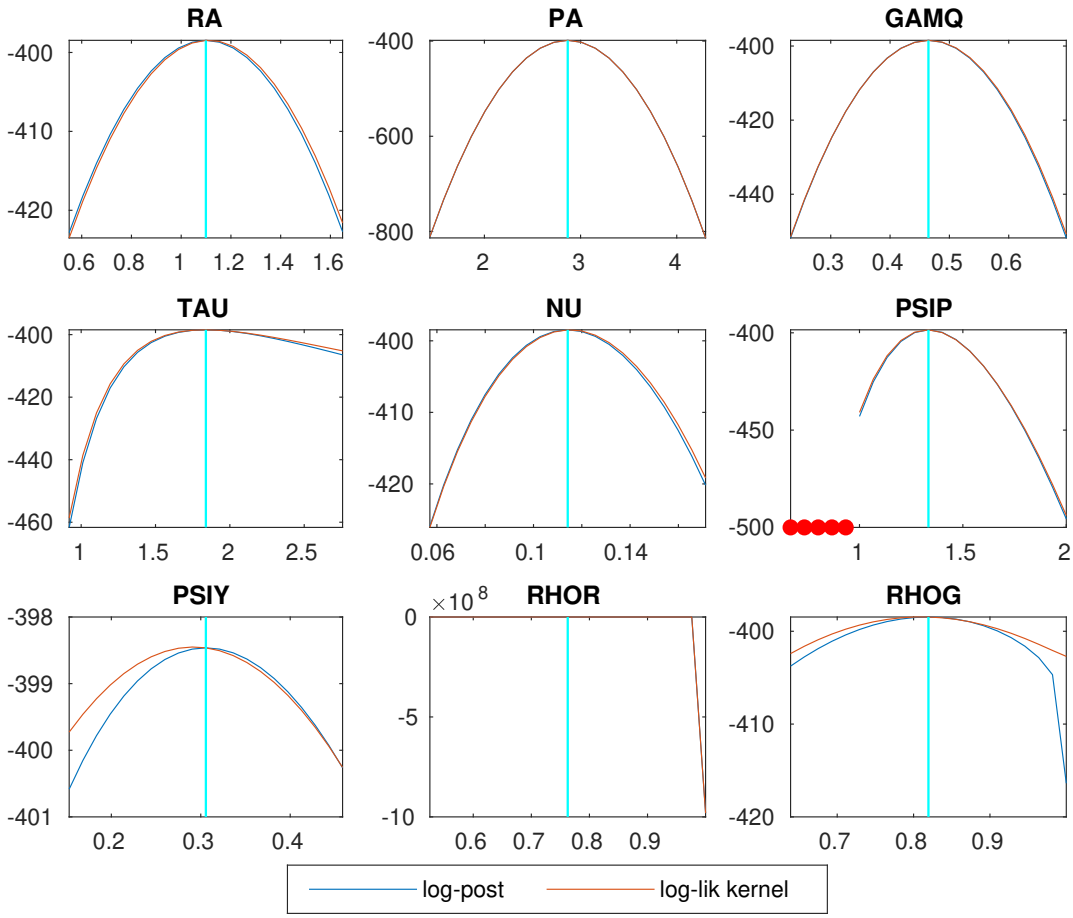

Figure 1: Check plots.

