

A Structural Model with Switching Regime

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Several approaches to modelling the economic business cycle have been proposed. However, few have been used to forecast the state of the economy which is not an easy task. Many considerations have to be given to how the state of the economy should be measured and how turning points in historical data can be determined. There is clearly no ideal measure of the state of the economy, simply because all sectors are not affected in the same way.

One approach is to consider real GNP as the main indicator of economic health. Many linear models headed by the ARMA family have been suggested in the past for modelling real GNP. However, recently much of the research has been aimed at nonstationary and nonlinear models because of the apparent asymmetric behaviour of the business cycle. One of these models is the switching regime model by Hamilton. The main idea in Hamilton model is that the series is divided into two unobserved components: the first is an autoregressive component and the second follows a discrete state Markov process. In this paper we apply the switching regime component to a local level model. Using U.S. quarterly real GNP data, our model is estimated and the results are compared to those of Hamilton.

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