

# **Bayesian Analysis of Time-Varying Parameter Vector Autoregressive Model with the Ordering of Variables for the Japanese Economy and Monetary Policy**

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## **Abstract**

This paper applies the time-varying parameter vector autoregressive model to the Japanese economy. The both parameters and volatilities, which are assumed to follow a random-walk process, are estimated using a Bayesian method with MCMC. The recursive structure is assumed for identification and the reversible jump MCMC is used for the ordering of variables. The empirical result reveals the time-varying structure of the Japanese economy and monetary policy during the period from 1981 to 2008 and provides evidence that the introduction of zero interest rate policy may have changed the order of variables.

**Keywords:** Bayesian inference; Monetary policy; Reversible jump Markov chain Monte Carlo; Stochastic volatility; Time-varying parameter VAR.