924 was accompanied by an abrupt rise in the number of unemployed. Another rise occurred in July of 1924. He argued that while the figures indicated substantial unemployment in late 1924, unemployment was not an order of magnitude worse than before the stabilization. The Polish zloty depreciated internationally from late 1925 onward but stabilized in autumn of 1926 at around 72% of its level of January 1924. At the same time, the domestic price level stabilized at about 50% above its level of January 1924. The threatened renewal of inflation has been attributed to the government’s premature relaxation of exchange controls and the tendency of the central bank to make private loans at insufficient interest rates. The stabilization of the German mark was accompanied by increases in output and employment and decreases in unemployment. While 1924 was not a good year for German business, it was much better than 1923. From the figures, he couldn’t find much convincing evidence of a favourable trade-off between inflation and output, since the year of spectacular inflation, 1923 was a very

bad year for employment and physical production. According to the data, there was an evident absence of a trade-off between inflation and real output. However he suggested that the inflation and the associated reduction in real rates of return to high powered money and other government debt were accompanied by real over-investment in many kinds of capital goods.

He concluded his findings by stating that the essential measures that ended hyperinflation in each of Germany, Austria, Hungary, and Poland were, first, the creation of an independent central bank that was legally committed to refuse the government's demand for additional unsecured credit and, second, a simultaneous alteration in the fiscal policy regime. These measures had the effect of binding the government to place its debt with private parties and foreign governments which would value that debt according to whether it was backed by sufficiently large prospective taxes relative to public expenditures. In each case that he studied, once it became widely understood that the government would not rely on the central bank for its finances, the inflation terminated and the exchanges stabilized. He further saw that it was not simply the increasing quantity of central bank notes that caused the hyperinflation, since in each case the note circulation continued to grow rapidly after the exchange rate and price level had been stabilized.

According his findings for the four countries, one may conclude that his studies supported the costless disinflation proposition. However there have been other studies that do not support this proposition.

In his paper “ What determines the sacrifice ratio?”, Laurence Ball investigated

• Considers several OECD countries.

• Finds that the cost of ending moderate inflations can be high. Sacrifice ratio = cumulative output lost due to the permanent reduction in the inflation rate associated with the disinflationary policy.

• Average sacrifice ratio = 0.77%: each p. p. reduction in inflation is associated with a 0.77 p. p. loss of output.

• Sacrifice ratio larger when disinflation slower, and in countries with greater nominal wage rigidity.

• Does not support costless disinflation proposition

The New Keynesian Stanley Fischer (1977) applied the insights of Franco Modigliani to the model employed by Sargent and Wallace. Fischer therefore introduced the assumption that workers sign nominal wage contracts that last for more than one period, wages are “ sticky”. The outcome is that government policy can be fully effective since although workers rationally expect the outcome of a change in policy, they are unable to respond to it as they are locked into expectations formed when they signed their wage contract. It is not only possible for government policy to be used effectively but its use is also desirable. The government is able respond to random

shocks to the economy to which agents are unable to react, and so stabilise output and employment.

Since it was possible to incorporate the rational expectations hypothesis into macroeconomic models whilst avoiding the stark conclusions that Sargent and Wallace reached, the policy ineffectiveness proposition has had less of a lasting impact on macroeconomic reality than first may have been expected.

This applies much more generally. Any consistent set of government policies will be learned and anticipated by a population with Rational Expectations. Since they are anticipated, they will not come as a surprise. Instead, people will shift their short-run aggregate supply curves in such a way that production will be back at the NAIRGDP and unemployment at the NAIRU. If the policies are designed to move the economy away from the NAIRGDP, then they will be ineffective — regardless what mix of fiscal and monetary policies they are.

This leads to the general Policy Ineffectiveness Proposition.

