
A Way to Improve Economic Forecasting

With inflation and unemployment once again rising faster than many expected, the demand for better economic policies and better economic forecasts is mounting too. Econometric models are being used to help meet this demand, but most can't do a very good job. Models designed in the usual way are based on economic theories which have not been able to accurately predict the impact on the economy of alternative government policies. And because they have failed at that, some economists believe that models designed to use these theories are probably not the best for simply forecasting under current policies either.

Vector Autoregression

No modeling approach has been developed yet that can help economic policymaking very much, but one that seems to be better at simple forecasting is the subject of two articles in this *Quarterly Review*: vector autoregression (VAR). In order to forecast, VAR relies only on regularities in the historical data, not at all on economic theories. Models using VAR are therefore likely to capture historical relationships better than models tied to inadequate economic theories and so be able to forecast more accurately.

Especially for Regions

National VAR models have been built that can forecast at least as well as prominent national models. In the first article in this issue (p. 2), Paul A. Anderson

explains why this new technique can potentially do even better at the regional level. To satisfy economic theories and forecast well, current models require an extensive and complete data set, something that's rarely available for regions. Fragmentary data sets are no problem for VAR models, though. Since VAR is based on statistical regularities rather than economic theories, it can easily be used to forecast with whatever data are available. With data from the Ninth Federal Reserve District, Anderson demonstrates how a regional VAR model can produce more accurate, more frequent, and much cheaper forecasts than regional models designed in the standard way.

A Technical Description

In a second, more technical article (p. 8), Thomas J. Sargent explains the rationale behind the development of the VAR approach and describes its general uses. After discussing the shortcomings of current modeling techniques, he examines several alternative approaches and concludes that for simple forecasting VAR is the most promising. He then describes how to use a VAR model to predict several periods into the future, to analyze unexpected shocks to the economy, and to estimate the probability of future events. Finally, Sargent warns readers that while VAR may be the best available forecasting technique, it cannot be used to analyze the impact of alternative government policies.

The views expressed herein are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.