Comment

by Allan H. Meltzer

Robert J. Gordon has undertaken to explain the rate of price change in each of the past 87 years. I applaud his effort because I believe that much more can be learned from studies of these annual data, despite the imprecision of the data for earlier years, than from additional studies of quarterly data for the past three decades.

During the period Gordon considers, we shifted from gold to a paper standard, and from fixed to floating exchange rates. The role of government in the economy expanded greatly. From studies of this experience, we can learn about the consequences of these and other changes for inflation, price and output variability and the formation of anticipations. Eventually, we will learn about the institutions that increase or reduce variability.

Gordon's principal findings are: (1) there is a nearly constant response of the percentage rate of price change to the percentage rate of change of nominal GNP; (2) the size of the response is approximately 1/3; (3) the slower response of the prices observed during postwar recessions, he finds, is mainly the result of changes in beliefs about persistent inflation and not, as commonly alleged, the result of increased powers of unions and monopolies or other changes in the relation between prices and output; (4) the standard Phillips curve is far less reliable than a relation that links output or spending to the price level so that the rate of price change varies with the rate of growth of output or spending and not with the level of spending or output; and (5) the lagged inflation rate is far more important in recent years than before World War II.

Conclusions three and four are consistent with and supportive of my own earlier work Meltzer (1977). I am particularly pleased to have Gordon join me in rejecting the standard Phillips curve on the grounds that it is misspecified.

The fifth conclusion -- that the lagged inflation helps to predict the persistence of inflation -- is similar to my finding that the maintained average rate of money growth became much more important than the current rate of money growth once the U.S. left the gold standard. The greater importance of past average rates of change of money and prices does not mean that people now look farther back when forming anticipations about the future rate of inflation or that they form beliefs about the rate of inflation more slowly. The opposite is more likely to be true.

To see why, think of the current rate of price change, p, as consisting of two components. $p = \pi + \rho$. The anticipated rate of inflation, π, is the central value around which prices are expected to change; ρ is the one-time rate of change of prices. See Brunner and Meltzer (1977) or Gordon's equation (3). Under the gold standard π changed slowly, but ρ changed frequently. Consequently, people looked back farther to estimate π but gave less weight to π when forming anticipations about p. In the fifties and sixties, π dominated p, so past average money growth (or past rates of price change) receive greater weight in the expected rate of inflation. The oil shocks of the seventies shifted some of the weight from π back to ρ.

I am less willing to accept Gordon's conclusions (1) and (2). These results differ from Cagan's (1975) and my own (1977) result. The difference in conclusion is related to the way in which Gordon models the pricing process.

Gordon's model, like many standard Phillips curves, is based on an implausible idea. Deviations of prices from expected price levels depend on the gap between current output and some measure of capacity or full employment output. [1] Expected price levels are not related to expected levels of output except in the special case in which the economy is expected to operate at capacity. The use of capacity as a measure of expected output does not introduce sizeable error in the fifties and sixties, but it does involve sizeable error in the depressions of the 1890's and the 1930's.

Gordon overcomes the problem by introducing lagged "net" price change as a measure of anticipated inflation. "Net" price change has opposite signs in the sixties and seventies than in the thirties and is not significant in the heyday of the gold standard. The lack of significance warns us, and should have warned Gordon, that his explanation of a shift from regressive to extrapolative price expectations is not correct. There was no reason under the gold standard to anticipate that prices would fall next year if they rose this year. That result depends not only on spells of adjustment but on whether the aggregate world stock of gold and demand for gold changed or was redistributed.

Gordon has produced some interesting results. The generous use of dummy variables and extra effects, the absence of a model of demand and the presence of current nominal GNP growth as a dependent variable in an equation explaining the rate of price change should warn us, and him, not to attach too much credibility to R^2, predictions, and precise numerical results.

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[1] The problem does not depend on either the use of price levels instead of rates of price change or on the use of output instead of employment.

REFERENCES

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