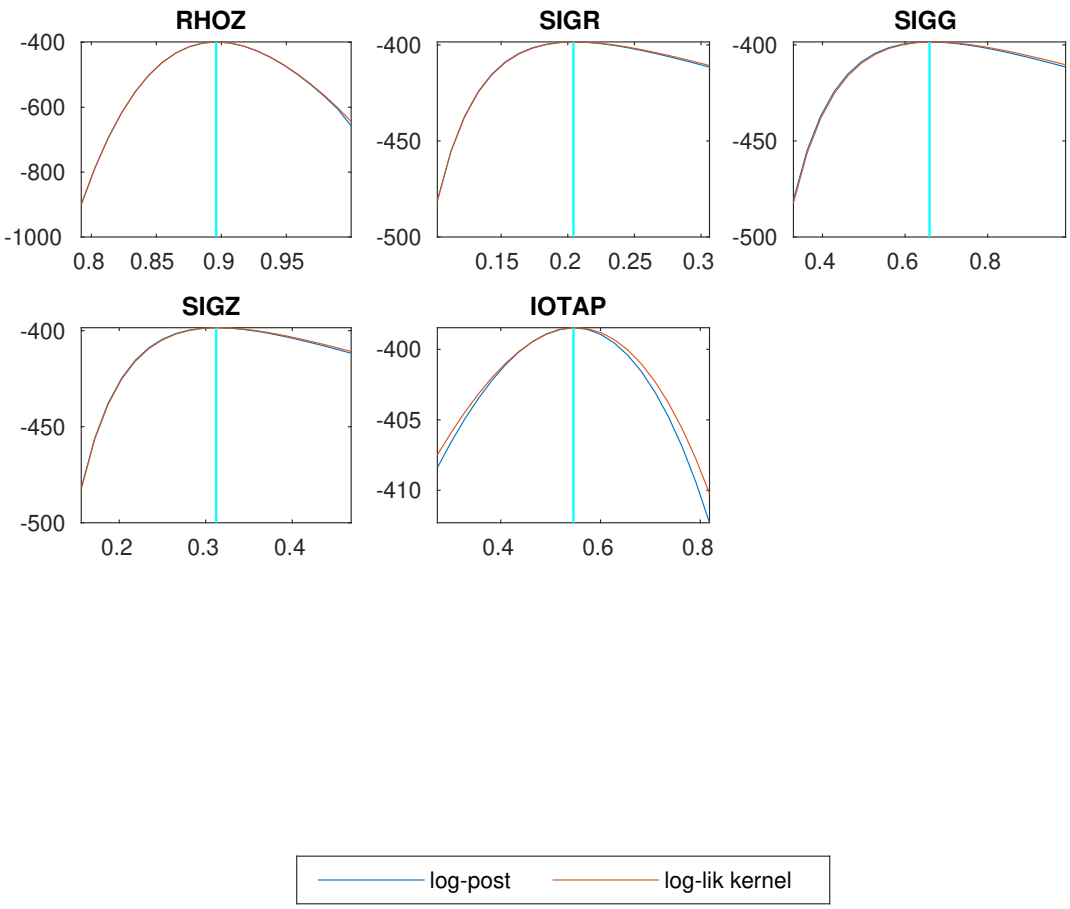

Figure 2: Check plots.

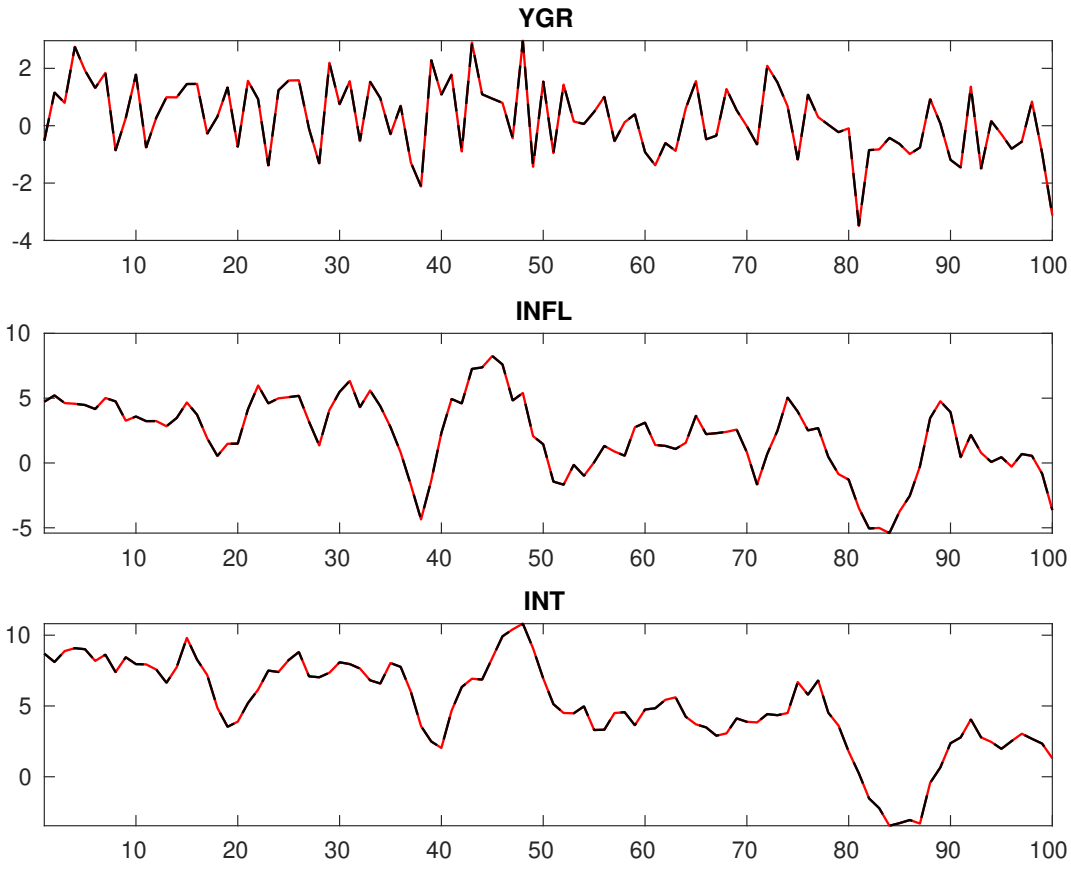

Figure 3: Historical and smoothed variables.

