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Title	Impulse Response Matching Esimators for DSGE Models
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Abstract	One of the leading methods of estimating the structural parameters of DSGE models is the VAR-based impulse response matching estimator. The existing asympotic theory for this estimator does not cover situations in which the number of impulse response parameters exceeds the number of VAR model parameters. Situations in which this order condition is violated arise routinely in applied work. We establish the consistency of the impulse response matching estimator in this situation, we derive its asymptotic distribution, and we show how this distribution can be approximated by bootstrap methods. Our analysis sheds new light on the choice of the weighting matrix and covers both weakly and strongly identified DSGE model parameters. We also show that under our assumptions special care is needed to ensure the asymptotic validity of Bayesian methods of inference. A simulation study suggests that the interval estimators we propose are reasonably accurate in practice. We also show that using these methods may affect the substantive conclusions in empirical work.
Keywords	Structural estimation, DSGE, VAR, impulse response, nonstandard asymptotics, bootstrap, weak identification, robust inference
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