Policy Ineffectiveness Proposition

Any consistent government policies designed to influence the economy to a level of production other than the NAIRGDP will be ineffective if the population have rational expectations

The essential measures that ended hyperinflation in each of Germany,

Austria, Hungary, and Poland were, first, the creation of an independent

central bank that was legally committed to refuse the government's demand for additional unsecured credit and, second, a simultaneous alteration in the fiscal policy regime. 37 These measures were interrelated and coordinated. They had the effect of binding the government to place its debt with private parties and foreign governments which would value that debt according to whether it was backed by sufficiently large prospective taxes relative to public expenditures. In each case that we have studied, once it became widely understood that the government would not rely on the central bank for its finances, the inflation terminated and the exchanges stabilized. We have further seen that it was not simply the increasing quantity of central bank notes that caused the hyperinflation, since in each case the note circulation continued to grow rapidly after the exchange rate and price level had been stabilized. Rather, it was the growth of fiat currency which was unbacked, or backed only by government bills, which there never was a prospect to retire through taxation.

The changes that ended the hyperinflations were not isolated restrictive

actions within a given set of rules of the game or general policy.

Earlier attempts to stabilize the exchanges in Hungary under Hegedus, 38

and also in Germany, failed precisely because they did not change the

rules of the game under which fiscal policy had to be conducted. 39

In discussing this subject with various people, I have encountered the

view that the events described here are so extreme and bizarre that they

do not bear on the subject of inflation in the contemporary United States.

On the contrary, it is precisely because the events were so extreme that

they are relevant. The four incidents we have studied are akin to laboratory

experiments in which the elemental forces that cause and can be used

to stop inflation are easiest to spot. I believe that these incidents are full of

lessons about our own, less drastic predicament with inflation, if only we

interpret them correctly.

Costless immediate disinflation is not possible in an economy with long-

term labor contracts. This paper sets out a simple contracting model of wage
and

output determination and uses it to calculate sacrifice ratios for a disinflation

program, under the assumption that announced policy changes are immediately

believed. Under this assumption disinflation with a structure of labor contracts

like those of the United States would be less costly than typically estimated.

The model is then modified to allow for the slow adjustment of expectations of

policy to actual policy; sacrifice ratios then approach the ranges typically estimated.

The sacrifice ratio for the current disinflation is calculated in the last

section: the current disinflation was somewhat more rapid and less costly than

previous estimates suggested. The calculated sacrifice ratio is consistent with

the predictions of the simple contracting model.

Inflationary expectations and aggregate demand pressure are two

important variables that influence inflation. It is recognized that reducing

inflation through contractionary demand policies can involve significant

reductions in output and employment relative to potential output. The

empirical macroeconomics literature is replete with estimates of the so-called “sacrifice ratio,” the percentage cumulative loss of output due to a 1 percent reduction in inflation.

It is well known that inflationary expectations play a significant role in any disinflation program. If inflationary expectations are adaptive (backward-looking), wage contracts would be set accordingly. If inflation drops unexpectedly, real wages rise increasing employment costs for employers. Employers would then cut back employment and production disrupting economic activity. If expectations are formed rationally (forward-looking), any momentum in inflation must be due to the underlying macroeconomic policies. Sargent (1982) contends that the seeming inflation-output

trade-off disappears when one adopts the rational expectations framework. The staggered wage-setting literature provides evidence that even if expectations are formed rationally, wage and price determination will have backward-looking and forward looking elements. The backward-looking element reflects last year's contracts on this year's prices whereas the

forward-looking element reflects next year's contracts on this year's prices.

Taylor (1998) presents a detailed account of the staggered wage and price

setting literature, and the exercise will not be pursued here. Calvo (1983)

shows that in a world of stochastic contract length, the costless disinflation

result extends to a world of staggered wage contracts with forward-looking

expectations. Stopping inflation is then a matter of a resolute commitment

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part of the government to a credible disinflation program.

In this literature, the costless disinflation result extends to a world of

staggered wage contracts with forward-looking expectations. Stopping

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government to a credible disinflation program.

It is likely that in an economy there are both forward- and backwardlooking

elements in inflationary expectations. Chadha, Masson, and

Meredith (1992) (henceforth CMM), provide a unified framework to test for

expectations formation in a single specification. CMM use a Phillips curve

framework to consider two benchmark cases: a Phelps-Friedman adaptive

expectations model which places a weight of unity on past inflation (complete inflation stickiness) and a rational staggered contracts model based on Calvo (1983) that places a weight of unity on expected inflation (inflation is independent of past inflation). These two extremes are nested in one specification where current inflation is a weighted average of past and expected future inflation.