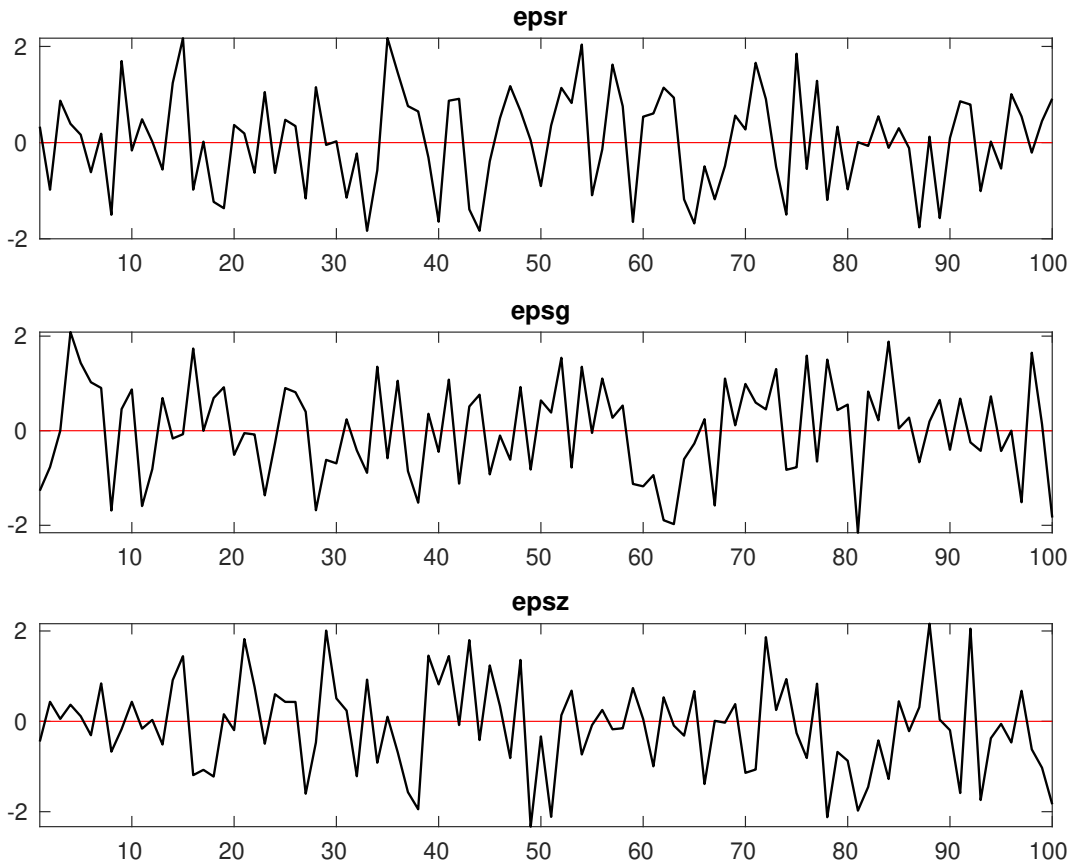

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	68.532	58.749	59.254	57.229
$\pi^{(A)}$	70.095	66.898	65.539	64.595
$\gamma^{(Q)}$	69.496	66.070	66.275	65.130
τ	72.903	73.191	71.471	70.593
ν	78.970	76.406	76.844	69.473
ψ_π	66.620	66.058	61.950	63.323
ψ_y	67.815	67.694	63.850	69.524
ρ_R	64.196	70.136	67.596	71.397
ρ_g	67.780	72.109	69.453	68.500
ρ_z	69.994	78.509	73.062	72.382
σ_R	57.449	61.222	55.885	61.117
σ_g	61.960	59.402	57.699	62.038
σ_z	57.780	63.047	60.504	54.537
ι_p	65.870	67.530	68.275	66.581

