

Discussion

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The current episode of monetary disinflation in the United States is generating a valuable new set of time series data for the testing of alternative theories of aggregate supply. John Taylor's paper serves two purposes, both providing a doctrinal overview of two extreme opposing positions, which he calls "Keynesian" and "new classical," and illustrative numerical simulations using his own approach, which he describes variously as "this new alternative view" and "a compromise or consensus view." With typical modesty, Taylor has avoided giving his own name to the approach that he invented, but I need not feel so inhibited and will henceforth label it "Taylorian."

If true, the Taylorian view would have dramatic implications. The simulations in Tables 1 through 5 exhibit alternative paths of disinflation, *all of which occur without the creation of a single layoff or the loss of a single dollar of real GNP during the transition period.* Taylor's demonstration that painless disinflation is compatible with the U.S. type of three-year staggered wage contract system is extremely ingenious but ultimately unconvincing. For if disinflation-without-pain were part of the economy's set of feasible outcomes with its existing monetary and contractual institutions, there would be no reason for the actual process of U.S. disinflation since 1979 to have been accompanied by an increase in the unemployment rate from 6 to 10 percent. To repeat the language that Barro has applied to agents in Keynesian models, Taylorian agents in 1980-82 have failed on a massive scale to "realize perceived gains from trade." The jarring discrepancy between real-world behavior and the hypothetical scenarios makes me doubt that his approach can now or ever be dubbed a "consensus view."

The Overview of Alternative Doctrines

The doctrinal landscape painted by Taylor is sparsely populated and one-dimensional. He depicts a straight line along which the protagonists can be arrayed as if the line were divided into segments, num-

bered left-to-right from 1 to 10, with Keynesians variously described as if they occupy the region 1 to 3, the new classical proponents at 10, and the Taylorian view somewhere in between. Judging from the penultimate sentence, "...the answer might be a lot closer to the new classical than to the Keynesians," Taylor seems to imagine himself as residing at 7 or 8.

The Taylor overview is underpopulated in its omission of the substantial body of recent research that occupies the territory between, say, 3 and 7 on his linear scale, and one-dimensional in its failure to refer to the wide variety of experience among industrialized nations in the postwar era, not to mention earlier historical eras. In fact, rather than a one-dimensional line segment as a descriptive image, I prefer to think of a grid with the extent of price flexibility along one axis and national identity along the other, and with plotted points suggesting substantial price inertia and backward-looking expectation formation in a country like the United States (which might register 3 or 4 on my scale), and prompt adjustment with forward-looking expectations formation in a country like Japan (which might register 7 or 8).

The mechanism of expectation formation in Keynesian models is labeled as both "exogenous" and "backward looking." Since the term "Keynesian" is used at the outset as the approach "embodied in most econometric models now used for policy evaluation in practice," it is accurate to describe the expectations mechanism in those models as "backward looking," i.e., adaptive, but not as "exogenous." For at least two decades the wage-price sector of virtually every econometric model in the Keynesian tradition has included lagged wages, prices, or both, in the wage equation. It makes no difference for the reduced forms of these models whether the lagged wage and price variables are entered directly, or whether the specification includes an unobservable expected price or wage variable that is promptly defined to depend entirely on lagged actual values. The first practice is preferable, since the second imposes an autoregressive restriction on the formation of expectations that unrealistically excludes other important lagged demand and supply variables from influencing price and wage expectations (Sims, 1980).

The backward vs. forward distinction generates the central difference between Keynesian and Taylorian models. The former cannot

1. "These models are not 'Keynesian' in that expectations are not exogenous or purely backward looking" (p. 11).

produce a disinflation without the creation of temporary economic slack, whereas forward-looking Taylorian agents are capable (as in the paper's simulations in Tables 1 through 5) of disinflation-without-pain. While valid, this distinction has the effect in Taylor's overview of lumping together all Keynesian models and **overlooking** the enormous diversity of estimated responses and coefficients that appear in the literature. On the 1-to-10 scale the far left is occupied by models developed in Cambridge (U.K.) in which wage changes are exogenous and the aggregate price level mimics changes in the exogenous wage without any influence of demand (**Godley and Nordhaus, 1972**). At the other extreme, say 5 or 6 on the linear scale, are my own backward looking models for the U.S., which are capable of generating a decline in the inflation rate of five percentage points within only two or three years after a five-percentage-point monetary growth slowdown (**Gordon, 1982b; Gordon-King, 1982**). And responses are even faster in some other nations with less wage inertia than in the U.S., as emphasized in comparative macroeconomic research by **Branson-Rotemberg (1980)**, **Sachs (1979)**, and myself (**1982a, 1982c**).

Further, my model includes the foreign exchange rate as an additional channel, besides economic slack, by which policymakers can influence the inflation rate. As a formal matter my model can generate a disinflation without slack, as can the Taylorian model, if the authorities use monetary policy to manipulate the exchange rate and fiscal policy to maintain an equilibrium unemployment rate. I do not stress this possibility, however, because I believe that fiscal multipliers are too weak and uncertain in size and timing to allow such a **disinflationary** strategy actually to be carried out (the disinflation would not be painless in a global sense since unemployment and slack would simply be exported abroad).

