

Another Look at the Role of Oil Supply, Demand, and Inventory Shocks

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July 19, 2019

Table 1: Simulation of Contemporaneous Effects Γ_0

	Variance Set ($\epsilon_{1t}, \epsilon_{4t}$)				
	(0.5,0.5)	(0.1,0.5)	(0.9,0.5)	(0.5,0.1)	(0.5,0.9)
γ_{21}	0.31	0.36	0.30	0.31	0.31
$\times 10^{-3}$	(14.7)	(5.20)	(2.59)	(14.4)	(1.49)
γ_{31}	0.31	0.31	0.30	0.31	0.31
	(17.6)	(5.76)	(3.79)	(17.4)	(1.78))
γ_{41}	0.29	0.25	0.30	0.30	0.30
	(18.2)	(5.39)	(4.97)	(0.48)	(14.8)
γ_{32}	0.30	0.30	0.29	0.30	0.30
	(15.4)	(15.0)	(15.2)	(15.2)	(1.5)
γ_{42}	0.27	0.27	0.27	0.29	0.23
	(14.4)	(15.6)	(13.8)	(0.41)	(11.1)
γ_{43}	0.33	0.32	0.33	0.38	0.38
	(13.9)	(15.3)	(13.4)	(0.39)	(10.0)
Correct Prediction	26	39	16	0	44

The lag order $k=3$, which is chosen by AIC method. Each row shows the mean of estimated coefficients and standard errors ($\times 10^{-3}$) calculated from 100 simulations. The sample size $S=100$. Correct Prediction is the number of correct ordering prediction in 100 simulations.

$$\begin{aligned}
\mathbf{\Gamma}_0 &= \begin{bmatrix} 0 & 0 & 0 & 0 \\ 0.3 & 0 & 0 & 0 \\ 0.3 & 0.3 & 0 & 0 \\ 0.3 & 0.3 & 0.3 & 0 \end{bmatrix}, \mathbf{\Gamma}_1 = \begin{bmatrix} 0.9 & 0 & 0 & 0 \\ 0 & 0.9 & 0 & 0 \\ 0 & 0 & 0.9 & 0 \\ 0 & 0 & 0 & 0.9 \end{bmatrix} \\
\mathbf{Y}_t &= \begin{bmatrix} y_{1t} \\ y_{2t} \\ y_{3t} \\ y_{4t} \end{bmatrix}, \epsilon_t \sim \text{Log}\mathcal{N}(0, 0.01 - 0.81) \\
\mathbf{u}_t &= (\mathbf{I} - \mathbf{\Gamma}_0)^{-1} \epsilon_t \\
\begin{bmatrix} u_t^1 \\ u_t^2 \\ u_t^3 \end{bmatrix} &= \begin{bmatrix} 0 & 0 & 0 \\ \gamma_{21} & \gamma_{22} & 0 \\ \gamma_{31} & \gamma_{32} & \gamma_{33} \end{bmatrix} \begin{bmatrix} \epsilon_t^1 \\ \epsilon_t^2 \\ \epsilon_t^3 \end{bmatrix}
\end{aligned}$$