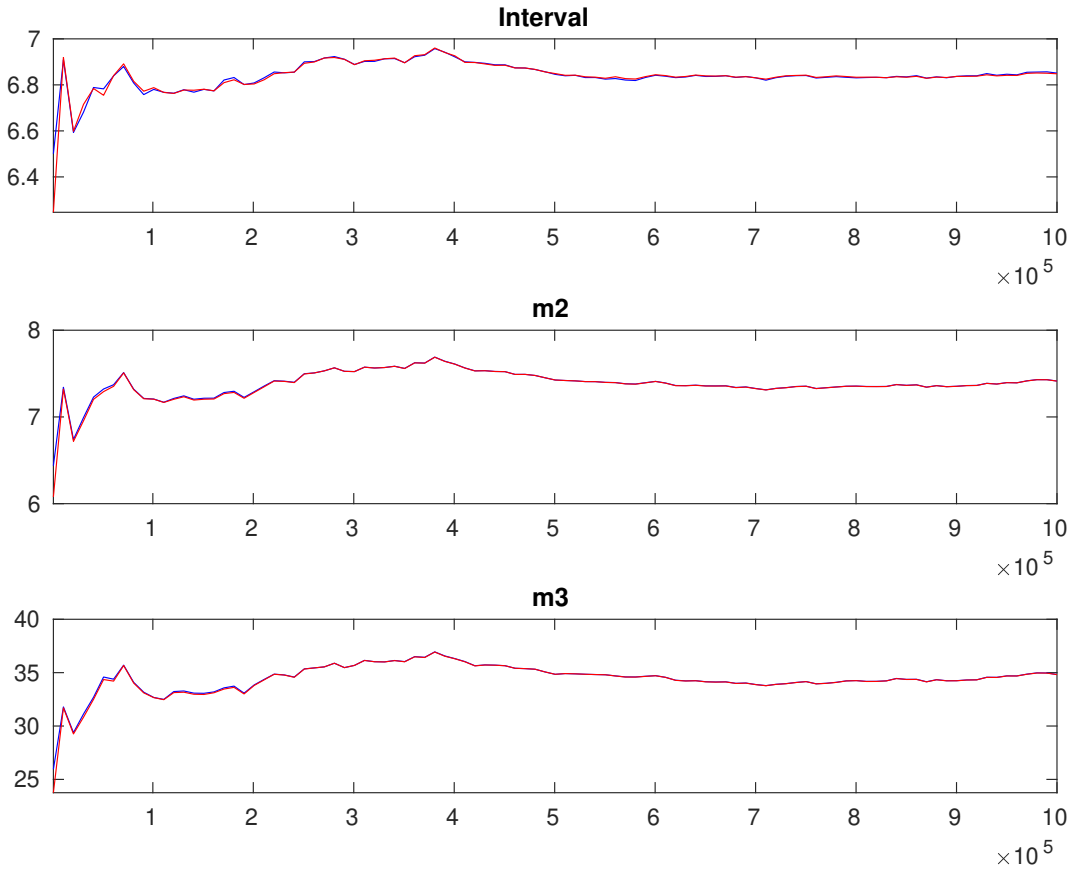

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
r_A	gamm	0.800	0.5000	1.120	0.3678	0.5009	1.7144
$\pi^{(A)}$	gamm	4.000	2.0000	2.845	0.4929	2.0309	3.6526
$\gamma^{(Q)}$	norm	0.400	0.2000	0.461	0.1424	0.2243	0.6929
τ	gamm	2.000	0.5000	2.000	0.3596	1.4109	2.5701
ν	beta	0.100	0.0500	0.122	0.0282	0.0770	0.1669
ψ_π	gamm	1.500	0.2500	1.348	0.1363	1.1213	1.5701
ψ_y	gamm	0.500	0.2500	0.378	0.1753	0.1032	0.6418
ρ_R	beta	0.500	0.2000	0.770	0.0288	0.7232	0.8177
ρ_g	beta	0.800	0.1000	0.843	0.0553	0.7538	0.9354
ρ_z	beta	0.660	0.1500	0.900	0.0176	0.8715	0.9293
σ_R	invg	0.300	4.0000	0.211	0.0168	0.1831	0.2373
σ_g	invg	0.400	4.0000	0.682	0.0495	0.6010	0.7615
σ_z	invg	0.400	4.0000	0.324	0.0368	0.2645	0.3835
ι_p	beta	0.500	0.1500	0.558	0.0961	0.4033	0.7192

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.0993	0.3679
$\pi^{(A)}$	gamm	4.000	2.0000	2.8665	0.4819
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4647	0.1403
τ	gamm	2.000	0.5000	1.8387	0.3434
ν	beta	0.100	0.0500	0.1142	0.0270
ψ_π	gamm	1.500	0.2500	1.3335	0.1324
ψ_y	gamm	0.500	0.2500	0.3057	0.1799
ρ_R	beta	0.500	0.2000	0.7626	0.0290
ρ_g	beta	0.800	0.1000	0.8195	0.0539
ρ_z	beta	0.660	0.1500	0.8960	0.0169
σ_R	invg	0.300	4.0000	0.2042	0.0169
σ_g	invg	0.400	4.0000	0.6591	0.0486
σ_z	invg	0.400	4.0000	0.3121	0.0392
ι_p	beta	0.500	0.1500	0.5457	0.0946