Substantive Issues in the Taylorian Approach

The distinctive feature of the Taylorian model is its dual emphasis on multi-period staggered contracts and on forward-looking expectation formation. He rightly views the existence of staggered contracts as undermining the new classical prediction that price changes respond instantaneously to anticipated changes in nominal demand. But he wrongly imposes a false symmetry by arguing that "the Keynesian approach. . . cannot deal with the expectations issue systematically," as if to imply that, because of their **backward-looking** constructs, **Keyne-**

sians ignore expectations with as little justification as new classical economists ignore multi-period contracts.

But there are three good reasons to justify the backward-looking orientation of Keynesian models. First (as Taylor has recognized elsewhere but does not discuss here), "disinflation-without-pain" scenarios require that agents accept as fully credible all announcements by the monetary authority of its future policy. Second, Taylor implicitly assumes a one-to-one link between future announced decelerations in monetary growth and in nominal GNP, ignoring the uncertainty produced by the Congressional budget process and by mysterious shifts in the demand for money (as occurred both in 1975-76 and in 1981-82). Consider a wage-setting agent committed to following the behavior set out in Taylor's calculations. If velocity increased faster than in the forecast, nominal GNP in wage units would also increase and could imply some combination of higher profits and a lower real wage, **and/or** higher employment of additional workers, than in the simulations. At the opposite extreme, a slower increase in velocity would imply some combination of lower profits and a higher real wage, **and/or** lower employment with the possibility of layoffs. Since velocity surprises tend to be serially correlated, an agent may be tempted to wait until they actually occur rather than precommit himself to behavior that may later prove to be suboptimal.

The third problem with forward-looking behavior, however, is the most crucial and helps to explain the failure of the real-world U.S. economy to realize the perceived gains from trade that Taylor's disinflationary strategy exhibits, in contrast to the "high pain" outcome that has actually occurred. This problem involves the decentralization of decision making and the resulting unwillingness of any individual agent to accept with complete confidence that all other agents will accurately read the lines written out in Taylor's precisely detailed deflationary screenplay. An accurate line-reader who accepts a sudden reduction in the rate of wage change will suddenly find himself accepting a lower real wage, should other workers fail to play their assigned roles. Yet each other worker has an incentive to leave the cast of the production, hoping that loyal line-reading behavior by at least some workers will reward his own disloyalty with a higher real wage. This incentive to disloyalty is a classic case of the economist's "free rider" problem.

In contrast to the unrealistic hopefulness of the Taylorian simulations is the hard-minded realism of Keynesian backward-looking simula-

tions, which might be dubbed the "Missouri" or "show-me" approach. While admitting that expectations are relevant for every aspect of economic behavior, the sensible Keynesian recognizes that agents are likely to wait until they see evidence of current (not future) price deflation and economic slack before agreeing to wage moderation and concessions. The much publicized wage concessions in the United States in 1981-82 have, after all, occurred in industries where bankruptcy is a real and present threat, not in situations where economic agents worked out in Taylorian fashion the future consequences for profits and real output of present policies (Mitchell, 1982). The rate of wage change slowed down *after*, not before, unemployment rose, the exchange rate appreciated, and the real price of oil began to decline. In fact, Taylor provides no evidence that a forward-looking expectation mechanism has ever existed, and it is hard to see where such evidence would come from. For instance, correlations between current wages and future values of the unemployment rate would be open to multiple interpretations, including reverse causality.

Viewed with reference to my three objections to Taylor's forward-looking assumption, the section called "forward looking" in his paper addresses secondary issues. In particular, Okun's argument that forecasting is complex and costly is not convincing. As Taylor recognizes, it is cheap to refer to wage surveys. Yet the use of wage surveys inherently introduces inertial and backward-looking characteristics into the wage-adjustment process.

Conclusion

On empirical grounds Taylor rightly rejects the new classical macroeconomics. Yet he symmetrically dismisses, without evidence or footnotes, all of Keynesian macroeconomics, thus lumping together a wide variety of research including obsolete approaches in which wages and prices are exogenous, and modern time-series econometric research which exhibits substantial responsiveness of the aggregate U.S. inflation rate to monetary policy and which attempts to explain cross-country differences in this degree of price adjustment. Taylor seems to be so convinced by his own research that painless disinflation is feasible that he states that the two main objectives of monetary policy are to bring down the inflation rate in the short run and to keep the inflation rate near this new lower level in the long run. He never

considers the possibility that, because real-world disinflation involves a large loss of output, a prior question for the monetary authority is whether to disinflate at all. As month after month in 1982 goes by with high and rising unemployment throughout the industrialized world, and with a degree of economic slack unprecedented since the Great Depression, it is not too early to suggest that forward-looking approaches to macroeconomics may have forfeited their claim to credibility. As I look at the time path of inflation and unemployment in the United States as it has emerged over the past two years, the outcome seems closest not to Taylor's screenplay, nor to my own relatively optimistic econometric work, but to the backward-looking Phillips-curve adjustment loop displayed for illustrative purposes in the current edition of my *Macroeconomics* textbook (p. 235), written in the fall of 1979.

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