On noncausal reduced rank VAR models

Abstract:
We consider a reduced rank vector autoregressive model where one or several of the roots of the determinant of the characteristic polynomial have modulus stricter than one. We prove a noncausal Johansen-Granger representation for such time series and discuss how the parameters can be estimated. The asymptotic distribution of the trace statistic is also considered. Some Monte Carlo simulations and a small illustration are presented.