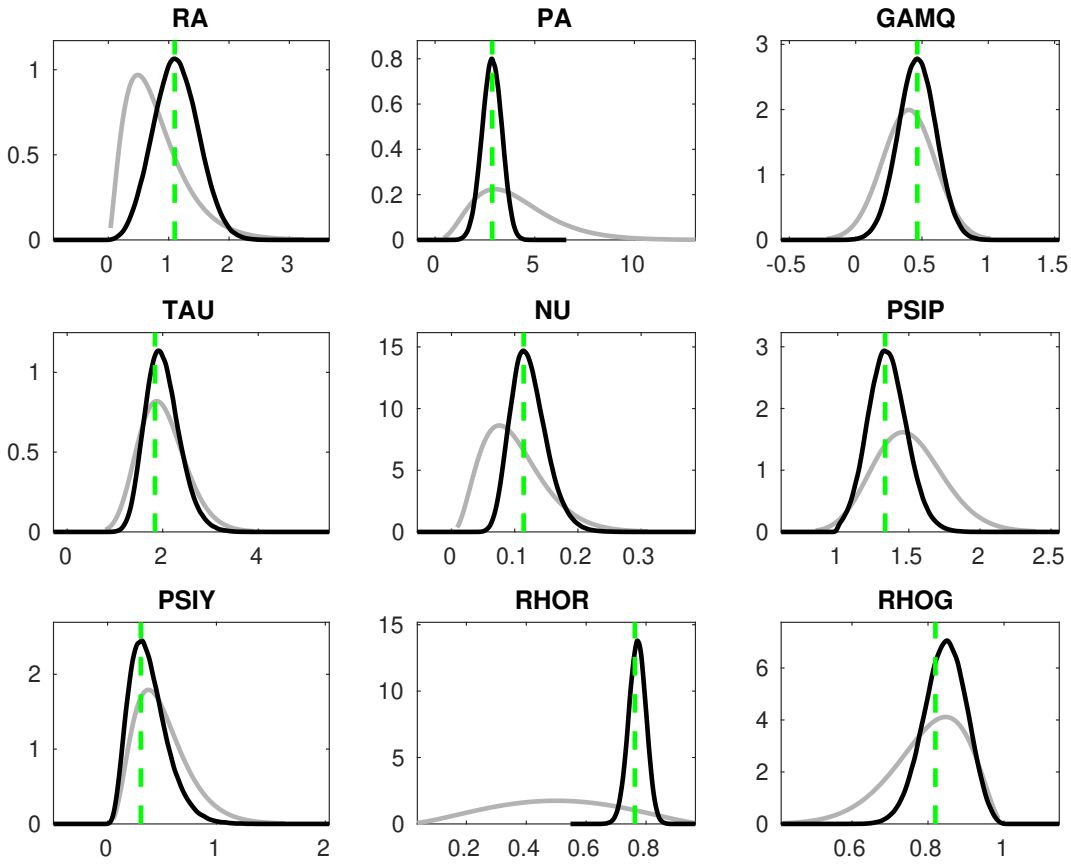

Figure 6: Priors and posteriors.

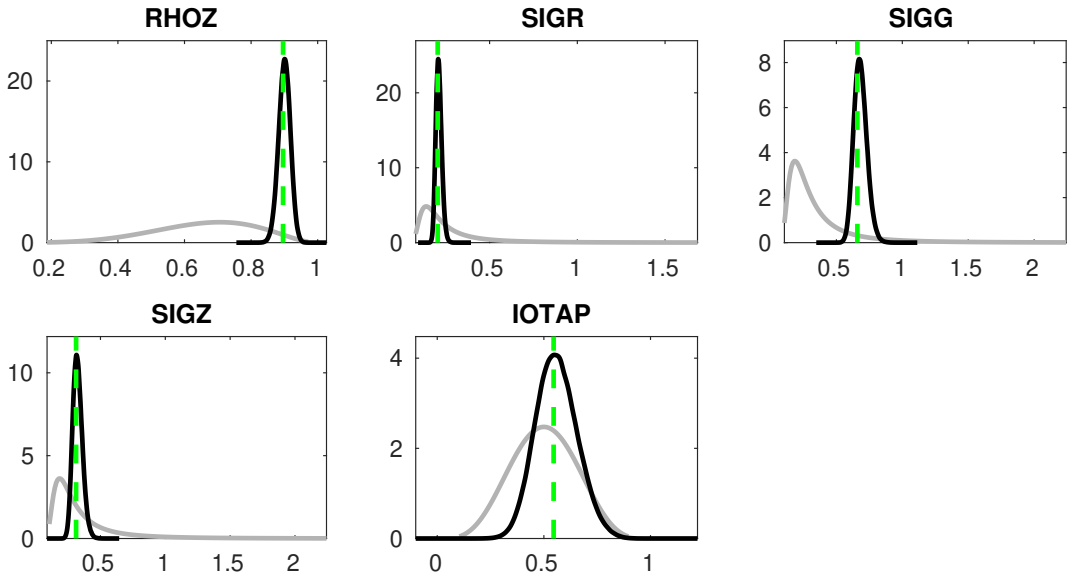

Figure 7: Priors and posteriors.

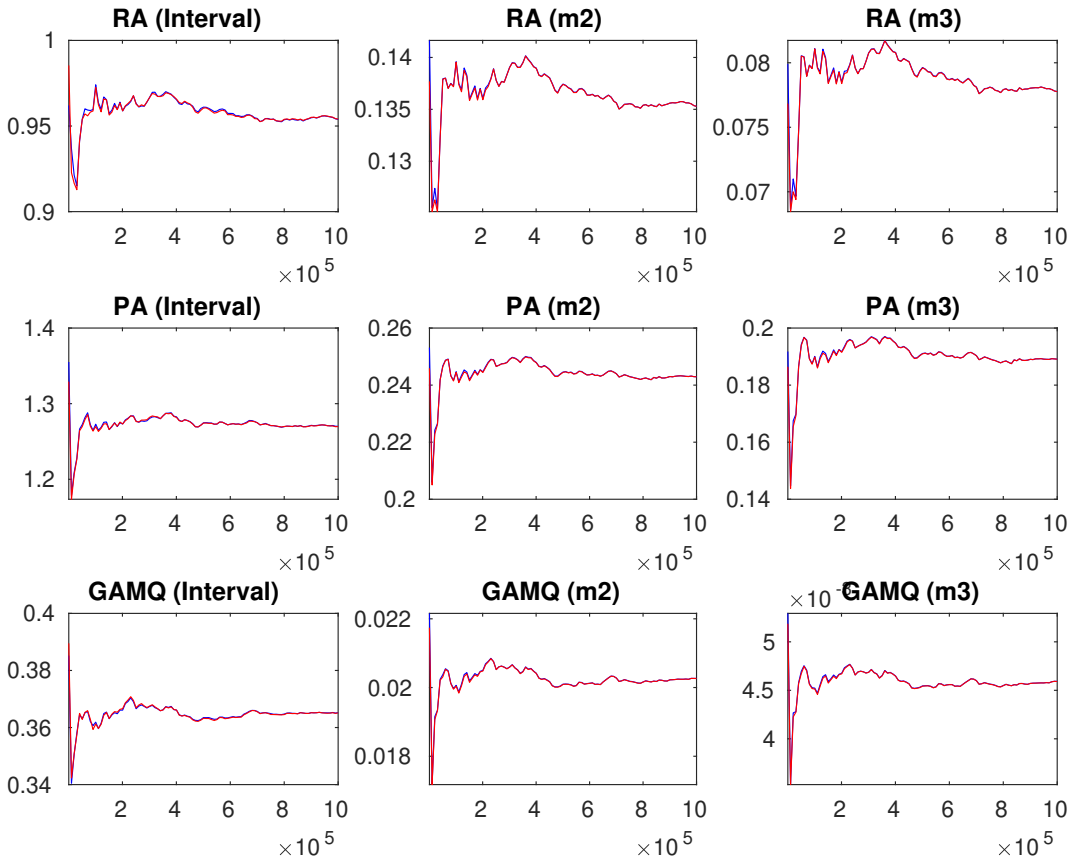

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

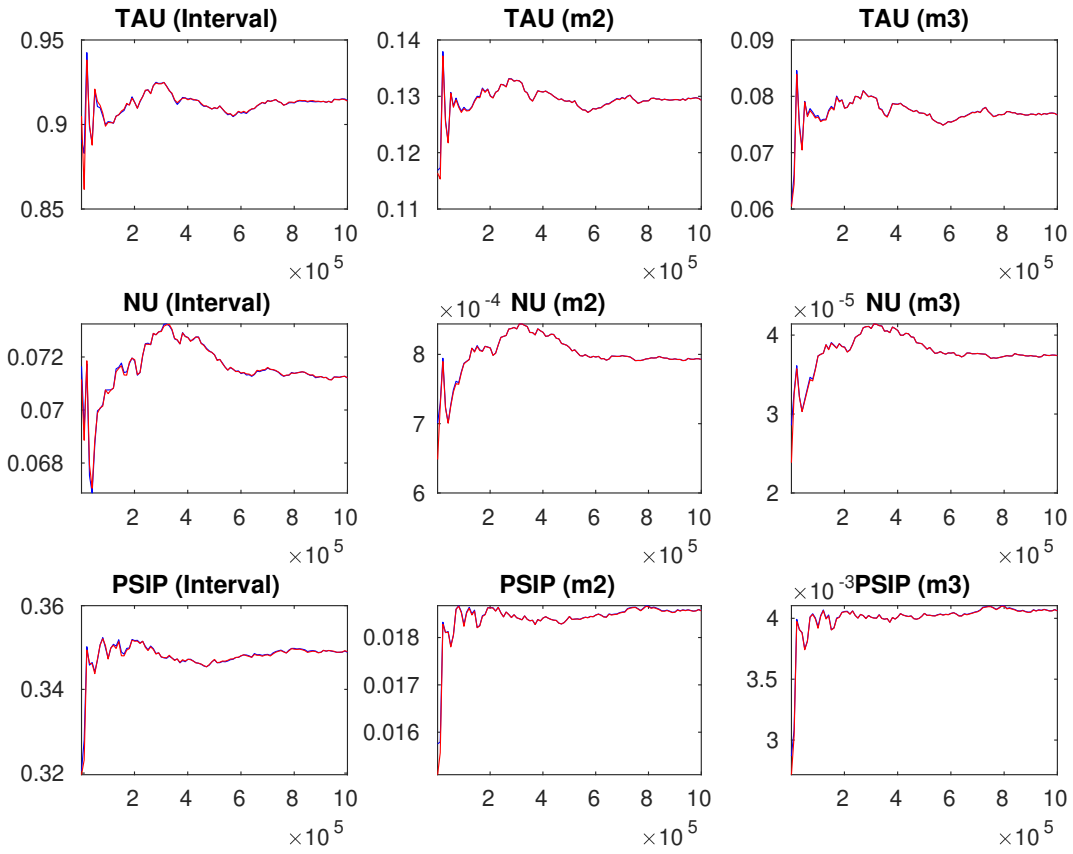

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

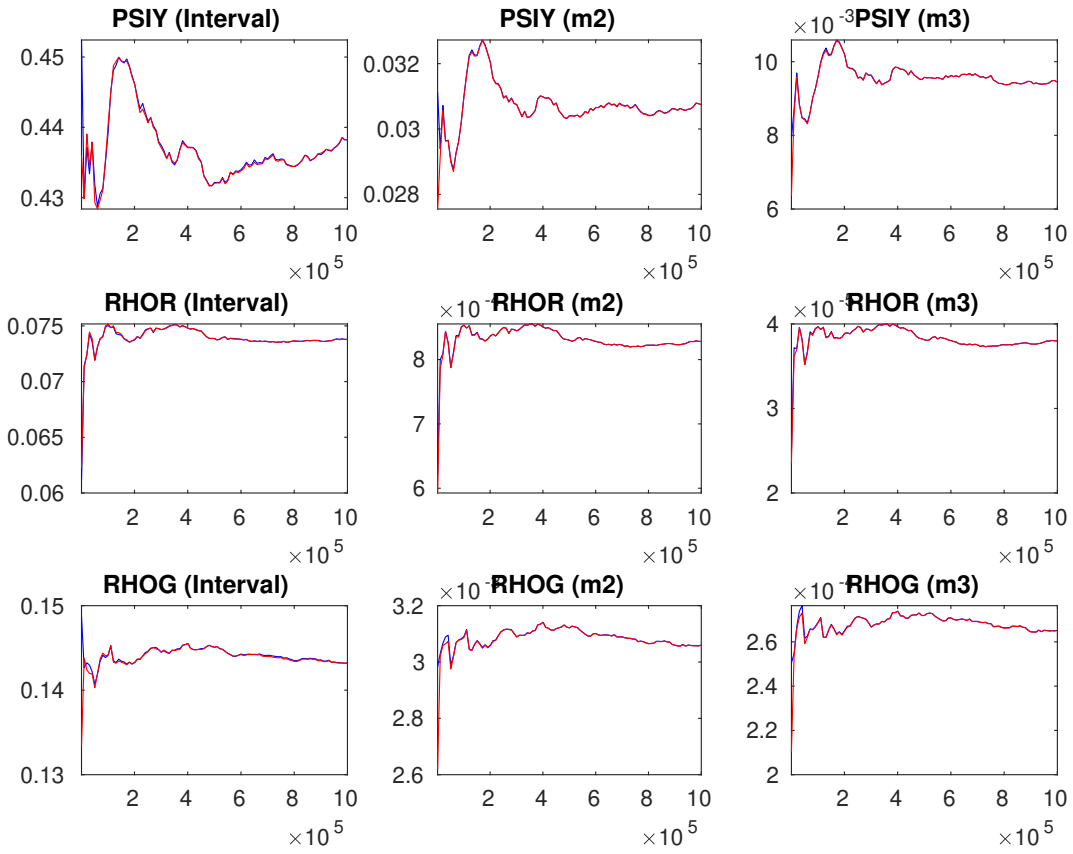

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

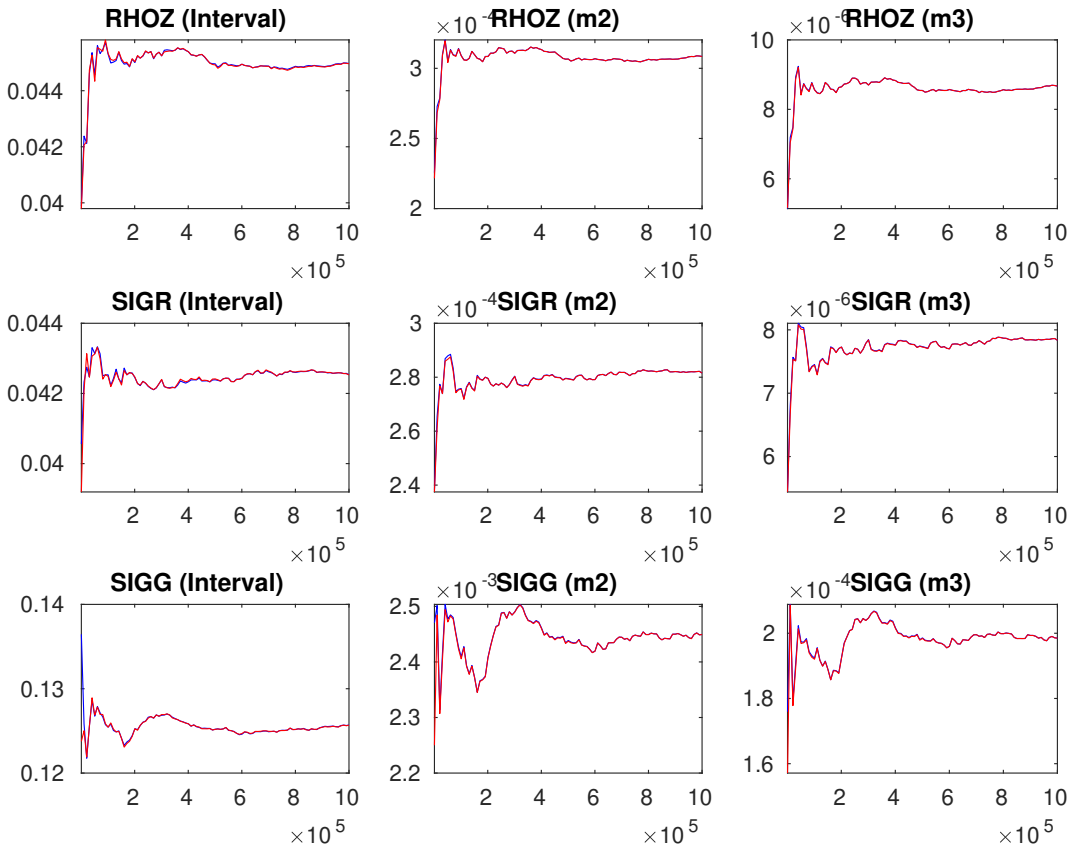

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

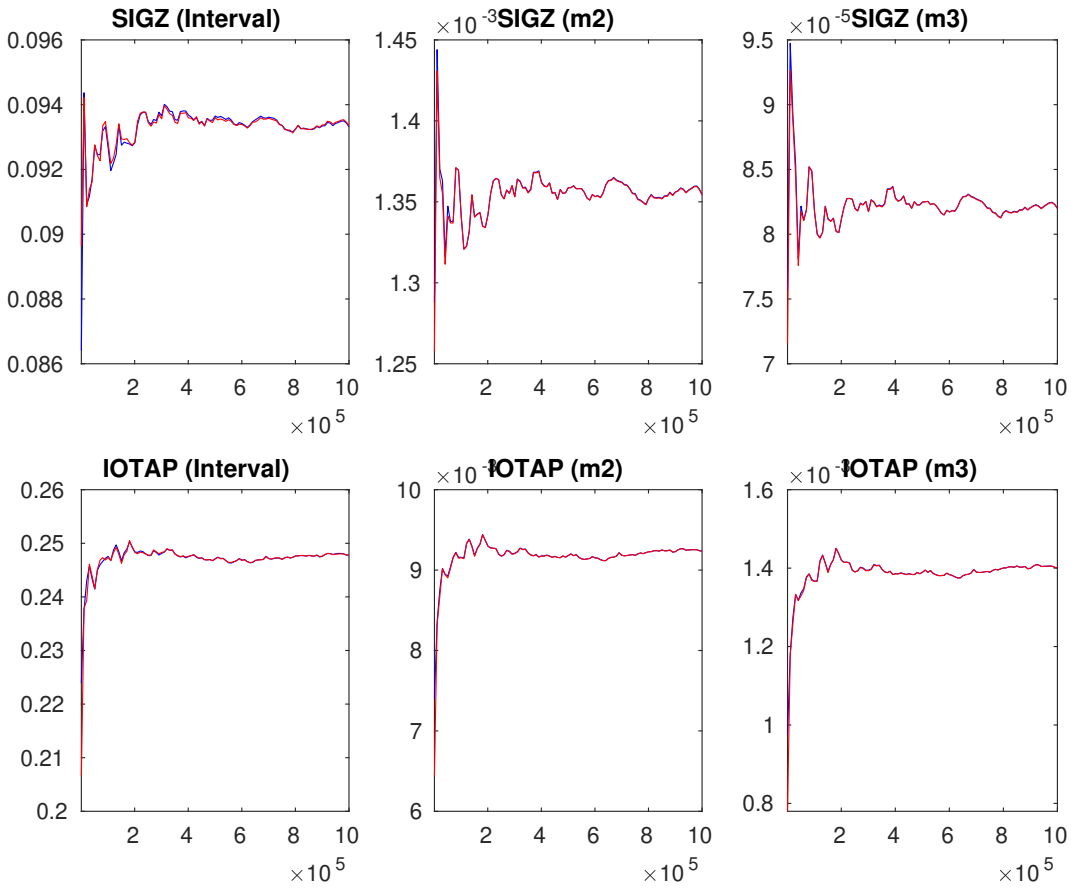

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.